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As filed with the Securities and Exchange Commission on February 3, 2026.

Registration No. 333-292701

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

AMENDMENT NO. 1

TO

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

BIRCHTECH CORP.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2819
(Primary Standard Industrial
Classification Code Number)

87-0398271
(I.R.S. Employer
Identification No.)

1810 Jester Drive
Corsicana, Texas 75109
(614) 505-6115

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Richard MacPherson
President, Chief Executive Officer and Secretary
1810 Jester Drive
Corsicana, Texas 75109
(614) 505-6115

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Alexander M. Schwartz
Sheppard, Mullin, Richter & Hampton LLP
321 North Clark Street, 32nd Floor
Chicago, Illinois 60654
(312) 499-6300

David E. Danovitch, Esq.
Angela Gomes, Esq.
Michael DeDonato, Esq.
Sullivan & Worcester LLP
1251 Avenue of the Americas, 19th Floor
New York, NY 10020
(212) 660-3060

Approximate date of commencement of proposed sale to the public: **As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

Large accelerated filer
Non-accelerated filer

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 7(a)(2)(B) of the Securities Act.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED FEBRUARY 3, 2026

BIRCHTECH CORP.



**5,449,592 Shares of
Common Stock**

Birchtech Corp. (the “Company”, “we”, “us” or “our”) is offering 5,449,592 shares of our common stock, par value \$0.001 per share (the “common stock”), based on an assumed public offering price of \$3.67, which was the last reported sale price of our common stock on the OTCQB (as defined below) on January 29, 2026.

Our common stock is presently traded on the Toronto Stock Exchange (“TSX”) under the symbol “BCHT”, and is quoted on the OTCQB market tier operated by OTC Markets Group Inc. (“OTCQB”) under the symbol “BCHT”. On January 29, 2026, the last reported sale price of our common stock on the OTCQB was \$3.67 per share. The final public offering price of the shares of common stock sold in this offering will be determined through negotiation between us and the underwriters in the offering and the assumed public offering price of our common stock used throughout this prospectus may not be indicative of the final public offering price. The share and per share information in the prospectus, unless otherwise noted, reflect the reverse stock split of our outstanding shares of common stock at a 1-for-5 ratio, which became effective December 26, 2025.

In connection with this offering, we have applied to list the common stock on the New York Stock Exchange American Exchange (the “NYSE American”) under the symbol “BCHT”. The approval of the listing of the common stock on the NYSE American is a condition to the completion of this offering and we expect that, if approved, the common stock will begin trading on the NYSE American on or around the date of this prospectus, at which point the common stock will cease to be traded on the OTCQB. No assurance can be given that our application will be approved or, if we receive approval, that a trading market will develop or, if developed, that it will be sustained or that the trading prices of the common stock on the OTCQB and TSX will be indicative of the prices of our common stock if traded on the NYSE American. We cannot assure you that our common stock will become eligible for trading on the NYSE American or on any other exchange or market.

We are a “smaller reporting company” as such term is defined under federal securities laws, and, as such, have elected to take advantage of certain reduced public company reporting requirements.

Investing in our common stock involves a high degree of risk. Before buying any shares, you should carefully read the discussion of the material risks of investing in our common stock that are described in “Risk Factors” beginning on page 11 of this prospectus.

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Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions (1)	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) Represents a cash fee equal to seven percent (7.0%) of the aggregate purchase price paid by investors in this public offering (including shares of common stock to cover over-allotments, if any). See "Underwriting" beginning on page 79 of this prospectus for additional information regarding the compensation payable to the underwriters.

We have granted the underwriters a 30-day option to purchase up to an additional 817,439 shares of common stock, or 15% of the total number of shares of common stock sold in this offering, solely to cover over-allotments, if any. If the underwriters exercise the option in full, the total underwriting discounts and commissions, based upon the assumed public offering price of \$3.67 per share, payable by us will be \$1,610,000, and the total proceeds to us, before expenses, will be \$21,390,004.

We expect to deliver the shares of common stock on or about _____, 2026.

Lake Street

Huntington Capital Markets

The date of this prospectus is _____, 2026.

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ABOUT THIS PROSPECTUS

Neither we nor the underwriters have authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any amendment or supplement to this prospectus, and you should rely only on the information contained in this prospectus. We and the underwriters take no responsibility for, and can provide no assurances as to the reliability of, any information that others may give you. This prospectus is not an offer to sell, nor is it seeking an offer to buy, the shares of common stock offered hereby in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus is only accurate as of its date, regardless of its time of delivery or the time of any sale of our common stock. Our business, financial condition, results of operations, and prospects may have changed since that date.

We own or have rights to various trademarks, service marks, and trade names that we use in connection with the operation of our business. This prospectus may also contain trademarks, service marks, and trade names of third parties, which are the property of their respective owners. Our use or display of third parties' trademarks, service marks, and trade names or products in this prospectus is not intended to, and does not, imply a relationship with, or endorsement or sponsorship by, us. Solely for convenience, the trademarks, service marks, and trade names referred to in this prospectus may appear without the ®, TM, or SM symbols, but the omission of such references is not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable owner of these trademarks, service marks, and trade names.

For investors outside the United States: Neither we nor any of the underwriters have done anything that would permit this offering, or the possession or distribution of this prospectus, in any jurisdiction where action is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of our common stock and the distribution of this prospectus outside of the United States.

Numerical figures included in this prospectus have been subject to rounding adjustments. Accordingly, numerical figures shown as totals in various tables may not be arithmetic aggregations of the figures that precede them.

The market data and certain other statistical information used throughout this prospectus are based on independent industry publications, governmental publications, reports by market research firms, or other independent sources that we believe to be reliable sources. Industry publications and third-party research, surveys, and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. We are responsible for all of the disclosure contained in this prospectus, and we believe these industry publications and third-party research, surveys, and studies are reliable. Although we believe that these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. While we are not aware of any misstatements regarding any third-party information presented in this prospectus, their estimates, in particular, as they relate to projections, involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section entitled "Risk Factors" and elsewhere in this prospectus. Some data is also based on our good faith estimates. Accordingly, investors should not place undue reliance on this information.

As used in this prospectus, unless the context otherwise requires, references to:

- "BAC" means brominated powdered activated carbon.
- "Birchtech Corp.," the "Company," "we," "us," and "our" means Birchtech Corp. and its consolidated subsidiaries, or any or all of them, as the context may require.
- "EGUs" means electric generating units.
- "EPA" means the U.S. Environmental Protection Agency.
- "ESP" means electro-static precipitators.
- "GAC" means granular activated carbon.

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- “Hazard Index MCL” means a regulatory limit used by the EPA to address safe drinking water when mixtures of certain PFAS are present.
- “HFPO-DA” means hexafluoropropylene oxide dimer acid, which is a specific type of chemical within the PFAS group.
- “Hg” means mercury.
- “MATS” means the Mercury and Air Toxics Standards established by the EPA to limit hazardous air pollutants emitted by coal- and oil-fired power plants.
- “MCLs” means maximum contaminant levels.
- “MW” means megawatts.
- “NOX” means oxides of nitrogen.
- “PAC” means powdered activated carbon.
- “PFAS” means per-and polyfluoroalkyl substances, which are a group of synthetic chemicals also known as “forever chemicals”.
- “PFBS” means perfluorobutanesulfonic acid, which is a specific type of chemical within the PFAS group.
- “PFHxS” means perfluorohexane sulfonic acid, which is a specific type of chemical within the PFAS group.
- “PFNA” means perfluorononanoic acid, which is a specific type of chemical within the PFAS group.
- “PFOA” means perfluorooctanoic acid, which is a specific type of chemical within the PFAS group.
- “PFOS” means perfluorooctane sulfonate, which is a specific type of chemical within the PFAS group.
- “RSSCTs” means rapid small-scale column tests.
- “SCR” means selective catalytic reduction.
- “SDWA” means the U.S. Safe Drinking Water Act enacted in 1974 to protect public drinking water supplies throughout the United States.
- “SEA®” means the Company’s proprietary sorbent enhancing additive.
- “SOX” means oxides of sulfur.

PROSPECTUS SUMMARY

This summary highlights selected information contained in greater detail elsewhere in this prospectus. Because it is a summary, it does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this prospectus in its entirety, including the sections entitled “Risk Factors,” “Special Note Regarding Forward Looking Statements,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes to those financial statements, in each case included elsewhere in this prospectus.

Our Company

Overview

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.

Products and Services

Mercury Emissions

We provide mercury capture solutions for coal-fired power plants driven by our patented two-part 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 has largely been driven by federal regulations. The MATS rule, proposed by the EPA in May 2011 and which became effective in April 2012, is intended to reduce air emissions of heavy metals, including 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 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 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.

Water Treatment

In April 2024, the EPA under the Biden Administration issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as “forever chemicals”. The rule established legally enforceable MCLs for six PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. Under the Rule, public water systems must monitor these PFAS and must 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 April 2024, we announced the introduction of our new water treatment business to address the growing potable (drinking) water market with next-generation sorbent technologies. These new solutions are being designed to use significantly less activated carbon, offering a more environmentally sustainable approach to water treatment while maintaining or improving contaminant removal performance. Our products target not only compliance with emerging PFAS regulations, but also broader opportunities in water quality improvement positioning us to serve a large and expanding market.

As part of this strategic pivot, we have invested in the commissioning of two state-of-the-art laboratory facilities—one in Pennsylvania and one in North Dakota—referred to as our “Design Centers.” The Design Centers are dedicated sites for water treatment innovation and development. Together, we believe these facilities represent the only known facilities that have integrated capability in North America to thermally reactivate spent GAC under controlled conditions and subsequently conduct RSSCTs to directly compare reactivated GAC performance against virgin carbon counterparts. This combination allows us to evaluate reactivated GAC as a sustainable and cost-effective alternative to virgin carbon and address key water utility questions, including how to optimize media changeout schedules, strategies to reduce operational costs, and provide lab-based validation of treatment performance for PFAS and other contaminants.

These Design Centers will also function as a direct resource for the water treatment industry, offering thermal reactivation, contaminant analysis, and carbon performance evaluations. By enabling municipal and industrial utilities to lower compliance costs and improve operational efficiency, we expect to build strong technical credibility and customer engagement ahead of large-scale market adoption. Importantly, we believe our technology platform is not solely dependent on PFAS regulations, as market demand for improved water treatment solutions is broad.

Our investment in our Design Centers also serves as the basis for our planned commercial thermal reactivation plants, which we intend to open and operate in the future. Data generated from the Design Centers is being used to define permitting requirements, capital expenditure parameters, and projected operating costs, accelerating the commercialization timeline while avoiding costly future reliance on third-party providers.

On May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS. As part of this action, the EPA also announced its intent to extend the PFOA and PFOS MCL compliance deadlines to 2031 and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA/GenX, and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

In light of evolving water regulations and funding dynamics, we believe the Company is well positioned to capture a meaningful share in the rapidly growing water treatment sector.

Marketing and Our Growth Strategy

Mercury Emissions

Our marketing efforts have principally focused on the North American market to date, and particularly the United States.

In the U.S. market, our success depends, in part, on the success of demonstrations performed with utility customers and the resulting contract awards to meet the MATS requirements in the long-term period and its operational performance with EGUs under contract.

In Canada, there are the 2000 Canada-wide Standards for Mercury Emissions and the 2006 Canada-wide Standards for Mercury Emissions from Coal-Fired Electric Power Generation Plants among all the provinces which was initially implemented in 2010, with caps in mercury emissions for each of the provinces. We believe that we have the most effective technology for the EGUs and that we maintain a strong patent position for our mercury emissions technologies in Canada.

Our marketing strategy is designed to grow our mercury capture solutions in the North American region by building and maintaining the reputation and trust of our work among its customers – specifically by carrying out successful demonstrations performed with utility customers and the resulting contract awards to meet the MATS requirements in the long-term period and sustaining our operational performance with EGUs under contract – and developing new, and refining our existing, unique emissions technologies. We believe that by offering proven and innovative service offerings, we can attract more customers and partners to our services, creating a network growth effect. We expect that the continuing pursuit of infringers of our patented technologies will yield further licensing and supply agreements.

We believe that these targeted marketing initiatives are the most efficient and cost-effective strategy to sustain the growth of both new and existing customers.

As of December 31, 2025, there were 16 EGUs in the U.S. that use our SEA® technologies and buy product from us.

Other Possible Markets for Our Emissions Technologies

In May 2017, the European Union and seven of its member states ratified the Minamata Convention on Mercury. The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. This convention was a result of three years of meeting and negotiating, after which the text of the convention was approved by delegates representing approximately 140 countries in January 2013 in Geneva. As of December 31, 2025, 153 countries have joined the Convention. It is expected that over the next few decades, this international agreement will enhance the reduction of mercury pollution from the targeted activities responsible for the major release of mercury into the environment. Specific emissions limits are being developed by the European Union, although the timing of any enactment of such is uncertain. Any such regulations may lead to additional business opportunities for our mercury control technologies within the European Union, although we do not currently pursue the European market and have no present plans to enter that market in the near term.

With regard to business opportunities in China and other Asian countries, there currently exists no regulatory requirement that mandates the use of any particular mercury capture or control technology. While regulatory authorities in these regions continue to evaluate air-emissions controls more broadly, the adoption of additional mercury-specific requirements, and the extent to which such requirements could create demand for our technologies, is uncertain and may not occur.

Water Treatment

Initially, we intend to focus our marketing efforts on municipalities that have limited resources and engineering experience and offer shaped activated carbons (including reactivated GAC), testing and consulting services.

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 treatment. 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 address industrial wastewater challenges, providing contaminant removal and offering a practical pathway to manage treatment costs.

We are developing a carbon rejuvenation process, referred to as Carbon Rejuvenation™, focused on the thermal reactivation of spent GAC. In January 2026, we announced that we have conducted demonstrations of this process with regulated municipal water utilities at our Design Centers, which indicated that our thermally reactivated GAC performed comparably to virgin activated carbon in removing PFAS under the conditions tested. The demonstrations utilized spent GAC sourced from active utility systems and were evaluated against performance benchmarks routinely applied by those utilities. Results met expected treatment standards, which we believe supports the technical and commercial viability of our carbon rejuvenation process as an alternative to virgin carbon replacement.

Our carbon rejuvenation process is expected to restore spent granular activated carbon for reuse, reduce reliance on virgin raw materials while lowering total lifecycle costs for customers through shorter transportation distances, reduce disposal requirements, and regional reuse within utility systems. Unlike traditional centralized reactivation models, our approach will emphasize regional deployment, expected to align with utility priorities around emissions reduction, localized supply chains, capital discipline, rate stability, and infrastructure resilience. We believe this regional reactivation model represents a differentiated solution that integrates environmental benefits directly into operating economics and supports broader commercialization opportunities.

During 2026, we plan to acquire property and construct a facility dedicated to the reactivation of GAC in support of our carbon rejuvenation initiative; however, there can be no assurance that such a facility will be developed on acceptable terms, or at all.

Additional Business Opportunities

Pursuant to a License and Supply Agreement we entered into with Dakin Holdings Ltd., a company incorporated in Barbados (“Dakin”), effective as of January 1, 2023, as amended (the “Dakin Agreement”), we also maintain a license with respect to certain intellectual property owned by Dakin, consisting of a proprietary compound of materials engineered to treat a boiler to improve the combustion process and thereby reduce overall emissions, while improving boiler efficiency during the combustion of all types of fuels at power plants (the “Dakin IP”). We believe that the Dakin IP can be an effective supplement to our mercury emissions removal business at coal-fired power plants and provide an additional revenue stream utilizing our present infrastructure. However, there can be no assurance that such license will lead to any significant revenues. For additional information, see the section entitled “Certain Relationships and Related Party Transactions”.

Industry Background and Governmental Regulations

The market for mercury removal from power plant emissions in the United States has largely been driven by federal regulations.

On December 21, 2011, the EPA announced MATS for power plants in the U.S. The MATS rule is intended to reduce air emissions of heavy metals, including 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. Existing power plants were granted three years (plus a potential one-year extension in cases of hardship, ruled on by state EPAs where the plant is domiciled) from April 16, 2012 to comply with the new emission limits. The MATS rule applies to EGUs that are larger than 25 MW that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public, and includes investor-owned units, as well as units owned by the federal government, municipalities, and cooperatives that provide electricity for commercial, industrial, and residential uses. At the time that MATS was promulgated, there were approximately 1,250 coal-fired EGUs affected by this rule. Many EGUs have since shut down as a result of regulation and competitive disadvantages to newer or gas-fired EGUs and renewable energy sources (e.g., wind and solar). We believe that at December 31, 2025, there were approximately 400 coal-fired EGUs remaining in the power market which make up the large mercury-emissions control market into which we sell.

The final MATS rule identifies two subcategories of coal-fired EGUs, four subcategories of oil-fired EGUs, and a subcategory for units that combust gasified coal or solid oil (integrated gasification combine cycle, or “IGCC” units) based on the design, utilization, and/or location of the various types of boilers at different power stations. The rule includes emission standards and/or other requirements for each subcategory. The rule set nationwide emission limits estimated to reduce mercury emissions in coal-fired plants by about 90%.

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 and updates MATS for coal-fired power plants 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.

In June 2025, the EPA proposed to repeal certain amendments finalized in 2024 to the MATS Rule and return compliance obligations to the MATS standards which existed prior to the 2024 update. On December 23, 2025, the EPA submitted a draft of the final action to the Office of Management and Budget (the “OMB”) for interagency review under Executive Order 12866. As indicated on the EPA’s website, following completion of the OMB interagency review process, in accordance with OMB Memorandum M-25-36, section 1.A., the EPA expected that the EPA Administrator of the Office of Information and Regulatory Affairs of the OMB would finalize the action by the end of January 2026. As of February 3, 2026, the EPA has not updated this expected timeline.

In addition to the U.S. federal MATS rule, certain states currently have regulations that limit mercury emissions and are similar to or more restrictive than the MATS rule.

There are several choices of pollution control technologies available to reduce mercury emissions, but they do not all work consistently or cost-effectively for every plant design or for all of the various types of coal. The most common technology employed to reduce mercury emissions is a sorbent injection system which provides for the injection of PAC or BAC into the flue-gas of an EGU after the boiler itself, but in front of the ESP. Such injections have proven effective with many coals, especially at reduction levels of 70% or less. At required mercury reduction levels above 80%, these injection systems require substantial injection rates which often have severe operational issues, including over-loading the ESP and rendering the fly ash unfit for sale to concrete companies, and at times even causing combustion concerns with the fly ash itself.

Mercury is also removed as a co-benefit by special pollution control equipment installed to remove SOX and NOX. To achieve very high levels of SOX reduction, large, complex, and expensive (with capital costs in the hundreds of millions of dollars for a medium-sized EGU) systems called scrubbers can be installed in the plant exhaust system, typically just before the flue-gas goes up the stack for release. As a co-benefit to their primary mission, scrubbers have been shown to remove significant quantities of oxidized mercury. Mercury is typically found in two basic forms in coal: elemental and oxidized. The amount of each form varies in any given seam of coal and is affected by the other natural elements (such as chlorine) which might also be present in the coal. We believe that about 30-40% of the mercury in the post-combustion flue-gas exists in the oxidized state for power plants burning low-rank coal and about 60-70% for power plants burning high-rank coals. Mercury is found in only trace amounts in coal, making it difficult to remove from coal or from the flue-gas when combusted with the coal. It is in the burning of millions of tons of coal that these trace amounts become problematic and is why MATS was promulgated.

The other major pollution control system which contributes significantly to the co-benefits of mercury removal is an SCR system, which can be installed to achieve high levels of removal of NOX. SCRs are also very large and expensive systems (costing hundreds of millions of dollars in capital costs to install on a medium-size EGU) that are typically installed just after the flue-gas exits from the unit boiler. As a co-benefit, SCRs have been shown to oxidize a considerable percentage of the elemental mercury in many types of coal. If the EGU then has a combination of an SCR and a scrubber, we estimate that the EGU might achieve an over-all reduction of 80-85% of the mercury in power plants that burn high-rank coals. The exact level of mercury emission reductions depends on the designs of these systems, the types of coal being burned and the operations of the power plant.

We believe that a large percentage of the coal-fired EGUs in the U.S. employ some sort of sorbent injection system to achieve the very low mercury emission levels required by the MATS rule, with either the sorbent injection system as the primary removal method or such a system being employed as a supplemental system to SCR/scrubber combinations to achieve the emission limits.

In the United States, potable water treatment is regulated primarily by the EPA under the SDWA. The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation’s public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs, and ground water wells. The SDWA does not regulate private wells which serve fewer than 25 individuals. The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The SDWA covers water quality standards, treatment processes, and monitoring requirements for public water systems.

The EPA has set MCLs for specific contaminants in drinking water. These include: microbial contaminants like bacteria, viruses, and protozoa (e.g., E. coli and cryptosporidium); inorganic contaminants like lead, arsenic, and nitrates; organic contaminants like pesticides and solvents; radionuclides like radon and uranium; and disinfectants and disinfection by-products like chlorine and trihalomethanes (“THMs”). Water systems must treat water to meet these MCLs or achieve a level that minimizes the risk to public health.

In April 2024, the EPA issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as “forever chemicals”. The Rule sets limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA/GenX. 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 must 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. Public water systems must implement solutions that reduce these PFAS by 2029 if monitoring shows that drinking water levels exceed the MCLs set forth in the Rule. By 2029, public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation.

The EPA has indicated that once implemented, these limits will reduce tens of thousands of PFAS-attributable illnesses or deaths and will reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems.

The EPA has indicated that compliance with this Rule is estimated to cost approximately \$1.5 billion annually. The Infrastructure Investment and Jobs Act has dedicated \$9 billion to help communities impacted by PFAS pollution in drinking water. In addition, another \$12 billion in Infrastructure Investment and Jobs Act funding is available to communities to make general drinking water improvements, including addressing PFAS chemicals. Estimated costs include water system monitoring, communicating with customers, and – if necessary – installing treatment technologies.

On May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS. As part of this action, EPA also announced its intent to extend the PFOA and PFOS MCL compliance deadlines to 2031 and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA/GenX, and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

In addition to the national standards established by the EPA which states are required to implement and enforce, individual states have the authority to impose stricter regulations than those set by the EPA. Many states have already set their own standards for PFAS, often more stringent than federal standards, in response to the growing public health concerns. States also run their own monitoring programs and inspections to ensure compliance with federal and state regulations.

Risks Factor Summary

An investment in our common stock involves a high degree of risk. You should carefully consider the risks summarized below. These risks, and other risks, are discussed more fully in the section entitled “Risk Factors” following this prospectus summary. These risks include, but are not limited to, the following:

Risks Related to our Company

- Demand for our mercury emissions services and products is largely driven by coal consumption by North American electricity power generating plants. Any significant changes that diminish the use of coal as a primary fuel source for electricity production may adversely affect our business;
- Technological change may make our products and services less marketable;
- Our industry is highly competitive. If we are unable to compete effectively with competitors having greater resources than we do, our financial results could be adversely affected;
- We may not be able to successfully protect our intellectual property rights, and we may not be successful in patent litigation, which could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not issuing;
- We are currently subject to inter partes review proceedings that could adversely affect the enforceability of our patent rights.

- We depend on third-party suppliers for materials needed to implement our emissions technologies, key customers, and a small number of key employees—the losses of which could negatively impact our business, our financial results, our operations, and our projected future growth;
- Our lack of diversification increases the risk of an investment in the Company;
- Low gas prices can negatively impact our results of operations; mild weather could also have corresponding effects on the demand for coal;
- Our insurance coverage may not be adequate to protect us from all business risks;
- Revenues are generated under contracts or blanket purchase orders that must be renegotiated periodically;

Risks Related to Regulation

- Any significant changes in environmental regulations related to mercury emissions and potable water treatment could have a major impact on us;
- Since being enacted, the MATS Rule has been subject to legal challenges and modifications which may continue;
- Uncertainty of and variability in international environmental regulations could restrict our ability to expand outside of the United States;

Risks Related to our Common Stock and this Offering

- The trading activity for our common stock has varied and, at times, been limited;
- Our stock price may be volatile, which could result in substantial losses to investors and litigation;
- We may need additional capital in the future, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions;
- If we fail to list our common stock on the NYSE American and it continues to be characterized as a “penny stock” under the U.S. Securities and Exchange Commission (“SEC”) rules, it may be more difficult to resell securities classified as “penny stock”;
- Investors in this offering will experience immediate and substantial dilution in net tangible book value;
- If we cannot satisfy the initial listing standards, or continue to satisfy the continued listing standards, of the NYSE American, our securities may not be listed or may be delisted, which could negatively impact the price of our securities and your ability to sell them;
- Even though we effected the 1-for-5 reverse stock split of our common stock, we cannot assure you that the market price of our common stock will remain high enough for such reverse stock split to have the intended effect of complying with the NYSE American’s minimum price requirement;
- We have broad discretion in the use of the net proceeds from this offering and may not use them effectively;
- If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline;
- The reverse stock split, effected on December 26, 2025, could cause our stock price to decline relative to its value before the split and decrease the liquidity of shares of our common stock; and

- the other factors described in the section entitled “Risk Factors.”

Reverse Stock Split

On December 23, 2025, we filed with the Secretary of State of the State of Delaware a certificate of amendment to our certificate of incorporation, as amended (the “Certificate of Incorporation”), to effect a reverse stock split of our issued and outstanding shares of common stock at a ratio of 1-for-5, effective December 26, 2025. Following the reverse stock split, every five (5) shares of our issued and outstanding common stock were automatically converted into one (1) issued and outstanding share of common stock, without any change in par value per share. No fractional shares were issued in connection with the reverse stock split, and any shareholders who would have received fractional shares of common stock instead were rounded up to the nearest whole number of shares of common stock. The reverse stock split did not affect the number of shares of authorized common stock. The common stock began trading on a reverse stock split-adjusted basis on December 31, 2025.

The purpose of the reverse stock split was to allow us to meet the minimum stock price threshold listing requirement for listing the common stock on the NYSE American. Unless otherwise noted and other than in our historical financial statements and the notes thereto, all share and per share information in this prospectus gives effect to the reverse stock split.

Corporate Information

We were originally incorporated on July 19, 1983 in the State of Utah and subsequently re-domesticated as a Delaware corporation in February 2007. Effective on October 17, 2024, as part of our rebranding, we changed our corporate name from Midwest Energy Emissions Corp. to Birchtech Corp.

Our wholly owned subsidiary, MES, Inc., was originally incorporated in December 2008 in the State of North Dakota. Effective on June 21, 2011, we completed a merger transaction (the “Merger”) whereby MES, Inc. (then called Midwest Energy Emissions Corp.) became our wholly owned subsidiary. As a result of the Merger, our business began to focus on the delivery of mercury capture technologies to power plants.

Our mercury emissions business is sometimes referred to and known as “ME₂C”®, which is a trademark of the Company.

Our principal place of business is located at 1810 Jester Drive, Corsicana, Texas 75109, which location we have maintained for manufacturing and distribution of our products since 2015. Our telephone number is (614) 505-6115. Our corporate website address is <http://www.birchtech.com>.

We do not incorporate the information on or accessible through our website to be part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” as defined in the Securities Exchange Act of 1934, as amended (the “Exchange Act”). We may take advantage of certain of the scaled disclosures available to smaller reporting companies until the fiscal year following the determination that the aggregate market price of our voting and non-voting common stock held by non-affiliates is more than \$250 million measured on the last business day of our second fiscal quarter, or our annual revenues are less than \$100 million during the most recently completed fiscal year and the aggregate market value of our voting and non-voting common stock held by non-affiliates is more than \$700 million measured on the last business day of our second fiscal quarter.

THE OFFERING	
Common stock offered by us:	5,449,592 shares, assuming a public offering price of \$3.67 per share, which is based on the closing price of the shares of common stock on the OTCQB on January 29, 2026.
Common stock outstanding prior to this offering:	19,455,966 shares.
Common stock to be outstanding immediately following this offering:	24,905,558 shares, assuming a public offering price of \$3.67 per share, which is based on the closing price of the shares of common stock on the OTCQB on January 29, 2026.
Underwriters' option to purchase additional shares of common stock from us:	We have granted the underwriters a 30-day option to purchase up to an additional 817,439 shares of common stock, or 15% of the total number of shares of common stock sold in this offering, at the public offering price, less underwriting discounts and commissions, solely to cover over-allotments, if any, on the same terms as set forth in this prospectus.
Use of proceeds:	We estimate that we will receive net proceeds from this offering of approximately \$17.7 million, or approximately \$20.5 million if the underwriters exercise their option to purchase additional shares of common stock in full, based upon the assumed public offering price of \$3.67 per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We currently intend to use the net proceeds from this offering, together with our existing cash, for, among other things, continuing operating expenses, working capital and other general corporate purposes. See "Use of Proceeds" below.
TSX and OTCQB symbols:	Our common stock is presently traded on the TSX under the symbol "BCHT" and is quoted on the OTCQB under the symbol "BCHT".
Proposed NYSE American trading symbol:	We have applied to have the common stock listed on the NYSE American under the proposed symbol "BCHT". The approval of the listing of the common stock on the NYSE American is a condition to the completion of this offering and we expect that, if approved, the common stock will begin trading on the NYSE American on or around the date of this prospectus, at which point the common stock will cease to be traded on the OTCQB. No assurance can be given that such listing will be approved or that a trading market will develop for our common stock.
Risk factors:	An investment in our common stock involves a high degree of risk. You should read this prospectus carefully, including the section entitled "Risk Factors" and the consolidated financial statements and the related notes to those statements included in this prospectus, before investing in our common stock.
Transfer agent:	The transfer agent and registrar for our common stock is Transfer Online, Inc., 512 SE Salmon Street, Portland, Oregon 97214. The co-transfer agent and registrar for our common stock in Canada is TSX Trust Company at its offices in Toronto, Ontario, Canada.
Lock-ups:	We and our directors and executive officers will agree with the underwriters not to offer for sale, issue, sell, contract to sell, pledge or otherwise dispose of any of our common stock or securities convertible into common stock for a period of 90 days after the date of this prospectus, subject to certain exceptions. See "Underwriting" section on page 79.

The number of shares of common stock outstanding prior to and following this offering is based on 19,455,966 shares of common stock outstanding at January 29, 2026, and excludes the following:

- 1,070,000 shares of common stock issuable upon exercise of our outstanding stock options at a weighted average exercise price of \$3.43 per share; and
- 1,518,261 shares of common stock reserved for issuance pursuant to the Company's Amended and Restated 2017 Equity Incentive Plan (the "2017 Plan").

Unless otherwise indicated, all information in this prospectus assumes no exercise by the underwriters of their option to purchase up to 817,439 additional shares of common stock in this offering, assuming a public offering price of \$3.67 per share, which is the closing price of the common stock on the OTCQB on January 29, 2026.

RISK FACTORS

An investment in our common stock is speculative and involves a high degree of risk, including the risk of a loss of your entire investment. You should carefully consider the following risk factors. These risk factors contain, in addition to historical information, forward-looking statements that involve risks and uncertainties. Our actual results could differ significantly from the results discussed in the forward-looking statements. The occurrence of any of the adverse developments described in the following risk factors could materially and adversely harm our business, financial condition, results of operations, or prospects. In such event, the value of our common stock could decline, and you could lose all or a substantial portion of the money that you pay for our common stock. In addition, the risks and uncertainties discussed below are not the only ones that we face. Our business, financial condition, results of operations, or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material, and these risks and uncertainties could result in a complete loss of your investment. In assessing the risks and uncertainties described below, you should also refer to the other information contained in this prospectus (as may be supplemented or amended from time to time).

Risks Related to Our Company

Demand for our mercury emissions services and products is largely driven by coal consumption by North American electricity power generating plants. Any significant changes that diminish the use of coal as a primary fuel source for electricity production may adversely affect our business.

North American coal-fired electricity generating units comprise the basis of the market for our services and products. Regulations mandating or incentivizing the purchase of power from renewable energy sources (e.g., wind, solar, hydroelectric and geothermal) and/or the phasing out of coal-fired power plants could lessen the demand for electricity from such plants and overall reduce the number of coal-fired electricity generating units and the amount of coal burned, thereby decreasing the demand for our services and products which could adversely affect our business. The phasing out of coal-fired plants has already had a negative effect on our results of operations. Continued promulgation of these regulations in North America is affected by, among other things, politics, perceived environmental impact, and public favor.

The risks associated with technological change may make our products and services less marketable.

The market into which we sell our products and services is characterized by periodic technological change as well as evolving industry standards and regulations. The nature of such market will require that we continually improve and/or modify the performance, features, and reliability of our products and services, particularly in response to possible competitive offerings. Unless we are able to enhance, improve, and/or modify existing products in a timely manner or to develop and introduce new products that incorporate new technologies or conform with evolving industry standards and regulations, our products and services may be rendered less marketable.

Our industry is highly competitive. If we are unable to compete effectively with competitors having greater resources than we do, our financial results could be adversely affected.

We operate in highly competitive industries that are characterized by a diverse range of participants, including companies that operate in both the mercury capture and water treatment industries. Our major competitors in the mercury capture and water treatment markets include companies such as Arq, Inc. (formerly Advanced Emissions Solutions, Inc.), Norit Activated Carbon, Calgon Carbon Corporation, and Nalco Company LLC (also known as Nalco Water, an Ecolab company). Many of our competitors employ larger sales staff and are well established in the market with greater financial and operational resources. Our ability to compete successfully depends in part upon our ability to offer superior technology, including a superior team of technical personnel. If we are unable to maintain our competitive position, we could lose market share to our competitors, which is likely to adversely impact our financial results.

We may not be able to successfully protect our intellectual property rights.

As of December 31, 2025, our patent portfolio relating to mercury removal included 18 granted patents worldwide, consisting of 13 U.S. patents and 5 foreign patents (Canada, Europe and China), with stated expiration dates ranging from January 2026 to September 2034. Between August and October 2025, 13 U.S. Patents and 2 foreign patents relating to mercury removal expired. The patent data and expiration timelines cited above and elsewhere in this prospectus are based on internal assessments and information currently available through third-party databases, including Google Patent Database. While we believe these sources to be generally reliable, they are subject to inherent data lags, indexing errors or incomplete coverage of foreign jurisdictions. Consequently, the actual status, enforceability or precise expiration dates of certain patents may differ from those stated. While we actively pursue new patents and technological advancements to replace expiring patents, there is no guarantee that future patents will be granted, or that they will be able to provide and/or allow us to maintain the same level of market protection. As a result, we may not be able to successfully protect proprietary aspects of our technology.

With regard to our water treatment technologies, we have to date filed two provisional patent applications in the U.S. relating to water treatment. We have also filed two Patent Cooperation Treaty ("PCT") applications and one U.S. patent application. However, these applications do not provide enforceable patent rights unless they are successfully granted by the PCT and U.S. Patent and Trademark Office. There is no assurance that our pending applications will result in issued patents, or that any patents granted will provide meaningful protection against competitors.

We may not be successful in patent litigation.

Patent litigation, like most types of commercial litigation, can be expensive, time-consuming, and unpredictable. Any such litigation may require us to spend a substantial amount of time and money and could distract management from our day-to-day operations. There is no assurance that we will be successful in any such litigation. Moreover, in an infringement proceeding, a court may decide that one or more of our patents are not valid or enforceable, or a court may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation could put one or more of our patents at risk of being invalidated, held unenforceable, or interpreted narrowly and could put our patent applications at risk of not being approved.

On March 1, 2024, following a five-day jury trial, a federal jury in the U.S. District Court for the District of Delaware (the "Court") awarded a \$57.1 million patent infringement verdict in our favor against a group of defendants (the "CERT defendants"). Nevertheless, the ultimate success in this litigation against this group of defendants still remains uncertain due to other possible factors, including, but not limited to, the results of any post-trial motions and applications, appeals and any collectability issues. Following the trial, the Court entered non-final judgments on the verdict against the defendants and the parties submitted post-trial motions relating to the jury trial. The defendants also asserted that the Company's claims were barred due to their defense that they had an implied license to the asserted patents. A bench trial was held on such issue. On June 10, 2025, the Court ruled that the CERT defendants failed to prove that they had such an implied license and denied their motion to alter or amend the non-final judgment. On September 25, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants' post-trial motion that they should not be held liable as a matter of law for induced infringement, contributory infringement or willful infringement, and on November 20, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants' post-trial motion for a new trial on the issues of induced infringement, contributory infringement, willful infringement and damages. Thereafter, on December 17, 2025, the Court issued a memorandum order granting the Company's request for pre- and post-judgment interest, and denying the Company's request for enhanced damages. Following resolution of all post-trial motions, the Court issued the final judgment in favor of the Company on December 29, 2025 in the total amount of \$78,397,157.05, which amount includes pre-judgment interest.

On January 28, 2026, the CERT defendants filed a notice of appeal of the judgment. Under applicable rules, the CERT defendants may seek a stay of execution of the judgment pending appeal by posting a bond or other security in an amount and form approved by the Court. As of the date of this prospectus, the CERT defendants have not obtained a bonded stay. Although the automatic stay of execution applicable following entry of judgment has expired, the appeal remains pending. As a result, there can be no assurance regarding the timing or amount of any recovery, if any, from the judgment, or that the judgment will ultimately be upheld on appeal. Interest continues to accrue on the judgment amount during the pendency of the appeal.

We are currently subject to inter partes review proceedings that could adversely affect the enforceability of our patent rights.

Certain of our patents which pertain to mercury removal from coal-fired power plants are currently the subject of inter partes review (“IPR”) proceedings before the United States Patent and Trademark Office. IPR proceedings are a mechanism by which third parties can challenge the validity of issued patents, and they have become a frequent tool used by parties seeking to invalidate patents in our industry. Even though a jury has upheld the validity of certain of our patents in the Delaware proceeding and judgment has been entered as described in the immediately preceding risk factor and in further detail under the heading “Business—Legal Proceedings,” the IPR process is independent and could result in the narrowing or invalidation of some or all of the asserted claims, which could impair or eliminate our ability to enforce the judgment, collect damages or obtain other relief. While IPRs are a common feature of the U.S. patent system, we believe that our patents are valid and enforceable. We intend to actively defend our intellectual property rights, but the outcome of any administrative proceeding cannot be predicted with certainty.

It is possible that we are unable to continue as a going concern.

Based on our current cash levels and burn rate, amongst other things, we believe our cash and financial resources may be insufficient to meet our anticipated needs for the twelve months following the date of issuance of the financial statements for the quarterly period ended September 30, 2025, which raises substantial doubt about our ability to continue as a going concern within one year from the issuance date of such financial statements included elsewhere in this prospectus. The financial statements included elsewhere in this prospectus 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. The 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 we be unable to continue as a going concern within one year after the date the financial statements are issued. The Company’s total cash balance at December 31, 2025 was approximately \$2.3 million.

In addition to maintaining the revenue stream from our legacy mercury emissions control business, our plans and expectations over the twelve months from the issuance date of the financial statements for the quarterly period ended September 30, 2025 included elsewhere in this prospectus 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.

We depend on third-party suppliers for materials needed to implement our technologies; availability of raw materials and volatility in price could impact our results of operations.

We buy all the raw materials needed to implement our technologies and provide uniquely formulated products from third-party suppliers. Suppliers of our raw materials include large companies that have provided materials for decades and have an international presence. We believe that we have excellent relationships with our current suppliers. If any of our suppliers should become unavailable to us for any reason, there are a number of other suppliers that we believe can be contracted with to supply the raw materials that we need. However, the availability and price of those raw materials can be impacted by factors beyond our control, including any price increases due to inflation. If such suppliers cannot meet our demand for such raw materials on a timely basis or at acceptable prices or if we are unable to offset any such increases that might occur with price adjustments to our customers, such could have a negative effect on our operations.

We are dependent on key customers. A significant adverse change in such relationships could adversely impact our results of operations and financial condition.

For the year ended December 31, 2024, three customers accounted for 32%, 13%, and 10% of the Company's revenues, respectively. For the nine months ended September 30, 2025, three customers accounted for 26%, 10%, and 10% of the Company's revenues, respectively. At December 31, 2024, three customers accounted for 32%, 26% and 9% of the Company's accounts receivable, respectively. At September 30, 2025, two customers accounted for 28% and 27% of the Company's accounts receivable, respectively. Our customers are concentrated, so the loss of one or more key customers or a material reduction in business performed for them could cause us to experience a decline in net sales, which could adversely affect our financial results. In addition, there can be no assurance that such customers will not experience financial difficulties or other problems which could delay such customers in paying for product and services on a timely basis or at all. Any problems with such customers can be expected to have an adverse impact on our results of operations and financial condition.

We rely on a small number of key employees. The loss of more than one of these employees could disrupt our operations and future growth.

We have a limited number of employees and we depend on the continued services and performance of our key personnel. The loss of more than one member of this team could disrupt our operations and negatively impact our projected future growth. In addition, as we continue to grow, we cannot guarantee we will continue to attract and retain the personnel we need to maintain our competitive position.

Our lack of diversification increases the risk of an investment in the Company.

Our business lacks significant diversification and to date has been dependent on the success of our mercury emission control technologies. As a result, we are impacted more acutely by factors affecting our industry or the regions in which we operate than we would if our business were more diversified, enhancing our risk profile. While we are in the process of developing new technologies, particularly in the water treatment market, no assurance can be made that any such new technologies currently under development will be commercialized or result in a significant revenue stream.

Low gas prices can negatively impact our results of operations; mild weather could also have corresponding effects on the demand for coal.

Our mercury-emissions control technologies are used by coal-fired power plants primarily in the United States. At such times that gas prices remain low for sustained periods of time or such prices drop substantially, power suppliers will likely rely more upon gas-fired units rather than coal plants in meeting their power needs. Historically, gas prices have been volatile and are likely to remain volatile in the future due to numerous factors beyond our control. Although market prices for natural gas have recently remained relatively high, we cannot predict when such prices may decline and remain low for an extended period of time which, in such event, will likely cause a weaker demand for our products. In addition, mild winter months in the U.S. will also result in less of a power demand, which will also be expected to negatively impact our operations.

Our insurance coverage may not be adequate to protect us from all business risks.

We may be subject, in the ordinary course of business, to claims resulting from products liability, employment-related actions, class action lawsuits, accidents, acts of God, and other actions against us. Additionally, our insurance coverage may be insufficient to cover all existing and future claims against us. We may be compelled to expend significant time and resources defending any such claims, and a loss that is uninsured or which exceeds policy limits may require us to pay substantial amounts, which could adversely affect our financial condition and operating results.

Litigation resulting from disputes with customers may result in substantial costs, liabilities, and loss of revenues.

From time to time, we may be faced with disputes with our customers over the provisions of supply contracts relating to, among other things, pricing, quality, quantity, and the existence of specified conditions beyond our or our customers' control that impact performance obligations under the particular contract. In the event such disputes occur, we may not be able to resolve those disputes in a satisfactory manner, which could have a material adverse effect on our business, financial condition, and results of operations.

Revenues are generated under contracts or blanket purchase orders that must be renegotiated periodically.

Substantially all of our revenues to date have been generated under contracts or blanket purchase orders which expire periodically or which must be frequently renegotiated, extended, or replaced. Whether these contracts or blanket purchase orders are renegotiated, extended, or replaced is often subject to factors that may be beyond our control, including an extremely competitive marketplace for the services we offer. We cannot assure you that the costs and pricing of our services can remain competitive in the marketplace or that we will be successful in renegotiating our contracts and blanket purchase orders.

Business interruptions could significantly disrupt our operations and could have a material adverse impact on us.

Our operations, and those of our suppliers, and other contractors and consultants, could be subject to geopolitical events, natural disasters, power and other infrastructure failures or shortages, public health pandemics or epidemics, extreme weather events, including hurricanes, wildfires and prolonged droughts, and other natural or man-made disasters or business interruptions. Any of such occurrences may disrupt our operations, damage our facilities, affect our supply chains, disrupt our workforce, and impact our business relationships with other third parties. Any such disruptions or losses we incur could have a material adverse effect on our financial results and our ability to conduct business as expected.

Any disruptions to our information technology systems or breaches of our network security could interrupt our operations, compromise our reputation, and expose us to and costly response measures and could have a material adverse effect on our business operations.

We rely on information technology systems, including third-party hosted servers and cloud-based servers, to keep business, financial, and corporate records, communicate internally and externally, and operate other critical functions. If any of our internal systems or the systems of our third-party providers are compromised due to computer virus, unauthorized access, malware, and the like, then sensitive documents could be exposed or deleted, and our ability to conduct business could be impaired. Cyber incidents can result from deliberate attacks or unintentional events. These incidents can include, but are not limited to, unauthorized access to our systems, computer viruses or other malicious code, denial of service attacks, malware, ransomware, phishing, human error, or other events that result in security breaches or give rise to the manipulation or loss of sensitive information or assets. Cyber incidents can be caused by various persons or groups, including disgruntled employees and vendors, activists, organized crime groups, and state-sponsored and individual hackers. Cyber incidents can also be caused or aggravated by natural events, such as earthquakes, floods, fires, power loss, and telecommunications failures. The risk of cybersecurity breach has generally increased as the number, intensity, and sophistication of attempted attacks from around the world has increased. While we have certain cyber security procedures in place, given the evolving nature of these threats, there can be no assurance that we will not suffer material losses in the future due to cyber-attacks.

Maintaining and improving our financial controls may divert management's attention and increase costs.

We are subject to the requirements of the Exchange Act, including the requirements of the Sarbanes-Oxley Act of 2002. The requirements of these rules and regulations have increased in recent years, causing an increase in legal and financial compliance costs, and make some activities more difficult, time-consuming, or costly and may also place undue strain on our personnel, systems, and resources. Such rules and regulations require, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. This can be difficult to do. In this regard, our management concluded our internal control over financial reporting and disclosure controls were not effective as of December 31, 2024 and as of September 30, 2025. While we have completed certain remedial actions, we continue to plan for and implement additional control procedures to improve our overall control environment, and we expect these efforts to continue throughout 2026 and beyond. As a result of this and similar activities, management's attention may be diverted from other business concerns, which could have a material adverse effect on our business, financial condition, and results of operations. Further, investors could lose confidence in our financial reports, and our stock price may be adversely affected, if our internal controls over financial reporting continue to be found not to be effective by management or if we make disclosure of existing or potential significant deficiencies or material weaknesses in those controls in the future. Relatedly, if we fail to remediate any such material weakness in the future, we may not be able to accurately report our financial condition or results of operations.

Liquidity risk could impair our ability to fund operations and jeopardize our financial condition.

Liquidity, i.e., ready access to funds, is essential to our business. Our access to external sources of financing could be impaired by factors that are specific to us or others that may be outside of our control. As a result, such liquidity risk could impair our ability to fund operations and jeopardize our financial condition.

Our management has discretion in the use of our available funds

Management has discretion concerning the use of our available funds, as well as the timing of their expenditure. As a result, investors will be relying on the judgment of management for the application of our available funds. The results and the effectiveness of the application of the available funds are uncertain. If available funds are not applied effectively, the results of our operations may suffer. Stockholders may not agree with the manner in which management chooses to allocate and spend our available funds.

Our Board of Directors concluded in 2025 that we needed to restate previously issued financial statements as a result of a change in accounting for a certain license agreement.

On March 28, 2025, our Board of Directors, along with our Audit Committee and with management and, following dialogue with our auditors, concluded that our previously issued financial statements for the periods ended December 31, 2023 and 2022 included in the Company's Annual Reports on Form 10-K, and the periods ended March 31, 2024, June 30, 2024, and September 30, 2024, March 31, 2023, June 30, 2023, and September 30, 2023, included in the Company's Quarterly Reports on Form 10-Q, should no longer be relied upon as a result of the change in accounting for a certain license agreement. We concluded that the Company should have recognized the entire proceeds receivable pursuant to the agreement as revenue during the year ended December 31, 2022. The Company should also have recognized the financing component of the licensing agreement during the fiscal years ended December 31, 2023 and 2024. Such restatement, and any future restatements of our financial position, could cause uncertain sentiment in the investment community.

Risks Related to Regulation

Any significant changes in environmental regulations related to mercury emissions and potable water treatment could have a major impact on us.

Our business relies heavily on environmental regulations governing emissions from coal-fired power plants and regulations related to water treatment. In the United States, the MATS rule, issued by the EPA in 2011, is intended to reduce air emissions of heavy metals, including 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. Potable water treatment is regulated primarily by the EPA under the SDWA, which establishes standards to ensure that water is safe for human consumption. In April 2024, the EPA issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as forever chemicals. The Rule sets limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA/GenX. Any changes, rollbacks or delays in these regulations could significantly impact the Company's financial performance and growth prospects. In this regard, on May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS, but also announced its intent to extend the PFOA and PFOS MCL compliance deadlines to 2031 and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA, and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

Since being enacted, the MATS Rule has been subject to legal challenges and modifications which may continue.

Since being enacted in 2011, the MATS regulation has been subject to legal challenge and modifications. In June 2015, the U.S. Supreme Court, in *Michigan v. EPA*, held that the EPA unreasonably failed to consider costs in determining whether it is “appropriate and necessary” to regulate hazardous air pollutants, including mercury, from power plants, but left the rule in place. In April 2016, the EPA issued a supplemental finding in response to the *Michigan* decision and found that, after a consideration of costs, it remained appropriate and necessary to regulate such emissions from coal- and oil-fired power plants. In May 2020, the EPA, then under the first Trump Administration, reversed the determination, finding that, after weighing the costs of compliance against certain benefits of the regulation, the 2016 supplemental finding was erroneous, but left the MATS rule in place. Upon taking office, the Biden Administration in January 2021 directed the EPA to review the previous Administration’s actions on various environmental matters, including the withdrawal of the May 2020 “appropriate and necessary” determination, for conformity with the Biden Administration’s environmental policy. On February 9, 2022, the EPA proposed to revoke the May 2020 finding and reaffirm the EPA’s 2016 finding. On February 15, 2023, the EPA reaffirmed that it remains appropriate and necessary to regulate hazardous air pollutants, including mercury, from power plants after considering cost, and revoked the May 2020 finding. 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 and updates MATS for coal-fired power plants 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. In June 2025, the EPA proposed to repeal certain amendments finalized in 2024 to the MATS Rule and return compliance obligations to the MATS standards which existed prior to the 2024 update. On December 23, 2025, the EPA submitted a draft of the final action to the OMB for interagency review under Executive Order 12866. As indicated on the EPA’s website, following completion of the OMB interagency review process, in accordance with OMB Memorandum M-25-36, section 1.A., the EPA expected that the EPA Administrator of the Office of Information and Regulatory Affairs of the OMB would finalize the action by the end of January 2026. As of February 3, 2026, the EPA has not updated this expected timeline.

Uncertainty of and variability in international environmental regulations could restrict our ability to expand outside of the United States.

While the focus of our business has been North America, and particularly the United States, in order to expand our business internationally, we would expect that more restrictive international environmental regulations will need to be enacted for the purpose of mercury control from power plant emissions. In May 2017, the European Union and seven of its member states ratified the Minamata Convention on Mercury. The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. Specific emissions limits are being developed by the European Union, although the timing of any enactment of such is uncertain. With regard to business opportunities in China and other Asian countries, there currently exists no specific mandate for mercury capture that requires specific control technology, such as we offer. Any delay in enactment of more restrictive international regulations or the lack thereof could restrict any efforts and our ability to attract business in Europe and Asia for our emissions technologies.

With regard to our water treatment technologies, we intend to focus on the U.S. market. In the event we seek to expand our water treatment business internationally, we will face a complex array of international water treatment regulations, which vary significantly across countries and may be subject to frequent changes. This regulatory variability introduces uncertainty and potential compliance challenges should we seek to expand globally.

Risks Related to our Common Stock and this Offering

Trading activity for our common stock has varied, and, at times, been limited.

Our common stock is currently traded in Canada on the TSX under the symbol “BCHT” and is quoted in the United States on the OTCQB operated by OTC Markets Group Inc. under the symbol “BCHT”. Historically, the trading volume for our common stock

has varied and, at times, been limited. Accordingly, if we are not able to list our shares of common stock on the NYSE American and our common stock continues to trade on the TSX and is quoted on the OTCQB, investors may find it more difficult to buy and sell our shares. These factors may have an adverse impact on the trading and price of our common stock.

Our stock price may be volatile, which could result in substantial losses to investors and litigation.

In addition to changes to market prices based on our results of operations and the factors discussed elsewhere in this “*Risk Factors*” section, the market price of and trading volume for our common stock may change for a variety of other reasons, not necessarily related to our actual operating performance. The capital markets have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock. In addition, the average daily trading volume of the securities of small companies can be very low, which may contribute to future volatility. Factors that could cause the market price of our common stock to fluctuate significantly include:

- the results of operating and financial performance and prospects of other companies in our industry;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- announcements of innovations, increased service capabilities, new or terminated customers, or new, amended, or terminated contracts by our competitors;
- the public’s reaction to our press releases, other public announcements, and filings with the SEC;
- lack of securities analyst coverage or speculation in the press or investment community about us or market opportunities in our industry or about the market for coal-fired power in the U.S. or abroad;
- changes in government policies in the United States and in foreign countries, if we are able to derive significant business outside of the United States;
- changes in earnings estimates or recommendations by securities or research analysts who track our common stock or failure of our actual results of operations to meet those expectations;
- market and industry perception of our success, or lack thereof, in pursuing our growth strategy;
- changes in accounting standards, policies, guidance, interpretations, or principles;
- any lawsuit involving us, our services, or our products;
- arrival and departure of key personnel;
- sales of common stock by us, our investors or members of our management team; and
- changes in general market, economic and political conditions in the United States, and global economies or financial markets, including those resulting from natural or man-made disasters.

Any of these factors, as well as broader market and industry factors, may result in large and sudden changes in the trading volume of our common stock and could seriously harm the market price of our common stock, regardless of our operating performance. This may prevent you from being able to sell your shares of common stock at or above the price you paid for such shares, if at all. In addition, following periods of volatility in the market price of a company’s securities, stockholders often institute securities class action litigation against that company. Our involvement in any class action suit or other legal proceeding could divert our senior management’s attention and could adversely affect our business, financial condition, results of operations, and prospects.

Shares of common stock eligible for future sale may have adverse effects on our share price.

Sales of substantial amounts of shares of common stock or the perception that such sales could occur may adversely affect the prevailing market price for our shares. We may issue additional shares of common stock in subsequent public offerings or private placements to make new investments or for other purposes. We are not required to offer any such shares of common stock to existing stockholders on a preemptive basis. Therefore, it may not be possible for existing stockholders to participate in such future share issuances, which may dilute the existing stockholders' interests in us.

We do not anticipate paying any cash dividends on our capital stock in the foreseeable future.

We have never declared or paid any cash dividends on our capital stock, and we do not anticipate paying any cash dividends on our capital stock in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, capital appreciation, if any, of our common stock may be your sole source of gain for the foreseeable future.

We may need additional capital in the future, which may not be available on acceptable terms or at all, to continue investing in our business and to finance acquisitions and other strategic transactions.

We may need additional capital in the future, which may not be available on acceptable terms or at all, to among other things, continue investing in our business, pursue acquisitions and other strategic transactions. Future financings may involve the issuance of debt, equity, and/or securities convertible into or exercisable or exchangeable for our equity securities. These financings may not be available to us on commercially reasonable terms or at all if and when we require funding. If we are able to consummate such financings, the trading price of our common stock could be adversely affected and/or the terms of such financings may adversely affect the interests of our existing stockholders. Any failure to obtain additional working capital, if and when required, could have a material adverse effect on our business and financial condition and may result in a decline in our stock price.

Our officers and directors are entitled to indemnification from us for liabilities under our articles of incorporation, which could be costly to us and may discourage the exercise of stockholder rights.

Our Certificate of Incorporation provides that we possess and may exercise all powers of indemnification of our officers, directors, employees, agents, and other persons and our second amended and restated by-laws ("Bylaws") also require us to indemnify our officers and directors as permitted under the provisions of the General Corporate Law of the State of Delaware (the "DGCL"). The foregoing indemnification obligations could result in our incurring substantial expenditures to cover the cost of settlement or damage awards against directors and officers. These provisions and resultant costs may also discourage us from bringing a lawsuit against directors, officers, and employees for breaches of their fiduciary duties, and may similarly discourage the filing of derivative litigation by our stockholders against our directors, officers, and employees even though such actions, if successful, might otherwise benefit the Company and stockholders.

Our common stock is currently characterized as a "penny stock" under SEC rules. It may be more difficult to resell securities classified as "penny stock."

Our common stock is currently characterized as a "penny stock" under applicable SEC rules (generally defined as non-exchange traded stock with a per-share price below \$5.00). While we do not expect the common stock to be a "penny stock" upon consummation of this offering and the proposed listing on the NYSE American, if we are later deemed a "penny stock", certain rules impose additional sales practice requirements on broker-dealers that recommend the purchase or sale of penny stocks to persons other than those who qualify as "established customers" or "accredited investors." For example, broker-dealers must determine the appropriateness for non-qualifying persons of investments in penny stocks. Broker-dealers must also provide, prior to a transaction in a penny stock not otherwise exempt from the rules, a standardized risk disclosure document that provides information about penny stocks and the risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, disclose the compensation of the broker-dealer and its salesperson in the transaction, furnish monthly account statements showing the market value of each penny stock held in the customer's account, provide a special written determination that the penny stock is a suitable investment for the purchaser, and receive the purchaser's written agreement to the transaction.

U.S. legal remedies available to an investor in “penny stocks” may include the following:

- If a “penny stock” is sold to the investor in violation of the requirements listed above, or other federal or states securities laws, the investor may be able to cancel the purchase and receive a refund of the investment.
- If a “penny stock” is sold to the investor in a fraudulent manner, the investor may be able to sue the persons and firms that committed the fraud for damages.

These requirements may have the effect of reducing the level of trading activity, if any, in the secondary market for a security that becomes subject to the penny stock rules. The additional burdens imposed upon broker-dealers by such requirements may discourage broker-dealers from effecting transactions in our securities, which could severely limit the market price and liquidity of our securities. These requirements may restrict the ability of broker-dealers to sell our common stock and may affect your ability to resell our common stock.

Many brokerage firms will discourage or refrain from recommending investments in penny stocks. Most institutional investors will not invest in penny stocks. In addition, many individual investors will not invest in penny stocks due, among other reasons, to the increased financial risk generally associated with these investments.

For these reasons, penny stocks may have a limited market and, consequently, limited liquidity. We can give no assurance at what time, if ever, our common stock will not be classified as a “penny stock” in the future.

If our application to list our common stock on the NYSE American is not approved for any reason and we cannot continue to satisfy the continued listing requirements of the TSX, our common stock may be delisted from the TSX, which could negatively impact the price of our securities and your ability to sell them.

On July 20, 2023, our shares of common stock began to trade on the TSX Venture Exchange (“TSXV”). On October 9, 2024, we received conditional approval to list our common stock on the TSX and uplist from the TSXV to the TSX, and on November 12, 2024, our common stock commenced trading on the TSX. If our application to list our common stock on the NYSE American is not approved, we will not complete this offering and cannot assure you that our common stock will continue to be listed on the TSX. In order to maintain our listing on the TSX, we will be required to comply with certain rules of the TSX, including those regarding a minimum public float, and various additional requirements. We may not be able to continue to satisfy these requirements and applicable rules. If we are unable to satisfy the TSX criteria for maintaining our listing, our common stock could be subject to delisting from the TSX.

If the TSX subsequently delists our common stock from trading, we could face significant consequences, including:

- a limited availability for market quotations for our securities;
- reduced liquidity with respect to our securities;
- limited amount of news and analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

Potential future sales pursuant to Rule 144 may depress the price of our common stock.

Many of the shares of our common stock presently held by management and others are “restricted securities” as that term is defined in Rule 144, promulgated under the United States Securities Act of 1933, as amended (the “Securities Act”). Under Rule 144 of the Securities Act, a person (or persons whose shares are aggregated) who has satisfied a certain holding period, may, under certain circumstances, sell such shares or a portion of such shares. Such holding periods have already been satisfied in many instances. Therefore, actual sales or the prospect of sales of such shares under Rule 144 in the future may depress the price of our common stock.

Except as required by the federal securities laws, we do not undertake any obligation to release publicly any revisions to any forward-looking statements to reflect events or circumstances after the date of this prospectus or for any other reason.

Our Chief Executive Officer has the ability to significantly influence all matters submitted to our stockholders for approval.

As of January 29, 2026, our Chief Executive Officer, Richard MacPherson, beneficially owned approximately 14.51% of our outstanding shares of common stock, and upon consummation of this offering, would beneficially own approximately 11.36% of our outstanding shares of common stock. As a result, while we do not expect to be a “controlled company” within the meaning of the corporate governance rules of the NYSE American on which we intend to list our common stock, Mr. MacPherson is able to significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, Mr. MacPherson would significantly influence the election of directors and the approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of voting power could delay or prevent an acquisition of the Company on terms that other stockholders may desire.

Delaware law, our Certificate of Incorporation and Bylaws contain certain provisions, including anti-takeover provisions, that limit the ability of stockholders to take certain actions and could delay or discourage takeover attempts that stockholders may consider favorable.

Our Certificate of Incorporation, Bylaws and the DGCL contain provisions that could have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our Board of Directors and therefore depressing the trading price of our common stock. These provisions also could make it difficult for stockholders to take certain actions, including electing directors who are not nominated by the current members of our Board of Directors or taking other corporate actions, including effecting changes in our management. Among other things, our Certificate of Incorporation and Bylaws include provisions regarding:

- the ability of our Board of Directors to determine the rights, preferences and privileges of our preferred stock and to issue the preferred stock without stockholder approval;
- advance notice requirements for election to our Board of Directors and for proposing matters that can be acted upon at stockholder meetings;
- vacancies on our Board of Directors may be filled by a majority of directors then in office, although less than a quorum;
- authority granted to our Board of Directors to increase or decrease the size of our Board of Directors;
- authorization for our Board of Directors, by majority vote, to amend the Bylaws; and
- under the DGCL, stockholders are not entitled to cumulative voting in the election of directors unless specifically provided for; our Certificate of Incorporation and Bylaws do not provide for cumulative voting.

Investors in this offering will experience immediate and substantial dilution in net tangible book value.

The public offering price per share of our common stock will be substantially higher than the pro forma as adjusted net tangible book value per share of our outstanding shares of common stock as of September 30, 2025. As a result, investors in this offering will incur immediate dilution of \$3.08 per share, based on the assumed public offering price of \$3.67 per share. Investors in this offering will pay a price per share that substantially exceeds the book value of our assets after subtracting our liabilities. See “Dilution” for a more complete description of how the value of your investment will be diluted upon the completion of this offering.

Immediately prior to the consummation of this offering, we expect to have outstanding stock options to purchase approximately 335,000 shares of our common stock at exercise prices that are below the assumed public offering price of our common stock. To the extent that these options are exercised, there will be further dilution.

If we cannot satisfy the initial listing standards for listing on the NYSE American in connection with this offering, or in the event that our listing application is approved and we subsequently fail to comply with the standards for continued listing on the NYSE American, this could negatively impact the price of our common stock and your ability to sell your shares of common stock.

We have applied to have our common stock approved for listing on the NYSE American upon consummation of this offering. If our application to list on the NYSE American is not approved, we will not complete this offering. Furthermore, even if our application

to list on the NYSE American is approved we cannot assure you that we will be able to meet the NYSE American's initial listing requirements at that time.

In addition, following this offering, in order to maintain our listing on the NYSE American, we will be required to comply with certain rules of the NYSE American, including those regarding minimum stockholders' equity, minimum share price, minimum market value of publicly held shares, and various additional requirements. Even if we initially meet the listing requirements and other applicable rules of the NYSE American, we may not be able to continue to satisfy these requirements and applicable rules. If we are unable to satisfy the NYSE American criteria for maintaining our listing, our securities could be subject to delisting.

If the NYSE American subsequently delists our common stock from trading, we could face significant consequences, including:

- reduction in the market price of our common stock;
- a limited availability for market quotations for our common stock;
- reduced liquidity with respect to our common stock;
- a determination that our common stock is a "penny stock," which will require brokers trading in our common stock to adhere to more stringent rules and possibly result in a reduced level of trading activity in the secondary trading market for our common stock;
- an inability to obtain financing for the continuation of our operations;
- a reduction in the number of institutional and general investors that will consider investing in our common stock;
- a reduction in the number of investors in general that will consider investing in our common stock;
- a reduction in the number of market makers in our common stock;
- a reduction in the number of broker-dealers willing to execute trades in shares of our common stock;
- a reduction in the availability of information concerning the trading prices and volume of our common stock;
- limited amount of news and analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

Even though we effected the 1-for-5 reverse stock split of our common stock, we cannot assure you that the market price of our common stock will remain high enough for such reverse stock split to have the intended effect of complying with the NYSE American's minimum price requirement.

In connection with this offering and the uplist of our common stock to the NYSE American, we effected a 1-for-5 reverse stock split on December 26, 2025 with the primary purpose to allow us to meet the NYSE American's minimum price requirement. There can be no assurance that the market price of our common stock following such reverse stock split will remain at the level required for compliance with that requirement. In any event, other factors unrelated to the number of shares of our common stock outstanding, such as negative financial or operational results, could adversely affect the market price of our common stock and thus jeopardize our ability to meet or maintain the NYSE American's minimum price requirement.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds will be used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment.

The failure by our management to apply these funds effectively could harm our business. If we do not apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our Company. If no securities or industry analysts commence coverage of our Company, the trading price for our common stock would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who covers us downgrades our common stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our Company or fails to publish reports on us regularly, demand for our common stock could decrease, which might cause our stock price and trading volume to decline.

The sale or availability for sale of substantial amounts of common stock could adversely affect their market price.

We expect to raise capital to fund our business by issuing additional shares of common stock and/or securities convertible into common stock, and the sales of substantial amounts of the common stock in the public market after the completion of this offering, or the perception that these sales could occur, could adversely affect the market price of the common stock and could materially impair our ability to raise capital through equity offerings in the future. The common stock sold in this offering will be freely tradable without restriction or further registration under the Securities Act, and shares held by our existing stockholders may also be sold in the public market in the future subject to the restrictions under the Securities Act. Future sales and issuances of our capital stock or rights to purchase our capital stock could result in substantial dilution to our existing stockholders. We may sell common stock, convertible securities and other equity securities in one or more transactions at prices and in a manner as we may determine from time to time. If we sell any such securities in subsequent transactions, investors may be materially diluted. New investors in such subsequent transactions could gain rights, preferences and privileges senior to those of holders of our common stock. Additionally, sales of shares by our directors, executive officers and holders of 5% or more of our outstanding common stock could have a material adverse effect on the trading price of our common stock.

There will be 24,905,558 shares of common stock outstanding immediately after this offering, and 25,722,997 shares of common stock outstanding immediately after this offering if the underwriters exercise their option to purchase additional shares of common stock in full pursuant to the over-allotment option, assuming a public offering price of \$3.67 per share, which is based on the closing price of the shares of common stock on the OTCQB on January 29, 2026.

Techniques employed by short sellers may drive down the market price of our common stock.

Short selling is the practice of selling securities that the seller does not own but rather has borrowed from a third party with the intention of buying identical securities back at a later date to return to the lender. The short seller hopes to profit from a decline in the value of the securities between the sale of the borrowed securities and the purchase of the replacement shares, as the short seller expects to pay less in that purchase than it received in the sale.

As it is in the short seller's interest for the price of the security to decline, many short sellers publish, or arrange for the publication of, negative opinions regarding the relevant issuer and its prospects to create negative market momentum and generate profits for themselves after selling a security short. These short attacks have, in the past, led to selling of shares in the market.

It is not clear what effect such negative publicity could have on us. If we were to become the subject of any unfavorable allegations, whether such allegations are proven to be true or untrue, we could have to expend significant resources to investigate such allegations and/or defend ourselves.

We may be constrained in the manner in which we can proceed against the relevant short seller by principles of freedom of speech, applicable state law or issues of commercial confidentiality. Such a situation could be costly and time-consuming, and could distract our management from growing our business. Even if such allegations are ultimately proven to be groundless, allegations against us could severely impact our business, and any investment in the common stock could be greatly reduced or even rendered worthless.

We may be subject to securities litigation, which is expensive and could divert our management's attention.

The market price of our common stock may be volatile, and in the past companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

There is no assurance that an investment in our common stock will earn any positive return.

There is no assurance that an investment in our common stock will earn any positive return. An investment in our common stock involves a high degree of risk and should be undertaken only by investors whose financial resources are sufficient to enable them to assume such risks and who have no need for immediate liquidity in their investment. An investment in our common stock is appropriate only for investors who have the capacity to absorb a loss of some or all of their investment.

An investment in our common stock, and certain subsequent transactions with respect to our common stock, may result in uncertain or adverse U.S. federal income tax consequences for an investor.

An investment in our common stock, and certain subsequent transactions with respect to our common stock, may result in uncertain or adverse U.S. federal income tax consequences for an investor. See the section entitled "Material U.S. Federal Income Tax Consequences to U.S. and Non-U.S. Holders" below for a summary of the principal U.S. federal income tax consequences of an investment in our common stock. Each prospective investor is urged to consult with and rely solely upon its own tax advisors with respect to these and other tax consequences when purchasing, holding or disposing of our common stock.

The reverse stock split could cause our stock price to decline relative to its value before the split and decrease the liquidity of shares of our common stock.

On December 26, 2025, we effected a 1-for-5 reverse stock split of our issued and outstanding common stock. There is no assurance that such reverse stock split will not cause a decline in the value of our outstanding common stock. The liquidity of the shares of our common stock may be affected adversely by such reverse stock split given the reduced number of shares that are outstanding following such reverse stock split, especially if the market price of our common stock does not increase as a result. Additionally, it is not uncommon for the market price of a company's common stock to decline in the period following a reverse stock split. If the market price of our common stock declines following the effectuation of our 1-for-5 reverse stock split, the percentage decline may be greater than would occur in the absence of such a reverse stock split. In addition, this reverse stock split may have increased the number of stockholders who own odd lots (less than 100 shares) of our common stock, creating the potential for such stockholders to experience an increase in the cost of selling their shares and greater difficulty effecting such sales.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets, or future development and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events and they are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “expects,” “anticipates,” “intends,” “estimates,” “plans,” “believes,” “seeks,” “may,” “should,” “could,” or the negative of such terms or other similar expressions, but the absence of this terminology does not mean that a statement is not forward-looking. Accordingly, these statements involve estimates, assumptions, and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the risks discussed throughout this prospectus. 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 our 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 our new technologies, particularly in the water treatment market;
- ability to retain key personnel;
- the potential that dividends may never be declared;
- varied, and, at times, limited trading activity for our common stock;
- volatility in our stock price; and
- other factors described in the section entitled “Risk Factors”.

You should read this prospectus (as it may be supplemented or amended) and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only. Because the risk factors referred to above, as well as the risk factors referred to on page 11 of this prospectus, could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. 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 prospectus, 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. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained above and throughout this prospectus. We qualify all of our forward-looking statements by these cautionary statements.

IN ADDITION TO THE ABOVE RISKS, BUSINESSES ARE OFTEN SUBJECT TO RISKS NOT FORESEEN OR FULLY APPRECIATED BY MANAGEMENT. IN REVIEWING THIS PROSPECTUS, POTENTIAL INVESTORS SHOULD KEEP IN MIND THAT THERE MAY BE OTHER POSSIBLE RISKS THAT COULD BE IMPORTANT.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$17.7 million from the sale of the shares of common stock offered in this offering, or approximately \$20.5 million if the underwriters exercise their over-allotment option in full, in each case based upon the assumed public offering price of \$3.67 per share and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering, together with our existing cash, for, among other things, continuing operating expenses, working capital and other general corporate purposes.

Each \$1.00 increase or decrease in the assumed public offering price of \$3.67 per share, the last reported sale price per share of our common stock on the OTCQB on January 29, 2026, would increase or decrease the net proceeds to us from this offering by \$5.1 million, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase or decrease of 100,000 shares of common stock offered by us, would increase or decrease the net proceeds to us by \$341,310, assuming the assumed public offering price per share remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The expected use of net proceeds of this offering represents our current intentions based upon our present plan and business conditions. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering. The amounts and timing of our actual expenditures will depend upon numerous factors, including our sales and marketing and commercialization efforts, demand for our products, our operating costs, and the other factors described under “Risk Factors” in this prospectus. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from this offering.

DIVIDEND POLICY

We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business, and therefore do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our Board of Directors and will depend on, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects, and other factors our Board of Directors may deem relevant. Investors should not purchase our common stock with the expectation of receiving cash dividends.

CAPITALIZATION

The following table sets forth our capitalization as of September 30, 2025:

- on an actual pre-reverse stock split basis;
- on a pro forma basis, to give effect to the reverse stock split of our common stock at a 1-for-5 ratio effected on December 26, 2025, as well as the issuance of 82,553 shares (on a post-reverse stock split basis) of our common stock upon the cashless exercise of options in December 2025; and
- on a pro forma as adjusted basis to give further effect to the issuance and sale by us of 5,449,592 shares of our common stock in this offering, assuming a public offering price of \$3.67 per share and the receipt by us of the net proceeds of such issuance and sale after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this information together with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this prospectus.

	As of September 30, 2025		
	Actual (unaudited)	Pro Forma (unaudited)	Pro Forma As Adjusted (unaudited)
Cash and cash equivalents	\$ 1,768,227	\$ 1,768,227	\$ 19,508,227
Total liabilities	11,280,089	11,280,089	11,280,089
Stockholders’ 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, 96,866,109 shares issued and outstanding (actual); 19,455,966 issued and outstanding (pro forma); 24,905,558 issued and outstanding (pro forma as adjusted)	96,866	19,456	24,906
Additional paid-in capital	73,947,827	74,025,237	91,759,787
Accumulated deficit	(75,186,360)	(75,186,360)	(75,186,360)
Total stockholders’ (deficit) equity	(1,141,667)	(1,141,667)	16,598,333
Total capitalization	<u>\$ 10,138,422</u>	<u>\$ 10,138,422</u>	<u>\$ 27,878,422</u>

The number of shares of common stock to be outstanding after this offering is based on 96,866,109 shares (on a pre-reverse stock split basis) of common stock outstanding at September 30, 2025 and excludes the following:

- 5,350,000 shares (on a pre-reverse stock split basis) of common stock issuable upon exercise of our outstanding stock options at a weighted average exercise price of \$0.69 per share (on a pre-reverse stock split basis); and
- 7,591,306 shares (on a pre-reverse stock split basis) of common stock reserved for issuance pursuant to the 2017 Plan.

Unless otherwise indicated, all information in this prospectus assumes no exercise by the underwriters of their option to purchase up to 817,439 additional shares of common stock in this offering. The actual number of shares of common stock issued and sold in this offering will depend on the final public offering price.

A \$1.00 increase (decrease) in the assumed public offering price of \$3.67 per share (the closing sale price of our common stock on the OTCQB on January 29, 2025), would increase (decrease) pro forma as adjusted cash and cash equivalents and total stockholders’ equity by approximately \$5.1 million, after deducting underwriting fees and estimated offering expenses payable by us, and assuming the number of shares of common stock set forth on the cover page of this prospectus remains the same. The pro forma as adjusted information discussed above is illustrative only and may change based on the actual public offering price and other terms of this offering determined at pricing. Similarly, each increase (decrease) of 100,000 shares in the number of shares offered by us in this offering would increase (decrease) the pro forma as adjusted cash and cash equivalents and total stockholders’ equity by approximately \$341,000, assuming the assumed public offering price of \$3.67 per share remains the same, and after deducting estimated underwriting discounts and commissions and estimated expenses payable by us.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

As of September 30, 2025, our historical net tangible book value (deficit), was \$(2,966,258), or \$(0.03) per share of our common stock. Net tangible book value (deficit) per share represents our total tangible assets (total assets less intangible assets) less total liabilities, divided by the total number of our outstanding shares of common stock as of September 30, 2025. After giving effect to the pro forma effect of the issuance of 82,553 shares (on a post-reverse stock split basis) of common stock upon the cashless exercise of options in December 2025, and the reverse stock split of our common stock at a 1-for-5 ratio effective December 26, 2025, our pro forma net tangible book value (deficit), would have been approximately \$(2,966,258), or \$(0.15) per share of our common stock.

After giving further effect to the issuance and sale of 5,449,592 shares of common stock in this offering, assuming a public offering price of \$3.67 per share, the most recent reported sale price of our common stock on January 29, 2026, and our receipt of the net proceeds from such issuance and sale, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2025 would have been approximately \$14.8 million, or \$0.59 per share of our common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of approximately \$0.74 per share to our existing stockholders and an immediate dilution of \$3.08 per share to new investors.

Dilution per share to investors participating in this offering is determined by subtracting the pro forma as adjusted net tangible book value per share after this offering from the public offering price per share paid by investors participating in this offering. The following table illustrates this dilution:

Assumed public offering price per share	\$	3.67
Historical net tangible book value per share as of September 30, 2025 (based on pre-reverse stock split shares of common stock outstanding)	\$	(0.03)
Decrease in pro forma net tangible book value per share attributable to our existing stockholders (based on post-reverse stock split shares of common stock outstanding)	\$	(0.12)
Pro forma net tangible book value per share attributable to our existing stockholders	\$	(0.15)
Increase in pro forma as adjusted net tangible book value per share attributable to our existing stockholders	\$	0.74
Pro forma as adjusted net tangible book value per share immediately after this offering	\$	0.59
Dilution in pro forma as adjusted net tangible book value per share to new investors participating in this offering	\$	3.08

The dilution information discussed above is illustrative and will change based on the actual number of shares and public offering price and other terms of this offering determined at pricing. If the underwriters exercise their option to purchase 817,439 additional shares of common stock in full, our pro forma as adjusted net tangible book value per share after this offering would be approximately \$0.68 per share, and the dilution in pro forma as adjusted net tangible book value per share to new investors participating in this offering would be \$2.99 per share.

A \$1.00 increase (decrease) in the assumed public offering price of \$3.67 per share, would increase (decrease) the pro forma as adjusted net tangible book value by \$0.20 per share and the dilution to investors participating in this offering by \$0.80 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated expenses payable by us. Similarly, each increase (decrease) of 100,000 shares in the number of shares of common stock offered by us in this offering would increase (decrease) the pro forma as adjusted net tangible book value by \$0.01 per share and the dilution to investors participating in this offering by \$0.01 per share, assuming the assumed public offering price of \$3.67 per share, remains the same, and after deducting estimated underwriting discounts and commissions and estimated expenses payable by us.

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The following table summarizes as of September 30, 2025, on a pro forma as adjusted basis, as described above, the number of shares of our common stock, the total consideration and the average price per share (1) paid to us by our existing stockholders and (2) to be paid by investors purchasing shares of our common stock in this offering, assuming a public offering price of \$3.67 per share of common stock offered by this prospectus, before deducting underwriting discounts and commissions and estimated offering expenses payable by us:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	19,455,966	78 %	\$ 74,044,693	79 %	\$ 3.81
New investors	5,449,592	22 %	\$ 20,000,000	21 %	\$ 3.67
Total	24,905,558	100.0 %	\$ 94,044,693	100.0 %	\$ 3.78

The total number of shares of the common stock reflected in the discussion and tables above is based on 19,455,966 shares of our common stock outstanding as of September 30, 2025, as adjusted for the reverse stock split of our common stock at a 1-for-5 ratio effected on December 26, 2025, as well as shares of our common stock issued upon the cashless exercise of options in December 2025, and the 24,905,558 shares of common stock does not take into account the exercise of the underwriters' over-allotment option and excludes outstanding stock options as of such date.

To the extent that our outstanding exercisable stock options are exercised you could experience further dilution. To the extent that we raise additional capital through the sale of additional equity, the issuance of any of our shares of common stock could result in further dilution to our stockholders.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the "Summary Financial Data" section of this prospectus and our consolidated financial statements and the related notes appearing elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks, uncertainties, and assumptions. You should read the "Special Note Regarding Forward-Looking Statements" and "Risk Factors" sections of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Restatements of Previously Issued Consolidated Financial Statements

As described in Note 2-Restatement of Previously Issued Financial Statements to our consolidated financial statements for the year ended December 31, 2024 included elsewhere in this prospectus, for the period ended December 31, 2024, management identified an error in the previously reported financial statements related to the under recognition of revenue during the year ended December 31, 2022. The Company entered into a license agreement for which it should have recognized the entire proceeds receivable pursuant to the agreement as revenue during the year ended December 31, 2022. The Company should also have recognized the financing component of the licensing agreement during the fiscal years ended December 31, 2023 and 2024. As a result, the consolidated financial statements appearing elsewhere in this prospectus reflect this restatement.

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 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 has largely been driven by federal regulations. The MATS rule, proposed by the EPA in May 2011 and which became effective in April 2012, is intended to reduce air emissions of heavy metals, including 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 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 and updates MATS for coal-fired power plants 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.

In June 2025, the EPA proposed to repeal certain amendments finalized in 2024 to the MATS Rule and return compliance obligations to the MATS standards which existed prior to the 2024 update. On December 23, 2025, the EPA submitted a draft of the final action to the OMB for interagency review under Executive Order 12866. As indicated on the EPA's website, following completion of the OMB interagency review process, in accordance with OMB Memorandum M-25-36, section 1.A., the EPA expected that the EPA Administrator of the Office of Information and Regulatory Affairs of the OMB would finalize the action by the end of January 2026. As of February 3, 2026, the EPA has not updated this expected timeline.

Water Treatment

In April 2024, the EPA under the Biden Administration issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as "forever chemicals". The rule established legally enforceable MCLs for six PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. Under the Rule, public water systems must monitor these PFAS and must 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 April 2024, we announced the introduction of our new water treatment business to address the growing potable (drinking) water market with next-generation sorbent technologies. These new solutions are being designed to use significantly less activated carbon, offering a more environmentally sustainable approach to water treatment while maintaining or improving contaminant removal performance. Our products target not only compliance with emerging PFAS regulations, but also broader opportunities in water quality improvement positioning us to serve a large and expanding market.

As part of this strategic pivot, we have invested in the commissioning of two state-of-the-art laboratory facilities—one in Pennsylvania and one in North Dakota—referred to as our "Design Centers." The Design Centers are dedicated sites for water treatment innovation and development. Together, we believe these facilities represent the only known facilities that have integrated capability in North America to thermally reactivate spent GAC under controlled conditions and subsequently conduct RSSCTs to directly compare reactivated GAC performance against virgin carbon counterparts. This combination allows us to evaluate reactivated GAC as a sustainable and cost-effective alternative to virgin carbon and address key water utility questions including how to optimize media changeout schedules, strategies to reduce operational costs, and provide lab-based validation of treatment performance for PFAS and other contaminants.

These Design Centers will also function as a direct resource for the water treatment industry, offering thermal reactivation, contaminant analysis, and carbon performance evaluations. By enabling municipal and industrial utilities to lower compliance costs and improve operational efficiency, we expect to build strong technical credibility and customer engagement ahead of large-scale market adoption. Importantly, we believe our technology platform is not solely dependent on PFAS regulations as market demand for improved water treatment solutions is broad.

Our investment in our Design Centers also serves as the basis for our planned commercial thermal reactivation plants which we intend to open and operate in the future. Data generated from the Design Centers is being used to define permitting requirements, capital expenditure parameters, and projected operating costs accelerating the commercialization timeline while avoiding costly future reliance on third-party providers.

On May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS. As part of this action, the EPA also announced its intent to extend the PFOA and PFOS MCL compliance deadlines to 2031 and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA/GenX, and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

In light of evolving water regulations and funding dynamics, we believe the Company is well positioned to capture a meaningful share in the rapidly growing water treatment sector.

Additional Information

In May 2024, we announced the appointment of David Mazyck to head our new business line to address the potable (drinking) water market with new sorbent technologies under development. In June 2025, he was appointed our Executive Director of Innovation and Commercialization. In addition, in May 2024, we announced the appointment of Dennis Baranik as Director of National Sales. Mr. Baranik oversees 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.

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 TSX and graduate from the TSXV to the TSX. On November 12, 2024, our shares of common stock commenced trading on the TSX under the ticker symbol "BCHT".

Other Recent Developments

On December 23, 2025, we filed with the Secretary of State of the State of Delaware a certificate of amendment to our Certificate of Incorporation to effect a reverse stock split of our issued and outstanding shares of common stock at a ratio of 1-for-5, effective December 26, 2025. Following the reverse stock split, every five (5) shares of our issued and outstanding common stock were automatically converted into one (1) issued and outstanding share of common stock, without any change in par value per share. No fractional shares were issued in connection with the reverse stock split, and any shareholders who would have received fractional shares of common stock instead were rounded up to the nearest whole number of shares of common stock. The reverse stock split did not affect the number of shares of authorized common stock. The common stock began trading on a reverse stock split-adjusted basis on December 31, 2025.

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, the Court entered non-final judgments on the verdict against the CERT defendants and the parties submitted post-trial motions relating to the jury trial. The CERT defendants also asserted that the Company's claims were barred due to their defense that they had an implied license to the asserted patents. A bench trial was held on such issue. On June 10, 2025, the Court ruled that the CERT defendants failed to prove that they had such an implied license and denied their motion to alter or amend the non-final judgment. On September 25, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants' post-trial motion that they should not be held liable as a matter of law for induced infringement, contributory infringement or willful infringement, and on November 20, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants' post-trial motion for a new trial on the issues of induced infringement, contributory infringement, willful infringement and damages. Thereafter, on December 17, 2025, the Court issued a memorandum order granting the Company's request for pre- and post-judgment interest, and denying the Company's request for enhanced damages. Following resolution of all post-trial motions, the Court issued the final judgment in favor of the Company on December 29, 2025 in the total amount of \$78,397,157.05, which amount includes pre-judgment interest. On January 28, 2026, the CERT defendants filed a notice of appeal of the judgment. Under applicable rules, the CERT defendants may seek a stay of execution of the judgment pending appeal by posting a bond or other security in an amount and form approved by the Court. As of the date of this prospectus, the CERT defendants have not obtained a bonded stay. Although the automatic stay of execution applicable following entry of judgment has expired, the appeal remains pending. Interest continues to accrue on the judgment amount during the pendency of the appeal.

Effective as of September 30, 2025, we entered into an agreement with another utility not named as a defendant in our patent litigations, but a party to the IPR petitions filed with the U.S. Patent and Trademark Office ("PTO"). Such agreement provides such utility and its affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with a certain designated coal-fired power plant operated by them. Such 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. Such party has agreed to withdraw from IPR petitions.

Effective as of October 15, 2025, the Company entered into an agreement with another utility named as a defendant in the Southern District of Iowa action. While the terms of the agreement are confidential, it includes a resolution of the disputes between the Company and that utility and its affiliates and provides for their withdrawal from related proceedings. As a result of this and the other agreements described above, the Company and several defendants have resolved their respective claims, and those defendants have been dismissed from the applicable actions. There remain two utilities in the consolidated Iowa actions.

As a result of the agreements described above, the Company and several defendants have resolved their respective claims, and those defendants have been dismissed from the applicable actions. There remain two utilities in the consolidated Iowa actions.

As described above, between January and April 2025, certain defendants in the consolidated Iowa actions filed IPR petitions seeking to invalidate various asserted claims. In September and October 2025, the U.S. Patent Trial and Appeal Board ("PTAB") granted the institution of the review of certain of the Company's asserted patents. The Company requested that the PTO Director review those decisions. On October 13, 2025, the Court in the consolidated Iowa actions ruled to stay the litigation pending completion of the IPR process in the PTAB. On November 25, 2025, in response to the Company's request for review, the PTO Director ordered the PTAB to reconsider most of its institution decisions from September and October 2025. No assurance can be given as to the ultimate outcome of these proceedings.

Between June and July 2025, certain other defendants in the consolidated Iowa actions filed IPR petitions seeking to invalidate various asserted claims. In November 2025, the PTO Director denied institution of all of those proceedings. Those defendants have requested that the PTO Director reconsider these decisions. No assurance can be given as to the ultimate outcome of these proceedings.

Results of Operations

Year Ended December 31, 2024 compared with Year Ended December 31, 2023

Revenues

We generated revenues of approximately \$17,406,000 and \$17,625,000 (as restated) for the years ended December 31, 2024 and 2023, respectively. Such revenues were primarily derived from sorbent product sales which were approximately \$14,482,000 and \$17,093,000 for the years ended December 31, 2024 and 2023, 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 in 2024 resulting in decreased product revenues for 2024 compared to the prior year, offset by an increase in licensing revenues for 2024 compared to 2023.

Licensing revenues were approximately \$2,808,000 and \$388,000 (as restated) for the years ended 2024 and 2023, respectively. Such increase was primarily due to a new licensing agreement which was entered into in 2024 with a utility.

Equipment sales and other revenues for the years ended December 31, 2024 and 2023 were approximately \$116,000 and \$145,000, respectively. This decrease was primarily due to a decrease in demonstrations and consulting revenues offset by an increase in equipment sales revenues in 2024 compared to 2023.

Cost of Sales

Cost of sales were approximately \$10,305,000 and \$12,172,000 for the years ended December 31, 2024 and 2023, respectively. The decrease in cost of sales of approximately \$1,867,000 was primarily attributable to decreased product sales in 2024 compared to the prior year, together with a decrease in the Company's cost of carbon in 2024 compared to 2023.

Gross Profit

Gross profit was approximately \$7,101,000 and \$5,453,000 (as restated) for the years ended December 31, 2024 and 2023, respectively. This increase in gross profit of approximately \$1,648,000 was primarily due to higher licensing revenues in 2024 compared to 2023, 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 an impairment loss of \$43,000 in 2024 and SG&A and an impairment loss of approximately \$220,000 in 2023. SG&A expenses were approximately \$14,216,000 and \$14,207,000 for the years ended December 31, 2024 and 2023, respectively. Although total SG&A expenses were largely unchanged in 2024 compared to the prior year, there were significant variances in individual categories. Increases in salaries and wages, including bonus compensation and engagement of new senior personnel, increases in our Board of Directors fees and increased stock-based compensation, were largely offset by reduced professional fees in 2024 compared to 2023. The decrease in professional fees was mainly due to two settlement agreements reached in the fourth quarter of 2023 with various defendants in our patent litigation. These agreements led to significant legal fees paid in 2023 to the patent litigation firm handling the cases, with no comparable expenses incurred in 2024.

Operating Loss

Our operating loss was approximately \$7,158,000 and \$8,973,000 (as restated) for the years ended December 31, 2024 and 2023, respectively. Such decrease in operating loss was primarily due to our increased gross profit in 2024 compared to 2023 coupled with total operating expenses remaining relatively unchanged from year to year.

Other Income (Expense)

During the years ended December 31, 2024 and 2023, we had income from legal claims of \$0 and approximately \$27,608,000, respectively. The income from legal claims in 2023 consisted of two settlement agreements reached in the fourth quarter of 2023 with various defendants in our patent litigation.

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Interest expense related to the financing of capital was approximately \$267,000 and \$1,362,000 for the years ended December 31, 2024 and 2023, respectively. The approximate breakdown of interest expense for the years ended December 31, 2024 and 2023 is as follows:

	Year Ended December 31,	
	2024	2023
Interest expense on notes payable	\$ 4,000	\$ 24,000
Other interest expense	21,000	2,000
Amortization of discount of notes payable	242,000	1,336,000
	<hr/> <u>\$ 267,000</u>	<hr/> <u>\$ 1,362,000</u>

Loss on change in fair value of profit share liability were approximately \$3,959,000 and \$11,210,000 for the years ended December 31, 2024 and 2023, respectively. The change is primarily attributed to the modification of the terms of the profit share liability (see Note 8 to the consolidated financial statements for the year ended December 31, 2024).

Net Income (Loss)

For the year ended December 31, 2024, we had a net loss of approximately \$10,802,000 compared to net income of approximately \$5,668,000 (as restated) for the year ended December 31, 2023. Such change was primarily due to no income from legal claims in 2024 compared to \$27,608,000 in 2023, offset by an increase in gross profit in 2024 compared to 2023, and a decrease in the loss on change in fair value of profit share recognized in 2024 compared to 2023.

Nine Months Ended September 30, 2025 compared with Nine Months Ended September 30, 2024

Revenues

We generated revenues of approximately \$13,837,000 and \$11,840,000 for the nine months ended September 30, 2025 and 2024, respectively. Such revenues were primarily derived from sorbent product sales which were approximately \$10,637,000 and \$11,479,000 for the nine months ended September 30, 2025 and 2024, respectively. Revenues from product sales can be dependent on natural gas prices, extreme weather, and the maintenance and downtime requirements of customer plants. The decrease in product sales from the prior year was primarily due to the mix of plants running, unexpected customer forced outages and products sold in the first nine months of 2025 resulting in decreased product revenues for the nine months ended September 30, 2025 compared to the prior year period. This decrease was offset by an increase in licensing revenues for the nine months ended September 30, 2025 compared to September 30, 2024, resulting in an overall increase in the revenues for the nine months ended September 30, 2025 compared to the prior year period.

Licensing revenues were approximately \$3,125,000 and \$274,000 for the nine months ended September 30, 2025 and 2024, respectively. Such increase was primarily due to new licensing agreements which were entered into during the nine months ended September 30, 2025 with primarily utility defendants.

Other revenues, consisting of demonstration, consulting and equipment sales, were approximately \$75,000 and \$87,000 for the nine months ended September 30, 2025 and 2024, respectively. Other revenues have not been material in relation to total revenues.

Cost of Sales

Cost of sales were approximately \$7,602,000 and \$8,056,000 for the nine months ended September 30, 2025 and 2024, respectively. This decrease in cost of sales of approximately \$454,000 for the nine months ended September 30, 2025 was primarily attributable to decreased product sales in the first nine months of 2025 compared to the prior year period, together with a change in the mix of products sold in the first nine months of 2025 compared to the first nine months of 2024.

Gross Profit

Gross profit was approximately \$6,235,000 and \$3,784,000 for the nine months ended September 30, 2025 and 2024. The increase in gross profit for the nine months ended September 30, 2025 was primarily due to significantly 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 SG&A and research and development expenses (“R&D”) in 2025 and SG&A and in 2024. Operating expenses decreased significantly in 2025 compared to 2024, despite incurring costs related to the development of the Company’s water treatment business. SG&A expenses were approximately \$6,617,000 and \$10,863,000 for the nine months ended September 30, 2025 and 2024, respectively. Total SG&A expenses decreased in the first nine months of 2025 compared to the prior year period, as a result of variances in individual categories. This includes decreases in salaries and wages, professional fees and consulting fees. The decrease in salaries and wages was primarily due to the payment of bonus compensation in the first nine months of 2024 for which there were no comparable expenses in the first nine months of 2025, along with greater stock-based compensation in the first nine months of 2024 compared to the comparable period in 2025. The decrease in professional fees was primarily due to lower legal fees in the first nine months 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 \$1,335,000 and \$0 for the nine months ended September 30, 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 nine months of 2025 compared to the prior year period as the Company had not incurred any research related costs during the first nine 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 Income (Loss)

Our operating loss was approximately \$1,717,000 and \$7,079,000 for the nine months ended September 30, 2025 and 2024, respectively. Such decrease in operating loss was primarily due to our increased license fee revenue in 2025 compared to 2024 coupled with a decrease in total operating expenses during the first nine months of 2025 as discussed above.

Other Income (Expense)

Interest expense related to the financing of capital was approximately \$54 and \$259,000 for the nine months ended September 30, 2025 and 2024, respectively. The approximate breakdown of interest expense for the nine months ended September 30, 2025 and 2024 is as follows:

	Nine Months Ended September 30,	
	2025	2024
Interest expense on notes payable	\$ —	\$ 4
Amortization of discount of notes payable	—	242
Other interest	—	13
	<hr/>	<hr/>
	\$ —	\$ 259

Gain (Loss) on change in fair value of profit share liability and unsecured note was approximately \$(767,000) and \$(2,672,000) for the nine months ended September 30, 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 unaudited condensed consolidated financial statements for the three and nine months ended September 30, 2025).

Net Income (Loss)

For the nine months ended September 30, 2025, we had a net loss of approximately \$2,433,000, an improvement from a net loss of approximately \$9,459,000 for the nine months ended September 30, 2024. This improvement was primarily due an increase in license fee revenues in 2025 compared to 2024, and a decrease in SG&A.

Liquidity and Capital Resources

We had approximately \$1,768,000 in cash on our balance sheet at September 30, 2025 compared to approximately \$3,456,000 at December 31, 2024. Total current assets were approximately \$6,027,000 and total current liabilities were approximately \$11,054,000 at September 30, 2025, resulting in a working capital deficiency of approximately \$5,027,000. 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 \$75,186,000 at September 30, 2025 compared to \$72,753,000 at December 31, 2024. Additionally, we had a net loss in the amount of approximately \$2,433,000 and cash used in operating activities of approximately \$1,664,000 for the nine months ended September 30, 2025.

Based on the Company's cash levels and burn rate as of September 30, 2025 discussed above, we believe our cash and financial resources may be insufficient to meet our anticipated needs for the twelve months following the date of issuance of the financial statements for the quarterly period ended September 30, 2025, included elsewhere in this prospectus, which raises substantial doubt about our ability to continue as a going concern within one year from the issuance date of the financial statements for the quarterly period ended September 30, 2025. The Company's total cash balance at December 31, 2025 was approximately \$2.3 million.

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 \$10,261,000 at December 31, 2024 versus approximately \$28,311,000 (as restated) at December 31, 2023. The change in total assets is primarily attributable to an approximate \$17,484,000 decrease in cash and an approximate \$1,253,000 decrease in accounts receivable, offset by an increase in property and equipment.

Total assets were approximately \$10,138,000 at September 30, 2025 versus approximately \$10,261,000 at December 31, 2024. The change in total assets is primarily attributable to an approximate \$1,688,000 decrease in cash, a \$153,000 decrease in intellectual property, offset by an approximate \$1,808,000 increase in accounts receivable.

Total Liabilities

Total liabilities were approximately \$9,069,000 at December 31, 2024 versus approximately \$28,250,000 at December 31, 2023. The decrease is primarily attributable to a decrease in outstanding debt as a result of the modification of the terms of the profit share liability, the repayment of the secured note and the repayment of the unsecured note.

Total liabilities were approximately \$11,280,000 at September 30, 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) provided by operating activities consists of net income (loss), adjusted by certain non-cash items, and changes in operating assets and liabilities.

Net cash used in operating activities was approximately \$4,105,000 for the year ended December 31, 2024 compared to net cash provided by operating activities of approximately \$19,226,000 for the year ended December 31, 2023. The increase in net cash provided by operating activities was primarily due to the following: (i) a net loss of \$10.8 million in 2024 compared to net income of \$5.7 million in 2023; (ii) loss on change in fair value of profit share of \$4.0 million in 2024 compared to \$11.2 million in 2023; and (iii) 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.

Net cash used by operating activities was approximately \$1,664,000 for the nine months ended September 30, 2025 compared to net cash used by operating activities of approximately \$3,275,000 for the nine months ended September 30, 2024. The decrease in net cash provided by operating activities was primarily due to the following: (i) a net loss of \$2.4 million for the nine months ended September 30, 2025 compared to net loss of \$9.5 million for the nine months ended September 30, 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

We had net cash used in investing activities of approximately \$809,000 for the year ended December 31, 2024 for the purchase of a truck and lab equipment compared to no cash used in investing activities for the year ended December 31, 2023.

We had net cash used in investing activities of approximately \$23,000 for the nine months ended September 30, 2025 for the purchase of lab equipment compared to net cash used in investing activities of approximately \$702,000 for the nine months ended September 30, 2024 for the purchase of a truck and lab equipment.

Financing Activities

Net cash used in financing activities was approximately \$12,569,000 for the year ended December 31, 2024 compared to approximately \$210,000 provided by financing activities for the year ended December 31, 2023. During the year ended December 31, 2024, we repaid the remaining principal of approximately \$272,000 on the AC Midwest secured note and approximately \$12,315,000 of the principal remaining on the AC Midwest unsecured note. During the years ended December 31, 2024 and 2023, we received approximately \$17,500 and \$210,000, respectively, from the exercise of stock options.

Net cash used in financing activities was approximately \$0 for the nine months ended September 30, 2025 compared to approximately \$12,569,000 used in financing activities for the nine months ended September 30, 2024. During the nine months ended September 30, 2024, we repaid the remaining principal of approximately \$272,000 on the AC Midwest Energy LLC (“AC Midwest”) secured note and approximately \$12,315,000 of the principal remaining on the AC Midwest unsecured note.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial conditions and results of operation are based upon the accompanying consolidated financial statements which have been prepared in accordance with the generally accepted accounting principles in the U.S. The preparation of the consolidated financial statements requires that we make estimates and assumptions that affect the amounts reported in assets, liabilities, revenues, and expenses. We use 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. We base these estimates on various assumptions and experience that we believe to be reasonable. The following critical accounting policies are those that are important to the presentation of our financial condition and results of operations. These policies require management’s most difficult, complex, or subjective judgments, often as a result of the need to make estimates of matters that are inherently uncertain.

The following critical accounting policies affect our more significant estimates used in the preparation of our consolidated financial statements. In particular, our most critical accounting policies relate to the recognition of revenue, and the valuation of our stock-based compensation.

Property and Equipment

Property and equipment are stated at cost. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings. For consolidated financial statement purposes, equipment is recorded at cost and depreciated using the straight-line method over their estimated useful lives of 2 to 5 years. Leasehold improvements are recorded at cost and depreciated using the straight-line method over the life of the lease.

Expenditures for repairs and maintenance which do not materially extend the useful lives of property and equipment are charged to operations. Management reviews the carrying value of our property and equipment for impairment on an annual basis.

Intellectual Property

Intellectual property is recorded at cost and amortized over its estimated useful life of 15 years. Management reviews intellectual property for impairment when events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. In the event that impairment indicators exist, a further analysis is performed and if the sum of the expected undiscounted future cash flows resulting from the use of the asset or asset group is less than the carrying amount of the asset or asset group, an impairment loss equal to the excess of the asset or asset group's carrying value over its fair value is recorded. Management considers historical experience and all available information at the time the estimates of future cash flows are made, however, the actual cash values that could be realized may differ from those that are estimated.

Recoverability of Long-Lived and Intangible Assets

Long-lived assets and certain identifiable intangibles held and used by us 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. We evaluate 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. After completing the assessment of property and equipment for impairment as of December 31, 2024 and 2023, the Company recorded an impairment expense related to property and equipment of \$43,000 (2023 - \$219,707) which is included in Impairment loss in the Company's consolidated statements of operations. The expense was primarily related to the impairment of construction in process costs where management determined that the undiscounted future cash flows were not sufficient to recover the carrying value of these assets over the estimated useful life. No impairment charges were recognized for the three and nine months ended September 30, 2025.

Stock-Based Compensation

We account for stock-based compensation awards in accordance with the provisions of ASC 718, Compensation-Stock Compensation, which requires equity-based compensation, be reflected in the consolidated financial statements over the period of service which is typically the vesting period based on the estimated fair value of the awards.

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. Our 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.

Revenue Recognition

We record 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 we satisfy our 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 our 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 we expect 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

We generated revenue for the years ended December 31, 2024 and 2023, and the nine months ended September 30, 2025 by (i) delivering product to our commercial customers, (ii) completing and commissioning equipment projects at commercial customer sites, (iii) performing demonstrations of our technology at customers with the intent of entering into long term supply agreements based on the performance of our products during the demonstrations and (iv) licensing our 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 our promise is to provide a right to access our IP or a right to use our IP, we consider the nature of our 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 our IP.

The licenses provide the customer with the right to use our 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 we have no obligation to provide any future updates. During the year ended December 31, 2024 the Company recognized \$2,773,750 (2023 - \$356,250) of revenue for licenses for which revenue was recognized at a point in time and \$34,375 (2023 - \$31,250) for licenses for which revenue was recognized over time. During the three and nine months ended September 30, 2025, the Company recognized \$2,600,000 and \$3,125,000, respectively (2024 - \$133,125 and \$273,750, respectively) 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.

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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.

Income Taxes

We follow 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 December 31, 2024 and 2023, and September 30, 2025. We are currently not aware of any issues under review that could result in significant payments, accruals or material deviation from our position. We are no longer subject to tax examinations by tax authorities for years prior to 2020.

We 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. Our management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

In December 2023, the FASB issued ASU 2023-09, Improvements to Income Tax Disclosures, which requires disaggregated information about our effective tax rate reconciliation as well as information on income taxes paid. The guidance will first be effective in our annual disclosures for the year ending December 31, 2025, and should be applied on a prospective basis with the option to apply retrospectively. Early adoption is permitted. The Company is in the process of assessing the impact of ASU 2023-09 on our disclosures.

Recently Issued Accounting Standards

Recently issued, but not yet effective accounting pronouncements, that when adopted, may have a material effect on the accompanying consolidated financial statements are as follows:

Issued in June 2021, FASB Accounting Standards Update (ASU) No. 2016-13, *Measurement of Credit Losses on Financial Instruments* adds to U.S. GAAP an impairment model known as the current expected credit loss (CECL) model, which is based on expected losses rather than incurred losses. This guidance is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early application of the amendments is permitted. Effective January 1, 2023, the Company adopted ASU No. 2016-13. The adoption of ASU No. 2016-13 did not have a material effect on the accompanying consolidated financial statements.

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, which amends and enhances the disclosure requirements for reportable segments. All disclosure requirements under this standard will also be required for public entities with a single reportable segment. The new standard will be effective for the Company for fiscal years beginning after December 15, 2023, including interim periods within fiscal years beginning after December 15, 2024. The Company adopted ASU 2023-07 effective for its Annual Report on Form 10-K for the year ended December 31, 2024 and subsequent interim periods. Since ASU 2023-07 addresses only disclosures, the adoption of ASU 2023-07 did not have a significant impact on our consolidated financial statements.

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. The Company is evaluating this standard to determine if adoption will have a material impact on the Company's 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.

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.

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The following table shows our reconciliation of net income (loss) to adjusted EBITDA for the years ended December 31, 2024 and 2023, respectively:

	For the Year Ended	
	December 31, 2024	December 31, 2023 (as restated)
	(In thousands)	
Net income (loss)	\$ (10,802)	\$ 5,668
Non-GAAP adjustments:		
Depreciation and amortization	248	259
Interest	267	1,362
Change in fair value of profit share	3,959	11,210
Impairment of property and equipment	43	220
Income Taxes	(289)	473
Stock based compensation	1,089	520
Adjusted EBITDA	\$ (5,485)	\$ 19,712

The following table shows our reconciliation of net income (loss) to adjusted EBITDA for the three and nine months ended September 30, 2025 and 2024, respectively:

	For the Three Months Ended		For the Nine Months Ended	
	September 30, 2025	September 30, 2024	September 30, 2025	September 30, 2024
	(In thousands)		(In thousands)	
Net income (loss)	\$ 788	\$ (458)	\$ (2,433)	\$ (9,459)
Non-GAAP adjustments:				
Depreciation and amortization	107	65	282	185
Interest	—	7	—	259
Change in fair value of profit share	39	(283)	767	2,672
Income Taxes	—	—	—	—
Stock based compensation	21	134	100	1,041
Adjusted EBITDA	\$ 955	\$ (535)	\$ (1,284)	\$ (5,302)

BUSINESS

General

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.

Products and Services

Mercury Emissions

We provide mercury capture solutions for coal-fired power plants driven by our patented two-part 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 has largely been driven by federal regulations. The MATS rule, proposed by the EPA in May 2011 and which became effective in April 2012, is intended to reduce air emissions of heavy metals, including 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 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.

Water Treatment

In April 2024, the EPA under the Biden Administration issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as "forever chemicals". The rule established legally enforceable MCLs for six PFAS in drinking water: PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. Under the Rule, public water systems must monitor these PFAS and must 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 April 2024, we announced the introduction of our new water treatment business to address the growing potable (drinking) water market with next-generation sorbent technologies. These new solutions are being designed to use significantly less activated carbon, offering a more environmentally sustainable approach to water treatment while maintaining or improving contaminant removal performance. Our products target not only compliance with emerging PFAS regulations, but also broader opportunities in water quality improvement positioning us to serve a large and expanding market.

As part of this strategic pivot, we have invested in the commissioning of two state-of-the-art laboratory facilities—one in Pennsylvania and one in North Dakota—referred to as our “Design Centers.” The Design Centers are dedicated sites for water treatment innovation and development. Together, we believe these facilities represent the only known facilities that have integrated capability in North America to thermally reactivate spent GAC under controlled conditions and subsequently conduct RSSCTs to directly compare reactivated GAC performance against virgin carbon counterparts. This combination allows us to evaluate reactivated GAC as a sustainable and cost-effective alternative to virgin carbon and address key water utility questions including how to optimize media changeout schedules, strategies to reduce operational costs, and provide lab-based validation of treatment performance for PFAS and other contaminants.

These Design Centers will also function as a direct resource for the water treatment industry, offering thermal reactivation, contaminant analysis, and carbon performance evaluations. By enabling municipal and industrial utilities to lower compliance costs and improve operational efficiency, we expect to build strong technical credibility and customer engagement ahead of large-scale market adoption. Importantly, we believe our technology platform is not solely dependent on PFAS regulations as market demand for improved water treatment solutions is broad.

Our investment in our Design Centers also serves as the basis for our planned commercial thermal reactivation plants which we intend to open and operate in the future. Data generated from the Design Centers is being used to define permitting requirements, capital expenditure parameters, and projected operating costs accelerating the commercialization timeline while avoiding costly future reliance on third-party providers.

On May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS. As part of this action, the EPA also announced its intent to extend the PFOA and PFOS MCL compliance deadlines to 2031 and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA/GenX, and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

In light of evolving water regulations and funding dynamics, we believe the Company is well positioned to capture a meaningful share in the rapidly growing water treatment sector.

Marketing and Our Growth Strategy

Mercury Emissions

Our marketing efforts have principally focused on the North American market to date, and particularly the United States.

In the U.S. market, our success depends, in part, on the success of demonstrations performed with utility customers and the resulting contract awards to meet the MATS requirements in the long-term period and its operational performance with EGUs under contract.

In Canada, there are the 2000 Canada-wide Standards for Mercury Emissions and the 2006 Canada-wide Standards for Mercury Emissions from Coal-Fired Electric Power Generation Plants among all the provinces which was initially implemented in 2010, with caps in mercury emissions for each of the provinces. We believe that we have the most effective technology for the EGUs and that we maintain a strong patent position for our mercury emissions technologies in Canada.

Our marketing strategy is designed to grow our mercury capture solutions in the North American region by building and maintaining the reputation and trust of our work among its customers - specifically by carrying out successful demonstrations performed with utility customers and the resulting contract awards to meet the MATS requirements in the long-term period and sustaining our operational performance with EGUs under contract - and developing new, and refining our existing, unique emissions technologies. We believe that by offering proven and innovative service offerings, we can attract more customers and partners to our services, creating a network growth effect. We expect that the continuing pursuit of infringers of our patented technologies will yield further licensing and supply agreements.

We believe that these targeted marketing initiatives are the most efficient and cost-effective strategy to sustain the growth of both new and existing customers.

As of December 31, 2025, there were 16 EGUs in the U.S. that use our SEA® technologies and buy product from us.

Other Possible Markets for Our Emissions Technologies

In May 2017, the European Union and seven of its member states ratified the Minamata Convention on Mercury. The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. This convention was a result of three years of meeting and negotiating, after which the text of the convention was approved by delegates representing approximately 140 countries in January 2013 in Geneva. As of December 31, 2025, 153 countries have joined the Convention. It is expected that over the next few decades, this international agreement will enhance the reduction of mercury pollution from the targeted activities responsible for the major release of mercury into the environment. Specific emissions limits are being developed by the European Union, although the timing of any enactment of such is uncertain. Any such regulations may lead to additional business opportunities for our mercury control technologies within the European Union although we do not currently pursue the European market and have no present plans to enter that market in the near term.

With regard to business opportunities in China and other Asian countries, there currently exists no regulatory requirement that mandates the use of any particular mercury capture or control technology. While regulatory authorities in these regions continue to evaluate air-emissions controls more broadly, the adoption of additional mercury-specific requirements, and the extent to which such requirements could create demand for our technologies, is uncertain and may not occur.

Water Treatment

Initially, we intend to focus our marketing efforts on municipalities that have limited resources and engineering experience and offer shaped activated carbons (including reactivated GAC), testing and consulting services.

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 treatment. 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 address industrial wastewater challenges, providing contaminant removal and offering a practical pathway to management treatment costs.

We are developing a carbon rejuvenation process, referred to as Carbon RejuvenationTM, focused on the thermal reactivation of spent GAC. In January 2026, we announced that we have conducted demonstrations of this process with regulated municipal water utilities at our Design Centers, which indicated that our thermally reactivated GAC performed comparably to virgin activated carbon in removing PFAS under the conditions tested. The demonstrations utilized spent GAC sourced from active utility systems and were evaluated against performance benchmarks routinely applied by those utilities. Results met expected treatment standards, which we believe supports the technical and commercial viability of our carbon rejuvenation process as an alternative to virgin carbon replacement.

Our carbon rejuvenation process is expected to restore spent granular activated carbon for reuse, reduce reliance on virgin raw materials while lowering total lifecycle costs for customers through shorter transportation distances, reduce disposal requirements, and regional reuse within utility systems. Unlike traditional centralized reactivation models, our approach will emphasize regional deployment, expected to align with utility priorities around emissions reduction, localized supply chains, capital discipline, rate stability, and infrastructure resilience. We believe this regional reactivation model represents a differentiated solution that integrates environmental benefits directly into operating economics and supports broader commercialization opportunities.

During 2026, we plan to acquire property and construct a facility dedicated to the reactivation of GAC in support of our carbon rejuvenation initiative; however, there can be no assurance that such a facility will be developed on acceptable terms, or at all.

Additional Business Opportunities

Pursuant to the Dakin Agreement, we also maintain a license with respect to certain intellectual property owned by Dakin, consisting of a proprietary compound of materials engineered to treat a boiler to improve the combustion process and thereby reduce overall emissions, while improving boiler efficiency during the combustion of all types of fuels at power plants. We believe that the Dakin IP can be an effective supplement to our mercury emissions removal business at coal-fired power plants and provide an additional revenue stream utilizing our present infrastructure. However, there can be no assurance that such license will lead to any significant revenues. For additional information, see the section entitled “Certain Relationships and Related Party Transactions”.

Industry Background and Governmental Regulations

The market for mercury removal from power plant emissions in the United States has largely been driven by federal regulations.

On December 21, 2011, the EPA announced MATS for power plants in the U.S. The MATS rule is intended to reduce air emissions of heavy metals, including 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. Existing power plants were granted three years (plus a potential one-year extension in cases of hardship, ruled on by state EPAs where the plant is domiciled) from April 16, 2012 to comply with the new emission limits. The MATS rule applies to EGUs that are larger than 25 MW that burn coal or oil for the purpose of generating electricity for sale and distribution through the national electric grid to the public, and includes investor-owned units, as well as units owned by the federal government, municipalities, and cooperatives that provide electricity for commercial, industrial, and residential uses. At the time that MATS was promulgated, there were approximately 1,250 coal-fired EGUs affected by this rule. Many EGUs have since shut down as a result of regulation and competitive disadvantages to newer or gas-fired EGUs and renewable energy sources (e.g. wind and solar). We believe that at December 31, 2025, there were approximately 400 coal-fired EGUs remaining in the power market which make up the large mercury-emissions control market into which we sell.

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 and updates MATS for coal-fired power plants 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.

In June 2025, the EPA proposed to repeal certain amendments finalized in 2024 to the MATS Rule and return compliance obligations to the MATS standards which existed prior to the 2024 update. On December 23, 2025, the EPA submitted a draft of the final action to the OMB for interagency review under Executive Order 12866. As indicated on the EPA's website, following completion of the OMB interagency review process, in accordance with OMB Memorandum M-25-36, section 1.A., the EPA expected that the EPA Administrator of the Office of Information and Regulatory Affairs of the OMB would finalize the action by the end of January 2026. As of February 3, 2026, the EPA has not updated this expected timeline.

The final MATS rule identifies two subcategories of coal-fired EGUs, four subcategories of oil-fired EGUs, and a subcategory for units that combust gasified coal or solid oil (integrated gasification combine cycle, or "IGCC" units) based on the design, utilization, and/or location of the various types of boilers at different power stations. The rule includes emission standards and/or other requirements for each subcategory. The rule set nationwide emission limits estimated to reduce mercury emissions in coal-fired plants by about 90%.

In addition to the U.S. federal MATS rule, certain states currently have regulations that limit mercury emissions and are similar to or more restrictive than the MATS rule.

There are several choices of pollution control technologies available to reduce mercury emissions, but they do not all work consistently or cost-effectively for every plant design or for all of the various types of coal. The most common technology employed to reduce mercury emissions is a sorbent injection system which provides for the injection of PAC or BAC into the flue-gas of an EGU after the boiler itself but in front of the ESP. Such injections have proven effective with many coals, especially at reduction levels of 70% or less. At required mercury reduction levels above 80%, these injection systems require substantial injection rates which often have severe operational issues including over-loading the ESP and rendering the fly ash unfit for sale to concrete companies, and at times even causing combustion concerns with the fly ash itself.

Mercury is also removed as a co-benefit by special pollution control equipment installed to remove SOX and NOX. To achieve very high levels of SOX reduction, large, complex, and expensive (with capital costs in the hundreds of millions of dollars for a medium-sized EGU) systems called scrubbers can be installed in the plant exhaust system, typically just before the flue-gas goes up the stack for release. As a co-benefit to their primary mission, scrubbers have been shown to remove significant quantities of oxidized mercury. Mercury is typically found in two basic forms in coal: elemental and oxidized. The amount of each form varies in any given seam of coal and is affected by the other natural elements (such as chlorine) which might also be present in the coal. We believe that about 30-40% of the mercury in the post-combustion flue-gas exists in the oxidized state for power plants burning low-rank coal and about 60-70% for power plants burning high-rank coals. Mercury is found in only trace amounts in coal making it difficult to remove from coal or from the flue-gas when combusted with the coal. It is in the burning of millions of tons of coal that these trace amounts become problematic and is why MATS was promulgated.

The other major pollution control system which contributes significantly to the co-benefits of mercury removal is an SCR system which can be installed to achieve high levels of removal of NOX. SCRs are also very large and expensive systems (costing hundreds of millions of dollars in capital costs to install on a medium-size EGU) that are typically installed just after the flue-gas exits from the unit boiler. As a co-benefit, SCRs have been shown to oxidize a considerable percentage of the elemental mercury in many types of coal. If the EGU then has a combination of an SCR and a scrubber, we estimate that the EGU might achieve an over-all reduction of 80-85% of the mercury in power plants that burn high-rank coals. The exact level of mercury emission reductions depends on the designs of these systems, the types of coal being burned and the operations of the power plant.

We believe that a large percentage of the coal-fired EGUs in the U.S. employ some sort of sorbent injection system to achieve the very low mercury emission levels required by the MATS rule, with either the sorbent injection system as the primary removal method or such a system being employed as a supplemental system to SCR/scrubber combinations to achieve the emission limits.

In the United States, potable water treatment is regulated primarily by the EPA under the SDWA. The SDWA was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources-rivers, lakes, reservoirs, springs, and ground water wells. (The SDWA does not regulate private wells which serve fewer than 25 individuals.) The SDWA authorizes the EPA to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. The SDWA covers water quality standards, treatment processes, and monitoring requirements for public water systems.

The EPA has set MCLs for specific contaminants in drinking water. These include: microbial contaminants like bacteria, viruses, and protozoa (e.g., E. coli and cryptosporidium); inorganic contaminants like lead, arsenic, and nitrates; organic contaminants like pesticides and solvents; radionuclides like radon and uranium; and, disinfectants and disinfection by-products like chlorine and THMs. Water systems must treat water to meet these MCLs or achieve a level that minimizes the risk to public health.

In April 2024, the EPA issued the first-ever national, enforceable drinking water standard to protect communities from exposure to harmful PFAS, also known as "forever chemicals". The Rule sets limits for five individual PFAS: PFOA, PFOS, PFNA, PFHxS, and HFPO-DA/GenX. 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 must 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. Public water systems must implement solutions by 2029 that reduce these PFAS if monitoring shows that drinking water levels exceed the MCLs set forth in the Rule. By 2029, public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation.

The EPA has indicated that once implemented, these limits will reduce tens of thousands of PFAS-attributable illnesses or deaths and will reduce PFAS exposure for approximately 100 million Americans served by public drinking water systems.

The EPA has indicated that compliance with this Rule is estimated to cost approximately \$1.5 billion annually. The Infrastructure Investment and Jobs Act has dedicated \$9 billion to help communities impacted by PFAS pollution in drinking water. In addition, another \$12 billion in Infrastructure Investment and Jobs Act funding is available to communities to make general drinking water improvements, including addressing PFAS chemicals. Estimated costs include water system monitoring, communicating with customers, and - if necessary - installing treatment technologies.

On May 14, 2025, the EPA under the new Trump Administration announced the agency will keep the regulations for PFOA and PFOS. As part of this action, EPA also announced its intent to extend the PFOA and PFOS Maximum Contaminant Level compliance deadlines and establish a federal exemption framework. Additionally, the EPA announced its intent to rescind the regulations and

reconsider the regulatory determinations for PFHxS, PFNA, HFPO-DA/GenX), and the Hazard Index mixture of these three PFAS plus PFBS to ensure the determinations and any resulting drinking water regulation follow the SDWA process.

In addition to the national standards established by the EPA which states are required to implement and enforce, individual states have the authority to impose stricter regulations than those set by the EPA. Many states have already set their own standards for PFAS, often more stringent than federal standards, in response to the growing public health concerns. States also run their own monitoring programs and inspections to ensure compliance with federal and state regulations.

Patents and Trademarks

Our SEA® technology was originally developed by the University of North Dakota's Energy and Environmental Research Center. It was tested and refined on numerous operating coal-fired EGUs, with the founder of our wholly-owned subsidiary participating with the Energy and Environmental Research Center on these tests since 2008. The Energy and Environmental Research Center Foundation, a non-profit entity, obtained patents on this technology. Between 2009 and 2017, we maintained an exclusive worldwide license with respect to this patented technology, which applied to various domestic and foreign patents and patent applications. Such formed the basis of our mercury control technology. On April 24, 2017, we acquired from The Energy and Environmental Research Center Foundation all such patent rights, including all patents and patents pending, domestic and foreign, relating to the foregoing technology.

As of December 31, 2025, our patent portfolio relating to mercury removal included 18 granted patents worldwide, consisting of 13 U.S. patents and 5 foreign patents (Canada, Europe and China), with stated expiration dates ranging from January 2026 to September 2034. Between August and October 2025, 13 U.S. Patents and 2 foreign patents relating to mercury removal expired. We continue to maintain a portfolio of patents relating to mercury removal in the U.S. and abroad.

With regard to our water treatment technologies, we have to date filed two provisional patent applications in the U.S. relating to water treatment. We have also filed two PCT applications and one U.S. patent application. However, these applications do not provide enforceable patent rights unless they are successfully granted by the PCT and U.S. Patent and Trademark Office. There is no assurance that our pending applications will result in issued patents, or that any patents granted will provide meaningful protection against competitors.

Competition

We operate in highly competitive industries that are characterized by a diverse range of participants, including companies that operate in both the mercury capture and water treatment industries. Our major competitors in the mercury capture and water treatment markets includes companies such as Arq, Inc. (formerly Advanced Emissions Solutions, Inc.), Norit Activated Carbon, Calgon Carbon Corporation, and Nalco Company LLC (also known as Nalco Water, an Ecolab company). Many of our competitors employ larger sales staff and are well established in the market with greater financial and operational resources. However, in most head-to-head tests with competitor products in the mercury capture market, our SEA® technology has consistently performed better in mercury removal, at lower projected costs. We believe that our SEA® technology is superior to offerings of our competitors and, with our highly experienced staff, we have shown that we can compete effectively in this market. In the water treatment market, our competitive strategy will focus on delivering tailored and cost-effective water treatment solutions, innovative technologies, and exceptional customer service to meet the specific needs of our clients. While the industry faces ongoing regulatory and technological advancements, we believe our industry expertise and focus on customer relationships will position us to effectively compete and grow within the water treatment market.

Raw Materials

We buy all of the raw materials needed to implement our technologies and provide our formulated products from third-party suppliers. Suppliers of our raw materials include large companies that have provided materials for decades and have an international presence. When we use PAC as one component of our sorbent material, we buy it in the market from large activated carbon manufacturers. We believe that we have excellent relationships with our current suppliers. If any of our suppliers should become unavailable to us for any reason, there are a number of other suppliers that we believe can be contracted with to supply the raw materials that we need. However, the availability and price of those raw materials can be impacted by factors beyond our control including any price increases due to inflation. If such suppliers cannot meet our demand for such raw materials on a timely basis or at acceptable prices or if we are unable to offset any such increases that might occur with price adjustments to our customers, such could have a negative effect on our operations.

Seasonality

Our products and services for mercury capture are connected to the power market. This market has changed over recent years, creating a greater proportional residential load demand. With this shift in demand and load, we have experienced some seasonal changes in billing cycles as our current customer concentration is in the southwestern United States, where many of our customers decrease capacity in such winter months, unless there are abnormally low temperatures during such winter months. The price and availability of natural gas and renewables can also influence the amount of generation provided by coal-fired plants.

In the water treatment market, we expect there will be a greater demand for our products and services in the summer months when higher temperatures lead to more water usage and warmer temperatures tend to promote algae growth and create ideal conditions for bacteria, viruses and parasites to thrive.

Employees

As of December 31, 2025, we had 14 full-time and 6 part-time employees. Our employees are not represented by labor unions. We believe that relations with our employees are good.

Properties

We lease a warehouse in Corsicana, Texas, consisting of approximately 20,000 square feet, which we have leased since December 2019 and which we use for manufacturing and distribution of our products. Such lease in Corsicana, Texas expires March 31, 2029.

Since August 2024, we have leased laboratory space in Grand Forks, North Dakota, and since November 2024, we have leased additional laboratory space in State College, Pennsylvania. Each lease has a three-year term, with an option to extend for an additional term of three years. Such laboratories are used for research and development and will be able to offer other services such as carbon activation, thermal reactivation, and regeneration, contaminant analysis and carbon evaluations and recommendations.

Legal Proceedings

We have commenced multiple patent infringement lawsuits to enforce our proprietary two-part SEA® process for mercury removal from coal-fired power plants. These actions, filed between 2019 and 2025, target various operators of coal-fired power plants and refined coal producers whom we allege have willfully infringed our patent rights. We are seeking damages, injunctive relief, and other remedies in each of these proceedings.

Delaware District Court Action

In July 2019, we initiated patent litigation against various defendants in the U.S. District Court for the District of Delaware, which included (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 operated or were involved in operations of refined coal facilities in the United States.

Between July 2020 and January 2021, we entered into agreements with each of the four major utility defendants, which included certain monetary arrangements and pursuant to which we dismissed all claims brought against each of them and their affiliates.

In November 2023, we entered into a confidential binding term sheet with Arthur J. Gallagher & Co., and various of its affiliated entities, and DTE Energy Resources LLC and various of its affiliated entities, 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. In November 2023, Alistar Enterprises, LLC, one of the remaining CERT defendants, entered into a settlement agreement with us.

In December 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) were not included within the scope of the license.

The case proceeded to trial in February 2024 against the remaining CERT defendants. On March 1, 2024, a federal jury returned a \$57.1 million verdict in favor of the Company against the remaining CERT defendants, finding willful infringement of the Company’s patented technologies and holding the defendants liable for inducing and contributory infringement. 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. Following the trial, the Court entered non-final judgments on the verdict against the CERT defendants and the parties submitted post-trial motions relating to the jury trial. The CERT defendants also asserted that the Company’s claims were barred due to their defense that they had an implied license to the asserted patents. A bench trial was held on such issue. On June 10, 2025, the Court ruled that the CERT defendants failed to prove that they had such an implied license and denied their motion to alter or amend the non-final judgment. On September 25, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants’ post-trial motion that they should not be held liable as a matter of law for induced infringement, contributory infringement or willful infringement, and on November 20, 2025, the Court issued a Memorandum Opinion and Order denying the CERT defendants’ post-trial motion for a new trial on the issues of induced infringement, contributory infringement, willful infringement and damages. Thereafter, on December 17, 2025, the Court issued a memorandum order granting the Company’s request for pre- and post-judgment interest, and denying the Company’s request for enhanced damages. Following resolution of all post-trial motions, the Court issued the final judgment in favor of the Company on December 29, 2025 in the total amount of \$78,397,157.05, which amount includes pre-judgment interest.

On January 28, 2026, the CERT defendants filed a notice of appeal of the judgment. Under applicable rules, the CERT defendants may seek a stay of execution of the judgment pending appeal by posting a bond or other security in an amount and form approved by the Court. As of the date of this prospectus, the CERT defendants have not obtained a bonded stay. Although the automatic stay of execution applicable following entry of judgment has expired, the appeal remains pending. Interest continues to accrue on the judgment amount during the pendency of the appeal.

2024-2025 Patent Infringement Actions

In July 2024, we commenced three additional patent infringement lawsuits in U.S. District Courts in Arizona, Iowa and Missouri against multiple utilities and related entities. These actions allege willful infringement of the Company’s patents related to mercury emissions control. Named as defendants in the action filed in the U.S. District Court for the District of Arizona were 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 were 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 were Ameren Corp. and Union Electric Co.

In October 2024, we entered into an agreement with one of the utility defendants and an affiliated entity in the Arizona action, and in January 2025, we entered into an agreement with another utility named in the Arizona action. Such agreements provide such parties and their affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with a certain designated coal-fired power plant operated by them. The agreements include one-time license fees which have been received by the Company. One agreement 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 and the other agreement 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.

On December 17, 2024, the U.S. Judicial Panel on Multidistrict Litigation ordered the consolidation of the three lawsuits in the U.S. District Court for the Southern District of Iowa for coordinated pretrial proceedings. In January 2025, we initiated an additional infringement suit in the Western District of Missouri against several Evergy-affiliated entities. Named as defendants in the action were Evergy, Inc., Evergy Metro Inc., Evergy Missouri West, Inc. and Evergy Kansas Central, Inc. One of such defendants was dismissed from the Western District of Missouri action and named as a defendant in a separate case commenced in the U.S. District Court for the District of Kansas. Such cases were transferred to the Iowa court pursuant to the existing transfer order.

Between January and July 2025, certain defendants in the consolidated Iowa actions filed IPR petitions with the PTO seeking to invalidate various asserted claims.

Effective as of August 5, 2025, we entered into separate agreements with two utilities, which are affiliated with each other, and named as defendants in the Southern District of Iowa action. In addition, as of September 9, 2025, we entered into an agreement with a utility and its affiliated entities, named as defendants in the Western District of Missouri and District of Kansas actions. Such agreements provide such parties and their affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with certain designated coal-fired power plants operated by them. Each agreement includes a one-time license fee. The agreements, effective as of August 5, 2025 and entered into with the two utilities, provide the Company with the right to be included in each utility's bidding process for certain product supply for mercury emissions capture at such party's operated power plants. Such two utilities have also agreed to withdraw from the IPR petitions.

Effective as of September 30, 2025, we entered into an agreement with another utility not named as a defendant in our patent litigations, but a party to the IPR petitions filed with the PTO. Such agreement provides such utility and its affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with a certain designated coal-fired power plant operated by them. Such 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. Such party has agreed to withdraw from IPR petitions.

Effective as of October 15, 2025, the Company entered into an agreement with another utility named as a defendant in the Southern District of Iowa action. While the terms of the agreement are confidential, it includes a resolution of the disputes between the Company and that utility and its affiliates and provides for their withdrawal from related proceedings.

As a result of the agreements described above, the Company and several defendants have resolved their respective claims, and those defendants have been dismissed from the applicable actions. There remain two utilities in the consolidated Iowa actions.

As described above, between January and April 2025, certain defendants in the consolidated Iowa actions filed IPR petitions seeking to invalidate various asserted claims. In September and October 2025, the PTAB granted the institution of the review of certain of the Company's asserted patents. The Company requested that the PTO Director review those decisions. On October 13, 2025, the Court in the consolidated Iowa actions ruled to stay the litigation pending completion of the IPR process in the PTAB. On November 25, 2025, in response to the Company's request for review, the PTO Director ordered the PTAB to reconsider most of its institution decisions from September and October 2025. No assurance can be given as to the ultimate outcome of these proceedings.

Between June and July 2025, certain other defendants in the consolidated Iowa actions filed IPR petitions seeking to invalidate various asserted claims. In November 2025, the PTO Director denied institution of all of those proceedings. Those defendants have requested that the PTO Director reconsider these decisions. No assurance can be given as to the ultimate outcome of these proceedings.

Other than the foregoing, there are no material pending legal proceedings to which we are a party or to which any of our property is subject, nor are there any such proceedings known to be contemplated by governmental authorities. None of our directors, officers, or affiliates are involved in a proceeding adverse to our business or has a material interest adverse to our business.

MANAGEMENT

The following table sets forth certain information as of January 29, 2026 about our executive officers and members of our Board of Directors.

Name	Age	Position
Richard MacPherson	70	President, Chief Executive Officer, Secretary and Chairman of the Board of Directors
John Pavlish	67	Senior Vice President and Chief Technology Officer
James Trettel	57	Executive Vice President of Operations
Fiona Fitzmaurice	44	Chief Financial Officer
David M. Kaye	71	Director
Troy Grant	52	Director
Mitzi H. Coogler	55	Director

Executive Officers

Richard MacPherson has been a director of the Company since June 2011 and the Chairman of our Board of Directors since July 2025. Mr. MacPherson has served as President and Chief Executive Officer of the Company since March 2015 and was appointed as Secretary of the Company in June 2023. Mr. MacPherson is the founder of MES, Inc. (current subsidiary and operating company of the Company) and had been its Chief Executive Officer from 2008 until 2011. From 2011 to March 2015, Mr. MacPherson served as Vice President of Business Development of the Company. Since 2008, Mr. MacPherson has worked with industry leading scientists and engineers to bring the Company's technology from the R&D phase, through multiple product development stages, to the final commercialization phase, acting as the lead on all required initiatives and activities. He has been a senior-level executive in the services industry for over 25 years. Mr. MacPherson brings extensive start-up and business development knowledge, applied and proven through his corporate experience throughout the United States and Canada. He has worked in multiple industries, such as electric utilities, communications, and marketing, as well as in several entrepreneurial ventures in the communications, hospitality, geological, and real estate development industries. We believe that Mr. MacPherson's deep experience in business and strong leadership skills, coupled with being the founder of our operating subsidiary and his extensive knowledge of our technology, qualifies him to serve on our Board of Directors.

John Pavlish has been Senior Vice President and Chief Technology Officer of the Company since November 2014. Prior to joining the Company, Mr. Pavlish was a Senior Research Advisor and the Director of the Center for Air Toxic Metals at the Energy & Environmental Research Center in Grand Forks, North Dakota. He has over 30 years of mercury-related experience and is regarded as an international expert on the topic of mercury. His primary areas of interest and expertise include research, technical guidance and consultation, and development of mercury control technologies, in particular, for coal combustion and gasification systems. He is an inventor of a number of patented mercury control technologies and has years of experience in development and testing of these technologies for commercial applications. Over the last 30 years, he has spent much of his time evaluating the efficacy of a number of different mercury control technologies/approaches and their cost-competitiveness in the commercial market. During the last five years, he has spent time evaluating several different technologies applicable to the recovery of rare earth elements and water treatment and has directed research and development activities in these areas in way of developing new products and services for the Company. Mr. Pavlish also has years of power plant experience and has worked for engineering/consulting company Black & Veatch, where he served as Unit Leader/System Engineer. Mr. Pavlish is a professional engineer, a member of the American Society of Mechanical Engineers, the Air & Waste Management Association, and the American Water Works Association. He serves on numerous professional and technical committees and is a U.S. Representative on the Mercury Emissions from Coal International Experts Working Group on Reducing Emissions from Coal and a member of the United Nations Environment Programme Global Mercury Partnership, Reduction of Mercury Releases from Coal Combustion. Mr. Pavlish has published over 200 papers, articles, and reports on various mercury-related, rare earth elements recovery, and water treatment topics and issues.

James Trettel has been Vice President of Operations of the Company since January 2014 and Executive Vice President of Operations of the Company since June 2024. Mr. Trettel possesses over 25 years of experience in the dry bulk material handling industry. During 2012 and 2013, he was the owner and operator of Solid Foundation Services, LLC, a firm specializing in deep foundation installations for the gas and oilfield industry, while providing technical consulting services to the Company. Prior to 2012, he provided project management and engineering duties for numerous multi-million dollar turn-key contracts while employed at Advanced Bulk and Conveying Inc. starting in 2004. Additionally, Mr. Trettel has overseen day to day operations for 14 years as the VP of J&B Industrial Sales Company Inc. of sales, systems, and engineering organization specializing in bulk material handling. Mr. Trettel has extensive field experience with systems operating in a large variety of industry sectors including coal fired utilities. Mr. Trettel graduated Cum Laude with a B.S. degree in Mechanical Engineering.

Fiona Fitzmaurice has been Chief Financial Officer of the Company since November 2023. She is a chartered accountant with over 15 years of experience in accounting and financial control for both private and publicly listed companies. She has significant experience as CFO for exploration companies and has been involved in numerous private placements, prospectus filings, flow-through financings and corporate audits. Ms. Fitzmaurice currently serves as CFO of the following companies: Elixer Ltd. (TSXV:ELXR) since December 2024; Metavista3D Inc. (TSXV:DDD) since November 2024; Exploits Discovery Corp. (CSE:NFLD) since December 2022; Digicann Ventures Inc. (CSE:DCNN) since October 2021; Provenance Gold Corp. (CSE:PAU) since May 2021; and MacDonald Mines Exploration Ltd. (TSXV:BMK) since December 2019. She has also served as CFO of Pedro Resources Ltd. (CSE:VBN) from August 2020 to January 2023; Controller of Noront Resources Ltd. (TSXV:NOT) from May 2015 to December 2022; CFO of Honey Badger Exploration Inc. (TSXV:TUF) from December 2019 to November 2020; CFO of Pasofino Gold Limited (TSXV:VEIN) from July 2017 to March 2020; and CFO of Mojave Jane Brands (CSE:JANE) from October 2017 to July 2019. Ms. Fitzmaurice currently holds a chartered certified qualification from ACCA (Association of Chartered Certified Accountants) having received her certification in Ireland in 2008. She holds a bachelor's degree in accounting and finance from Athlone Institute of Technology, Ireland.

Directors

Please see the information regarding *Richard MacPherson* under "Executive Officers" above.

David M. Kaye has been a director of the Company since June 2019 and acted as Secretary from December 2019 to June 2023. Mr. Kaye is an attorney and has been a partner in the law firm of Kaye Cooper Kay & Rosenberg, LLP, located in Roseland, New Jersey, since the firm's inception in February 1996. Since 1980, Mr. Kaye has been a practicing attorney in the New York City metropolitan area specializing in business, corporate, and securities matters. From March 2006 to June 2011, Mr. Kaye was a director of China Youth Media, Inc., resigning from such position effective with the merger between the Company with MES, Inc. which was completed in June 2011. From December 2000 to October 2009, Mr. Kaye also served on the Board of Directors of Dionics, Inc. Mr. Kaye received his B.A. from George Washington University (1976) and his J.D. from the Benjamin N. Cardozo School of Law, Yeshiva University (1979). We believe that Mr. Kaye's deep experience in business and transactional matters and working with public companies qualifies him to serve on our Board of Directors.

Troy Grant has been a director of the Company since May 2023. Mr. Grant, a graduate from St. Francis Xavier University with a Bachelor of Commerce degree, has extensive experience in investment financing, predominantly focusing on raising significant funding across global platforms and management of strategic operations. For the past 10 years, his career has been dedicated to his role as Chief Executive Officer (CEO) with Elcora Advanced Materials Corp. (TSXV: ERA). Elcora was founded in 2011 and has been successfully structured as a vertically integrated battery material company with mining assets in Sri Lanka and Morocco. As CEO, in addition to responsibility for the overall strategic operations, including exploration, business development and implementation of the company vision, Mr. Grant works diligently to raise equity and advance assets. Mr. Grant also currently serves as a director and member of the Audit Committee of several publicly listed companies, including Elcora Advanced Materials Corp., i3 Interactive Inc. (CSE: BETS), Auxly Cannabis Group Inc. (TSX: XLY), and Cleantech Power Corp. (formerly, Alkaline Fuel Cell Power Corp.) (NEO: PWWR). We believe Mr. Grant's deep public company experience in Canada and his strong background in business and investment financing qualifies him to serve on our Board of Directors.

Mitzi H. Coogler has been a director of the Company since December 2024. Ms. Coogler is a certified public accountant and has maintained an accounting practice since 2014 in Northport, Alabama specializing in management support and guidance for closely held businesses. Since November 2023, she has been Chief Financial Officer of JT Harrison Construction Co., Inc., located in Northport, Alabama, which provides design, general contracting and construction management services. From November 2017 to December 2021, she served as Chief Executive Officer and a member of the Board of Directors of Southeast Cancer Network, Inc., located in Tuscaloosa, Alabama. From February 2018 to July 2022, she also served as Chief Financial Officer of closely held businesses wholly or majority owned by Dr. Scott Drummond (deceased). From January 2005 to January 2014, she was a shareholder/employee of Echols, Coogler & Associates, P.C., an accounting firm, located in Tuscaloosa, Alabama. Ms. Coogler received her B.S. in accounting from University of Alabama in 1993. We believe Ms. Coogler's extensive financial, accounting and transactional experience qualifies her to serve on our Board of Directors.

Family Relationships

There are no family relationships between any of the directors and executive officers of the Company. There are no family relationships among our directors and executive officers and those of our subsidiaries and affiliated companies.

Invvement in Certain Legal Proceedings

We are not aware of any of our directors or officers being involved in any legal proceedings in the past ten years relating to any matters in bankruptcy, insolvency, criminal proceedings (other than traffic and other minor offenses), or being subject to any of the items set forth under Item 401(f) of Regulation S-K under the Securities Act.

Board of Directors

Our Board of Directors has a stewardship responsibility to supervise the management of and oversee the conduct of the business of the Company, provide leadership and direction to management, evaluate management, set policies appropriate for the business of the Company and approve corporate strategies and goals. The day-to-day management of the business and affairs of the Company is delegated by our Board of Directors to the executive officers of the Company. Our Board of Directors gives direction and guidance through the Chief Executive Officer to management and keeps management informed of its evaluation of the executive officers in achieving and complying with goals and policies established by our Board of Directors.

Our Board of Directors exercises its independent supervision over management by its policies that (a) periodic meetings of our Board of Directors be held to obtain an update on significant corporate activities and plans; and (b) all material transactions of the Company are subject to prior approval of our Board of Directors. To facilitate open and candid discussion among its independent directors, such directors are encouraged to communicate with each other directly to discuss ongoing issues pertaining to the Company.

Composition of Our Board of Directors

Our Board of Directors currently consists of four members and will continue to consist of four members following the closing of this offering. There are no contractual obligations regarding the election of our directors. We do not currently have a standing nominating committee and the functions of identifying, evaluating, and selecting candidates for our Board of Directors are performed by our Board of Directors as a whole. Our Board of Directors will, from time to time, assesses potential candidates to fill perceived needs on our Board of Directors based on required skills, expertise, independence and other factors. In considering whether to nominate any particular candidate for election to our Board of Directors, our Board of Directors uses various criteria to evaluate each candidate, including the candidate's ability to further the interest of the stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among members of our Board of Directors, knowledge of our business, understanding of the competitive landscape, professional and personal experiences, and expertise relevant to our growth strategy. Our Board of Directors does not set specific minimum qualifications or assign specific weights to particular criteria and no particular criterion is a prerequisite for a prospective nominee. Our directors hold office until their successors have been elected and qualified or until the earlier of their resignation or removal.

Majority Voting Policy

Our Board of Directors, pursuant to the requirements of the TSX, has adopted a Majority Voting Policy. In an uncontested election of directors, any nominee who receives a greater number of votes “withheld” than votes “for” (i.e., the nominee is not elected by at least a majority (50% +1) of the votes cast with respect to his/her election) is required to tender his or her resignation to our Board of Directors promptly following a stockholders meeting. The directors will consider the offer of resignation and, except in exceptional circumstances, will recommend that our Board of Directors accept the resignation. Our Board of Directors will make its decision within 90 days following a stockholders meeting and announce it in a press release, including the reasons for rejecting the resignation, if applicable. The nominee will not participate in any deliberations on the resignation offer. The policy does not apply in circumstances involving contested director elections.

Director Independence

Upon consummation of this offering, we intend for our common stock to be listed on the NYSE American and we will follow the rules for director independence set by the NYSE American. Presently, our Board of Directors consists of Richard MacPherson, David M. Kaye, Troy Grant and Mitzi H. Coogler. Upon listing on the NYSE American, we anticipate that our Board of Directors will consist of these same four individuals. We anticipate that Troy Grant and Mitzi H. Coogler will each be viewed as independent within the NYSE American rules and the applicable rules and regulations promulgated by the SEC. Under the applicable NYSE American rules, a director will qualify as an “independent director” if the director is not an executive officer or employee, our Board of Directors affirmatively determines that the director does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and the director meets the following qualifications:

- the director has not been employed by us during the previous three years (other than employment as an interim chief executive officer for a period of less than one year);
- neither the director nor an immediate family member has received more than \$120,000 in compensation from us in any twelve consecutive months at any time in the prior three years, other than for (i) board or board committee services, (ii) for compensation paid to an immediate family member as an employee but not as an executive officer, (iii) compensation paid for services as an interim chief executive officer, or (iv) benefits under a tax-qualified retirement plan or non-discretionary compensation;
- the director is not an immediate family member of an individual who is or was at any time during the prior three years been employed as our chief executive officer;
- neither the director nor an immediate family member is a partner, controlling stockholder or executive officer of any organization to which we made or from which we received payments (other than those arising from investments in our securities or payments under non-discretionary charitable contribution matching programs) that exceed the greater of 5% of our consolidated gross revenues or \$200,000, in any of the most recent three years;
- neither the director nor an immediate family member is employed as an executive officer of another entity where at any time during the most recent three fiscal years any of our executive officers serve on the compensation committee;
- neither the director nor an immediate family member is or was a partner of our outside auditor at any time in the past three years.

Audit Committee

As aforementioned, we have applied to list our common stock on the NYSE American and, upon listing, we will amend our Audit Committee's charter to comply with the NYSE American listing rules. The Audit Committee is currently comprised of David M. Kaye, Troy Grant and Mitzi Coogler. Upon listing on the NYSE American, we will remove Mr. Kaye from our Audit Committee. Ms. Coogler will serve as an "audit committee financial expert" within the meaning of the applicable SEC regulations. Under the NYSE American listing rules, independent directors must comprise a majority of a listed company's board of directors (or 50% in the case of a smaller reporting company like us). In addition, the NYSE American listing rules require that, subject to specified exceptions, each member of a listed company's audit committee be independent. The NYSE American listing rules require that a company's audit committee consist of three members, unless the issuer is a smaller reporting company such as the Company, in which case only two members are required. Audit committee members must also satisfy additional independence criteria, including those set forth in Rule 10A-3 under Exchange Act.

The Audit Committee is appointed by our Board of Directors to assist in fulfilling its oversight responsibility by reviewing the accounting and financial reporting processes of the Company and its subsidiaries, our internal control and disclosure control system, and the audits of our financial statements. In this regard, the Audit Committee approves our retention of independent auditors and pre-approve any audit or non-audit services performed by them. It reviews with such accountants the arrangements for, and the scope of, the audit to be conducted by them. It also reviews with the independent accountants and with management the results of audits and various other financial and accounting matters affecting us.

In the event that our listing application is approved, we anticipate that all members of our Audit Committee will meet the relevant independence requirements for service on the Audit Committee and requirements for financial literacy set forth in the NYSE American listing rules and SEC rules and our Board of Directors will appoint an "audit committee financial expert" within the meaning of applicable SEC regulations. Both our independent registered public accounting firm and management will periodically meet privately with our Audit Committee.

The full text of our Audit Committee charter is posted on the investor relations portion of our website at <http://www.birchtech.com>. We do not incorporate the information contained on, or accessible through, our corporate website into this prospectus, and you should not consider it a part of this prospectus.

Other Committees

Our Board of Directors will have not have any committees other than the Audit Committee.

Code of Ethics and Business Conduct

Our Board of Directors has adopted a written code of ethics and business conduct (the "Code of Conduct"), which outlines a set of ethical standards by which each director, officer and employee of the Company should conduct his or her business. The objective of the Code of Conduct is to provide guidelines for maintaining our commitment to honesty, integrity, and ethical behavior. The Code of Conduct addresses conflicts of interest, protection of our assets, confidentiality, fair dealing with customers, suppliers, competitors and employees, insider trading, compliance with laws, and reporting any illegal or unethical behavior. As part of the Code of Conduct, any person subject to the Code of Conduct is required to avoid or fully disclose interests or relationships that are harmful or detrimental to our best interests or that may give rise to real, potential, or the appearance of conflicts of interest. Our Board of Directors will have ultimate responsibility for the stewardship of and monitoring compliance with the Code of Conduct. Directors, officers, and employees may be required periodically to review the Code of Conduct and acknowledge in writing their understanding of and compliance with the Code. Our Code of Business Conduct and Ethics reflects the foregoing principles. A copy of the Code of Conduct is available free of charge to any person on written or telephone request to Birchtech Corp., 1810 Jester Drive, Corsicana, Texas 75109 or (614) 505-6115.

We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K relating to amendments to or waivers from any provision of the code of ethics and business conduct applicable to our Chief Executive Officer and Chief Financial Officer by posting such information on our website <http://www.birchtech.com>.

EXECUTIVE COMPENSATION

The following discussion relates to the compensation of our named executive officers, as determined under applicable SEC rules for smaller reporting companies like us, for the years ended December 31, 2025 and 2024, consisting of Richard MacPherson, our President and Chief Executive Officer, John Pavlish, Senior Vice President, and James Trettel, Executive Vice President of Operations.

Fiscal Year 2025 and 2024 Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)(4)	Stock Options (\$)(4)	All Other Compensation (\$)(5)	Total (\$)
Richard MacPherson	2025	1,000,000	—	—	—	146,279	1,146,279
President and Chief Executive Officer, Secretary, Director (1)	2024	879,818	1,250,000	402,666	189,664	140,244	2,862,392
John Pavlish	2025	500,000	—	—	—	23,082	523,082
Senior Vice President (2)	2024	488,625	550,000	—	63,221	22,143	1,123,989
James Trettel	2025	600,000	—	—	—	22,093	622,093
Executive Vice President of Operations (3)	2024	552,500	600,000	—	126,443	23,217	1,302,160

- (1) Mr. MacPherson was appointed President and Chief Executive Officer in March 2015. From January 1, 2024 to May 31, 2024, Mr. MacPherson's annual base salary was \$745,000. See "Executive Employment Agreements" below for information on the amended and restated employment agreement entered into with Mr. MacPherson effective June 1, 2024. During 2022, Mr. MacPherson was granted a retention stock bonus award in the amount of 600,000 shares of common stock. Such award was granted on November 8, 2022, which shares vested 25.0% every six months from the date of grant and became fully vested on November 8, 2024. During 2024, Mr. MacPherson was granted a five-year nonqualified stock option to acquire 60,000 shares of common stock exercisable at \$4.40 per share.
- (2) Mr. Pavlish was appointed Senior Vice President in November 2014. From January 1, 2024 to May 31, 2024, Mr. Pavlish's annual base salary was \$480,000. See "Executive Employment Agreements" below for information on the amended and restated employment agreement entered into with Mr. Pavlish effective June 1, 2024. During 2024, Mr. Pavlish was granted a five-year nonqualified stock option to acquire 20,000 shares of common stock exercisable at \$4.40 per share.
- (3) Mr. Trettel was appointed Vice President of Operations in January 2014. From January 1, 2024 to May 31, 2024, Mr. Trettel's annual base salary was \$500,000. See "Executive Employment Agreements" below for information on the employment agreement entered into with Mr. Trettel effective June 1, 2024. During 2024, Mr. Trettel was granted a five-year nonqualified stock option to acquire 40,000 shares of common stock exercisable at \$4.40 per share.

(4) Represents the dollar amount recognized for consolidated financial statement reporting purposes of restricted stock awards and stock option awards granted to the executive officers computed in accordance with FASB ASC Topic 718. For a discussion of valuation assumptions, see Note 11 to our consolidated financial statements included elsewhere in this prospectus for the year ended December 31, 2024. The dollar amount shown in the “Stock Awards” column for Mr. MacPherson reflects the grant date fair value recognized in 2024 for the retention stock award granted in November 2022 which was subject to a vesting schedule. The full amount for the entire grant was \$960,000. The dollar amounts shown in the “Option Awards” column for Mr. MacPherson, Mr. Pavlish and Mr. Trettel reflect the grant date fair value recognized for stock options granted in 2024. There can be no assurance the amounts determined in accordance with FASB ASC Topic 718 will ever be realized. The following table provides information concerning the stock options granted to the executive officers:

Name	Year	Stock Options (#)	FASB ASC Topic 718 Value (\$)
Richard MacPherson	2025	—	—
	2024	60,000	189,664
John Pavlish	2025	—	—
	2024	20,000	63,221
James Trettel	2025	—	—
	2024	40,000	126,443

(5) The amounts shown for 2025 and 2024 in the “All Other Compensation” column are comprised of the following:

Name	Year	401k Match (\$)	Life Insurance Premiums (\$)	Auto Allowance (\$)	Perquisites and Other Benefits (\$) ⁽¹⁾
Richard MacPherson	2025	—	96,600	27,600	22,079
	2024	—	96,600	27,785	15,859
John Pavlish	2025	15,793	—	—	7,289
	2024	13,833	—	—	8,310
James Trettel	2025	16,093	—	—	6,000
	2024	17,217	—	—	6,000

(1) The amount for each of Messrs. MacPherson, Pavlish and Trettel includes \$6,000 for a home office allowance in 2025 and 2024. The amount for each of Messrs. MacPherson and Pavlish also includes \$16,079 and \$1,289, respectively, for medical expense reimbursement in 2025 and \$9,859 and \$2,310, respectively, for medical expense reimbursement in 2024.

Executive Employment Agreements

On June 7, 2024, the Company entered into an amended and restated employment agreement with Richard MacPherson, effective as of June 1, 2024, pursuant to which Mr. MacPherson will continue to serve as President and Chief Executive Officer of the Company. The agreement has a term of three years which after such three-year term will automatically renew for successive one-year periods unless otherwise terminated by either party prior to the next applicable renewal period. Mr. MacPherson is entitled to a base salary of \$1,000,000 per year, which may be increased from time to time solely at the discretion of our Board of Directors (or committee thereof). Mr. MacPherson shall be eligible to receive bonus compensation in such amounts and at such times as our Board of Directors (or committee thereof) at its sole discretion shall from time to time determine and which shall not exceed \$1,000,000 annually. He is entitled to participate in benefit plans that are made available to executive employees of the Company, and is entitled to certain other benefits. He is also entitled to receive equity awards subject to the sole discretion of our Board of Directors (or committee thereof). The agreement also provides for certain severance payments in the event the agreement is terminated by the Company without cause or terminated by Mr. MacPherson for good reason (as such terms are defined in the agreement).

On June 7, 2024, the Company also entered into an amended and restated employment agreement with John Pavlish, effective as of June 1, 2024, pursuant to which Mr. Pavlish will continue to serve as Senior Vice President and Chief Technology Officer of the Company. The agreement has a term of three years which after such three-year term will automatically renew for successive one-year periods unless otherwise terminated by either party prior to the next applicable renewal period. Mr. Pavlish is entitled to a base salary

of \$500,000 per year, which may be increased from time to time solely at the discretion of our Board of Directors (or committee thereof). Mr. Pavlish shall be eligible to receive bonus compensation in such amounts and at such times as our Board of Directors (or committee thereof) at its sole discretion shall from time to time determine and which shall not exceed \$500,000 annually. He is entitled to participate in benefit plans that are made available to executive employees of the Company, and is entitled to certain other benefits. He is also entitled to receive equity awards subject to the sole discretion of our Board of Directors (or committee thereof). The agreement also provides for certain severance payments in the event the agreement is terminated by the Company without cause or terminated by Mr. Pavlish for good reason (as such terms are defined in the agreement).

On June 7, 2024, the Company also entered into an employment agreement with James Trettel, effective as of June 1, 2024, pursuant to which Mr. Trettel will serve as Executive Vice President of Operations of the Company. The agreement has a term of three years which after such three-year term will automatically renew for successive one-year periods unless otherwise terminated by either party prior to the next applicable renewal period. Mr. Trettel is entitled to a base salary of \$600,000 per year, which may be increased from time to time solely at the discretion of our Board of Directors (or committee thereof). Mr. Trettel shall be eligible to receive bonus compensation in such amounts and at such times as our Board of Directors (or committee thereof) at its sole discretion shall from time to time determine and which shall not exceed \$500,000 annually. He is entitled to participate in benefit plans that are made available to executive employees of the Company, and is entitled to certain other benefits. He is also entitled to receive equity awards subject to the sole discretion of our Board of Directors (or committee thereof). The agreement also provides for certain severance payments in the event the agreement is terminated by the Company without cause or terminated by Mr. Trettel for good reason (as such terms are defined in the agreement).

Outstanding Equity Awards as of December 31, 2025

The following table sets forth certain information about the number of unexercised nonqualified stock options held as of December 31, 2025 by each executive named in the Summary Compensation Table.

Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option Exercise Price (\$)	Option Expiration Date
Richard MacPherson	150,000	—	3.90	11/22/2026
	60,000	—	4.40	01/15/2029
John Pavlish	10,000	—	5.75	02/10/2027
	100,000	—	3.90	11/22/2026
	100,000	—	1.05	05/31/2027
	20,000	—	4.40	01/15/2029
James Trettel	100,000	—	5.75	02/10/2027
	100,000	—	3.90	11/22/2026
	100,000	—	1.05	05/31/2027
	40,000	—	4.40	01/15/2029

Other Benefits

Our executive officers are eligible to participate in all of our employee benefit plans, such as medical and dental, our employee stock purchase plan, and our 401(k) plan, in each case on the same basis as other employees, subject to applicable law, should such benefits exist. Our 401(k) plan allows eligible employees to defer a portion of their compensation before federal income tax to a qualified trust. All employees who are at least 21 years of age are eligible to participate in the 401(k) plan. The participants may choose from multiple investment options for the investment of their deferred compensation. In addition, we match 100% of each participant's salary deferral, for the first 4% of their salary, with a cash contribution. For the years ended December 31, 2025 and 2024, we contributed \$88,813 and \$71,909, respectively, to the 401(k) plan. We also provide vacation and other paid holidays to all employees, including our executive officers, which are comparable to those provided at peer companies. Certain other perquisites and benefits are provided to our executive officers as reflected in the tables above.

Policies Regarding Recovery of Awards

Our Board of Directors has not adopted a policy that requires us to make retroactive adjustments to any cash or equity-based incentive compensation paid to executive officers (or others) where the payment was predicated upon the achievement of financial results that were subsequently the subject of a restatement. However, in connection with our application to list our common stock on NYSE American, we intend to adopt a clawback policy that complies with NYSE American's clawback rules promulgated under Section 10D of the Exchange Act and the rules promulgated thereunder.

Tax and Accounting Treatment of Compensation

Section 162(m) of the Internal Revenue Code places a limit of \$1.0 million per person on the amount of compensation that we may deduct in any one year with respect to our Chief Executive Officer and certain of our other executive officers. While our Board of Directors considers deductibility factors when making compensation decisions, our Board of Directors also looks at other considerations, such as providing our executive officers with competitive and adequate incentives to remain with us and increase our business operations, financial performance, and prospects, as well as rewarding extraordinary contributions.

We account for equity compensation paid to our employees under the rules of FASB ASC Topic 718, which requires us to estimate and record an expense for each award of equity compensation over the service period of the award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. We have not tailored our executive compensation program to achieve particular accounting results.

Policies on Ownership, Insider Trading, Hedging, and 10b5-1 Plans

We do not have formal stock ownership guidelines for our employees or directors, because our Board of Directors is satisfied that stock and option holdings among our employees or directors, are sufficient at this time to provide motivation and to align this group's interests with those of our stockholders. In addition, we believe that stock ownership guidelines are rare in companies at our stage, which means that ownership requirements would put us at a competitive disadvantage when recruiting and retaining high-quality executives.

We have established an insider trading policy which provides guidelines to officers, directors and employees with respect to transactions in the Company's securities. The Company's insider trading policy prohibits certain actions by such individuals relating to buying and selling common stock of the Company, and discourages certain other actions in other situations. Such individuals are authorized to enter into trading plans established according to Section 10b5-1 of the Exchange Act with an independent broker-dealer. Under these plans, the individual must not exercise any influence over the amount of the securities to be traded, the price at which they are to be traded or the date of the trade. The plan must either specify the amount, pricing and timing of transactions in advance or delegate discretion on these matters to an independent third party. Such plans provide a defense from insider trading liability. No director or named executive officer has a trading plan in place.

Stockholder Advisory Vote on Executive Compensation

Our Company held an advisory vote on executive compensation in 2024 and takes such action annually. Our Board of Directors intends to periodically reevaluate our executive compensation philosophy and practices in light of our performance, needs and developments, including the outcome of future non-binding advisory votes by our stockholders.

Stock Option Grant Practices

Our Company has certain practices relating to the timing of grants of stock options. For option grants to our employees, including executive officers, and non-employee directors, grants of options are currently made by and at meetings of our Board of Directors, or by unanimous written consent in lieu of a meeting, under our Amended and Restated 2017 Equity Incentive Plan. While our Board of Directors does not currently have a formal policy regarding the timing and terms of stock option awards while in possession of material non-public information, our Board of Directors expects to defer grants until a date on which the Company is not in possession of material non-public information. It is the Company's practice not to time the disclosure of material non-public information for the purpose of affecting the value of executive or director compensation.

DIRECTOR COMPENSATION**Director Compensation Table for Year Ended December 31, 2025**

The following table sets forth information regarding the compensation for 2025 of each non-executive member of our Board of Directors. Christopher Greenberg resigned from our Board of Directors on July 1, 2025.

Name	Fees Earned or Paid in Cash (\$)	Stock Awards(\$)(1)	Option Awards (\$)(1)	Total (\$)
Christopher Greenberg	75,000	—	—	75,000
David M. Kaye	75,000	—	—	75,000
Troy Grant	112,500	1,668	—	114,168
Mitzi H. Coogler	75,000	—	40,071	115,071

(1) Represents the aggregate grant date fair value recognized in 2025 computed in accordance with FASB ASC Topic 718. For a discussion of valuation assumptions, see Note 11 to our consolidated financial statements included elsewhere in this prospectus for the year ended December 31, 2024. There can be no assurance the amounts determined in accordance with FASB ASC Topic 718 will ever be realized. The following table provides information concerning the restricted stock units (“RSUs”) and stock options granted to the Directors for 2025:

Name	Stock Awards (#)	FASB ASC Topic 718 Value (\$)	Stock Options (#)(1)	FASB ASC Topic 718 Value (\$)
Christopher Greenberg	—	—	—	—
David M. Kaye	—	—	—	—
Troy Grant	10,000 (1)	1,668	—	—
Mitzi H. Coogler	—	—	20,000 (2)	40,071

(1) On January 15, 2024, the Company granted 10,000 RSUs to Mr. Grant. The RSUs vest one year from the grant of grant on January 15, 2025. Once vested, each RSU represents the right to receive one share of the Company’s common stock.

(2) On January 9, 2025, the Company granted a nonqualified stock option to Ms. Coogler to acquire 20,000 shares of common stock at an exercise price of \$2.80 per share. The option is fully vested and exercisable as of the grant date.

During 2025, Mr. Greenberg received \$75,000 in compensation for his service as Chairman of our Board of Directors from January 1, 2025 until his resignation, effective July 1, 2025. Each of Mr. Kaye, Mr. Grant and Ms. Coogler received \$75,000 during 2025 for service on our Board of Directors. Mr. Grant also received an additional \$37,500 during 2025 for his service as Chairman of the Audit Committee. Effective July 1, 2025, Mr. Grant no longer receives this additional compensation.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than the compensation agreements and other arrangements described under the sections entitled “Executive Compensation” and “Director Compensation” in this prospectus and the transactions described below, since January 1, 2023, there has not been and there is not currently proposed, any transaction or series of similar transactions to which we were, or will be, a party in which the amount involved exceeded, or will exceed, the lesser of (i) \$120,000 or (ii) one percent of the average of our total assets for the last two completed fiscal years, and in which any director, executive officer, holder of five percent or more of any class of our capital stock, or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest.

AC Midwest Agreements

On February 27, 2024, we entered into an Unsecured Debt Restructuring Agreement (the “Debt Restructuring Agreement”) with AC Midwest, which replaced and superseded the Unsecured Note Financing Agreement and Reaffirmation of Guaranty entered into with AC Midwest on February 25, 2019, as amended on October 28, 2022 (the “Unsecured Note Financing Agreement”).

Pursuant to the Unsecured Note Financing Agreement, prior to February 27, 2024, AC Midwest was the holder of an unsecured note with a principal amount outstanding of \$13,154,930.61 which was issued on February 25, 2019 (the “Unsecured Note”). The Unsecured Note was scheduled to mature on August 25, 2025 and bore a zero cash interest rate. Pursuant to the Unsecured Note Financing Agreement, AC Midwest was also entitled to a “non-recourse” profit participation preference equal to \$17,654,930.60 (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 its maturity date. The Profit Share, however, if not paid in full on or before such maturity date, would remain subject to the Unsecured Note Financing Agreement until full and final payment.

Prior to February 27, 2024, there also remained outstanding to AC Midwest a principal balance of \$271,686.10 due under a secured note of the Company issued on November 29, 2016 in the original principal amount of \$9,646,686, which had a maturity date of August 25, 2025 (the “Secured Note”). The Secured Note had been issued pursuant to an Amended and Restated Financing Agreement and Reaffirmation of Guaranty, dated as of November 1, 2016, as amended on June 14, 2018, September 12, 2019, February 25, 2019 and October 28, 2022 (the “Restated Financing Agreement”).

Pursuant to the Debt Restructuring Agreement, on February 27, 2024, we (i) paid AC Midwest \$9,040,000 as a reduction in the outstanding principal balance of the Unsecured Note, (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 \$4,114,930.60 (the “New Note”), and (iii) paid AC Midwest \$275,625.55 representing the remaining principal balance under the Secured Note of \$271,686.10 plus interest of \$3,939.45. In addition, within 30 days, we 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 such shares for the purchase price of \$960,000 was completed on March 11, 2024. Any remaining principal balance on the New Note was due August 27, 2024 (the “Maturity Date”), which was six months from February 27, 2024. Until repaid in full, the New Note accrued interest at a rate equal to the Secured Overnight Financing Rate plus 2.0% per annum. The New Note completely replaced and superseded the Unsecured Note, which was of no further force and effect. On August 26, 2024 and August 27, 2024, the Company repaid AC Midwest the remaining principal of \$3,154,931 on the New Note together with accrued interest of \$119,164. As a result, the only remaining debt obligation under the Debt Restructuring Agreement is the profit participation, as described below.

In addition, pursuant to the Debt Restructuring Agreement, AC Midwest is entitled to a profit participation preference equal to \$7,900,000 (the “Restructured Profit Share”). 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 our intellectual property. Following the receipt of any Net Litigation Proceeds, we are required to 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 completely replaces and supersedes the terms and conditions of the Profit Share in the amount of \$17,654,930.60 provided for in the Unsecured Note Financing Agreement, which is of no further force and effect. The Restructured Profit Share, if not paid in full on or before the Maturity Date, remains 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 will be issued to the Company.

As a result of the repayment of the remaining principal balance under the Secured Note, we and AC Midwest executed a Satisfaction and Discharge of Secured Debt confirming the cancellation of the Secured Note and that all of the obligations under the Restated Financing Agreement have been fully satisfied and discharged.

As of the date of this prospectus, AC Midwest beneficially owns approximately 9.6% of the outstanding shares of our common stock.

Kaye Cooper Kay & Rosenberg, LLP

Kaye Cooper Kay & Rosenberg, LLP provides certain legal services to the Company and was paid \$393,111, \$431,444 and \$450,760 for the years ended December 31, 2023, December 31, 2024 and December 31, 2025, respectively, for legal services rendered and disbursement incurred. David M. Kaye, a director of the Company, is a partner of the law firm.

Dakin Agreement

On January 31, 2023, we entered into the Dakin Agreement, pursuant to which Dakin has granted to the Company (i) a limited license to manufacture and produce for Dakin products (the “Dakin Products”) comprising Dakin IP described below, and (ii) an exclusive license to commercialize the Dakin IP in the United States. Dakin is a company owned and controlled by Richard MacPherson, 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. Under the Dakin Agreement, Dakin is required to purchase from the Company 100% of Dakin’s requirements for the Dakin Products containing the Dakin IP for all sales of the Dakin Products outside of the United States, subject to the availability of the products from the Company, at a pricing formula set forth in the Dakin Agreement. The Company was required to pay Dakin a license fee of \$12,500 per month for a three-year period commencing as of the effective date, and pay Dakin a royalty on all sales of the Dakin Products made by the Company in the United States. The Company also agreed to provide Dakin with technical support as requested by Dakin at such technical support rates set forth in the Dakin Agreement subject to adjustment. 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. The Dakin IP consists of a proprietary compound of materials engineered to treat a boiler to improve the combustion process and thereby reduce overall emissions, while improving boiler efficiency during the combustion of all types of fuels at power plants. For the years ended December 31, 2023 and 2024, Dakin incurred license fees of \$150,000 and \$112,500, respectively.

On May 28, 2024, the Company entered into an Administrative Services Agreement with Greenberg Enterprises, LLC (“Greenberg Enterprises”), pursuant to which Greenberg Enterprises will be paid for certain administrative support provided to the Company since January 1, 2024 and administrative support to be provided in the future to the Company, including but not limited to general office and technical support, project management and support, and vendor relations support. Such agreement was terminated effective in December 2024. During the year ended December 31, 2024, Greenberg Enterprises provided \$237,020 for administrative services and \$335,100 for expense reimbursement. At December 31, 2024, Greenberg Enterprises was owed \$0 from the Company pursuant to the agreement. Greenberg Enterprises is a company owned and controlled by Christopher Greenberg, the former Chairman of our Board of Directors.

Indemnification Agreements

Following this offering, we intend to enter into new agreements to indemnify our directors and executive officers. These agreements will, among other things, require us to indemnify these individuals for certain expenses (including attorneys’ fees), judgments, fines, and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our Company or that person’s status as a member of our Board of Directors to the maximum extent allowed under Delaware law.

Policies for Approval of Related Party Transactions

All related persons transactions were reviewed and approved by a majority of our Board of Directors on terms no less favorable than those that could be obtained from unaffiliated third parties. Further, we intend to ensure that all future transactions between us and any related person are approved by a majority of the members of our Board of Directors, including a majority of the independent and disinterested members of our Board of Directors, and are on terms no less favorable to us than those that we could obtain from unaffiliated third-parties. Additionally, all such transactions shall be reviewed and approved by our Audit Committee, which will present its determination to our Board of Directors as a whole.

Following this offering, we expect to adopt a written related party transactions policy that will provide that such transactions must be approved by our Audit Committee. Pursuant to this policy, the Audit Committee will have the primary responsibility for reviewing and approving or disapproving “related party transactions,” which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed the lesser of (i) \$120,000 or (ii) one percent of the average of our total assets for the last two completed fiscal years, and in which a related person has or will have a direct or indirect material interest. For purposes of this policy, a related person will be defined as a director, executive officer, nominee for director, or greater than 5% beneficial owner of our common stock, in each case since the beginning of the most recently completed year, and their immediate family members.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information known to us regarding beneficial ownership of our common stock as of January 29, 2026 by:

- each person or group of affiliated persons known by us to be the beneficial owner of more than five percent of our capital stock;
- each of our named executive officers;
- each of our directors; and
- all of our executive officers and directors as a group.

The column entitled “Percentage of Shares Beneficially Owned-Before Offering” is calculated based on shares of common stock outstanding as of January 29, 2026. The column entitled “Percentage of Shares Beneficially Owned-After Offering” is based on shares of our common stock to be outstanding after this offering, including the shares of our common stock that we are selling in this offering (without giving effect to the issuance of 817,439 shares of common stock if the underwriters elect to exercise their option to purchase additional shares in full, based on an assumed public offering price of \$3.67, which was the last reported sale price of our common stock on the OTCQB on January 29, 2026).

We have determined beneficial ownership in accordance with the rules of the SEC, and the information is not necessarily indicative of beneficial ownership for any other purpose. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities as well as any shares of common stock that the person has the right to acquire within 60 days of January 29, 2026 through the exercise of stock options or other rights. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them.

Except as otherwise noted below, the address for persons listed in the table is c/o the Company at 1810 Jester Drive, Corsicana, Texas 75109.

Name	Number of Shares Beneficially Owned	Percentage of Outstanding Shares Beneficially Owned (9)	
		Before Offering	After Offering
<i>Directors and Named Executive Officers:</i>			
Richard MacPherson	2,852,595 (1)	14.51 %	11.36 %
John Pavlish	669,710 (2)	3.40 %	2.66 %
James Trettel	403,387 (3)	2.04 %	1.60 %
David M. Kaye	119,032 (4)	*	*
Troy Grant	65,000 (5)	*	*
Mitzi H. Coogler	22,000 (6)	*	*
All officers and directors as a group (7 persons)	4,136,724	20.35 %	16.05 %
<i>5% or Greater Stockholders:</i>			
Alterna Core Capital Assets Fund II, L.P., et al	1,860,000 (7)	9.56 %	7.47 %
Christopher Greenberg	1,126,107 (8)	5.78 %	4.51 %

* Less than one percent of the outstanding shares of common stock of the Company.

(1) Includes 2,642,595 shares of common stock owned by Mr. MacPherson and 210,000 shares of common stock which Mr. MacPherson has the right to acquire upon exercise of options.

- (2) Includes 439,710 shares of common stock owned by Mr. Pavlish and 230,000 shares of common stock which Mr. Pavlish has the right to acquire upon exercise of options.
- (3) Includes 23,387 shares of common stock owned by Mr. Trettel, 40,000 owned by Mr. Trettel's wife, and 340,000 shares of common stock which Mr. Trettel has the right to acquire upon exercise of options.
- (4) Includes 74,032 shares of common stock owned by Mr. Kaye and 45,000 shares of common stock which Mr. Kaye has the right to acquire upon exercise of options.
- (5) Includes 40,000 shares of common stock owned by Mr. Grant and 25,000 shares of common stock which Mr. Grant has the right to acquire upon exercise of options.
- (6) Includes 2,000 shares of common stock owned by Ms. Coogler with her husband, as joint tenants, and 20,000 shares of common stock which Ms. Coogler has the right to acquire upon exercise of options.
- (7) Represents 1,860,000 shares of common stock owned and based solely upon and according to information reported in filings made to the SEC, jointly filed by and on behalf of certain reporting persons identified below (the "Reporting Persons"). The Reporting Persons are Alterna Core Capital Assets Fund II, L.P., Alterna Capital Partners LLC, Alterna General Partner II LLC, AC Midwest Energy LLC, Eric M. Press, Roger P. Miller, and Earle Goldin. The address for the Reporting Persons is 10 Corporate Drive, Suite 2204, Bedford, NH 03110.
- (8) Includes 1,084,507 shares of common stock owned by Mr. Greenberg, 1,000 shares of common stock owned by Mr. Greenberg with his wife, 600 shares of common stock owned by Mr. Greenberg's wife, and 40,000 shares which Mr. Greenberg has the right to acquire upon exercise of options.
- (9) Applicable percentage ownership for each stockholder before the offering is based on 19,455,966 shares of common stock outstanding as of January 29, 2026 plus any securities that stockholder has the right to acquire within 60 days of January 29, 2026 pursuant to options, warrants, conversion privileges, or other rights. Applicable percentage ownership for each stockholder after the offering is based on 19,455,966 shares of common stock outstanding as of January 29, 2026, plus 5,449,592 shares of common stock to be issued in the offering, based on an assumed public offering price of \$3.67, which was the last reported sale price of our common stock on the OTCQB on January 29, 2026, plus any securities that the stockholder has the right to acquire within 60 days of January 29, 2026 pursuant to options, warrants, conversion privileges, or other rights. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock that a person has the right to acquire beneficial ownership of upon the exercise or conversion of options, convertible stock, warrants, or other securities that are currently exercisable or convertible or that will become exercisable or convertible within 60 days of January 29, 2026 are deemed to be beneficially owned by the person holding such securities for the purpose of computing the percentage of ownership of such person, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person.

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our Certificate of Incorporation and Bylaws. The descriptions in this prospectus of our securities and our organizational documents do not purport to be complete and are subject to, and qualified in their entirety by reference to, our organizational documents, copies of which have been filed or incorporated by reference as exhibits to the registration statement of which this prospectus form a part.

General

We are authorized to issue 150,000,000 shares of common stock and 2,000,000 shares of preferred stock, par value \$0.001 per share (the “preferred stock”). As of January 29 2026, 19,455,966 shares of our common stock were outstanding and held of record by 374 stockholders, and no shares of preferred stock were outstanding.

Common Stock

The holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of our stockholders. The holders of our common stock do not have any cumulative voting rights. Holders of our common stock are entitled to receive ratably any dividends declared by our Board of Directors out of funds legally available for that purpose, subject to any preferential dividend rights of any outstanding preferred stock. Our common stock has no preemptive rights, conversion rights or other subscription rights, or redemption or sinking fund provisions.

In the event of our liquidation, dissolution, or winding up, holders of our common stock will be entitled to share ratably in all assets remaining after payment of all debts and other liabilities and any liquidation preference of any outstanding convertible preferred stock. The shares to be issued by us in this offering will be, when issued and paid for, validly issued, fully paid, and non-assessable.

Preferred Stock

Our Board of Directors is authorized, without further action by our stockholders, to issue up to 2,000,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, and restrictions thereof. These rights, preferences, and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms, and the number of shares constituting, or the designation of, such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon our liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring, or preventing a change in control of our Company or other corporate action. Immediately after consummation of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Stock Options

As of January 29, 2026, there were outstanding options to purchase an aggregate of 1,070,000 shares of our common stock at a weighted average exercise price of \$3.43 per share.

Anti-Takeover Effects of our Certificate of Incorporation, Bylaws and Delaware Law

Our Certificate of Incorporation and Bylaws contain provisions that could have an anti-takeover effect, including provisions that provide the following:

- the ability of our Board of Directors to determine the rights, preferences and privileges of our preferred stock and to issue the preferred stock without stockholder approval;
- advance notice requirements for election to our Board of Directors and for proposing matters that can be acted upon at stockholder meetings;
- vacancies on our Board of Directors may be filled by a majority of directors then in office, although less than a quorum;

- authority granted to our Board of Directors to increase or decrease the size of our Board of Directors;
- authorization for our Board of Directors, by majority vote, to amend the Bylaws; and
- under the DGCL, stockholders are not entitled to cumulative voting in the election of directors unless specifically provided for; our Certificate of Incorporation and Bylaws do not provide for cumulative voting.

Filling Board Vacancies

Our Certificate of Incorporation provides that any vacancy on our Board of Directors, however occurring, including a vacancy resulting from an increase in the size of our Board of Directors, may only be filled by the affirmative vote of a majority of our directors then in office even if less than a quorum. The limitation on treatment of director vacancies has the effect of making it more difficult for stockholders to change the composition of our Board of Directors.

No Written Consent of Stockholders

Our Certificate of Incorporation provides that stockholder actions must be taken by a vote of the stockholders at an annual or special meeting, meaning stockholders may not take any action by written consent in lieu of a meeting. This limit may lengthen the amount of time required to take stockholder actions and would prevent the amendment of our Bylaws or removal of directors by our stockholders without holding a meeting of stockholders.

Meetings of Stockholders

Our Bylaws provide that a special meeting may be called only by our Chairman, if any, the Chief Executive Officer, the President or any Vice President, the Secretary or by our Board of Directors, and shall be called by any of the foregoing at the request in writing of stockholders owning in the aggregate not less than 25% of the entire capital stock of the Corporation issued and outstanding and entitled to vote. Our Bylaws limit the business that may be conducted at an annual meeting of stockholders to those matters properly brought before the meeting.

Advance Notice Requirements

Our Bylaws establish advance notice procedures with regard to stockholder proposals relating to the nomination of candidates for election as directors or new business to be brought before meetings of our stockholders. These procedures provide that notice of stockholder proposals must be timely given in writing to our corporate secretary prior to the meeting at which the action is to be taken. Generally, to be timely, notice must be received at our principal executive offices not less than 45 days nor more than 120 days prior to the date on which we filed our definitive proxy materials (regardless of whether or not thereafter revised or supplemented) with the SEC for the prior year's annual meeting of stockholders. Our Bylaws specify the requirements as to form and content of all stockholders' notices. These requirements may preclude stockholders from bringing matters before the stockholders at an annual or special meeting.

Amendment to Bylaws

Our Bylaws may be amended by, at either an annual or special meeting, the affirmative vote of a majority of the stock entitled to vote at such meeting. Our Bylaws may also be amended by unanimous written consent or at any annual or special meeting by the affirmative vote of a majority of the whole number of directors, subject to the power of the stockholders to change or repeal such Bylaws and provided that our Board of Directors shall not make or alter any Bylaws fixing the qualifications, classifications, term of office or compensation of directors.

Undesignated Preferred Stock

Our Certificate of Incorporation provides for 2,000,000 authorized shares of preferred stock. The existence of authorized but unissued shares of preferred stock may enable our Board of Directors to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest, or otherwise. For example, if in the due exercise of its fiduciary obligations, our Board of Directors were to determine that a takeover proposal is not in the best interests of our stockholders, our Board of Directors could cause shares of preferred stock to be issued without stockholder approval in one or more private offerings or other transactions that might dilute the voting or other rights of the proposed acquirer or insurgent stockholder or stockholder group. In this regard, our Certificate of Incorporation grants our Board of Directors has broad power to establish the rights and preferences of authorized and unissued shares of preferred stock. The issuance of shares of preferred stock could decrease the amount of earnings and assets available for distribution to holders of shares of common stock. The issuance may also adversely affect the rights and powers, including voting rights, of these holders and may have the effect of delaying, deterring or preventing a change in control of us.

NYSE American Listing

We have applied to list our common stock on the NYSE American under the trading symbol “BCHT”.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Transfer Online, Inc., 512 SE Salmon Street, Portland, Oregon 97214. The co-transfer agent and registrar for our common stock in Canada is TSX Trust Company at its offices in Toronto, Ontario, Canada.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, shares of our common stock were traded on the TSX under the symbol “BCHT” and quoted on the OTCQB maintained by OTC Markets Group Inc. under the symbol “BCHT”. Future sales of our common stock in the public market, or the perception that these sales may occur, could adversely affect the prevailing market prices for our common stock and could impair our ability to raise equity capital in the future. (See “Risk Factors—Risks Related to our Common Stock and this Offering—The sale or availability for sale of substantial amounts of common stock could adversely affect their market price.”)

Based on the number of shares outstanding as of January 29, 2026, 24,905,558 shares of our common stock will be outstanding following this offering, assuming no exercise of the underwriters’ option to purchase additional shares of common stock and no exercise of outstanding options. All of the shares of our common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our “affiliates” as that term is defined under Rule 144 under the Securities Act or purchased by existing stockholders and their affiliated entities that are subject to lock-up agreements. Certain shares of our common stock held by existing stockholders are “restricted securities,” as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if their resale qualifies for exemption from registration, including pursuant to Rule 144 promulgated under the Securities Act. Restricted securities may also be sold outside of the U.S. to non-U.S. persons in accordance with Rule 904 of Regulation S.

Rule 144

In general, a person who has beneficially owned restricted stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale and have filed all reports required thereunder. Persons who have beneficially owned restricted shares for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of common stock then outstanding, which will equal approximately 249,000 shares of common stock immediately after this offering, assuming no exercise of the underwriters’ option to purchase additional shares of common stock, based on the number of shares of common stock outstanding as of January 29, 2026; or
- the average weekly trading volume of our common stock on the NYSE American during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale and have filed all reports required thereunder. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Subject to satisfaction of the necessary holding period under Rule 144, following this offering approximately 20.8 million shares of our common stock will be eligible for sale by non-affiliates pursuant to Rule 144, subject in some cases to applicable volume, manner of sale and other limitations under Rule 144. We cannot estimate the number of shares of our common stock that our stockholders will elect to sell under Rule 144.

Lock-Up Agreements

We will agree, subject to certain exceptions and without the approval of the representative of the underwriters, not to offer for sale, issue, sell, contract to sell, pledge or otherwise dispose of any of our common stock or securities convertible into common stock for a period of 90 days after the date of this prospectus. Our directors and executive officers will agree with the underwriters not to offer for sale, issue, sell, contract to sell, pledge or otherwise dispose of any of our common stock or securities convertible into common stock for a period of 90 days after the date of this prospectus.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO U.S. AND NON-U.S. HOLDERS

The following is a summary of the material U.S. federal income tax considerations relating to the purchase, ownership, and disposition of our common stock purchased in this offering, which we refer to collectively as our securities, but is for general information purposes only and does not purport to be a complete analysis of all the potential tax considerations. This summary is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), final, temporary, and proposed Treasury regulations promulgated thereunder, administrative rulings and pronouncements and judicial decisions, all in effect as of the date hereof. These authorities may change, possibly retroactively, resulting in U.S. federal income tax consequences different from those set forth below. There can be no assurance that the Internal Revenue Service (the “IRS”) will not challenge one or more of the tax consequences described herein, and we have not obtained, and do not intend to obtain, an opinion of counsel or ruling from the IRS with respect to the U.S. federal income tax considerations relating to the purchase, ownership, or disposition of our securities.

This summary does not address any alternative minimum tax considerations, any considerations regarding the Medicare tax, any considerations regarding the tax on net investment income, or the tax considerations arising under the laws of any state, local, or non-U.S. jurisdiction, or under any non-income tax laws, including U.S. federal gift and estate tax laws, except to the limited extent set forth below. In addition, this summary does not address all of the tax consequences that may be relevant to investors, nor does it address tax considerations applicable to an investor’s particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, or other financial institutions;
- investment funds;
- tax-exempt entities or governmental organizations, including agencies or instrumentalities thereof;
- regulated investment companies and real estate investment trusts;
- controlled foreign corporations, passive foreign investment companies, and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than five percent of our common stock (except to the extent specifically set forth below);
- tax-qualified retirement plans;
- certain expatriates and former citizens or long-term residents of the United States;
- partnerships or entities or arrangements classified as partnerships for U.S. federal income tax purposes and other pass-through entities including S corporations and trusts (and any investors therein);
- persons who hold our securities as a position in a hedging transaction, “straddle,” “conversion transaction,” or other risk reduction transaction or integrated investment;
- persons who do not hold our securities as a capital asset within the meaning of Section 1221 of the Code;
- persons deemed to sell our securities under the constructive sale provisions of the Code, or persons holding the securities as part of a “straddle,” hedge, conversion transaction, integrated transaction, or other similar transaction;
- persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; or

- “qualified foreign pension funds” as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

In addition, if a partnership (or entity or arrangement classified as a partnership for U.S. federal income tax purposes) holds our securities, the tax treatment of a partner generally will depend on the status of the partner and upon the activities of the partnership. Accordingly, partnerships that hold our securities, and partners in such partnerships, should consult their tax advisors regarding the U.S. federal income tax consequences to them.

This discussion is for informational purposes only and is not tax advice. You are urged to consult your own tax advisors with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership, and disposition of our securities arising under the U.S. federal estate or gift tax laws or under the laws of any state, local, non-U.S., or other taxing jurisdiction or under any applicable tax treaty.

CONSEQUENCES TO U.S. HOLDERS

The following is a summary of the U.S. federal income tax consequences that will apply to a U.S. holder of our securities. For purposes of this discussion, you are a U.S. holder if, for U.S. federal income tax purposes, you are a beneficial owner of our securities, other than a partnership, that is:

- an individual citizen or resident of the United States;
- a corporation or other entity taxable as a corporation created or organized in the United States or under the laws of the United States, any State thereof or the District of Columbia;
- an estate or trust whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a U.S. court and which has one or more “United States persons” (within the meaning of Section 7701(a)(30) of the Code) who have the authority to control all substantial decisions of the trust or (y) which has made a valid election to be treated as a “United States person.”

Distributions

As described in the section titled “Dividend Policy,” we currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business, and therefore do not intend to pay cash dividends on our common stock for the foreseeable future. However, if we do make distributions in cash or other property on our common stock, those payments will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent our distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital that will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale or other disposition of stock as described below under “Sale, Exchange, or Other Taxable Disposition of Common Stock.”

Dividend income may be taxed to an individual U.S. holder at rates applicable to long-term capital gains, provided that a minimum holding period and other limitations and requirements are satisfied with certain exceptions. Any dividends that we pay to a U.S. holder that is a corporation will qualify for the dividends received deduction if the requisite holding period is satisfied, subject to certain limitations. U.S. holders should consult their own tax advisors regarding the holding period and other requirements that must be satisfied in order to qualify for the reduced tax rate on dividends or the dividends-received deduction.

Sale, Exchange, or Other Taxable Disposition of Common Stock

A U.S. holder will generally recognize capital gain or loss on the sale, exchange, or other taxable disposition of our common stock. The amount of gain or loss will equal the difference between the amount realized on the sale and such U.S. holder’s adjusted tax basis in such common stock. The amount realized will include the amount of any cash and the fair market value of any other property received in exchange for such common stock. A U.S. holder’s adjusted tax basis in its common stock will generally equal the U.S. holder’s acquisition cost or purchase price, less any prior distributions treated as a return of capital. Gain or loss will be long-term capital

gain or loss if the U.S. holder has held the common stock for more than one year. Long-term capital gains of non-corporate U.S. holders are generally taxed at preferential rates. The deductibility of capital losses is subject to certain limitations.

Information Reporting and Backup Withholding

In general, information reporting requirements may apply to dividends paid to a U.S. holder and to the proceeds of the sale or other disposition of our common stock, unless the U.S. holder is an exempt recipient. Backup withholding may apply to such payments if the U.S. holder fails to provide a taxpayer identification number, a certification of exempt status or has been notified by the IRS that it is subject to backup withholding (and such notification has not been withdrawn).

Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a U.S. holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

Unearned Income Medicare Tax

A 3.8% Medicare contribution tax will generally apply to all or some portion of the net investment income of a U.S. holder that is an individual with adjusted gross income that exceeds a threshold amount (\$200,000, or \$250,000 if married filing jointly).

CONSEQUENCES TO NON-U.S. HOLDERS

The following is a summary of the U.S. federal income tax consequences that will apply to a non-U.S. holder of our securities. A "non-U.S. holder" is a beneficial owner of our securities (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that, for U.S. federal income tax purposes, is not a U.S. holder. The term "non-U.S. holder" includes:

- a non-resident alien individual (other than certain former citizens and residents of the U.S. subject to U.S. tax as expatriates);
- a foreign corporation;
- an estate or trust that is not a U.S. holder; or
- any other person that is not a U.S. holder;

but generally does not include an individual who is present in the U.S. for 183 days or more or who is otherwise treated as a U.S. resident in the taxable year. If you are such an individual, you should consult your tax advisor regarding the U.S. federal income tax consequences of the acquisition, ownership, or sale or other disposition of our securities.

Distributions

As described in the section titled "Dividend Policy," we currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business, and therefore do not intend to pay cash dividends on our common stock for the foreseeable future. However, subject to the discussion below regarding effectively connected income, if we do make distributions of cash or property on our securities, any distribution paid to a non-U.S. holder, to the extent paid out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute a dividend for U.S. federal income tax purposes and, provided such dividends are not effectively connected with the non-U.S. holder's conduct of a trade or business within the U.S., will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty. In order to receive a reduced treaty rate, a non-U.S. holder must provide us with an IRS Form W-8BEN, IRS Form W-8BEN-E, or other applicable documentation properly certifying qualification for the reduced rate. These forms must be provided prior to the payment of dividends and must be updated periodically. A non-U.S. holder eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty should consult with its individual tax advisor to determine if you may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. If a non-U.S. holder holds our securities through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then may be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Dividends received by a non-U.S. holder that are effectively connected with its conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States) are generally exempt from such withholding tax if the non-U.S. holder satisfies certain certification and disclosure requirements. In order to obtain this exemption, the non-U.S. holder must provide us with an IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated U.S. federal income tax rates applicable to U.S. holders, net of certain deductions and credits. In addition, dividends received by a corporate non-U.S. holder that are effectively connected with its conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty. Non-U.S. holders should consult their own tax advisors regarding any applicable tax treaties that may provide for different rules.

Any distribution not constituting a dividend will be treated first as reducing (but not below zero) the non-U.S. holder's adjusted tax basis in its common stock and, to the extent such distribution exceeds the non-U.S. holder's adjusted tax basis, as gain realized from the sale or other disposition of the common stock, which will be treated as described under "Gain on Sale, Exchange, or Other Taxable Disposition of Common Stock" below.

Gain on Sale, Exchange, or Other Taxable Disposition of Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, a non-U.S. holder generally will not be required to pay U.S. federal income tax on any gain realized upon the sale, exchange or other taxable disposition of our Common Stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States);
- the non-U.S. holder is a non-resident alien individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- shares of our common stock constitute U.S. real property interests by reason of our status as a "United States real property holding corporation" (a USRPHC) for U.S. federal income tax purposes.

If the non-U.S. holder is described in the first bullet above, it will be required to pay tax on the net gain derived from the sale, exchange or other taxable disposition under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a rate of 30%, or (in each case) such lower rate as may be specified by an applicable income tax treaty.

An individual non-U.S. holder described in the second bullet above will be required to pay a flat 30% tax (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, exchange or other taxable disposition, which gain may be offset by U.S. source capital losses for the year (provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses).

With respect to the third bullet point above, we believe that we are not currently and will not become a USRPHC for U.S. federal income tax purposes, and the remainder of this discussion so assumes. However, because the determination of whether we are a USRPHC depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a USRPHC in the future. Even if we become a USRPHC, however, as long as our common stock is regularly traded on an established securities market, such common stock will be treated as U.S. real property interests only if the non-U.S. holder actually or constructively hold more than five percent of such regularly traded common stock at any time during the shorter of the five-year period preceding the non-U.S. holder's disposition of, or the non-U.S. holder's holding period for, our common stock.

Non-U.S. holders should consult their own tax advisors regarding any applicable income tax or other treaties that may apply.

Federal Estate Tax

Common stock beneficially owned by an individual who is not a citizen or resident of the United States (as defined for U.S. federal estate tax purposes) at the time of their death will generally be includable in the decedent's gross estate for U.S. federal estate tax purposes. Such shares, therefore, may be subject to U.S. federal estate tax, unless an applicable estate tax treaty provides otherwise.

Backup Withholding and Information Reporting

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E, or W-8ECI, or otherwise establishes an exemption. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Generally, we must report annually to the IRS the amount of dividends paid to you, your name and address, and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence. A non-U.S. holder may have to comply with certification procedures to establish that it is not a United States person in order to avoid information reporting and backup withholding requirements. The certification procedures required to claim a reduced rate of withholding under a treaty generally will satisfy the certification requirements necessary to avoid the backup withholding as well for example, by properly certifying your non-U.S. status on an IRS Form W-8BEN or IRS Form W-8BEN-E or other applicable IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance

The Foreign Account Tax Compliance Act generally imposes withholding tax at a rate of 30% on dividends on and gross proceeds from the sale or other disposition of our securities paid to a “foreign financial institution” (as specially defined under these rules), unless any such institution (1) enters into, and complies with, an agreement with the IRS to report, on an annual basis, information with respect to interests in, and accounts maintained by, the institution that are owned by certain U.S. persons and by certain non-U.S. entities that are wholly or partially owned by U.S. persons and to withhold on certain payments, or (2) if required under an intergovernmental agreement between the United States and an applicable foreign country, reports such information to its local tax authority, which will exchange such information with the U.S. authorities. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Accordingly, the entity through which our securities are held will affect the determination of whether such withholding is required. Similarly, dividends in respect of our securities held by an investor that is a non-financial non-U.S. entity that does not qualify under certain exceptions will generally be subject to withholding at a rate of 30%, unless such entity either (1) certifies to us or the applicable withholding agent that such entity does not have any “substantial United States owners” or (2) provides certain information regarding the entity’s “substantial United States owners,” which will in turn be provided to the U.S. Department of Treasury. Non-U.S. holders should consult their own tax advisors regarding the possible implications of this legislation on their investment in our securities.

Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state, and local and non-U.S. tax consequences of purchasing, owning, and disposing of our securities, including the consequences of any proposed changes in applicable laws.

UNDERWRITING

We intend to enter into an underwriting agreement with Lake Street Capital Markets, LLC to act as the representative of the several underwriters (the “Representative”) listed in the table below. We refer to the several underwriters listed in the table below as the “underwriters.” Subject to the terms and conditions of the underwriting agreement, we will agree to sell to the underwriters, and the underwriters will agree to purchase from us, shares of our common stock.

Pursuant to the terms and subject to the conditions to be contained in the underwriting agreement, we will agree to sell to the underwriters named below, and each underwriter severally will agree to purchase from us, the respective number of shares of common stock set forth opposite its name below:

Underwriter	Number of Shares of Common Stock
Lake Street Capital Markets, LLC	
Huntington Securities, Inc.	
Total	

The underwriting agreement will provide that the obligation of the underwriters to purchase the shares of common stock offered by this prospectus is subject to certain conditions. The underwriters will be obligated to purchase all of the shares of common stock offered hereby if any of the shares are purchased.

We will grant the underwriters an option to buy up to an additional shares of common stock, or 15% of the total number of shares of common stock sold in this offering, at the public offering price, less the underwriting discounts and commissions, solely to cover over-allotments, if any. The underwriters may exercise this option at any time, in whole or in part, during the 30-day period after the date of this prospectus.

Discounts, Commissions, and Expenses

The underwriters propose to offer the shares of common stock purchased pursuant to the underwriting agreement to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of \$ per share. After this offering, the public offering price and concession may be changed by the underwriters. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the underwriting discounts and commissions payable to the underwriters by us in connection with this offering (assuming both the exercise and non-exercise of the over-allotment option to purchase additional shares of common stock we have granted to the Representative):

	Per Share		Total	
	Without Over- allotment	With Over- allotment	Without Over- allotment	With Over- allotment
Public offering price	\$	\$		
Underwriting discounts and commissions to paid by us (7.0%)	\$	\$		

We have also agreed to reimburse the Representative for its out-of-pocket expenses, including legal expenses incurred by it in connection with the offering up to a maximum of \$180,000. In the event that this offering does not close, then such reimbursement will be up to a maximum amount of \$50,000.

Indemnification

Pursuant to the underwriting agreement, we will also agree to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriters or such other indemnified parties may be required to make in respect of those liabilities.

Lock-Up Agreements

We will agree not to (i) offer, pledge, issue, sell, contract to sell, purchase, contract to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock; (ii) enter into any swap or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of shares of common stock; or (iii) file any registration statement with the SEC relating to the offering of any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, without the prior written consent of the Representative, for a period of 90 days following the date of this prospectus, (the “Lock-up Period”). This consent may be given at any time without public notice. These restrictions on future issuances are subject to exceptions for (i) the issuance of shares of our common stock sold in this offering, (ii) the issuance of shares of our common stock upon the exercise of outstanding options or warrants and the vesting of restricted stock awards or units, (iii) the issuance of employee stock options not exercisable during the Lock-up Period and the grant, redemption or forfeiture of restricted stock awards or restricted stock units pursuant to our equity incentive plans or as new employee inducement grants and (iv) the issuance of common stock or warrants to purchase common stock in connection with mergers or acquisitions of securities, businesses, property or other assets, joint ventures, strategic alliances, equipment leasing arrangements or debt financing.

In addition, each of our directors and executive officers will enter into a lock-up agreement in favor of the underwriters. Under the lock-up agreements, the directors and executive officers may not, directly or indirectly, sell, offer to sell, contract to sell, or grant any option for the sale (including any short sale), grant any security interest in, pledge, hypothecate, hedge, establish an open “put equivalent position” (within the meaning of Rule 16a-1(h) under the Exchange Act), or otherwise dispose of, or enter into any transaction which is designed to or could be expected to result in the disposition of, any shares of our common stock or securities convertible into or exchangeable for shares of our common stock, or publicly announce any intention to do any of the foregoing, without the prior written consent of the Representative, for a period of 90 days from the date of this prospectus. This consent may be given at any time without public notice. These restrictions on future dispositions by our directors and executive officers are subject to exceptions for (i) one or more bona fide gift transfers of securities to immediate family members who agree to be bound by these restrictions and (ii) transfers of securities to one or more trusts for bona fide estate planning purposes. Each officer and director shall be immediately and automatically released from all restrictions and obligations under the lock up agreement in the event that he or she ceases to be a director or officer of the Company and has no further reporting obligations under Section 16 of the Exchange Act.

Determination of Offering Price

The actual offering price of the shares of common stock offered hereby will be negotiated between us, the underwriters and the investors in this offering based on the trading of our shares of common stock prior to the offering, among other things. Other factors to be considered in determining the public offering price of the shares of common stock we are offering, include our history and prospects, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, the general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

Electronic Distribution

This prospectus may be made available in electronic format on websites or through other online services maintained by the underwriters or by their affiliates. In those cases, prospective investors may view offering terms online and prospective investors may be allowed to place orders online. Other than this prospectus in electronic format, the information on the underwriters’ websites or our website and any information contained in any other websites maintained by the underwriters or by us (which is not part of this prospectus or the registration statement of which this prospectus forms a part) has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

Price Stabilization, Short Positions and Penalty Bids

In connection with the offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

- Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum.

- Over-allotment involves sales by the underwriters of shares in excess of the number of shares of common stock the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares of common stock over-allotted by the underwriters is not greater than the number of shares of common stock that they may purchase in the over-allotment option. In a naked short position, the number of shares of common stock involved is greater than the number of shares of common stock in the over-allotment option. The underwriters may close out any covered short position by either exercising their over-allotment option and/or purchasing shares of common stock in the open market.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares of common stock available for purchase in the open market as compared to the price at which they may purchase shares of common stock through the over-allotment option. A naked short position occurs if the underwriters sell more shares of common stock than could be covered by the over-allotment option. This position can only be closed out by buying shares of common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares of common stock in the open market after pricing that could adversely affect investors who purchase shares of common stock in the offering.
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our shares of common stock. In addition, neither we nor the underwriters make any representation that the underwriter will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the shares of common stock offered by this prospectus in any jurisdiction where action for that purpose is required.

The shares of common stock offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such shares of common stock be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any shares of common stock offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the shares of common stock under this prospectus is only made to persons to whom it is lawful to offer the shares of common stock without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the shares of common stock sold to the offeree within 12 months after its transfer to the offeree under this prospectus.

Canada

The shares of common stock may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws. Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor. Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriter is not required to comply with the disclosure requirements of NI33-105 regarding underwriter conflicts of interest in connection with this offering.

China

The information in this document does not constitute a public offer of the shares of common stock, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The shares of common stock may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area - Belgium, Germany, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of shares of common stock will be made pursuant to an exemption under the Directive 2003/71/EC ("Prospectus Directive"), as implemented in Member States of the European Economic Area (each, a "Relevant Member State"), from the requirement to produce a prospectus for offers of shares of common stock.

An offer to the public of shares of common stock has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in shares of common stock;
- to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statements);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive) subject to obtaining our prior consent or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of common stock shall require us to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code monétaire et financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des marchés financiers ("AMF"). The shares of common stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the shares of common stock have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to be distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2 and D.411-1 to D.411-3, D. 744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified

investors (cercle restreint d'investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the shares of common stock cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of shares of common stock in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the “Prospectus Regulations”). The shares of common stock have not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(l) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The shares of common stock offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such shares of common stock been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with this offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the shares of common stock being offered. Any resale in Israel, directly or indirectly, to the public of the shares of common stock offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the shares of common stock in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Società e la Borsa, “CONSOB”) pursuant to the Italian securities legislation and, accordingly, no offering material relating to the shares of common stock may be distributed in Italy and such shares of common stock may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 (“Decree No. 58”), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no. 58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 (“Regulation no. 11971”) as amended (“Qualified Investors”); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the shares of common stock or distribution of any offer document relating to the shares of common stock in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the shares of common stock in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such shares of common stock being declared null and void and in the liability of the entity transferring the shares of common stock for any damages suffered by the investors.

Japan

The shares of common stock have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the “FIEL”) pursuant to an exemption from the registration requirements applicable to a private placement of shares of common stock to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the shares of common stock may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires shares of common stock may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of shares of common stock is conditional upon the execution of an agreement to that effect.

New Zealand

The shares of common stock offered hereby have not been offered or sold, and will not be offered or sold, directly or indirectly in New Zealand and no offering materials or advertisements have been or will be distributed in relation to any offer of shares in New Zealand, in each case other than:

- to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money;
- to persons who in all the circumstances can properly be regarded as having been selected otherwise than as members of the public;
- to persons who are each required to pay a minimum subscription price of at least NZ\$500,000 for the shares before the allotment of those shares (disregarding any amounts payable, or paid, out of money lent by the issuer or any associated person of the issuer); or
- in other circumstances where there is no contravention of the Securities Act 1978 of New Zealand (or any statutory modification or reenactment of, or statutory substitution for, the Securities Act 1978 of New Zealand).

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The shares of common stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the shares of common stock have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissăo do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of shares of common stock in Portugal are limited to persons who are “qualified investors” (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the shares of common stock be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of shares of common stock in Sweden is limited to persons who are “qualified investors” (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the shares of common stock may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the shares of common stock have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares of common stock will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the shares of common stock have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor have we received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the shares of common stock within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. We may not render services relating to the shares of common stock within the United Arab Emirates, including the receipt of applications and/or the allotment or redemption of such shares.

No offer or invitation to subscribe for shares of common stock is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended (“FSMA”)) has been published or is intended to be published in respect of the shares of common stock. This document is issued on a confidential basis to “qualified investors” (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the shares of common stock may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the shares of common stock has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply us.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 (“FPO”), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together “relevant persons”). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Sheppard, Mullin, Richter & Hampton LLP. Certain legal matters relating to this offering will be passed upon for the underwriters by Sullivan & Worcester LLP, New York, New York.

EXPERTS

The consolidated financial statements of Birchtech Corp. as of December 31, 2024 and 2023 and for the years then ended, appearing in this Prospectus and Registration Statement, have been included in reliance on the report, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, of Rosenberg Rich Baker Berman, P.A., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the common stock that we are offering by this prospectus. This prospectus does not contain all of the information included in the registration statement. For further information pertaining to us and our common stock, you should refer to the registration statement and to its exhibits. Whenever we make reference in this prospectus to any of our contracts, agreements, or other documents, the references are not necessarily complete, and you should refer to the exhibits attached to the registration statement for copies of the actual contract, agreement, or other document.

Upon the completion of the offering, we will continue to be subject to the informational requirements of the Exchange Act and will file annual, quarterly, and current reports, proxy statements, and other information with the SEC. You can read our SEC filings, including the registration statement, at the SEC's website at www.sec.gov. We also maintain a website at <http://www.birchtech.com>. The information contained in or accessible from our website is not incorporated into this prospectus, and you should not consider it part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference. Upon completion of the offering, you will continue to have access, free of charge, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Birchtech Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Birchtech Corp (the Company) as of December 31, 2024 and 2023, and the related consolidated statements of operations, stockholders' deficit, and cash flows for the two years in the period ended December 31, 2024, and the related notes (collectively referred to as the financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2024 and 2023, and the results of its operations and its cash flows for the two years in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

Restatement of Prior Periods

As discussed in Note 2, the December 31, 2023 consolidated financial statements have been restated to correct a misstatement.

Emphasis of Matter Regarding Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 3 to the financial statements, the Company has identified conditions, including a net loss and net cash used in operations, that raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are described in Note 3. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provides a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

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Valuation of Profit Share Liability

Description of the Matter

As of December 31, 2024, the Company recorded a profit share liability of \$6.85 million. As discussed in Note 8 to the financial statements, the Company entered into a profit participation preference (the “profit share liability”) with AC Midwest Energy LLC as part of its Unsecured Note Financing Agreement. The Company calculates the fair value of the profit share liability on a quarterly basis utilizing management estimates. 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 is determined on a Level 3 measurement.

Inherent in the valuation of Level 3 financial instruments are certain significant judgments and estimates related to forecasted cash flows. Changes in these assumptions can significantly impact the valuation of the profit share liability and the gain or loss on change in fair value that is recorded. This required a high degree of auditor judgment and an increased extent of effort when performing audit procedures to evaluate the reasonableness of management’s forecasted cash flows.

How We Addressed the Critical Audit Matter in Our Audit

To test the profit share liability calculation as of December 31, 2024, we performed the following procedures among others, by which we:

- Obtained and reviewed the Unsecured Note Agreement and evaluated management’s assessment of the terms of the agreement.
- Evaluated the assumptions regarding the probabilities related to the timing and amount of cash flows by comparing historical information and current events.
- Utilized our internal valuation specialist to assist in the assessment of the appropriateness of the valuation methodology and the reasonableness of the discount rate applied, including consideration of conditions affecting market rates.
- Tested the clerical accuracy of the profit share liability calculation.

/s/ Rosenberg Rich Baker Berman, P.A.

We have served as the Company’s auditor since 2023.

Somerset, New Jersey

March 31, 2025, except for the effects of the reverse stock split as discussed in Note 4 to the consolidated financial statements, to which the date is January 13, 2026

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BIRCHTECH CORP. AND SUBSIDIARIES
(formerly Midwest Energy Emissions Corp.)
CONSOLIDATED BALANCE SHEETS

	December 31, 2024	December 31, 2023 (as restated)
ASSETS		
Current assets		
Cash	\$ 3,456,082	\$ 20,939,762
Accounts receivable	1,823,232	3,076,462
Inventory	621,813	795,164
Prepaid expenses and other assets	198,185	183,621
Total current assets	<u>6,099,312</u>	<u>24,995,009</u>
Security deposits	6,615	5,175
Property and equipment, net	2,350,688	1,595,958
Right of use asset - operating lease	305,142	10,639
Intellectual property, net	1,499,463	1,704,063
Total assets	<u><u>\$ 10,261,220</u></u>	<u><u>\$ 28,310,844</u></u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable and accrued expenses (related party \$37,500 and \$107,454 at December 31, 2024 and December 31, 2023, respectively)	\$ 1,702,998	\$ 1,558,450
Income tax payable	—	437,821
Current portion of operating lease liability	42,733	11,157
Customer credits	167,000	167,000
Accrued salaries	39,280	8,936
Profit share liability – related party	6,853,858	—
Total current liabilities	<u>8,805,869</u>	<u>2,183,364</u>
Operating lease liability, net of current portion	263,490	—
Secured note payable, net of discount – related party	—	239,466
Unsecured note payable, net of discount and issuance costs – related party	—	10,979,723
Profit share liability – related party	—	14,847,937
Total liabilities	<u><u>9,069,359</u></u>	<u><u>28,250,490</u></u>
Commitments and contingencies (Note 10)		
Stockholders' equity (deficit)		
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 19,235,631 and 18,872,022 shares issued and outstanding as of December 31, 2024 and December 31, 2023 respectively.	19,236	18,872
Additional paid-in capital	73,925,861	61,992,607
Accumulated deficit	(72,753,236)	(61,951,125)
Total stockholders' equity (deficit)	<u>1,191,861</u>	<u>60,354</u>
Total liabilities and stockholders' equity (deficit)	<u><u>\$ 10,261,220</u></u>	<u><u>\$ 28,310,844</u></u>

See accompanying notes to these consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
(formerly Midwest Energy Emissions Corp.)
CONSOLIDATED STATEMENTS OF OPERATIONS

	For the Year Ended December 31, 2024	For the Year Ended December 31, 2023 (as restated)
Product revenue	\$ 14,481,784	\$ 17,092,996
License revenue	2,808,125	387,500
Other revenue	116,276	144,874
Revenues	<u>\$ 17,406,185</u>	<u>\$ 17,625,370</u>
 Cost of sales	 (10,305,076)	 (12,172,374)
 Gross profit	 7,101,109	 5,452,996
 Operating expenses:		
Impairment loss	(43,000)	(219,707)
Selling, general and administrative expenses (related party of \$1,116,064 and \$554,410)	(14,216,377)	(14,206,761)
Total operating expenses	<u>(14,259,377)</u>	<u>(14,426,468)</u>
Operating loss	<u>(7,158,268)</u>	<u>(8,973,472)</u>
 Other income (expense)		
Income from legal claims	—	27,607,776
Interest expense (related party of \$245,724 and \$1,360,623)	(267,458)	(1,362,401)
Loss on change in fair value of profit share and unsecured note	(3,959,065)	(11,209,677)
Interest income	293,524	79,301
Total other (expense) income	(3,932,999)	15,114,999
(Loss) income before provision for income taxes	<u>(11,091,267)</u>	<u>6,141,527</u>
 Income tax benefit (expense)	 289,156	 (473,213)
 Net (loss) income	 <u>\$ (10,802,111)</u>	 <u>\$ 5,668,314</u>
 Basic & Diluted (loss) income per share:		
Basic net (loss) income per share	\$ (0.57)	\$ 0.30
Diluted net (loss) income per share	\$ (0.57)	\$ 0.29
 Weighted average common shares outstanding:		
Basic	19,058,110	18,834,339
Diluted	19,058,110	19,490,479

See accompanying notes to these consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
(formerly Midwest Energy Emissions Corp.)
CONSOLIDATED STATEMENT OF STOCKHOLDERS' DEFICIT

	Year Ended December 31, 2024				
	Common Stock	Additional Paid-in Capital	Accumulated (Deficit)	Total	
Shares	Par Value	\$	\$	\$	
Balance - January 1, 2024 (as restated)	18,872,022	\$ 18,872	\$ 61,992,607	\$ (61,951,125)	\$ 60,354
Stock issued for cashless exercise of options	341,239	341	(341)	—	—
Stock issued for exercise of warrants	5,000	5	17,495	—	17,500
Stock issued for cashless exercise of warrants	17,370	18	(18)	—	—
Gain on modification of related party debt	—	—	10,827,195	—	10,827,195
Share based payments	—	—	1,088,923	—	1,088,923
Net loss	—	—	—	(10,802,111)	(10,802,111)
Balance - December 31, 2024	<u>19,235,631</u>	<u>\$ 19,236</u>	<u>\$ 73,925,861</u>	<u>\$ (72,753,236)</u>	<u>\$ 1,191,861</u>
Year Ended December 31, 2023					
Shares	Common Stock	Additional Paid-in Capital	Accumulated Deficit	Total	
Balance - January 1, 2023 (as previously reported)	18,617,560	\$ 18,618	\$ 61,262,912	\$ (68,698,389)	\$ (7,416,859)
Restatement adjustment	—	—	—	1,078,950	1,078,950
Balance - January 1, 2023 (as restated)	<u>18,617,560</u>	<u>\$ 18,618</u>	<u>\$ 61,262,912</u>	<u>\$ (67,619,439)</u>	<u>\$ (6,337,909)</u>
Share based compensation expense	—	—	520,449	—	520,449
Stock issued for cashless exercise of options	84,462	84	(84)	—	—
Stock issued for cash exercise of options	170,000	170	209,330	—	209,500
Net income	—	—	—	5,668,314	5,668,314
Balance December 31, 2023 (as restated)	<u>18,872,022</u>	<u>\$ 18,872</u>	<u>\$ 61,992,607</u>	<u>\$ (61,951,125)</u>	<u>\$ 60,354</u>

See accompanying notes to these consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
(formerly Midwest Energy Emissions Corp.)
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the year Ended December 31, 2024	For the year Ended December 31, 2023 (as restated)
Cash flows from operating activities		
Net (loss) income	\$ (10,802,111)	\$ 5,668,314
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Stock-based compensation – amortization of prepaid services	—	486,667
Stock-based compensation	1,088,923	33,782
Amortization of discount of notes payable	241,444	1,336,171
Amortization of right to use assets	31,782	40,924
Amortization of patent rights	204,600	205,534
Depreciation expense	11,702	12,927
Impairment loss	43,000	219,707
Non-cash interest revenue	(57,191)	(79,301)
Loss on change in fair value of profit share	3,959,065	11,209,677
Changes in operating assets and liabilities		
Accounts receivable	1,310,421	859,396
Inventory	173,351	195,967
Prepaid expenses and other assets	(16,004)	88,772
Accrued salaries	30,344	(58,542)
Accounts payable and accrued liabilities	144,547	(1,388,385)
Income tax payable	(437,821)	437,821
Operating lease liability	(31,219)	(43,394)
Net cash (used in) provided by operating activities	(4,105,167)	19,226,037
Cash flows used in investing activities		
Purchase of property and equipment	(809,432)	—
Net cash used in investing activities	(809,432)	—
Cash flows from financing activities		
Proceeds from exercise of stock options	17,500	209,500
Repayment of secured notes payable	(271,686)	—
Repayment of unsecured notes payable	(12,314,895)	—
Net cash (used in) provided by financing activities	(12,569,081)	209,500
Net (decrease) increase in cash and cash equivalents	(17,483,680)	19,435,537
Cash and cash equivalents - beginning of period	20,939,762	1,504,225
Cash and cash equivalents - end of period	\$ 3,456,082	\$ 20,939,762
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	\$ 4,023	\$ 19,721
Income taxes	\$ 143,269	\$ —
SUPPLEMENTAL DISCLOSURE OF NON-CASH TRANSACTIONS		
Capital from related party debt extinguishments	\$ 10,827,195	\$ —
Recognition of ROU asset and operating lease liability	\$ 326,285	\$ —

See accompanying notes to these consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
(formerly Midwest Energy Emissions Corp.)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2024

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 – Restatement of Previously Issued Financial Statements

Description of Restatement Adjustments

In connection with the preparation of the Company’s consolidated financial statements as of and for the period ended December 31, 2024, management identified an error in the previously reported financial statements related to the recognition of revenue during the year ended December 31, 2022. The Company entered into a license agreement for which it should have recognized the entire proceeds receivable pursuant to the agreement as revenue during the year ended December 31, 2022. The Company should also have recognized the financing component of the licensing agreement during the fiscal years ended December 31, 2023 and 2024. As a result, the consolidated financial statements reflect the recognition of this additional revenue during the year ended December 31, 2022, removes the revenue recognized and records the financing component of the arrangement during annual and interim periods in the fiscal year ending December 31, 2023 and the interim periods in the fiscal year ending December 31, 2024.

The following tables reflect the impact of the restatement to the specific line items presented in the Company’s previously reported consolidated financial statements as of December 31, 2022 and for the year ended December 31, 2023. The accompanying applicable notes to consolidated financial statements have been updated to reflect the effects of the restatement.

The impact of the restatement to the consolidated statements of stockholders’ equity (deficit) includes a decrease of \$843,251 in accumulated deficit as of December 31, 2023 and a \$1,078,950 decrease to the accumulated deficit as of January 1, 2023.

The amounts in the “As previously reported” columns are amounts derived from the Company’s previously filed consolidated financial statements. The amounts in the “Restatement adjustments” columns present the impact of the following adjustments:

- The recognition of the licensing revenue during the year ended December 31, 2022.
- The removal of the licensing revenue recorded during the year ended December 31, 2023.
- The recording of the financing component during the year ended December 31, 2023.

The amounts in the “As restated” columns are the updated amounts including the impacts from the restatement.

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Audited Financial Statements

The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of December 31, 2023:

CONSOLIDATED BALANCE SHEETS

	DECEMBER 31, 2023		
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 2,233,211	\$ 843,251	\$ 3,076,462
Total current assets	24,151,758	843,251	24,995,009
Total assets	27,467,593	843,251	28,310,844
Stockholders' equity (deficit)			
Accumulated deficit	(62,794,376)	843,251	(61,951,125)
Total stockholders' equity (deficit)	(782,897)	843,251	60,354
Total liabilities and stockholders' equity (deficit)	\$ 27,467,593	\$ 843,251	\$ 28,310,844

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the year ended December 31, 2023:

CONSOLIDATED STATEMENT OF OPERATIONS

	FOR THE YEAR ENDED DECEMBER 31, 2023		
	As previously reported	Adjustment	As restated
Revenue	\$ 17,940,370	\$ (315,000)	\$ 17,625,370
Gross Profit	5,767,996	(315,000)	5,452,996
Operating (loss) income	(8,658,472)	(315,000)	(8,973,472)
Interest income	—	79,301	79,301
Total other income	15,035,698	79,301	15,114,999
Income (loss) before provision for income taxes	6,377,226	(235,699)	6,141,527
Net income (loss)	\$ 5,904,013	\$ (235,699)	\$ 5,668,314
Net loss per common share - basic and diluted:	\$ 0.06	\$ —	\$ 0.06

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statements of Changes in Stockholder's Equity for the years ended December 31, 2023 and 2022:

	Accumulated Deficit		
	As Reported	Adjustment	As Restated
Balance – January 1, 2022	\$ (67,116,913)	\$ —	\$ (67,116,913)
Net loss	(1,581,476)	1,078,950	(502,526)
Balance December 31, 2022	(68,698,389)	1,078,950	(67,619,439)
Net income	5,904,013	(235,699)	5,668,314
Balance December 31, 2023	\$ (62,794,376)	\$ (843,251)	\$ (61,951,125)

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the year ended December 31, 2023:

	FOR THE YEAR ENDED DECEMBER 31, 2023		
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ 5,904,013	\$ (235,699)	\$ 5,668,314
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(79,301)	(79,301)
Changes in operating assets and liabilities			
Accounts receivable	544,396	315,000	859,396
Net cash provided by operating activities	\$ 19,226,037	\$ —	\$ 19,226,037

Note 3 – 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 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 consolidated financial statements, the Company had a net loss of approximately \$10.8 million and cash used in operating activities of approximately \$4.1 million for the year ended December 31, 2024; had cash of approximately \$3.5 million at December 31, 2024; and an accumulated deficit of approximately \$72.8 million at December 31, 2024. The Company's working capital deficiency at December 31, 2024 was approximately \$2.7 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.

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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 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 4 - Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The accompanying 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 promulgated by the United States Securities and Exchange Commission ("SEC").

Principles of Consolidation

The 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 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 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.

Stock Split

On December 26, 2025, the Company effected a 1-for-5 reverse stock split of its issued and outstanding shares of common stock. The stock split did not affect the number of authorized shares. All share and per share information, including share based compensation, throughout the financial statements has been retroactively adjusted to reflect the stock split. The shares of common stock retain a par value of \$0.001 per share. Accordingly, an amount equal to the par value of the increased shares resulting from the stock split was reclassified from capital in excess of par value to common stock.

Inventory

Inventories are stated at the lower of cost (first-in, first-out basis) or net realizable value. Inventories are periodically evaluated to identify obsolete or otherwise impaired products and are written off when management determines usage is not probable. The Company estimates the balance of excess and obsolete inventory by analyzing inventory by age using last used and original purchase date and existing sales pipeline for which the inventory could be used. As of December 31, 2024 and 2023, the Company had no valuation allowance.

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Property and Equipment

Property and equipment are stated at cost. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings. For consolidated financial statement purposes, equipment is recorded at cost and depreciated using the straight-line method over their estimated useful lives of 2 to 5 years. Leasehold improvements are recorded at cost and depreciated using the straight-line method over the life of the lease.

Expenditures for repairs and maintenance which do not materially extend the useful lives of property and equipment are charged to operations. Management reviews the carrying value of our property and equipment for impairment on an annual basis.

Intellectual Property

Intellectual property is recorded at cost and amortized over its estimated useful life of 15 years. Management reviews intellectual property for impairment when events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. In the event that impairment indicators exist, a further analysis is performed and if the sum of the expected undiscounted future cash flows resulting from the use of the asset or asset group is less than the carrying amount of the asset or asset group, an impairment loss equal to the excess of the asset or asset group's carrying value over its fair value is recorded. Management considers historical experience and all available information at the time the estimates of future cash flows are made, however, the actual cash values that could be realized may differ from those that are estimated.

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. After completing the assessment of property and equipment for impairment as of December 31, 2024 and 2023, the Company recorded an impairment expense related to property and equipment of \$43,000 (2023 - \$219,707) which is included in Impairment loss in the Company's consolidated statements of operations and comprehensive income (loss). The expense was primarily related to the impairment of construction in process costs where management determined that the undiscounted future cash flows were not sufficient to recover the carrying value of these assets over the estimated useful life.

Stock-Based Compensation

We account for stock-based compensation awards in accordance with the provisions of ASC 718, Compensation-Stock Compensation, which requires equity-based compensation, be reflected in the consolidated financial statements over the period of service which is typically the vesting period based on the estimated fair value of the awards.

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.

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- *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 December 31, 2024 and December 31, 2023. 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 December 31, 2024 and December 31, 2023 due to their short-term maturities.

The fair value of the notes payable at December 31, 2023 approximated the carrying amount, as the notes were recently issued at interest rates prevailing in the market. The fair value of the notes payable was determined on a Level 2 measurement. Discounts on issued debt, as well as debt issuance costs, are amortized over the term of the individual notes.

At December 31, 2024, 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, 2023 was also calculated using a discounted cash flow model based on estimated future cash payments. At December 31, 2024 and December 31, 2023, 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 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	<u>\$ 6,853,858</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,853,858</u>
Fair Value Measurement as of December 31, 2023				
	Total	Level 1	Level 2	Level 3
Liabilities:				
Profit share liability – related party (1)	\$ 14,847,937	\$ —	\$ —	\$ 14,847,937
Total Liabilities	<u>\$ 14,847,937</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 14,847,937</u>

(1) See Note 8 - Related Party

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The following tables present the Company's liabilities 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	<u><u>\$ 1,545,000</u></u>	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 1,545,000</u></u>
	Fair Value Measurement as of December 31, 2023			
	Total	Level 1	Level 2	Level 3
Assets:				
Property and equipment (Construction in progress)	\$ 1,588,000	\$ —	\$ —	\$ 1,588,000
Total Assets	<u><u>\$ 1,588,000</u></u>	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 1,588,000</u></u>

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 years ended December 31, 2024 and 2023 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

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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 year ended December 31, 2024 the Company recognized \$2,773,750 (2023 - \$356,250) of revenue for licenses for which revenue was recognized at a point in time and \$34,375 (2023 - \$31,250) 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 product for the years ended December 31, 2024 and 2023. All sales were in the United States.

	December 31, 2024	December 31, 2023
Product revenue	\$ 14,481,784	\$ 17,092,996
License revenue	2,808,125	387,500
Demonstrations & Consulting revenue	36,000	90,000
Equipment revenue	80,276	54,874
	<hr/> <u>\$ 17,406,185</u>	<hr/> <u>\$ 17,625,370</u>

Accounts receivable and allowance for credit losses

Accounts receivable are presented net of an allowance for credit losses. The Company maintains allowances 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 December 31, 2024. The Company historically has not experienced significant uncollectible accounts receivable. As of December 31, 2024 and December 31, 2023, the Company's allowance for credit losses was \$0, and the Company recorded \$0 of bad debt expense for both the years ended December 31, 2024 and 2023.

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

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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 December 31, 2024 and 2023. 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 year ended December 31, 2024, because the Company incurred a net loss and basic and diluted losses per common share are the same. There are 656,140 dilutive stock options and no dilutive warrants for the year ended December 31, 2023 as the Company reported net income for the period.

We calculate basic earnings per share by dividing net income by the weighted-average number of common shares outstanding during the reporting period. Diluted earnings per share reflects the effects of potentially dilutive securities. The summary of the basic and diluted earnings per share calculations for the years ended December 31, 2024 and 2023:

	2024	2023
Basic:		
Net Income (Loss)	\$ (10,802,111)	\$ 5,668,314
Weighted-average shares outstanding	<u>19,058,110</u>	<u>18,834,339</u>
Basic	<u><u>\$ (0.57)</u></u>	<u><u>\$ 0.30</u></u>
Diluted:		
Net Income (Loss)	\$ (10,802,111)	\$ 5,668,314
Weighted-average shares outstanding	<u>19,058,110</u>	<u>18,834,339</u>
Effect of diluted securities – stock options	<u>—</u>	<u>656,140</u>
Weighted-average shares used in the calculation of diluted earnings per share	<u><u>19,058,110</u></u>	<u><u>19,490,479</u></u>
Diluted earnings (loss) per share	<u><u>\$ (0.57)</u></u>	<u><u>\$ 0.29</u></u>

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

	December 31, 2024	December 31, 2023
Stock Options	1,860,000	1,930,000
Warrants	—	510,000
Total common stock equivalents excluded from dilutive loss per share	<u>1,860,000</u>	<u>2,440,000</u>

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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 December 31, 2024 and December 31, 2023 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 December 31, 2024, the Company had \$2,956,082 (2023 - \$20,439,762) in excess of FDIC limits.

Customer and Supplier Concentration

For the year ended December 31, 2024, three customers represented 32%, 13%, and 10% of the Company's revenues, and for the year ended December 31, 2023, three customers represented 28%, 23%, and 11% of the Company's revenues.

At December 31, 2024, three customers represented 32%, 26% and 9% of the Company's accounts receivable, and at December 31, 2023, four customers represented 32%, 27%, 10% and 8% of the Company's accounts receivable.

For the year ended December 31, 2024, two suppliers represented 51% and 35% of the Company's purchases. For the year ended December 31, 2023, 91% of the Company's purchases related to three suppliers. At December 31, 2024 and 2023, 68% and 68% of the Company's accounts payable and accrued expenses related to two vendors, respectively. 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 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

Issued in June 2021, FASB Accounting Standards Update (ASU) No. 2016-13, *Measurement of Credit Losses on Financial Instruments* adds to U.S. GAAP an impairment model known as the current expected credit loss (CECL) model, which is based on expected losses rather than incurred losses. This guidance is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early application of the amendments is permitted. Effective January 1, 2023, the Company adopted ASU No. 2016-13. The adoption of ASU No. 2016-13 did not have a material effect on the accompanying consolidated financial statements.

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*, which amends and enhances the disclosure requirements for reportable segments. All disclosure requirements under this standard will also be required for public entities with a single reportable segment. The new standard will be effective for the Company for fiscal years beginning after December 15, 2023, including interim periods within fiscal years beginning after December 15, 2024. The Company adopted ASU 2023-07 effective for its Annual Report on Form 10-K for the year ended December 31, 2024 and subsequent interim periods. Since ASU 2023-07 addresses only disclosures, the adoption of ASU 2023-07 did not have a significant impact on its consolidated financial statements.

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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. The Company is evaluating this standard to determine if adoption will have a material impact on the Company's 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 5 - Inventory

Inventory was comprised of the following at December 31, 2024 and December 31, 2023:

	December 31, 2024	December 31, 2023
Raw Materials	\$ 169,527	\$ 200,496
Spare Parts	—	17,912
Finished Goods	452,286	576,756
	<hr/> <u>\$ 621,813</u>	<hr/> <u>\$ 795,164</u>

Note 6 - Property and Equipment, Net

Property and equipment at December 31, 2024 and December 31, 2023 are as follows:

	December 31, 2024	December 31, 2023
Equipment & installation	\$ 1,096,979	\$ 1,095,139
Leasehold improvements	117,512	101,821
Trucking equipment	911,377	845,102
Lab equipment	725,626	—
Office equipment, computer equipment and software	1,874	1,874
Total equipment	<hr/> <u>2,853,368</u>	<hr/> <u>2,043,936</u>
Less: accumulated depreciation	(2,047,680)	(2,035,978)
Construction in process	1,545,000	1,588,000
Property and equipment, net	<hr/> <u>\$ 2,350,688</u>	<hr/> <u>\$ 1,595,958</u>

The Company uses the straight-line method of depreciation over estimated useful lives of 2 to 5 years. During the year ended December 31, 2024 and 2023 depreciation expense was \$11,702 and \$12,927, respectively. At December 31, 2024, lab equipment included \$725,626 of lab equipment not yet placed in service.

At December 31, 2024 and 2023, the Company concluded that Company's plant construction in process asset had become impaired based on the existing and anticipated future economic outlook. As a result, the Company impaired the asset to reduce the carrying value to fair value. Estimated fair value of the impaired long-lived asset is based on the estimated cost to replace the asset. As a result of the uncertain cash flows related to the Company's capitalized construction costs, the Company has recorded an impairment charge of \$43,000 (2023 - \$219,707).

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Note 7 - Intellectual Property

License and patent costs capitalized as of December 31, 2024 and December 31, 2023 are as follows:

	December 31, 2024	December 31, 2023
Licenses and patents	\$ 3,068,995	\$ 3,068,995
Less: Accumulated amortization	(1,569,532)	(1,364,932)
Intellectual property, net	<u><u>\$ 1,499,463</u></u>	<u><u>\$ 1,704,063</u></u>

Amortization expense for the year ended December 31, 2024 and 2023 was \$204,600 and \$205,534, 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	\$ 204,600
December 31, 2026	204,600
December 31, 2027	204,600
December 31, 2028	204,600
December 31, 2029	204,600
Thereafter	476,463
Total	<u><u>\$ 1,499,463</u></u>

Note 8 - 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 December 31, 2024 and December 31, 2023, total principal of \$0 and \$271,686, respectively, was outstanding on this note. Interest expense for the years ended December 31, 2024 and 2023 was \$4,279 and \$43,955, respectively.

Amortized discount recorded as interest expense for the years ended December 31, 2024 and 2023 was \$32,220 and \$19,504, respectively. As of December 31, 2024 and 2023, the unamortized balance of the discount was \$Nil and \$32,220, respectively.

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Unsecured Note Payable

The Company has the following unsecured note payable - related party outstanding as of December 31, 2024 and December 31, 2023:

	December 31, 2024	December 31, 2023
Unsecured note payable	\$ 13,154,931	\$ 13,154,931
Repayments	(12,314,895)	—
Less fair value adjustment on extinguishment, net of amortized discount of \$1,965,984 and \$1,547,536, respectively	(960,000)	(2,175,208)
Plus fair value adjustment	119,964	—
Total unsecured note payable	—	10,979,723
Less current portion	—	—
Unsecured note payable, net of current portion	<u>\$ —</u>	<u>\$ 10,979,723</u>

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

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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 years ended December 31, 2024 and 2023 was \$209,224 and \$1,316,667, respectively. As of December 31, 2024 and 2023, the unamortized balance of the discount was \$Nil and \$2,175,208, 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

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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 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 discounted cash flow model assumptions used at December 31, 2023 to calculate the Profit Share liability included: the projected full repayment of the profit share liability of \$17,654,931 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 years ended December 31, 2024 and 2023:

Profit Share as of January 1, 2023	\$ 3,638,260
Addition	—
Loss on change in fair value of profit share	11,209,677
Profit Share as of December 31, 2023	<u>\$ 14,847,937</u>
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	<u>\$ 6,853,858</u>

Related Party Transactions

Kaye Cooper Kay & Rosenberg, LLP provides certain legal services to the Company and was paid \$431,444 and \$393,111 for the years ended December 31, 2024 and 2023, respectively, for legal services rendered and disbursement incurred. David M. Kaye, a Director of the Company, is a partner of the law firm. At December 31, 2024 and December 31, 2023, \$37,500 and \$33,333, 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 years ended December 31, 2024 and 2023, Dakin incurred \$112,500 and \$150,000 license fees. At December 31, 2024 and 2023, \$Nil and \$25,000 was owed to Dakin for license fees.

On May 28, 2024, the Company entered into an Administrative Services Agreement with Greenberg Enterprises, LLC ("Greenberg Enterprises"), pursuant to which Greenberg Enterprises will be paid for certain administrative support provided to the Company since January 1, 2024 and administrative support to be provided in the future to the Company including but not limited to general office and technical support, project management and support, and vendor relations support. Such agreement was terminated effective in December 2024. During the year ended December 31, 2024, Greenberg Enterprises provided \$237,020 for administrative services and \$335,100 for expense reimbursement. At December 31, 2024, \$Nil was owed to Greenberg Enterprises pursuant to the agreement. Greenberg Enterprises is a company owned and controlled by Christopher Greenberg, Chairman of the Board of the Company.

Note 9 - 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

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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 lease 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 approximate 3-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 years ended December 31, 2024 and 2023, the Company recorded an operating lease right of use asset and liabilities as follows:

	December 31, 2024	December 31, 2023
Right of use asset - operating lease	\$ 305,142	\$ 10,639
Current portion of operating lease liability	42,733	11,157
Operating lease liability	306,233	—

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

For the twelve months ended December 31,	\$	83,460
2025	\$ 85,224	85,224
2026	86,992	86,992
2027	88,692	88,692
2028	54,618	54,618
2029	33,880	33,880
Thereafter	432,866	432,866
Total	(126,643)	(126,643)
Less discount	306,223	306,223
Total lease liabilities	(42,733)	(42,733)
Less current portion	\$ 263,490	\$ 263,490
Operating lease obligation, net of current portion		

The weighted average remaining lease term for operating leases is 5.2 years and the weighted average discount rate used in calculating the operating lease asset and liability is 14.55%. For the years ended December 31, 2024 and 2023, payments on lease obligations were \$52,871 and \$45,000, respectively, and amortization on the right of use assets was \$31,782 and \$40,924, respectively.

For the years ended December 31, 2024 and 2023, the Company's lease cost consists of the following components, each of which is included in costs and expenses within the Company's consolidated statements of operations:

	December 31, 2024	December 31, 2023
Operating lease costs	\$ 53,595	\$ 45,310

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Note 10 - 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.

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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").

See "Note 16 – Subsequent Events" for information on an agreement entered into with another party named as a defendant in the Arizona Action, along with information of the commencement of additional patent litigation and filing of petitions for Inter Partes Review with the United States Patent and Trademark Office.

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.

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Note 11 - 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 years ended December 31, 2024 and 2023, stock-based compensation expense amounted to \$1,088,922 and \$520,449, 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 2,815,692, 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 955,000 additional shares of common stock. (On July 3, 2023, there were 955,000 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 December 31, 2024, there were 1,148,261 shares remaining available for issuance under the 2017 Plan.

Common Stock

On November 8, 2022, the Company issued a total of 600,000 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 years ended December 31, 2024 and 2023 was \$402,666 and \$486,667, respectively.

Stock Options

On February 1, 2023, the Company issued (i) 170,000 shares of common stock to the Company's Chairman of the Board upon a cash exercise of options to purchase an aggregate of 170,000 shares of common stock at exercise prices ranging from \$0.95 to \$1.35 per share or \$209,500 in the aggregate, (ii) 22,000 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 50,000 shares of common stock at an exercise price of \$1.40 per share based upon a market price of \$2.50 per share as determined under the terms of the option, and (iii) 31,000 shares of common stock to a director of the Company upon a cashless exercise of an option to purchase 50,000 shares of common stock at an exercise price of \$0.95 per share based upon a market price of \$2.50 per share as determined under the terms of the option.

On February 20, 2023, the Company issued 3,572 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 10,000 shares of common stock at an exercise price of \$1.35 per share based upon a market price of \$2.10 per share as determined under the terms of the option.

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Between February 21, 2023 and February 23, 2023, the Company issued an aggregate of 5,804 shares of common stock to three employees and one former employee upon a cashless exercise of options to purchase an aggregate of 16,000 shares of common stock at an exercise price of \$1.35 per share based upon market prices ranging from \$2.10 to \$2.15 per share as determined under the terms of the options.

On March 8, 2023, and pursuant to an advisor agreement dated March 1, 2023 with a nonaffiliated third party, the Company granted a nonqualified stock option under the 2017 Equity Incentive Plan to such third party to acquire 25,000 shares of the Company's common stock at an exercise price of \$2.00 per share, representing the fair market value of the common stock on the date of grant as determined under the 2017 Equity Incentive Plan. Fifty percent of the option shall vest and become exercisable on September 1, 2023, and the remaining fifty percent shall vest and become exercisable on March 1, 2024. The option will expire five years after the date of grant. Based on a Black-Scholes valuation model, these options were valued at \$30,933, 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. The valuation assumptions included an expected duration of 2.9 years, volatility of 98%, discount rate of 4.71% and dividends of \$0. On September 30, 2023, the advisor agreement was terminated resulting in 50.0% of the option remaining unvested and unexercisable.

On April 4, 2023, and pursuant to a consulting agreement effective April 1, 2023 with a nonaffiliated third party, the Company granted a nonqualified stock option under the 2017 Equity Incentive Plan to such third party to acquire 50,000 shares of the Company's common stock at an exercise price of \$1.95 per share, representing the fair market value of the common stock on the date of grant as determined under the 2017 Equity Incentive Plan. Fifty percent of the option shall vest and become exercisable on October 1, 2023 and the remaining fifty percent shall vest and become exercisable on April 1, 2024. The option will expire five years after the date of grant. Based on a Black-Scholes valuation model, these options were valued at \$59,690, 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. The valuation assumptions included an expected duration of 2.9 years, volatility of 98%, discount rate of 3.60% and dividends of \$0. On August 28, 2023, the consulting agreement was terminated resulting in the option remaining unvested and being deemed terminated.

On May 26, 2023, a new director was appointed to the Board of Directors and was granted a nonqualified stock option to acquire 25,000 shares of the Company's common stock exercisable at \$2.05 per share. Fifty percent of the option shall vest and become exercisable on November 26, 2023, and the remaining fifty percent shall vest and become exercisable on May 26, 2024. The option will expire five years after the date of grant. Based on a Black-Scholes valuation model, these options were valued at \$30,527, in accordance with FASB ASC Topic 718. The fair value of the shares is being amortized to selling, general and administrative expenses within the Company's consolidated statements of operations over twelve months. During the years ended December 31, 2024 and 2023, the Company recognized \$12,211 and \$18,316, respectively, of stock-based compensation. The valuation assumptions included an expected duration of 2.88 years, volatility of 97%, discount rate of 4.23% and dividends of \$0.

On June 5, 2023, the Company issued 326 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 1,375 shares of common stock at an exercise price of \$1.45 per share based upon a market price of \$1.90 per share as determined under the terms of the options.

On June 6, 2023, the Company issued an aggregate of 685 shares of common stock to an employee upon a cashless exercise of options to purchase an aggregate of 1,531 shares of common stock at exercise prices ranging from \$0.85 to \$1.45 per share based upon a market price of \$1.90 per share as determined under the terms of the options.

On June 7, 2023, the Company issued 270 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock at an exercise price of \$1.45 per share based upon a market price of \$1.85 per share as determined under the terms of the options.

On June 28, 2023, the Company issued (i) 1,043 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of options to purchase an aggregate of 4,937 shares of common stock at exercise prices ranging from \$1.05 to \$1.45 per share based upon a market price of \$1.50 per share as determined under the terms of the options, (ii) 825 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock at an exercise price of \$1.05 per share based upon a market price of \$1.50 per share as determined under the terms of the option, and (iii) 375 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock at an exercise price of \$1.05 per share based upon a market price of \$1.50 per share as determined under the terms of the options.

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On July 28, 2023, the Company issued (i) 1,601 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 3,292 shares of common stock, (ii) 1,338 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock, and (iii) 608 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock. All of such options had an exercise price of \$0.85 per share and such share issuances were based upon a volume weighted average price ("VWAP") of \$1.66 per share as determined under the terms of the options.

On September 29, 2023, the Company issued (i) 1,111 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 3,292 shares of common stock, (ii) 928 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock, (iii) 422 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock, and (iv) 207 shares of common stock to an employee upon a cashless exercise of an option to purchase 612 shares of common stock. All of such options had an exercise price of \$1.30 per share and such share issuances were based upon a VWAP of \$1.96 per share as determined under the terms of the options.

On October 30, 2023, the Company issued 290 shares of common stock to an employee upon a cashless exercise of an option to purchase 612 shares of common stock at any exercise price of \$1.00 per share based upon a VWAP of \$1.90 per share as determined under the term of the options.

On October 31, 2023, the Company issued (i) 1,699 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 3,292 shares of common stock, (ii) 1,395 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock, and (iii) 634 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock. All of such options had an exercise price of \$1.00 per share and such share issuances were based upon a VWAP of \$2.03 per share as determined under the terms of the options.

On November 29, 2023, the Company issued 400 shares of common stock to an employee upon a cashless exercise of an option to purchase 612 shares of common stock at an exercise price of \$1.65 per share based upon a VWAP of \$4.76 per share as determined under the term of the options.

On November 30, 2023, the Company issued (i) 1,821 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock at an exercise price of \$1.65 per share, (ii) 828 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock at an exercise price of \$1.65 per share, and (iii) 1,880 shares of common stock to a former employee upon a cashless exercise of options to purchase a total of 3,750 shares of common stock, with exercise prices of ranging from \$1.25 to \$1.65 per share. All of such share issuances were based upon a VWAP of \$4.88 per share as determined under the terms of the options.

On December 11, 2023, the Company issued (i) 2,056 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 2,750 shares of common stock, and (ii) 934 shares of common stock to a director upon a cashless exercise of an option to purchase 1,250 shares of common stock. All of such options had an exercise price of \$1.25 per share and such share issuances were based upon a VWAP of \$4.95 per share as determined under the terms of the options.

On December 13, 2023, the Company issued 441 shares of common stock to an employee upon a cashless exercise of an option to purchase 612 shares of common stock at an exercise price of \$1.25 per share based upon a VWAP of \$4.47 per share as determined under the term of the options.

On January 15, 2024, the Company granted nonqualified stock options to certain directors, executive officers and employees to acquire an aggregate of 200,000 shares of the Company's common stock under the 2017 Plan. The options granted are exercisable at \$4.40 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.

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On February 27, 2024, the Company issued 1,857 shares of common stock to a former employee upon a cashless exercise of an option to purchase 3,750 shares of common stock covered by an option to purchase a total of 20,000 shares of common stock, with an exercise price of \$1.35 per share. Such share issuance was based upon a VWAP of \$4.62 per share as determined under the terms of the option.

On June 24, 2024, the Company issued (i) 177,291 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 300,000 shares of common stock at an exercise price of \$1.35 per share, and (ii) 134,573 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 320,000 shares of common stock at exercise prices ranging from \$1.35 to \$2.25 per share. Such share issuances were based upon a VWAP of \$3.30 per share as determined under the terms of the options.

On June 28, 2024, the Company issued (i) 9,282 shares of common stock to an employee upon a cashless exercise of options to purchase an aggregate of 60,000 shares of common stock at exercise prices ranging from \$1.35 to \$3.05 per share, (ii) 8,813 shares of common stock to an employee upon a cashless exercise of an option to purchase 15,000 shares of common stock covered by an option to purchase a total of 20,000 shares of common stock with an exercise price of \$1.35 per share, and (iii) 3,000 shares of common stock to a former employee upon a cashless exercise of an option to purchase 5,106 shares of common stock covered by an option to purchase a total of 100,000 shares of common stock with an exercise price of \$1.35 per share. Such share issuances were based upon a VWAP of \$3.27 per share as determined under the terms of the options.

On August 3, 2024, the Company issued 6,422 shares of common stock to a former consultant upon a cashless exercise of an option to purchase 12,500 shares of common stock, with an exercise price of \$2.00 per share. Such share issuance was based upon a VWAP of \$4.11 per share as determined under the terms of the option.

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, 2023	3,407,500	\$ 2.65	1.47	6,970,750
Grants	200,000	4.40	—	—
Expirations	(1,031,144)	3.20	—	—
Exercised	(716,356)	1.75	—	—
December 31, 2024	<u>1,860,000</u>	<u>\$ 2.90</u>	<u>1.75</u>	<u>12,500</u>
Options exercisable at:				
December 31, 2024	1,860,000	2.90	1.75	12,500

The aggregate intrinsic value in the table above represents the total intrinsic value, based on the Company's closing stock price of \$2.55 as of December 31, 2024 (the last trading day of the month of December 2024), which would have been received by the option holders had all option holders exercised their options as of that date.

Stock options exercised during the year ended December 31, 2024 include none that were exercised for cash and 716,356 which were a cashless exercise.

Restricted Share Units

On January 15, 2024, the Company granted 10,000 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 year ended December 31, 2024 was \$41,832.

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Note 12 - 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.

No warrants were issued during the years ended December 31, 2024 and 2023. The following warrants were exercised during the years ended December 31, 2024 and 2023:

On June 17, 2024, the Company issued an aggregate of 3,333 shares of common stock to certain warrant holders upon the cashless exercise of warrants to purchase an aggregate of 120,000 shares of common stock at an exercise price of \$3.50 per share based upon a market value of \$3.60 per share as determined under the terms of the warrants.

On June 18, 2024, the Company issued 704 shares of common stock to a certain warrant holder upon the cashless exercise of a warrant to purchase 50,000 shares of common stock at an exercise price of \$3.50 per share based upon a market value of \$3.55 per share as determined under the terms of the warrant.

On August 5, 2024, the Company issued 13,333 shares of common stock to a certain warrant holder upon the cashless exercise of a warrant to purchase 80,000 shares of common stock at an exercise price of \$3.50 per share based upon a market value of \$4.20 per share as determined under the terms of the warrant.

On August 22, 2024, the Company issued 5,000 shares of common stock to a certain warrant holder upon a cash exercise of a warrant to purchase 5,000 shares of common stock at an exercise price of \$3.50 per share or \$17,500 in the aggregate.

The following is a summary of the Company's warrant activity:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Aggregate Intrinsic Value
December 31, 2023	510,000	\$ 3.50	0.60	\$ —
Grants	—	—	—	—
Expirations	(255,000)	3.50	—	—
Exercised	(255,000)	3.50	—	—
December 31, 2024	—	\$ —	—	\$ —
Warrants exercisable at:				
December 31, 2024	—	\$ —	—	\$ —

The following table summarizes information about common stock warrants outstanding at December 31, 2024:

Exercise Price	Outstanding and Exercisable			Weighted Average Exercise Price
	Number Outstanding	Weighted Average Remaining Contractual Life (years)	—	
\$ —	—	—	—	\$ —

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Note 13 – Taxes

Below is breakdown of the income tax provisions for the years ended December 31:

	2024	2023
Federal		
Current	\$ —	\$ —
Deferred	—	—
State and local		
Current	(303,321)	473,000
Deferred	—	—
Income tax provision	<u><u>\$ (303,321)</u></u>	<u><u>\$ 473,000</u></u>

The expected tax expense (benefit) based on the statutory rate is reconciled with actual tax expense (benefit) as follows:

	For the Year Ended December 31, 2024	For the Year Ended December 31, 2023
U.S. federal statutory rate	21.0 %	21.0 %
State taxes	1.9 %	9.8 %
Deferred tax asset adjustments	(11.5)%	4.3 %
Non-deductible amortization of debt discount	(0.4)%	— %
Other non-deductible items	(0.1)%	1.9 %
Non-taxable change in profit share liability	(8.6)%	41.7 %
Change in valuation allowance	(0.3)%	(70.3)%
Income tax provision	<u><u>2.6 %</u></u>	<u><u>8.4 %</u></u>

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows at December 31:

	2024	2023
Deferred tax assets:		
Net operating loss carryforwards	\$ 3,595,000	\$ 2,751,000
Stock based compensation	799,000	1,517,000
Other	152,000	186,000
Total deferred tax assets	<u><u>4,546,000</u></u>	<u><u>4,454,000</u></u>
Deferred tax liability:		
IRC Section 481(a) adjustment	(125,000)	—
Valuation Allowance	<u><u>(4,421,000)</u></u>	<u><u>(4,454,000)</u></u>
Net deferred tax asset	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>

As of December 31, 2024, the Company has U.S. federal net operating loss carryovers ("NOLs") of approximately \$16,632,000 available to offset taxable net income in a given year of which \$3,769,000 expires from 2035 through 2037 and \$12,863,000 does not expire. The Company also has state NOL carryforwards of approximately \$2,306,000 which start to expire in 2025. If not used, these NOLs may be subject to limitation under Internal Revenue Code Section 382 should there be a greater than 50% ownership change as determined under the regulations.

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In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon future generation for taxable income during the periods in which temporary differences representing net future deductible amounts become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment. After consideration of all the information available, Management believes that significant uncertainty exists with respect to future realization of the deferred tax assets and has therefore established a full valuation allowance. For the years ended December 31, 2024 and 2023, the valuation allowance (decreased) by \$(33,000) and \$(3,973,000), respectively.

The Company evaluated the provisions of ASC 740-10 related to the accounting for uncertainty in income taxes recognized in an enterprise's financial statements. ASC 740-10 prescribes a comprehensive model for how a company should recognize, present, and disclose uncertain positions that the Company has taken or expects to take in its 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. Differences between tax positions taken or expected to be taken in a tax return and the net benefit recognized and measured pursuant to the interpretation are referred to as "unrecognized benefits." A liability is recognized (or amount of net operating loss carry forward or amount of tax refundable is reduced) for unrecognized tax benefit because it represents an enterprise's potential future obligation to the taxing authority for a tax position that was not recognized as a result of applying the provisions of ASC 740-10.

There were no unrecognized tax benefits as of December 31, 2024. The Company is no longer subject to tax examinations by tax authorities for years prior to 2020. If applicable, interest costs related to the unrecognized tax benefits are required to be calculated and would be classified as "Other expenses – Interest" in the statement of operations. Penalties would be recognized as a component of "General and administrative." No interest or penalties on unpaid tax were recorded during the years ended December 31, 2024 and 2023, respectively. As of December 31, 2024 and 2023, no liability for unrecognized tax benefits was required to be reported. The Company does not expect any significant changes in its unrecognized tax benefits in the next year.

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Note 14 – 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 December 31, 2024, had one operating segment, which entails the providing of patented sorbent technologies for mercury emissions capture for the coal-fired utility sector 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 4, "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 by the CEO for the purpose of evaluating segment performance and allocation of budget to support business expansion, new product development and operational efficiencies.

	2024	2023
Material sales	\$ 14,481,784	\$ 17,092,996
License fees	2,808,125	387,500
Other revenues	116,276	144,874
Total revenues	17,406,185	17,625,370
Material costs	(7,686,447)	(8,898,747)
Blending and milling	(377,598)	(769,167)
Shipping	(1,081,781)	(1,380,051)
Other cost of goods sold	(700,279)	(652,688)
Compensation and benefits	(6,148,100)	(2,577,473)
Stock-based compensation	(1,088,922)	(573,783)
Amortization and depreciation	(248,084)	(228,962)
Consulting fees	(879,800)	(109,381)
Professional fees	(4,722,313)	(9,717,572)
General and administrative	(1,588,129)	(1,471,311)
Change in fair value of profit share	(3,959,065)	(11,209,677)
Interest expense	(267,458)	(1,362,401)
Impairment loss	(43,000)	(219,707)
Income tax benefit (expense)	289,156	(473,213)
Income from legal claims	—	27,607,776
Interest income	293,524	79,301
Segment net (loss) income	(10,802,111)	5,668,314
Reconciliation of profit or loss		
Adjustments and reconciling items	—	—
Consolidated net (loss) income	\$ (10,802,111)	\$ 5,668,314

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

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Note 15 - Subsequent Events

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 50,000 shares of the Company's common stock at an exercise price of \$2.55 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.

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 (see "Note 10 – Commitments and Contingencies"). 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.

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 20,000 shares of the Company's common stock at an exercise price of \$2.80 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.

On January 15, 2025, the Company issued 10,000 shares of common stock to a director due to the vesting on such date of 10,000 restricted share units ("RSUs") which had previously been granted on January 15, 2024 pursuant to the 2017 Plan and had a one-year vesting period.

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 (see "Note 10 – Commitments and Contingencies").

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.

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 \$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. 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.

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Note 16 – Restatement of Quarterly Financial Information (Unaudited)

As described in Note 2—Restatement of Previously Issued Financial Statements, for the period ended December 31, 2024, management identified an error in the previously reported financial statements related to the recognition of revenue during the year ended December 31, 2022. The Company entered into a license agreement for which it should have recognized the entire proceeds receivable pursuant to the agreement as revenue during the year ended December 31, 2022. The Company should also have recognized the financing component of the licensing agreement during the fiscal years ended December 31, 2023 and 2024. As a result, the consolidated financial statements reflect the recognition of this additional revenue during the year ended December 31, 2022, removes the revenue recognized and records the financing component of the arrangement during annual and interim periods in the fiscal year ending December 31, 2023 and the interim periods in the fiscal year ending December 31, 2024. The following tables present the effect of the restatement on the Company's previously reported:

- unaudited condensed consolidated balance sheets as of March 31, 2023, June 30, 2023, and September 30, 2023;
- unaudited condensed consolidated balance sheets as of March 31, 2024, June 30, 2024, and September 30, 2024;
- unaudited condensed consolidated statements of operations for the three months ended March 31, 2023, the three months and six months ended June 30, 2023, and the three months and nine months ended September 30, 2023;
- unaudited condensed consolidated statements of operations for the three months ended March 31, 2024, the three months and six months ended June 30, 2024, and the three months and nine months ended September 30, 2024;
- unaudited condensed consolidated statements of cash flows for the three months ended March 31, 2023, the six months ended June 30, 2023, and the nine months ended September 30, 2023; and
- unaudited condensed consolidated statements of cash flows for the three months ended March 31, 2024, the six months ended June 30, 2024, and the nine months ended September 30, 2024.

The values as previously reported were derived from the previously filed Quarterly Reports on Form 10-Q for the periods ended March 31, 2023, June 30, 2023, September 30, 2023, March 31, 2024, June 30, 2024, and September 30, 2024. These restatements do not result in a reclassification between cash flows from operating activities, cash flows from investing activities, or cash flows from financing activities in the unaudited condensed consolidated statements of cash flows for the periods presented. The restatements only impact net loss in the unaudited condensed consolidated statements of changes in stockholders' equity (deficit) in the periods presented.

The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of March 31, 2023:

	CONSOLIDATED BALANCE SHEETS		
	As previously reported	Adjustment	MARCH 31, 2023 As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 696,933	\$ 788,408	\$ 1,485,341
Total current assets	4,313,535	788,408	5,101,943
Total assets	8,051,939	788,408	8,840,347
Stockholders' equity (deficit)			
Accumulated deficit	(70,145,373)	788,408	(69,356,965)
Total stockholders' equity (deficit)	(8,504,314)	788,408	(7,715,906)
Total liabilities and stockholders' equity (deficit)	\$ 8,051,939	\$ 788,408	\$ 8,840,347

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three months ended March 31, 2023:

CONSOLIDATED STATEMENT OF OPERATIONS

	FOR THE THREE MONTHS ENDED MARCH 31, 2023		
	As previously reported	Adjustment	As restated
Revenue	\$ 3,012,749	\$ (315,000)	\$ 2,697,749
Interest income	—	24,458	24,458
Total costs and expenses	<u>4,439,945</u>	<u>(24,458)</u>	<u>4,415,487</u>
Loss before provision for income taxes	<u>(1,427,196)</u>	<u>(290,542)</u>	<u>(1,717,738)</u>
Net loss	<u>\$ (1,446,984)</u>	<u>\$ (290,542)</u>	<u>\$ (1,737,526)</u>
Net loss per common share - basic and diluted:	<u>\$ (0.08)</u>	<u>\$ (0.01)</u>	<u>\$ (0.09)</u>

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the three months ended March 31, 2023:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	FOR THE THREE MONTHS ENDED MARCH 31, 2023		
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (1,446,984)	\$ (290,542)	\$ (1,737,526)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(24,458)	(24,458)
Changes in operating assets and liabilities			
Accounts receivable	2,080,674	315,000	2,395,674
Net cash provided by operating activities	<u>\$ 777,564</u>	<u>\$ —</u>	<u>\$ 777,564</u>

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The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of June 30, 2023:

CONSOLIDATED BALANCE SHEETS

	JUNE 30, 2023		
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 2,043,328	\$ 806,281	\$ 2,849,609
Total current assets	4,968,663	806,281	5,774,944
Total assets	8,645,146	806,281	9,451,427
Stockholders' equity (deficit)			
Accumulated deficit	(70,909,843)	806,281	(70,103,562)
Total stockholders' equity (deficit)	(9,131,190)	806,281	(8,324,909)
Total liabilities and stockholders' equity (deficit)	\$ 8,645,146	\$ 806,281	\$ 9,451,427

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three and six months ended June 30, 2023:

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

	FOR THE THREE MONTHS ENDED JUNE 30, 2023			FOR THE SIX MONTHS ENDED JUNE 30, 2023		
	As previously reported	Adjustment	As restated	As previously reported	Adjustment	As restated
Revenues	\$ 4,111,721	\$ —	\$ 4,111,721	\$ 7,124,469	\$ (315,000)	\$ 6,809,469
Interest income	—	17,873	17,873	—	42,331	42,331
Total costs and expenses	4,875,876	(17,873)	4,858,003	9,315,819	(42,331)	9,273,488
Net loss before provision for income taxes	(764,155)	17,873	(746,282)	(2,191,350)	(272,669)	(2,464,019)
Net loss	\$ (764,470)	\$ 17,873	\$ (746,597)	\$ (2,211,454)	\$ (272,669)	\$ (2,484,123)
Net loss per common share - basic and diluted:	\$ (0.04)	\$ —	\$ (0.04)	\$ (0.12)	\$ (0.01)	\$ (0.13)

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the six months ended June 30, 2023:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS			
FOR THE SIX MONTHS ENDED JUNE 30, 2023			
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (2,211,454)	\$ (272,669)	\$ (2,484,123)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(42,331)	(42,331)
Changes in operating assets and liabilities			
Accounts receivable	734,279	315,000	1,049,279
Net cash provided by operating activities	<u>\$ 232,492</u>	<u>\$ —</u>	<u>\$ 232,492</u>

The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of September 30, 2023:

CONSOLIDATED BALANCE SHEETS			
SEPTEMBER 30, 2023			
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 2,549,022	\$ 824,559	\$ 3,373,581
Total current assets	<u>6,074,162</u>	<u>824,559</u>	<u>6,898,721</u>
Total assets	<u>9,681,503</u>	<u>824,559</u>	<u>10,506,062</u>
Stockholders' equity (deficit)			
Accumulated deficit	(71,737,345)	824,559	(70,912,786)
Total stockholders' equity (deficit)	<u>(9,856,227)</u>	<u>824,559</u>	<u>(9,031,668)</u>
Total liabilities and stockholders' equity (deficit)	<u>\$ 9,681,503</u>	<u>\$ 824,559</u>	<u>\$ 10,506,062</u>

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three and nine months ended September 30, 2023:

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS						
	FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2023			FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2023		
	As previously reported	Adjustment	As restated	As previously reported	Adjustment	As restated
Revenues	\$ 6,747,256	\$ —	\$ 6,747,256	\$ 13,871,725	\$ (315,000)	\$ 13,556,725
Interest income	—	18,278	18,278	—	60,609	60,609
Total costs and expenses	7,574,758	(18,278)	7,556,480	16,910,681	(60,609)	16,850,072
Net loss before provision for income taxes	(827,502)	18,278	(809,224)	(3,038,956)	(254,391)	(3,293,347)
Net loss	\$ (827,502)	\$ 18,278	\$ (809,224)	\$ (3,038,956)	\$ (254,391)	\$ (3,293,347)
Net loss per common share - basic and diluted:	\$ (0.04)	\$ —	\$ (0.04)	\$ (0.16)	\$ (0.01)	\$ (0.17)

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the nine months ended September 30, 2023:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS			
	FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2023		
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (3,038,956)	\$ (254,391)	\$ (3,293,347)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(60,609)	(60,609)
Changes in operating assets and liabilities			
Accounts receivable	228,585	315,000	543,585
Net cash provided by operating activities	\$ 786,144	\$ —	\$ 786,144

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The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of March 31, 2024:

CONSOLIDATED BALANCE SHEETS

	MARCH 31, 2024		
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 1,667,856	\$ 547,367	\$ 2,215,223
Total current assets	<u>13,670,201</u>	<u>547,367</u>	<u>14,217,568</u>
Total assets	<u>17,083,765</u>	<u>547,367</u>	<u>17,631,132</u>
Stockholders' equity (deficit)			
Accumulated deficit	<u>(65,353,367)</u>	<u>547,367</u>	<u>(64,806,000)</u>
Total stockholders' equity (deficit)	<u>8,255,523</u>	<u>547,367</u>	<u>8,802,890</u>
Total liabilities and stockholders' equity (deficit)	<u>\$ 17,083,765</u>	<u>\$ 547,367</u>	<u>\$ 17,631,132</u>

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three months ended March 31, 2024:

CONSOLIDATED STATEMENT OF OPERATIONS

	FOR THE THREE MONTHS ENDED MARCH 31, 2024		
	As previously reported	Adjustment	As restated
Revenue			
Revenue	\$ 3,556,766	\$ (315,000)	\$ 3,241,766
Gross profit	<u>1,443,284</u>	<u>(315,000)</u>	<u>1,128,284</u>
Operating loss	<u>(2,083,492)</u>	<u>(315,000)</u>	<u>(2,398,492)</u>
Other income	<u>35,516</u>	<u>19,116</u>	<u>54,632</u>
Total other income (expense)	<u>(475,499)</u>	<u>19,116</u>	<u>(456,383)</u>
Loss before provision for income taxes	<u>(2,558,991)</u>	<u>(295,884)</u>	<u>(2,854,875)</u>
Net loss	<u>\$ (2,558,991)</u>	<u>\$ (295,884)</u>	<u>\$ (2,854,875)</u>
Net loss per common share - basic and diluted:	<u>\$ (0.14)</u>	<u>\$ (0.01)</u>	<u>\$ (0.15)</u>

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the three months ended March 31, 2024:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS			
FOR THE THREE MONTHS ENDED MARCH 31, 2024			
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (2,558,991)	\$ (295,884)	\$ (2,854,875)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(19,116)	(19,116)
Changes in operating assets and liabilities			
Accounts receivable	565,355	315,000	880,355
Net cash provided by operating activities	<u>\$ (439,220)</u>	<u>\$ —</u>	<u>\$ (439,220)</u>

The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of June 30, 2024:

CONSOLIDATED BALANCE SHEETS			
JUNE 30, 2024			
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 1,784,437	\$ 559,775	\$ 2,344,212
Total current assets	<u>11,327,736</u>	<u>559,775</u>	<u>11,887,511</u>
Total assets	<u>14,749,740</u>	<u>559,775</u>	<u>15,309,515</u>
Stockholders' equity (deficit)			
Accumulated deficit	(71,512,689)	559,775	(70,952,914)
Total stockholders' equity (deficit)	<u>2,232,979</u>	<u>559,775</u>	<u>2,792,754</u>
Total liabilities and stockholders' equity (deficit)	<u>\$ 14,749,740</u>	<u>\$ 559,775</u>	<u>\$ 15,309,515</u>

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three and six months ended June 30, 2024:

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS						
	FOR THE THREE MONTHS ENDED JUNE 30, 2024			FOR THE SIX MONTHS ENDED JUNE 30, 2024		
	As previously reported	Adjustment	As restated	As previously reported	Adjustment	As restated
Revenues	\$ 3,361,433	\$ —	\$ 3,361,433	\$ 6,918,199	\$ (315,000)	\$ 6,603,199
Gross profit	1,060,600	—	1,060,600	2,503,884	(315,000)	2,188,884
Operating loss	(3,573,510)	—	(3,573,510)	(5,657,002)	(315,000)	(5,972,002)
Interest income	109,787	12,408	122,195	145,303	31,524	176,827
Total other income (expense)	(2,585,466)	12,408	(2,573,058)	(3,060,965)	31,524	(3,029,441)
Net loss before provision for income taxes	(6,158,976)	12,408	(6,146,568)	(8,717,967)	(283,476)	(9,001,443)
Net loss	\$ (6,159,322)	\$ 12,408	\$ (6,146,914)	\$ (8,718,313)	\$ (283,476)	\$ (9,001,789)
Net loss per common share - basic and diluted:	\$ (0.33)	\$ —	\$ (0.33)	\$ (0.46)	\$ (0.02)	\$ (0.48)

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the six months ended June 30, 2024:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS			
	FOR THE SIX MONTHS ENDED JUNE 30, 2024		
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (8,718,313)	\$ (283,476)	\$ (9,001,789)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(31,524)	(31,524)
Changes in operating assets and liabilities			
Accounts receivable	448,774	315,000	763,774
Net cash provided by operating activities	\$ (3,122,619)	\$ —	\$ (3,122,619)

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The following table presents the impact of the financial statement adjustments on the Company's previous reported consolidated Balance Sheet as of September 30, 2024:

CONSOLIDATED BALANCE SHEETS

	SEPTEMBER 30, 2024		
	As previously reported	Adjustment	As restated
ASSETS AND STOCKHOLDERS' EQUITY (DEFICIT)			
Accounts receivable	\$ 1,930,396	\$ 572,465	\$ 2,502,861
Total current assets	7,590,707	572,465	8,163,172
Total assets	11,654,860	572,465	12,227,325
Stockholders' equity (deficit)			
Accumulated deficit	(71,982,925)	572,465	(71,410,460)
Total stockholders' equity (deficit)	1,913,874	572,465	2,486,339
Total liabilities and stockholders' equity (deficit)	\$ 11,654,860	\$ 572,465	\$ 12,227,325

The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Operations for the three and nine months ended September 30, 2024:

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

	FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2024			FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2024		
	As previously reported	Adjustment	As restated	As previously reported	Adjustment	As restated
Revenues	\$ 5,236,990	\$ —	\$ 5,236,990	\$ 12,155,189	\$ (315,000)	\$ 11,840,189
Gross profit	1,594,919	—	1,594,919	4,098,803	(315,000)	3,783,803
Operating loss	(1,107,431)	—	(1,107,431)	(6,764,433)	(315,000)	(7,079,433)
Interest income	67,966	12,690	80,656	213,269	44,214	257,483
Total other income (expense)	342,992	12,690	355,682	(2,717,973)	44,214	(2,673,759)
Net loss before provision for income taxes	(764,439)	12,690	(751,749)	(9,482,406)	(270,786)	(9,753,192)
Net loss	\$ (470,236)	\$ 12,690	\$ (457,546)	\$ (9,188,549)	\$ (270,786)	\$ (9,459,335)
Net loss per common share - basic and diluted:	\$ (0.02)	\$ —	\$ (0.02)	\$ (0.48)	\$ (0.02)	\$ (0.50)

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The following table presents the impact of the financial statement adjustments on the Company's previously reported Consolidated Statement of Cash Flows for the nine months ended September 30, 2024:

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS			
	FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2024		
	As previously reported	Adjustment	As restated
Cash flows from operating activities			
Net income (loss)	\$ (9,188,549)	\$ (270,786)	\$ (9,459,335)
Adjustments to reconcile net loss to net cash			
Non-cash interest income	—	(44,214)	(44,214)
Changes in operating assets and liabilities			
Accounts receivable	302,815	315,000	617,815
Net cash provided by operating activities	<u>\$ (3,274,785)</u>	<u>\$ —</u>	<u>\$ (3,274,785)</u>

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BIRCHTECH CORP. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS

	September 30, 2025 (Unaudited)	December 31, 2024
ASSETS		
Current assets		
Cash	\$ 1,768,227	\$ 3,456,082
Accounts receivable	3,630,790	1,823,232
Inventory	498,168	621,813
Prepaid expenses and other assets	130,229	198,185
Total current assets	<u>6,027,414</u>	<u>6,099,312</u>
Security deposits	6,615	6,615
Deferred offering costs	207,500	—
Property and equipment, net	2,279,802	2,350,688
Right of use asset - operating lease	271,078	305,142
Intellectual property, net	1,346,013	1,499,463
Total assets	<u><u>\$ 10,138,422</u></u>	<u><u>\$ 10,261,220</u></u>
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities		
Accounts payable and accrued expenses (related party \$50,471 and \$37,500 at September 30, 2025 and December 31, 2024, respectively)	\$ 3,191,020	\$ 1,702,998
Current portion of operating lease liability	48,846	42,733
Customer credits	167,000	167,000
Accrued salaries	26,773	39,280
Profit share liability – related party	7,620,525	6,853,858
Total current liabilities	<u>11,054,164</u>	<u>8,805,869</u>
Operating lease liability, net of current portion	225,925	263,490
Total liabilities	<u><u>11,280,089</u></u>	<u><u>9,069,359</u></u>
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 19,373,222 and 19,235,631 shares issued and outstanding as of September 30, 2025 and December 31, 2024 respectively.	19,373	19,236
Additional paid-in capital	74,025,320	73,925,861
Accumulated deficit	(75,186,360)	(72,753,236)
Total stockholders' (deficit) equity	<u>(1,141,667)</u>	<u>1,191,861</u>
Total liabilities and stockholders' (deficit) equity	<u><u>\$ 10,138,422</u></u>	<u><u>\$ 10,261,220</u></u>

See accompanying notes to these condensed consolidated financial statements.

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

	For the Three Months Ended September 30, 2025	For the Three Months Ended September 30, 2024	For the Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Product revenue	\$ 4,715,874	\$ 5,092,123	\$ 10,637,304	\$ 11,479,147
License revenue	2,600,000	133,125	3,125,000	273,750
Other revenue	46,015	11,742	74,507	87,292
Revenues	7,361,889	5,236,990	13,836,811	11,840,189
Cost of sales	(3,329,638)	(3,642,071)	(7,602,136)	(8,056,386)
Gross profit	4,032,251	1,594,919	6,234,675	3,783,803
Operating expenses:				
Research and development expenses	(473,303)	—	(1,335,464)	—
Selling, general and administrative expenses (related party of \$112,500, \$269,467, \$337,500 and \$635,864)	(2,748,100)	(2,702,350)	(6,616,663)	(10,863,236)
Total operating expenses	(3,221,403)	(2,702,350)	(7,952,127)	(10,863,236)
Operating income (loss)	810,848	(1,107,431)	(1,717,452)	(7,079,433)
Other income (expense)				
Interest expense (related party of \$Nil, \$Nil, \$Nil and \$245,817)	—	(7,356)	(54)	(258,990)
Loss on change in fair value of profit share and unsecured note	(37,619)	282,382	(766,667)	(2,672,252)
Interest income	15,412	80,656	66,222	257,483
Total other income (expense)	(22,207)	355,682	(700,499)	(2,673,759)
Income (Loss) before provision for income taxes	788,641	(751,749)	(2,417,951)	(9,753,192)
(Provision for) benefit from income taxes	(629)	294,203	(15,173)	293,857
Net income (loss)	\$ 788,012	\$ (457,546)	\$ (2,433,124)	\$ (9,459,335)
Net income (loss) per common share				
Basic net income (loss) per share	\$ 0.04	\$ (0.02)	\$ (0.13)	\$ (0.50)
Diluted net income (loss) per share	\$ 0.04	\$ (0.02)	\$ (0.13)	\$ (0.50)
Weighted average common shares outstanding				
Basic	19,373,222	19,225,159	19,289,948	18,998,504
Diluted	<u>19,600,076</u>	<u>19,225,159</u>	<u>19,289,948</u>	<u>18,998,504</u>

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 and Nine Months Ended September 30, 2025				
	Common Stock		Additional Paid-in Capital	Accumulated (Deficit)	Total
	Shares	Par Value			
Balance - January 1, 2025	19,235,631	\$ 19,236	\$ 73,925,861	\$ (72,753,236)	\$ 1,191,861
Stock issued for delivery of RSUs	10,000	10	(10)	—	—
Share based payments	—	—	60,527	—	60,527
Net loss	—	—	—	(1,679,220)	(1,679,220)
Balance - March 31, 2025	19,245,631	\$ 19,246	\$ 73,986,378	\$ (74,432,456)	\$ (426,832)
Stock issued for cashless exercise of options	127,591	127	(127)	—	—
Share based payments	—	—	19,428	—	19,428
Net loss	—	—	—	(1,541,916)	(1,541,916)
Balance - June 30, 2025	19,373,222	\$ 19,373	\$ 74,005,679	\$ (75,974,372)	\$ (1,949,320)
Share based payments	—	—	19,641	—	19,641
Net income	—	—	—	788,012	788,012
Balance - September 30, 2025	<u>19,373,222</u>	<u>\$ 19,373</u>	<u>\$ 74,025,320</u>	<u>\$ (75,186,360)</u>	<u>\$ (1,141,667)</u>

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	Three and Nine Months Ended September 30, 2024				
	Common Stock		Additional Paid-in Capital	Accumulated (Deficit)	Total
	Shares	Par Value			
Balance - January 1, 2024	18,872,022	\$ 18,872	\$ 61,992,607	\$ (61,951,125)	\$ 60,354
Stock issued for cashless exercise of options	1,857	2	(2)	—	—
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	18,873,879	\$ 18,874	\$ 73,590,016	\$ (64,806,000)	\$ 8,802,890
Stock issued for cashless exercise of options	332,959	333	(333)	—	—
Stock issued for cashless exercise of warrants	4,037	4	(4)	—	—
Share based payments	—	—	136,778	—	136,778
Net loss	—	—	—	(6,146,914)	(6,146,914)
Balance - June 30, 2024	19,210,875	\$ 19,211	\$ 73,726,457	\$ (70,952,914)	\$ 2,792,754
Stock issued for cashless exercise of options	6,422	6	(6)	—	—
Stock issued for exercise of warrants	5,000	5	17,495	—	17,500
Stock issued for cashless exercise of warrants	13,333	13	(13)	—	—
Share based payments	—	—	133,631	—	133,631
Net loss	—	—	—	(457,546)	(457,546)
Balance - September 30, 2024	19,235,630	\$ 19,235	\$ 73,877,564	\$ (71,410,460)	\$ 2,486,339

See accompanying notes to these condensed consolidated financial statements.

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

	For the Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Cash flows from operating activities		
Net loss	\$ (2,433,124)	\$ (9,459,335)
Adjustments to reconcile net loss to net cash (used in) operating activities:		
Stock-based compensation	99,596	1,040,625
Amortization of discount of notes payable	—	241,444
Amortization of right to use assets	34,064	23,380
Amortization of patent rights	153,450	153,450
Depreciation expense	94,281	8,159
Non-cash interest income	(26,280)	(44,214)
Loss on change in fair value of profit share	766,667	2,672,252
Changes in operating assets and liabilities		
Accounts receivable	(1,781,278)	617,815
Deferred offering costs	(207,500)	—
Income tax receivable	—	(144,465)
Inventory	123,645	(91,248)
Prepaid expenses and other assets	67,956	(51,881)
Accrued salaries	(12,507)	563,742
Accounts payable and accrued liabilities	1,488,022	1,568,918
Income tax payable	—	(350,087)
Operating lease liability	(31,452)	(23,340)
Net cash used in operating activities	<u>(1,664,460)</u>	<u>(3,274,785)</u>
Cash flows used in investing activities		
Purchase of property and equipment	(23,395)	(702,024)
Net cash used in investing activities	<u>(23,395)</u>	<u>(702,024)</u>
Cash flows used in financing activities		
Repayment of unsecured notes payable	—	(12,314,895)
Repayment of secured notes payable	—	(271,686)
Proceeds from exercise of stock options	—	17,500
Net cash used in financing activities	<u>—</u>	<u>(12,569,081)</u>
Net decrease in cash and cash equivalents	(1,687,855)	(16,545,890)
Cash and cash equivalents - beginning of period	3,456,082	20,939,762
Cash and cash equivalents - end of period	\$ 1,768,227	\$ 4,393,872
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	\$ —	\$ 3,939
Income taxes	\$ 15,173	\$ 200,000
SUPPLEMENTAL DISCLOSURE OF NON-CASH TRANSACTIONS		
Capital from related party debt extinguishments	\$ —	\$ 10,827,195
Recognition of ROU asset and operating lease liability	\$ —	\$ 231,343

See accompanying notes to these condensed consolidated financial statements.

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BIRCHTECH CORP. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
September 30, 2025 (Unaudited)

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 \$2.4 million and cash used in operating activities of \$1.7 million for the nine months ended September 30, 2025; had cash of approximately \$1.8 million at September 30, 2025; and an accumulated deficit of approximately \$75.2 million at September 30, 2025. The Company’s working capital deficiency at September 30, 2025 was approximately \$5.0 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 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.

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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 September 30, 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.

Stock Split

On December 26, 2025, the Company effected a 1-for-5 reverse stock split of its issued and outstanding shares of common stock. The stock split did not affect the number of authorized shares. All share and per share information, including share based compensation, throughout the financial statements has been retroactively adjusted to reflect the stock split. The shares of common stock retain a par value of \$0.001 per share. Accordingly, an amount equal to the par value of the increased shares resulting from the stock split was reclassified from capital in excess of par value to common stock.

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 and nine months ended September 30, 2025 and 2024.

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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 September 30, 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 September 30, 2025 and December 31, 2024 due to their short-term maturities.

At September 30, 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 September 30, 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 September 30, 2025			
	Total	Level 1	Level 2	Level 3
Liabilities:				
Profit share liability – related party (1)	\$ 7,620,525	\$ —	\$ —	\$ 7,620,525
Total Liabilities	<u>\$ 7,620,525</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 7,620,525</u>
Liabilities:				
Profit share liability – related party (1)	\$ 6,853,858	\$ —	\$ —	\$ 6,853,858
Total Liabilities	<u>\$ 6,853,858</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 6,853,858</u>

(1) See Note 7 - Related Party

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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	<u><u>\$ 1,545,000</u></u>	<u><u>\$ —</u></u>	<u><u>\$ —</u></u>	<u><u>\$ 1,545,000</u></u>

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 and nine months ended September 30, 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 and nine months ended September 30, 2025, the Company recognized \$2,600,000 and \$3,125,000, respectively (2024 - \$133,125 and \$273,750, respectively) 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.

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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 disaggregated sales based on the type of revenue for the three and nine months ended September 30, 2025 and 2024. All sales were in the United States.

	For the Three Months Ended September 30, 2025	For the Three Months Ended September 30, 2024
Product revenue	\$ 4,715,874	\$ 5,092,123
License revenue	2,600,000	133,125
Demonstrations & Consulting revenue	27,070	9,000
Equipment revenue	18,945	2,742
	<u>\$ 7,361,889</u>	<u>\$ 5,236,990</u>
	For the Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Product revenue	\$ 10,637,304	\$ 11,479,147
License revenue	3,125,000	273,750
Demonstrations & Consulting revenue	45,070	27,000
Equipment revenue	29,437	60,292
	<u>\$ 13,836,811</u>	<u>\$ 11,840,189</u>

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 September 30, 2025. The Company historically has not experienced significant uncollectible accounts receivable. As of September 30, 2025 and December 31, 2024, the Company's allowance for credit losses was \$0, and the Company recorded \$0 for credit losses for both the nine months ended September 30, 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.

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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 September 30, 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 2021.

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 are 226,854 dilutive stock options for the three months ended September 30, 2025 as the Company reported net income for the period. There were no dilutive potential common shares for the nine months ended September 30, 2025 or the three or nine months ended September 30, 2024, because the Company incurred a net loss and basic and diluted losses per common share are the same.

We calculate basic earnings per share by dividing net income (loss) by the weighted-average number of common shares outstanding during the reporting period. Diluted earnings per share reflects the effects of potentially dilutive securities. The summary of the basic and diluted earnings per share calculations for the three and nine months ended September 30, 2025 and 2024:

	For the Three Months Ended September 30, 2025	For the Three Months Ended September 30, 2024	For the Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Basic:				
Net Income (Loss)	788,012	(457,546)	(2,433,124)	(9,459,549)
Weighted-average shares outstanding	19,373,222	19,225,159	19,289,948	18,998,504
Basic	\$ 0.04	(0.02)	\$ (0.13)	\$ (0.50)
Diluted:				
Net Income (Loss)	788,012	(457,546)	(2,433,124)	(9,459,549)
Weighted-average shares outstanding	19,373,222	19,225,159	19,289,948	18,998,504
Effect of diluted securities – stock options	226,854	—	—	—
Weighted-average shares used in the calculation of diluted earnings per share	19,600,076	19,225,159	19,289,948	18,998,504
Diluted earnings (loss) per share	0.04	(0.02)	\$ (0.13)	\$ (0.50)

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

	September 30, 2025	September 30, 2024
Stock options	1,555,000	1,860,000
Warrants	—	155,000
Restricted stock units	—	10,000
Total common stock equivalents excluded from dilutive loss per share	<u>1,555,000</u>	<u>2,025,000</u>

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 September 30, 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 September 30, 2025 and December 31, 2024, the Company had \$1,268,227 and \$2,956,082, respectively, in excess of FDIC limits.

Customer and Supplier Concentration

For the nine months ended September 30, 2025, three customers represented 26%, 10%, and 10% of the Company's revenues, and for nine months ended September 30, 2024, three customers represented 36%, 17%, and 11% of the Company's revenues.

At September 30, 2025, two customers represented 28% and 27% of the Company's accounts receivable, and at December 31, 2024, three customers represented 32%, 26% and 9% of the Company's accounts receivable

For the nine months ended September 30, 2025, 91% of the Company's purchases related to two suppliers. For the nine months ended September 30, 2024, 85% of the Company's purchases related to two suppliers. At September 30, 2025 and 2024, 75% and 72% of the Company's accounts payable and accrued expenses related to two vendors, respectively. 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.

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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.

On July 30, 2025, the FASB issued ASU 2025-05, *Measurement of Credit Losses for Accounts Receivable and Contract Assets* ("ASU 2025-05"), which provides a practical expedient that assumes current conditions as of the balance sheet date remain unchanged when developing forecasts for estimating expected credit losses. Under ASU 2025-05, an entity is required to disclose that it has elected to use the practical expedient and the election should be applied prospectively. ASU 2025-05 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2025, with early adoption permitted. The Company does not expect the application of this standard will have a material impact on its financial statements and related disclosures.

Note 4 - Inventory

Inventory was comprised of the following at September 30, 2025 and December 31, 2024:

	September 30, 2025	December 31, 2024
Raw Materials	\$ 111,036	\$ 169,527
Finished Goods	387,132	452,286
	<u>\$ 498,168</u>	<u>\$ 621,813</u>

Note 5 - Property and Equipment, Net

Property and equipment at September 30, 2025 and December 31, 2024 are as follows:

	September 30, 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	747,469	725,626
Office equipment, computer equipment and software	3,426	1,874
Total equipment	<u>2,876,763</u>	<u>2,853,368</u>
Less: accumulated depreciation	(2,141,961)	(2,047,680)
Construction in process	1,545,000	1,545,000
Property and equipment, net	<u>\$ 2,279,802</u>	<u>\$ 2,350,688</u>

The Company uses the straight-line method of depreciation over estimated useful lives of 2 to 5 years. During the three months ended September 30, 2025 and 2024, depreciation expense was \$42,819 and \$6,581, respectively. During the nine months ended September 30, 2025 and 2024, depreciation expense was \$94,281 and \$8,159, respectively.

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Note 6 - Intellectual Property

License and patent costs capitalized as of September 30, 2025 and December 31, 2024 are as follows:

	September 30, 2025	December 31, 2024
Licenses and patents	\$ 3,068,995	\$ 3,068,995
Less: Accumulated amortization	(1,722,982)	(1,569,532)
Intellectual property, net	<u><u>\$ 1,346,013</u></u>	<u><u>\$ 1,499,463</u></u>

Amortization expense for the three months ended September 30, 2025 and 2024 was \$51,150 and \$51,150, respectively. Amortization expense for the nine months ended September 30, 2025 and 2024 was \$153,450 and \$153,450, 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)	\$ 51,250
December 31, 2026	204,600
December 31, 2027	204,600
December 31, 2028	204,600
December 31, 2029	204,600
Thereafter	476,363
Total	<u><u>\$ 1,346,013</u></u>

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 September 30, 2025 and December 31, 2024, total principal of \$0 and \$0, respectively, was outstanding on this note. Interest expense for the three months ended September 30, 2025 and 2024 was \$0 and \$0, respectively. Interest expense for the nine months ended September 30, 2025 and 2024 was \$0 and \$4,279, respectively.

Amortized discount recorded as interest expense for the three months ended September 30, 2025 and 2024 was \$0 and \$0, respectively. Amortized discount recorded as interest expense for the nine months ended September 30, 2025 and 2024 was \$0 and \$32,220, respectively. As of September 30, 2025 and December 31, 2024, the unamortized balance of the discount was \$0 and \$0, respectively.

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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.

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Amortized discount recorded as interest expense for the three months ended September 30, 2025 and 2024 was \$0 and \$0, respectively. Amortized discount recorded as interest expense for the nine months ended September 30, 2025 and 2024 was \$0 and \$209,224, respectively. As of September 30, 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 September 30, 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.

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The following are the changes in the profit share liability (the only Level 3 financial instrument) during the nine months ended September 30, 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	<u>\$ 6,853,858</u>
Profit Share as of January 1, 2025	\$ 6,853,858
Loss on change in fair value of profit share	766,667
Profit Share as of September 30, 2025	<u>\$ 7,620,525</u>

Related Party Transactions

Kaye Cooper Kay & Rosenberg, LLP provides certain legal services to the Company and the Company incurred \$112,500 and \$116,667 for the three months ended September 30, 2025 and 2024, respectively, and \$337,500 and \$318,944, respectively, for legal services rendered and disbursement incurred for the nine months ended September 30, 2025 and 2024. David M. Kaye, a Director of the Company, is a partner of the law firm. At September 30, 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 September 30, 2025 and 2024, Dakin incurred \$0 and \$37,500 license fees. For the nine months ended September 30, 2025 and 2024, Dakin incurred \$0 and \$112,500 license fees. At September 30, 2025 and December 31, 2024, \$0 and \$0 was owed to Dakin for license fees.

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 lease 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 approximate 3-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.

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For the nine months ended September 30, 2025 and the year ended December 31, 2024, the Company recorded an operating lease right of use asset and liabilities as follows:

	September 30, 2025	December 31, 2024
Right of use asset - operating lease	\$ 271,078	\$ 305,142
Current portion of operating lease liability	48,846	42,733
Operating lease liability	274,771	306,223

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

<u>For the twelve months ended September 30,</u>	
2026	\$ 84,696
2027	86,392
2028	88,512
2029	66,036
2030	40,480
Thereafter	4,201
Total	<u>370,317</u>
Less discount	<u>(95,546)</u>
Total lease liabilities	<u>274,771</u>
Less current portion	<u>(48,846)</u>
Operating lease obligation, net of current portion	<u>\$ 225,925</u>

The weighted average remaining lease term for operating leases is 4.45 years and the weighted average discount rate used in calculating the operating lease asset and liability is 14.55%. For the nine months ended September 30, 2025 and 2024, payments on lease obligations were \$62,550 and \$36,550, respectively, and amortization of the right of use assets was \$34,064 and \$23,380, respectively.

For the nine months ended September 30, 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 Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Operating lease costs	<u>\$ 65,162</u>	<u>\$ 36,750</u>

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

The Company has commenced multiple patent infringement lawsuits to enforce its proprietary two-part Sorbent Enhancement Additive (SEA®) process for mercury removal from coal-fired power plants. These actions, filed between 2019 and 2025, target various operators of coal-fired power plants and refined coal producers whom the Company alleges have willfully infringed its patent rights. The Company is seeking damages, injunctive relief, and other remedies in each of these proceedings.

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Delaware District Court Action

In July 2019, the Company initiated patent litigation against various defendants in the U.S. District Court for the District of Delaware which included (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.

Between July 2020 and January 2021, the Company entered into agreements with each of the four major utility defendants which included certain monetary arrangements and pursuant to which the Company dismissed all claims brought against each of them and their affiliates.

In November 2023, the Company entered into a confidential binding term sheet with Arthur J. Gallagher & Co., and various of its affiliated entities, and DTE Energy Resources LLC and various of its affiliated entities, 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. In November 2023, Alistar Enterprises, LLC, one of the remaining CERT defendants, entered into a settlement agreement with the Company.

In December 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) were not included within the scope of the license.

The case proceeded to trial in February 2024 against the remaining CERT defendants. On March 1, 2024, a federal jury returned a \$57.1 million verdict in favor of the Company against the remaining CERT defendants, finding willful infringement of the Company’s patented technologies and holding the defendants liable for inducing and contributory infringement. 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. Following the trial, the Court entered non-final judgments on the verdict against the CERT defendants and the parties submitted post-trial motions relating to the jury trial. The CERT defendants also asserted that the Company’s claims were barred due to their defense that they had an implied license to the asserted patents. A bench trial was held on such issue. On June 10, 2025, the Court ruled that the CERT defendants failed to prove that they had such an implied license and denied their motion to alter or amend the non-final judgment. In addition, on September 25, 2025, the Court issued a Memorandum Opinion and Order that denied the CERT defendants’ post-trial motion that they should not be held liable as a matter of law for induced infringement, contributory infringement or willful infringement. The Company is awaiting the Court’s determination as to the final judgment.

2024-2025 Patent Infringement Actions

In July 2024, the Company commenced three additional patent infringement lawsuits in U.S. District Courts in Arizona, Iowa and Missouri against multiple utilities and related entities. These actions allege willful infringement of the Company’s patents related to mercury emissions control. Named as defendants in the action filed in the U.S. District Court for the District of Arizona were 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 were Berkshire Hathaway Energy Company, MidAmerican Energy Company, PacifiCorp, Alliant Energy Corporation, Interstate Power and Light Company, and Wisconsin Power and Light

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Company, and named as defendants in the action filed in the U.S. District Court for the Eastern District of Missouri were Ameren Corp. and Union Electric Co.

In October 2024, the Company entered into an agreement with one of the utility defendants and an affiliated entity in the Arizona action, and in January 2025, the Company entered into an agreement with another utility named in the Arizona action. Such agreements provide 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 them. The agreements include one-time license fees which have been received by the Company. One agreement 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 and the other agreement 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.

On December 17, 2024, the U.S. Judicial Panel on Multidistrict Litigation ordered the consolidation of the three lawsuits in the U.S. District Court for the Southern District of Iowa for coordinated pretrial proceedings. In January 2025, the Company initiated an additional infringement suit in the Western District of Missouri against several Evergy-affiliated entities. Named as defendants in the action were Evergy, Inc., Evergy Metro Inc., Evergy Missouri West, Inc. and Evergy Kansas Central, Inc. One of such defendants was dismissed from the Western District of Missouri action and named as a defendant in a separate case commenced in the U.S. District Court for the District of Kansas. Such cases were transferred to the Iowa court pursuant to the existing transfer order.

Between January and July 2025, certain defendants in the consolidated Iowa actions filed inter partes review ("IPR") petitions with the U.S. Patent and Trademark Office seeking to invalidate various asserted claims.

Effective as of August 5, 2025, the Company entered into separate agreements with two utilities, which are affiliated with each other, and named as defendants in the Southern District of Iowa action. In addition, as of September 9, 2025, the Company entered into an agreement with a utility and its affiliated entities, named as defendants in the Western District of Missouri and District of Kansas actions. Such agreements provide such parties and their affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with certain designated coal-fired power plants operated by them. Each agreement includes a one-time license fee. The agreements effective as of August 5, 2025 entered into with the two utilities, provide the Company with the right to be included in each utility's bidding process for certain product supply for mercury emissions capture at such party's operated power plants. Such two utilities have also agreed to withdraw from the IPR petitions.

Effective as of September 30, 2025, the Company entered into an agreement with another utility not named as a defendant in the Company's patent litigations, but a party to the IPR petitions filed with the U.S. Patent and Trademark Office. Such agreement provides such utility and its affiliates with a non-exclusive license to certain Company patents related to the Company's two-part SEA® process for use in connection with a certain designated coal-fired power plant operated by them. Such 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. Such party has agreed to withdraw from IPR petitions.

Effective as of October 15, 2025, the Company entered into an agreement with another utility named as a defendant in the Southern District of Iowa action. While the terms of the agreement are confidential, it includes a resolution of the disputes between the Company and that utility and its affiliates and provides for their withdrawal from related proceedings. As a result of this and the other agreements described above, the Company and several defendants have resolved their respective claims, and those defendants have been dismissed from the applicable actions. There remain two utilities in the consolidated Iowa actions.

As described above, between January and July 2025, certain defendants in the consolidated Iowa actions filed IPR petitions seeking to invalidate various asserted claims. In September and October 2025, the U.S. Patent Trial and Appeal Board ("PTAB") granted the institution of the review of certain of the Company's asserted patents. On October 13, 2025, the Court in the consolidated Iowa actions ruled to stay the litigation pending completion of the IPR process in the PTAB. No assurance can be given as to the ultimate outcome of these proceedings.

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.

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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 September 30, 2025 and 2024, stock-based compensation expense amounted to \$19,641 and \$133,361, respectively. For the nine months ended September 30, 2025 and 2024, stock-based compensation expense amounted to \$99,596 and \$1,040,625, 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 2,815,692, 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 955,000 additional shares of common stock. (On July 3, 2023, there were 955,000 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 September 30, 2025, there were 1,253,261 shares remaining available for issuance under the 2017 Plan.

Common Stock

On November 8, 2022, the Company issued a total of 600,000 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 nine months ended September 30, 2025 and 2024 was \$0 and \$364,000, 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 \$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. 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 and nine months ended September 30, 2025, there were no repurchases made under the program.

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Stock Options

On January 15, 2024, the Company granted nonqualified stock options to certain directors, executive officers and employees to acquire an aggregate of 200,000 shares of the Company's common stock under the 2017 Plan. The options granted are exercisable at \$4.40 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 1,857 shares of common stock to a former employee upon a cashless exercise of an option to purchase 3,750 shares of common stock covered by an option to purchase a total of 20,000 shares of common stock, with an exercise price of \$1.35 per share. Such share issuance was based upon a VWAP of \$4.615 per share as determined under the terms of the option.

On June 24, 2024, the Company issued (i) 177,291 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 300,000 shares of common stock at an exercise price of \$1.35 per share, and (ii) 134,573 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 320,000 shares of common stock at exercise prices ranging from \$1.35 to \$2.25 per share. Such share issuances were based upon a VWAP of \$3.30 per share as determined under the terms of the options.

On June 28, 2024, the Company issued (i) 9,282 shares of common stock to an employee upon a cashless exercise of options to purchase an aggregate of 60,000 shares of common stock at exercise prices ranging from \$1.35 to \$3.05 per share, (ii) 8,813 shares of common stock to an employee upon a cashless exercise of an option to purchase 15,000 shares of common stock covered by an option to purchase a total of 100,000 shares of common stock with an exercise price of \$1.35 per share, and (iii) 3,000 shares of common stock to a former employee upon a cashless exercise of an option to purchase 5,106 shares of common stock covered by an option to purchase a total of 100,000 shares of common stock with an exercise price of \$1.35 per share. Such share issuances were based upon a VWAP of \$3.273 per share as determined under the terms of the options.

On August 3, 2024, the Company issued 6,422 shares of common stock to a former consultant upon a cashless exercise of an option to purchase 12,500 shares of common stock, with an exercise price of \$2.00 per share. Such share issuance was based upon a VWAP of \$4.1135 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 50,000 shares of the Company's common stock at an exercise price of \$2.55 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 \$57,857 of expenses during the nine months ended September 30, 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 20,000 shares of the Company's common stock at an exercise price of \$2.80 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.

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On June 20, 2025, the Company issued (i) 63,796 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 100,000 shares of common stock at an exercise price of \$0.95 per share, and (ii) 63,796 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 100,000 shares of common stock at an exercise price of \$0.95 per share. Such share issuances were based upon a VWAP of \$2.624 per share as determined under the terms of the options.

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	1,860,000	\$ 2.90	1.75	12,500
Grants	70,000	2.60		
Expirations	(175,000)	1.65		
Exercised	(200,000)	0.95		
September 30, 2025	1,555,000	\$ 3.30	1.36	1,062,500
Options exercisable at:				
September 30, 2025	1,530,000	3.30	1.34	1,034,750

The aggregate intrinsic value in the table above represents the total intrinsic value, based on the Company's closing stock price of \$3.65 as of September 30, 2025, which would have been received by the option holders had all option holders exercised their options as of that date.

Stock options exercised during the nine months ended September 30, 2025 include none that were exercised for cash and 200,000 that were cashless exercises. Stock options exercised during the nine months ended September 30, 2024 include none that were exercised for cash and 716,356 which were cashless exercises.

Restricted Share Units

On January 15, 2024, the Company granted 10,000 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 nine months ended September 30, 2025 and 2024 was \$1,668 and \$30,867, respectively.

On January 15, 2025, the Company issued 10,000 shares of common stock to a director due to the vesting on such date of 10,000 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 September 30, 2025, and no warrants were issued or exercised during the nine months ended September 30, 2025 and 2024.

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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 September 30, 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 by the CEO for the purpose of evaluating segment performance and allocation of budget to support business expansion, new product development and operational efficiencies.

	For the Three Months Ended September 30, 2025	For the Three Months Ended September 30, 2024	For the Nine Months Ended September 30, 2025	For the Nine Months Ended September 30, 2024
Material sales	4,715,874	5,092,123	10,637,304	11,479,147
License fees	2,600,000	133,125	3,125,000	273,750
Other revenues	46,015	11,742	74,507	87,292
Total revenues	\$ 7,361,889	\$ 5,236,990	\$ 13,836,811	\$ 11,840,189
Material costs	(2,557,924)	(2,829,784)	(5,736,069)	(6,055,177)
Blending and milling	(110,518)	(127,786)	(268,643)	(312,410)
Shipping	(339,987)	(417,997)	(821,308)	(941,768)
Other cost of goods sold	(197,856)	(151,095)	(452,507)	(417,317)
Compensation and benefits	(1,219,307)	(1,031,223)	(3,664,564)	(5,284,900)
Stock-based compensation	(19,641)	(133,631)	(99,596)	(1,040,625)
Amortization and depreciation	(105,667)	(64,830)	(281,796)	(184,989)
Consulting fees	(344,043)	(103,057)	(911,017)	(403,197)
Professional fees	(1,387,156)	(963,256)	(2,409,608)	(3,056,291)
General and administrative	(203,872)	(511,456)	(732,212)	(1,198,807)
Change in fair value of profit share	(37,619)	282,381	(766,667)	(2,672,253)
Interest expense	—	(7,356)	(54)	(258,990)
Income tax benefit (expense)	(1,611)	283,898	(37,391)	269,717
Research and development	(64,088)	—	(154,725)	—
Interest income	15,412	80,656	66,222	257,483
Segment net loss	788,012	(457,546)	(2,433,124)	(9,459,335)
Reconciliation of profit or loss				
Adjustments and reconciling items	—	—	—	—
Consolidated net loss	\$ 788,012	(457,546)	(2,433,124)	(9,459,335)

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

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**5,449,592 Shares of
Common Stock**

BIRCHTECH CORP.



PRELIMINARY PROSPECTUS

Lake Street

Huntington Capital Markets

, 2026

Through and including _____, 2026 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of the shares of common stock being registered. All amounts are estimates except for the SEC registration fee, NYSE American filing fee and the Financial Industry Regulatory Authority, Inc. (“FINRA”), filing fee.

Item	Amount to be paid
SEC registration fee	\$ 3,176.30
NYSE American filing fee	80,000.00
FINRA filing fee	3,950.00
Printing fees and expenses	100,000.00
Legal fees and expenses	505,000.00
Accounting fees and expenses	25,000.00
Transfer agent's fees and expenses	10,000.00
Miscellaneous fees and expenses	132,873.70
Total	\$ 860,000.00

Item 14. Indemnification of Directors and Officers

Section 145 of the DGCL (“Section 145”) provides in general that a Delaware corporation may indemnify any person who was, is or is threatened to be made, party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative, or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee, or agent of such corporation or is or was serving at the request of such corporation as a director, officer, employee, or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys’ fees), judgments, fines, and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit, or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation’s best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who are, were or are a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee, or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys’ fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation’s best interests, provided that no indemnification is permitted without judicial approval if the officer, director, employee, or agent is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses which such officer or director has actually and reasonably incurred.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee, or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee, or agent of another corporation or enterprise, against any liability asserted against him and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Our Bylaws provide that we must indemnify our directors and officers to the fullest extent permitted by the DGCL and must indemnify against all expenses, liability, and loss incurred in investigating, defending, or participating in such proceedings.

The Company maintains standard policies of insurance that provide coverage (1) to the Company’s directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act and (2) to the Company with respect to indemnification payments that the Company may make to such directors and officers.

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As of the date of the effectiveness of this registration statement, we intend to enter into separate indemnification agreements with each of our directors and executive officers. Each indemnification agreement will provide, among other things, for indemnification to the fullest extent permitted by law and our Bylaws against any and all expenses, judgments, fines, penalties, and amounts paid in settlement of any claim. The indemnification agreements will also provide for the advancement or payment of all expenses to the indemnitee.

Item 15. Recent Sales of Unregistered Securities

The following share amounts and prices disclosed in this Item 15 are set forth on a pre-reverse stock split basis.

On February 1, 2023, the Company issued (i) 850,000 shares of common stock to Christopher Greenberg, the former Chairman of our Board of Directors, upon a cash exercise of options to purchase an aggregate of 850,000 shares of common stock at then-existing exercise prices ranging from \$0.19 to \$0.27 per share, or \$209,500 in the aggregate, (ii) 110,000 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 250,000 shares of common stock at a then-existing exercise price of \$0.28 per share based upon a then-existing market price of \$0.50 per share as determined under the terms of the option, and (iii) 155,000 shares of common stock to a director of the Company upon a cashless exercise of an option to purchase 250,000 shares of common stock at a then-existing exercise price of \$0.19 per share based upon a then-existing market price of \$0.50 per share as determined under the terms of the option.

On February 20, 2023, the Company issued 17,858 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 50,000 shares of common stock at a then-existing exercise price of \$0.27 per share based upon a then-existing market price of \$0.42 per share as determined under the terms of the option.

Between February 21, 2023 and February 23, 2023, the Company issued an aggregate of 29,022 shares of common stock to three employees and one former employee upon a cashless exercise of options to purchase an aggregate of 80,000 shares of common stock at a then-existing exercise price of \$0.27 per share based upon then-existing market prices ranging from \$0.42 to \$0.43 per share as determined under the terms of the options.

On June 5, 2023, the Company issued 1,629 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 6,875 shares of common stock at a then-existing exercise price of \$0.29 per share based upon a then-existing market price of \$0.38 per share as determined under the terms of the option.

On June 6, 2023, the Company issued an aggregate of 3,426 shares of common stock to an employee upon a cashless exercise of options to purchase an aggregate of 7,655 shares of common stock at then-existing exercise prices ranging from \$0.17 to \$0.29 per share based upon a then-existing market price of \$0.38 per share as determined under the terms of the options.

On June 7, 2023, the Company issued 1,352 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock at a then-existing exercise price of \$0.29 per share based upon a then-existing market price of \$0.37 per share as determined under the terms of the option.

On June 28, 2023, the Company issued (i) 5,213 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of options to purchase an aggregate of 24,687 shares of common stock at then-existing exercise prices ranging from \$0.21 to \$0.29 per share based upon a then-existing market price of \$0.30 per share as determined under the terms of the options, (ii) 4,125 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock at a then-existing exercise price of \$0.21 per share based upon a then-existing market price of \$0.30 per share as determined under the terms of the option, and (iii) 1,875 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock at a then-existing exercise price of \$0.21 per share based upon a then-existing market price of \$0.30 per share as determined under the terms of the option.

On July 28, 2023, the Company issued (i) 8,007 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 16,458 shares of common stock, (ii) 6,690 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock, and (iii) 3,041 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock. All of such options had a then-existing exercise price of \$0.17 per share and such share issuances were based upon a then-existing volume weighted average price ("VWAP") of \$0.3311 per share as determined under the terms of the options.

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On September 29, 2023, the Company issued (i) 5,555 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 16,458 shares of common stock, (ii) 4,641 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock, (iii) 2,109 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock, and (iv) 1,033 shares of common stock to an employee upon a cashless exercise of an option to purchase 3,062 shares of common stock. All of such options had a then-existing exercise price of \$0.26 per share and such share issuances were based upon a VWAP of \$0.3925 per share as determined under the terms of the options.

On October 30, 2023, the Company issued 1,450 shares of common stock to an employee upon a cashless exercise of an option to purchase 3,062 shares of common stock at a then-existing exercise price of \$0.20 per share based upon a VWAP of \$0.3799 per share as determined under the term of the options.

On October 31, 2023, the Company issued (i) 8,346 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 16,458 shares of common stock, (ii) 6,973 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock, and (iii) 3,169 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock. All of such options had a then-existing exercise price of \$0.20 per share and such share issuances were based upon a VWAP of \$0.4058 per share as determined under the terms of the options.

On November 29, 2023, the Company issued 2,001 shares of common stock to an employee upon a cashless exercise of an option to purchase 3,062 shares of common stock at a then-existing exercise price of \$0.33 per share based upon a VWAP of \$0.9527 per share as determined under the term of the options.

On November 30, 2023, the Company issued (i) 9,104 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock at a then-existing exercise price of \$0.33 per share, (ii) 4,138 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock at a then-existing exercise price of \$0.33 per share, and (iii) 9,400 shares of common stock to a former employee upon a cashless exercise of options to purchase a total of 18,750 shares of common stock, with then-existing exercises prices of ranging from \$0.25 to \$0.33 per share. All of such share issuances were based upon a VWAP of \$0.9768 per share as determined under the terms of the options.

On December 11, 2023, the Company issued (i) 10,278 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 13,750 shares of common stock, and (ii) 4,672 shares of common stock to a director upon a cashless exercise of an option to purchase 6,250 shares of common stock. All of such options had a then-existing exercise price of 0.25 per share and such share issuances were based upon a VWAP of \$0.9902 per share as determined under the terms of the options.

On December 13, 2023, the Company issued 2,204 shares of common stock to an employee upon a cashless exercise of an option to purchase 3,062 shares of common stock at a then-existing exercise price of \$0.25 per share based upon a VWAP of \$0.8931 per share as determined under the term of the 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.

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 a then-existing 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 17, 2024, the Company issued an aggregate of 16,665 shares of common stock to certain warrant holders upon the cashless exercise of warrants to purchase an aggregate of 600,000 shares of common stock at a then-existing exercise price of \$0.70 per share based upon a market value of \$0.72 per share as determined under the terms of the warrants.

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On June 18, 2024, the Company issued 3,521 shares of common stock to a certain warrant holder upon the cashless exercise of a warrant to purchase 250,000 shares of common stock at a then-existing exercise price of \$0.70 per share based upon a market value of \$0.71 per share as determined under the terms of the warrant.

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 a then-existing 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 then-existing 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 then-existing 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 a then-existing 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 a then-existing 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 a then-existing 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 August 5, 2024, the Company issued 66,666 shares of common stock to a certain warrant holder upon the cashless exercise of a warrant to purchase 400,000 shares of common stock at a then-existing exercise price of \$0.70 per share based upon a market value of \$0.84 per share as determined under the terms of the warrant.

On August 22, 2024, the Company issued 25,000 shares of common stock to a certain warrant holder upon a cash exercise of a warrant to purchase 25,000 shares of common stock at a then-existing exercise price of \$0.70 per share or \$17,500 in the aggregate.

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 and had a one-year vesting period.

On June 20, 2025, the Company issued (i) 318,978 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 500,000 shares of common stock at a then-existing exercise price of \$0.19 per share, and (ii) 318,978 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 500,000 shares of common stock at a then-existing exercise price of \$0.19 per share. Such share issuances were based upon a VWAP of \$0.5248 per share as determined under the terms of the options.

On December 11, 2025, the Company issued 109,440 shares of common stock to the Company's Senior Vice President and Chief Technology Officer upon a cashless exercise of an option to purchase 300,000 shares of common stock covered by an option to purchase a total of 500,000 shares of common stock at a then-existing exercise price of \$0.58 per share. Such share issuance was based on a VWAP of \$0.9131 per share as determined under the terms of the option.

On December 12, 2025, the Company issued (i) 189,573 shares of common stock to the Company's Chief Executive Officer upon a cashless exercise of an option to purchase 500,000 shares of common stock at a then-existing exercise price of \$0.58 per share, (ii) 94,786 shares of common stock to a director upon a cashless exercise of an option to purchase 250,000 shares of common stock at a then-existing exercise price of \$0.58 per share, and (iii) 18,957 shares of common stock to an employee upon a cashless exercise of an option to purchase 50,000 shares of common stock at a then-existing exercise price of \$0.58 per share. Such share issuances were based upon a VWAP of \$0.9342 per share as determined under the terms of the options.

The foregoing securities were issued in reliance upon the exemption from registration pursuant to Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder, and where applicable, under Section 3(a)(9) of the Securities Act.

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Item 16. Exhibits and financial statement schedules

(a) Exhibits

<u>Exhibit</u>	<u>Description</u>
1.1*	Form of Underwriting Agreement by and between the Company and the Representative (including form of Lock-Up Agreement)
3.1	Certificate of Incorporation and amendments thereto through October 17, 2014 (Incorporated by reference to Exhibit 3.1 of the Company's Annual Report on Form 10-K, filed with the SEC on March 20, 2015)
3.2	Certificate of Amendment filed with the Secretary of State of Delaware effective on October 17, 2024 (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the SEC on October 17, 2024)
3.3	Certificate of Amendment filed with the Secretary of State of Delaware effective on December 23, 2025, effective on December 26, 2025 (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the SEC on December 29, 2025)
3.4	Second Amended and Restated By-laws (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the SEC on November 15, 2024)
5.1*	Opinion of Sheppard, Mullin, Richter & Hampton LLP
10.1	Closing Agreement by and among Midwest Energy Emissions Corp., MES, Inc. and Energy & Environmental Research Center Foundation effective as of April 21, 2017 (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 21, 2017)
10.2	Assignment of Patents by and between Energy & Environmental Research Center Foundation and Midwest Energy Emissions Corp. dated April 24, 2017 (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on August 21, 2017)
10.3	Amended and Restated Employment Agreement with Richard MacPherson dated as of June 7, 2024 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on June 13, 2024)
10.4	Amended and Restated Employment Agreement with John Pavlish dated as of June 7, 2024 (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the SEC on June 13, 2024)
10.5	Employment Agreement with James Trettel dated as of June 7, 2024 (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed with the SEC on June 13, 2024)
10.6	License and Supply Agreement with Dakin Holdings Ltd. dated as of January 31, 2023 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 3, 2023)
10.7	First Amendment to License and Supply Agreement with Dakin Holdings Ltd. dated as of November 18, 2024 (incorporated by reference to Exhibit 10.7 of the Company's Annual Report on Form 10-K, filed with the SEC on March 31, 2025)
10.8	Amended and Restated 2014 Equity Incentive Plan, as amended October 29, 2024 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on November 15, 2024)
10.9	Amended and Restated 2017 Equity Incentive Plan, as amended October 29, 2024 (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the SEC on November 15, 2024)

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10.10	Form of Option Award Agreement (Amended and Restated 2017 Equity Incentive Plan) (incorporated by reference to Exhibit 10.10 of the Company's Annual Report on Form 10-K, filed with the SEC on March 31, 2025)
10.11	Form of Restricted Share Unit Award Agreement (Amended and Restated 2017 Equity Incentive Plan) (incorporated by reference to Exhibit 10.11 of the Company's Annual Report on Form 10-K, filed with the SEC on March 31, 2025)
10.12	Unsecured Debt Restructuring Agreement among Midwest Energy Emissions Corp., MES, Inc. and AC Midwest Energy LLC dated as of February 27, 2024 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on March 4, 2024)
21.1	Subsidiaries of the registrant (incorporated by reference to Exhibit 21.1 of the Company's Annual Report on Form 10-K, filed with the SEC on March 31, 2025)
23.1*	Consent of Rosenberg Rich Baker Berman, P.A.
23.2*	Consent of Sheppard, Mullin, Richter & Hampton LLP (included in Exhibit 5.1)
24.1**	Power of Attorney (included on the signature page to this registration statement)
107**	Filing Fee Table

* Filed herewith.

** Previously filed.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) do not apply if the registration statement is on Form S-1 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

2. For the purposes of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

4. For the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

5. For the purposes of determining liability under the Securities Act of 1933 to any purchaser in the initial distributions of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

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(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

6. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a Registrant of expenses incurred or paid by a director, officer or controlling person of a Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, that Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

7. For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

8. For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

9. For purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Corsicana, Texas, on February 3, 2026.

Birchtech Corp.

By: /s/ Richard MacPherson

Name: Richard MacPherson

Title: President, Chief Executive Officer, Secretary and Chairman
(Principal Executive Officer)

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Richard MacPherson</u> Richard MacPherson	President, Chief Executive Officer, Secretary, and Chairman (Principal Executive Officer)	February 3, 2026
<u>/s/ Fiona Fitzmaurice</u> Fiona Fitzmaurice	Chief Financial Officer (Principal Financial and Accounting Officer)	February 3, 2026
<u>*</u> David M. Kaye	Director	February 3, 2026
<u>*</u> Troy Grant	Director	February 3, 2026
<u>*</u> Mitzi H. Coogler	Director	February 3, 2026
<u>*By: /s/ Richard MacPherson</u> Richard MacPherson Attorney-in-Fact		

UNDERWRITING AGREEMENT

BIRCHTECH CORP.

[·] Shares of Common Stock, par value \$0.001 per share

Underwriting Agreement

[·], 2026

LAKE STREET CAPITAL MARKETS, LLC
 121 South 8th Street, Suite 1000
 Minneapolis, Minnesota 55402

Ladies and Gentlemen:

Birchtech Corp., a Delaware corporation (the “Company”), proposes to issue and sell to Lake Street Capital Markets, LLC, in its capacity as representative of the several underwriters named in Schedule 1 hereto (the “Representative,” and such other underwriters being collectively called the “Underwriters” or, individually, an “Underwriter”), an aggregate of [·] shares (the “Underwritten Shares”) of common stock, par value \$0.001 per share (“Common Stock”), of the Company and, at the option of the Underwriters, up to an additional [·] shares of Common Stock (the “Option Shares”). The Underwritten Shares and the Option Shares are herein referred to as the “Shares.” The shares of Common Stock to be outstanding after giving effect to the sale of the Shares are referred to herein as the “Stock”.

The Company hereby confirms its agreement with the Representative concerning the purchase and sale of the Shares, as follows:

1. Registration Statement. The Company has prepared and filed with the U.S. Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended, and the rules and regulations of the Commission thereunder (collectively, the “Securities Act”), a registration statement on Form S-1 (File No. 333-292701), including each amendment thereto, and a prospectus, relating to the Shares. Such registration statement, as amended at the time it became effective, including the information, if any, deemed pursuant to Rule 430A, 430B or 430C under the Securities Act to be part of the registration statement at the time of its effectiveness (“Rule 430 Information”), is referred to herein as the “Registration Statement;” and as used herein, the term “Preliminary Prospectus” means each prospectus included in such registration statement (and any amendments thereto) before effectiveness, any prospectus filed with the Commission pursuant to Rule 424(a) under the Securities Act and the prospectus included in the Registration Statement at the time of its effectiveness that omits Rule 430 Information, and the term “Prospectus” means the prospectus in the form first used (or made available upon the request of purchasers pursuant to Rule 173 under the Securities Act) in connection with confirmation of sales of the Shares. If the Company has filed an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the “Rule 462 Registration Statement”), then any reference herein to the term “Registration Statement” shall be deemed to include such Rule 462 Registration Statement. Capitalized terms used but not defined herein shall have the meanings given to such terms in the Registration Statement and the Prospectus.

At or prior to the Applicable Time (as defined below), the Company had prepared the following information (collectively with the pricing information set forth on Annex A, the “Pricing Disclosure Package”): a Preliminary Prospectus, dated [·], 2026, and each “free-writing prospectus” (as defined pursuant to Rule 405 under the Securities Act) listed on Annex A hereto.

“Applicable Time” means [·] [A.M./P.M.], New York City time, on [·], 2026.

2. Purchase of the Shares.

(a) The Company agrees to issue and sell the Underwritten Shares to the Underwriters as provided in this underwriting agreement (this "Agreement"), and the Underwriters, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, agree, severally and not jointly, to purchase at a price per Share of \$[.] (the "Purchase Price"), which represents the public offering price of the Shares less a 7.0% underwriting discount, from the Company the number of Underwritten Shares set forth opposite each Underwriter's name in Schedule 1 hereto.

In addition, the Company agrees to issue and sell the Option Shares to the Underwriters as provided in this Agreement, and the Underwriters, on the basis of the representations, warranties and agreements set forth herein and subject to the conditions set forth herein, shall have the option to purchase from the Company the Option Shares at the Purchase Price less an amount per share equal to any dividends or distributions declared by the Company and payable on the Underwritten Shares but not payable on the Option Shares. If any Option Shares are to be purchased, the number of Option Shares to be purchased by each Underwriter shall be the number of Option Shares which bears the same ratio to the aggregate number of Option Shares being purchased as the number of Underwritten Shares set forth opposite the name of such Underwriter in Schedule 1 hereto (or such number increased as set forth in Section 10 hereof) bears to the aggregate number of Underwritten Shares being purchased from the Company by the several Underwriters, subject, however, to such adjustments to eliminate any fractional Shares as the Representative in its sole discretion shall make.

The Representative may exercise the option to purchase Option Shares at any time in whole, or from time to time in part, on or before the thirtieth day following the date of the Prospectus, by written notice from the Underwriters to the Company. Such notice shall set forth the aggregate number of Option Shares as to which the option is being exercised and the date and time when the Option Shares are to be delivered and paid for, which may be the same date and time as the Closing Date (as hereinafter defined) but shall not be earlier than the Closing Date nor later than the tenth full business day (as hereinafter defined) after the date of such notice. Any such notice shall be given at least two business days prior to the date and time of delivery specified therein, provided that if such date and time of delivery are the same as the Closing Date, such notice may be given one business day prior to such date and time of delivery.

(b) The Company understands that the Underwriters intend to make a public offering of the Shares, and initially to offer the Shares on the terms set forth in the Pricing Disclosure Package. The Company acknowledges and agrees that the Underwriters may offer and sell Shares to or through any affiliate of the Underwriters.

(c) Payment for the Shares shall be made by wire transfer in immediately available funds to the account specified by the Company to the Underwriters in the case of the Underwritten Shares, at the offices of Sullivan & Worcester LLP, counsel for the Representative, at 1251 Avenue of the Americas, New York, New York 10020 at 10:00 A.M. New York City time on [·], 2026, or at such other time or place on the same or such other date, not later than the second business day thereafter, as the Representative and the Company may mutually agree upon in writing or, in the case of the Option Shares, on the date and at the time and place specified in the written notice to the Company of an Underwriter's election to purchase such Option Shares. The time and date of such payment for the Underwritten Shares is referred to herein as the "Closing Date," and the time and date for such payment for the Option Shares, if other than the Closing Date, is herein referred to as the "Additional Closing Date."

Payment for the Shares to be purchased on the Closing Date or an Additional Closing Date, as the case may be, shall be made against delivery to the Representative for the respective accounts of the several Underwriters of the Shares to be purchased on such date or the Additional Closing Date, as the case may be, with any transfer taxes payable in connection with the sale of such Shares duly paid by the Company. Delivery of the Shares shall be made in book-entry form registered in such names and in such denominations as the Representative shall request in writing not later than two full business days prior to such date, through the facilities of The Depository Trust Company unless the Representative shall otherwise instruct.

(d) The Company acknowledges and agrees that the Representative is acting solely in the capacity of an arm's length contractual counterparty to the Company with respect to the offering of Shares contemplated hereby (including in connection with determining the terms of the offering) and not as a financial advisor or a fiduciary to, or an agent of, the Company or any other person. Additionally, the Company acknowledges and agrees that neither the Representative nor any Underwriter is advising the Company or any other person or entity as to any legal, tax,

investment, accounting or regulatory matters in any jurisdiction. The Company shall consult with its own advisors concerning such matters and shall be responsible for making its own independent investigation and appraisal of the transactions contemplated hereby, and the Underwriters shall not have any responsibility or liability to the Company with respect thereto. Any review by the Underwriters of the Company, the transactions contemplated hereby or other matters relating to such transactions will be performed solely for the benefit of the Underwriters and shall not be on behalf of the Company. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Underwriters with respect to any breach or alleged breach of fiduciary duty.

3. Representations and Warranties of the Company. The Company represents and warrants to the Representative that:

(a) *Compliance with Registration Requirements.* The Commission declared the Registration Statement effective under the Securities Act on [·], 2026. The Company has complied, to the Commission's satisfaction, with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement is in effect and no proceedings for such purpose or pursuant to Section 8A of the Securities Act against the Company or related to the offering of the Shares have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission.

(b) *Disclosure.* Each Preliminary Prospectus, and the Prospectus, when filed complied in all material respects with the Securities Act and, if filed by electronic transmission pursuant to the Commission's Electronic Data Gathering Analysis and Retrieval system ("EDGAR"), was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Shares. Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, the Pricing Disclosure Package (including any preliminary prospectus wrapper) did not, and at the Closing Date and at each applicable Additional Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus (including any Prospectus wrapper), as of its date, did not, and at the Closing Date and at each applicable Additional Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus or the Pricing Disclosure Package, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to any Underwriter furnished to the Company in writing by such Underwriter expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 7(b) below. There are no contracts or other documents required to be described in the Pricing Disclosure Package or the Prospectus or to be filed as an exhibit to the Registration Statement which have not been described or filed as required.

(c) *Free Writing Prospectuses; Road Show.* As of the determination date referenced in Rule 164(h) under the Securities Act and at the time of filing the Registration Statement and any amendment thereto, the Company was and is an "ineligible issuer" in connection with the offering of the Shares pursuant to Rules 164, 405 and 433 under the Securities Act. The Company shall not prepare, use, file or refer to any free writing prospectuses. If at any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of Shares contemplated under this Agreement (but in any event if at any time through and including the Closing Date) there occurred or occurs an event or development as a result the Preliminary Prospectus would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such time, not misleading, the Company shall promptly amend or supplement the Preliminary Prospectus to eliminate or correct such conflict so that the statements in the Preliminary Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such time, not misleading, as the case may be; provided, however, that prior to amending or supplementing the Preliminary Prospectus, the Company shall furnish

to the Underwriters for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented Preliminary Prospectus, and the Company shall not file, use or refer to such amended or supplemented Preliminary Prospectus without the Underwriters' prior written consent.

(d) *Distribution of Offering Material by the Company.* Prior to the latest of (i) the expiration or termination of the option granted to the Underwriters in Section 2 and (ii) the completion of the Underwriters' distribution of the Shares, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Shares other than the Registration Statement, the Pricing Disclosure Package or the Prospectus and any oral or written communication with potential investors undertaken in reliance on either Section 5(d) of, or Rule 163B under, the Securities Act (each, a "Testing-the-Waters Communication" and, if a written communication, a "Written Testing-the-Waters Communication"). The Company has not distributed or approved for distribution any Testing-the-Waters Communications, or any Written Testing-the-Waters Communications other than those listed on Annex B hereto. The Company confirms that the Representative has been authorized to act on its behalf in undertaking Testing-the-Waters Communications. Each Written Testing-the-Waters Communication, when considered together with the Pricing Disclosure Package, did not, as of the Applicable Time, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(e) *The Underwriting Agreement.* This Agreement has been duly authorized, executed and delivered by the Company.

(f) *Authorization of the Shares.* (i) The Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable shares of Common Stock; and (ii) and the issuance and sale of the Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Shares. The Shares conform in all material respects to all statements with respect thereto contained in the Registration Statement.

(g) *No Applicable Registration or Other Similar Rights.* There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived.

(h) *No Material Adverse Change.* Except as otherwise disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement, the Pricing Disclosure Package and the Prospectus: (i) there has been no material adverse change, or any development that would reasonably be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its Subsidiaries, considered as one entity (any such change being referred to herein as a "Material Adverse Change"); (ii) the Company and its Subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with its business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company and its Subsidiaries, considered as one entity; and (iii) there has not been any material decrease in the capital stock or any material increase in any short-term or long-term indebtedness of the Company or its Subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other Subsidiaries, by any of the Company's Subsidiaries on any class of capital stock, or any repurchase or redemption by the Company or any of its Subsidiaries of any class of capital stock.

(i) *Independent Accountants.* To the Company's knowledge, Rosenberg Rich Baker Berman, P.A., which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission as a part of the Registration Statement, the Pricing Disclosure Package and the Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act, Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission thereunder (collectively, the "Exchange Act"), and the rules of the Public Company Accounting Oversight Board ("PCAOB"), (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of

Regulation S-X under the Securities Act and (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(j) *Financial Statements.* The financial statements filed with the Commission as a part of the Registration Statement, the Pricing Disclosure Package and the Prospectus present fairly, in all material respects, the consolidated financial position of the Company and its Subsidiaries as of the dates indicated and the results of their operations, changes in stockholders' equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States ("GAAP"), applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. All disclosures contained in the Registration Statement, any preliminary prospectus or the Prospectus, that constitute non-GAAP financial measures (as defined by the rules and regulations under the Securities Act and the Exchange Act) comply in all material respects with Regulation G under the Exchange Act and Item 10 of Regulation S-K under the Securities Act, as applicable. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement, the Pricing Disclosure Package and the Prospectus.

(k) *Company's Accounting System.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and each of its Subsidiaries make and keep books and records and maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included in the Registration Statement, the Pricing Disclosure Package and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto.

(l) *Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting.* Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to provide reasonable assurance that material information relating to the Company, including its consolidated Subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(m) *Incorporation and Good Standing of the Company.* The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified as a foreign corporation to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing, as the case may be, or to have such power or authority would not, individually or in the aggregate, have a Material Adverse Effect (defined below).

(n) *Subsidiaries.* Each of the Company’s “Subsidiaries” (for purposes of this Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated or organized, as the case may be, and is validly existing and in good standing (where such concept is recognized) under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus. Each of the Company’s Subsidiaries is duly qualified to transact business and is in good standing (where such concept is recognized) in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing, as the case may be, or have such power or authority would not, individually or in the aggregate, have a Material Adverse Effect. All of the issued and outstanding capital stock or other equity or ownership interests of each of the Company’s Subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company, directly or through Subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the Subsidiaries listed in Exhibit 21.1 to the Registration Statement.

(o) *Capitalization and Other Capital Stock Matters.* The authorized, issued and outstanding capital stock of the Company is as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options or warrants, in each case described in the Registration Statement, the Pricing Disclosure Package and the Prospectus). The Shares, when issued pursuant to the terms of this Agreement will conform, in all material respects, to the description thereof contained in the Pricing Disclosure Package. All of the issued and outstanding shares of Common Stock have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all applicable federal and state securities laws. None of the outstanding shares of Common Stock were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, restricted stock units, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its Subsidiaries other than those described in the Registration Statement, the Pricing Disclosure Package and the Prospectus. The descriptions of the Company’s stock option, stock bonus and other stock plans or arrangements (each, a “Company Stock Plan”), and the options, restricted stock units or other rights granted thereunder, set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus accurately and fairly presents, in all material respects, the information required to be shown with respect to such plans, arrangements, options and rights.

(p) *Stock Exchange Listing.* The Common Stock is currently traded on the Toronto Stock Exchange (“TSX”) and quoted on the OTCQB market tier operated by the OTC Markets Group, Inc. (the “OTCQB”) and the Company has taken no action designed to, or likely to have the effect of terminating the listing of the Common Stock on the TSX or the quotation of the Common Stock on the OTCQB. To the Company’s knowledge, it is in compliance in all material respects with all applicable requirements of the TSX and the OTCQB.

(q) *Draft Registration Statements; Confidential Review.* The Company (i) qualifies as a smaller reporting company as defined by Rule 12b-2 of the Exchange Act and has appropriately submitted one or more draft registration statement(s) (the “Draft Registration Statement(s)”) to the Commission on a confidential, non-public basis pursuant to Section 6(e) of the Securities Act and/or related Commission staff guidance; (ii) submitted such Draft Registration Statement(s) in compliance with all applicable Commission rules and procedures; (iii) has timely filed publicly such Draft Registration Statement(s) and all amendments thereof, or will do so in accordance with the foregoing public-filing schedule; and (iv) has promptly responded to Commission comment letters relating to the Draft Registration Statement(s), if any.

(r) *Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required.* Neither the Company nor any of its Subsidiaries is in violation of its charter or bylaws, partnership agreement or operating agreement or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) (“Default”) under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its Subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an “Existing Instrument”), except for such Defaults as

could not be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or other), earnings, business, properties, operations, assets, liabilities or prospects of the Company and its Subsidiaries, considered as one entity (a “Material Adverse Effect”). The Company’s execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement, the Pricing Disclosure Package and the Prospectus and the issuance and sale of the Shares (including the use of proceeds from the sale of the Shares as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus under the caption “Use of Proceeds”) (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or bylaws, partnership agreement or operating agreement or similar organizational documents, as applicable, of the Company or any Subsidiary (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its Subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument, except as could not be expected, individually or in the aggregate, to have a Material Adverse Effect and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its Subsidiaries, except for such violations as would not be expected, individually or in the aggregate, to have a Material Adverse Effect. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company’s execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby and by the Registration Statement, the Pricing Disclosure Package and the Prospectus, except such as have been obtained or made or will be made by the Company under the Securities Act and such as may be required under applicable state securities or blue sky laws, the NYSE American LLC or the Financial Industry Regulatory Authority, Inc. (“FINRA”). As used herein, a “Debt Repayment Triggering Event” means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its Subsidiaries. Except as described in the Registration Statement, the Disclosure Package and the Prospectus, there are no existing agreements between the Company and its security holders that prohibit the sale, transfer, assignment, pledge or hypothecation of any of the Company’s securities.

(s) *Compliance with Laws.* The Company and its Subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance could not be expected, individually or in the aggregate, to have a Material Adverse Effect.

(t) *No Material Actions or Proceedings.* There is no action, suit, proceeding, inquiry or investigation brought by or before any governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its Subsidiaries, which if determined adversely to the Company or any of its Subsidiaries would reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect or materially and adversely affect the consummation of the transactions contemplated by this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any such Subsidiary is a party or of which any of their respective properties or assets is the subject, including ordinary routine litigation incidental to the business, if determined adversely to the Company, would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. No material labor dispute with the employees of the Company or any of its Subsidiaries exists or, to the knowledge of the Company, is threatened or imminent. To the knowledge of the Company, no material labor dispute with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists, or is threatened or imminent.

(u) *Intellectual Property.* Except as would not reasonably be expected to have a Material Adverse Effect, (i) the Company and its Subsidiaries own or have the right to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, domain names and other source indicators, copyrights and copyrightable works, know-how, trade secrets, systems, procedures, proprietary or confidential information and all other worldwide intellectual property, industrial property and proprietary rights (collectively, “Intellectual Property”) used in the conduct of their respective businesses as they are currently being conducted; (ii) the Company’s and its Subsidiaries’ conduct of their respective businesses does not infringe, misappropriate or otherwise violate any Intellectual Property of any person; (iii) the Company and its Subsidiaries have not received any written notice of any claim relating to the infringement, misappropriation or violation of any third party’s Intellectual Property; and (iv) to the knowledge of the Company, the Intellectual Property of the Company and its Subsidiaries is not being infringed, misappropriated or otherwise violated by any person.

(v) *All Necessary Permits, etc.* The Company and its Subsidiaries possess such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described in the Registration Statement, the Pricing Disclosure Package or the Prospectus ("Permits"), except where the failure to possess the same or so qualify would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. Neither the Company nor any of its Subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with the Permits, except for such violations, defaults or proceedings if resolved unfavorably, would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(w) *Title to Properties.* Except as set forth in the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company and its Subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 3(j) above (or elsewhere in the Registration Statement, the Pricing Disclosure Package or the Prospectus), and to all personal property and other assets owned by them, in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects (other than with respect to Intellectual Property, which for avoidance of doubt is addressed exclusively in Section 3(u) above), except such as do not materially and adversely affect the value of such property and do not materially interfere with the use made or proposed to be made of such property by the Company. The real property, improvements, equipment and personal property held under lease by the Company or any of its Subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company or such Subsidiary.

(x) *Tax Law Compliance.* Except in any case in which failure to pay or file (as applicable) would not, individually or in the aggregate, have a Material Adverse Effect, the Company and its Subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns or have properly requested extensions thereof and have paid all taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings. Except to the extent of any inadequacy that would not, individually or in the aggregate, result in a Material Adverse Effect, the Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 3(j) above in respect of all federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company or any of its Subsidiaries has not been finally determined.

(y) *Solvency.* Based on the consolidated financial condition of the Company as of each Closing Date or any Additional Closing Date, as applicable, after giving effect to the receipt by the Company of the proceeds from the sale of the Shares hereunder, the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, are sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). Except as set forth in the Registration Statement, the Pricing Disclosure Package or the Prospectus, the Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from each Closing Date or any Additional Closing Date, as applicable. The Registration Statement, the Pricing Disclosure Package and the Prospectus set forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company and its Subsidiaries or for which the Company and its Subsidiaries has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$100,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guarantees, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guarantees by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$100,000 due under leases required to be capitalized in accordance with U.S. GAAP. Except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus, neither the Company nor any of its Subsidiaries is in default with respect to any Indebtedness.

(z) *D&O Questionnaires.* To the Company's knowledge, all information contained in the questionnaires (the "Questionnaires") completed by each of the Company's directors and officers prior to the date hereof (the "Insiders") as well as in the Lock-Up Agreement in the form attached hereto as Annex C provided to the Representative is true and correct in all respects and the Company has not become aware of any information which would cause the information disclosed in the Questionnaires completed by each Insider to become inaccurate and incorrect.

(aa) *Insurance.* Each of the Company and its Subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are reasonably deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its Subsidiaries against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company and its Subsidiaries for product liability claims. The Company has no reason to believe that it or any of its Subsidiaries will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. Neither the Company nor any of its Subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(bb) *Compliance with Environmental Laws.* Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect: (i) neither the Company nor any of its Subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"); (ii) the Company and its Subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements; (iii) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its Subsidiaries; and (iv) there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its Subsidiaries relating to Hazardous Materials or any Environmental Laws.

(cc) *No Rated Debt or Preferred Securities.* There are no debt or preferred securities issued, or guaranteed, by the Company or its Subsidiaries that are rated by a "nationally recognized statistical rating organization," as such term is defined in Section 3(a)(62) of the Exchange Act.

(dd) *ERISA Compliance.* The Company and its Subsidiaries and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "ERISA")) established or maintained by the Company, its Subsidiaries or their "ERISA Affiliates" (as defined below) are in compliance in all material respects with ERISA. "ERISA Affiliate" means, with respect to the Company or any of its Subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "Code") of which the Company or such Subsidiary is a member. No "reportable event" (as defined under ERISA), for which notice has not been waived, has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates that would reasonably be expected to result in a material liability to the Company and its Subsidiaries. No "employee benefit plan" established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates, if such "employee benefit plan" were terminated, would have any "amount of unfunded benefit liabilities" (as defined under ERISA) that would reasonably be expected to result in a material liability to the Company and its Subsidiaries. Neither the Company, its Subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each employee

benefit plan established or maintained by the Company, its Subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and, to the knowledge of the Company, nothing has occurred, whether by action or failure to act, which would reasonably be expected to cause the loss of such qualification.

(ee) *Company Not an “Investment Company.”* Neither the Company nor any of its Subsidiaries are, nor will they be, either immediately after receipt of payment for the Shares or immediately after the application of the proceeds therefrom as described under “Use of Proceeds” in the Registration Statement, the Pricing Disclosure Package or the Prospectus, required to register as an “investment company” under the Investment Company Act of 1940, as amended (the “Investment Company Act”).

(ff) *No Price Stabilization or Manipulation; Compliance with Regulation M.* Neither the Company nor any of its Subsidiaries has taken, directly or indirectly, without giving effect to activities by the Underwriters, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“Regulation M”)) with respect to the Shares, whether to facilitate the sale or resale of the Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(gg) *Related-Party Transactions.* Except as would not, individually or in the aggregate, have a Material Adverse Effect, there are no business relationships or related-party transactions involving the Company or any of its Subsidiaries or any other person required to be described in the Registration Statement, the Pricing Disclosure Package or the Prospectus that have not been described as required.

(hh) *FINRA Matters.* All of the information provided to the Underwriters or to counsel for the Underwriters by the Company, to the Company’s knowledge, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Shares is true, complete, correct and compliant in all material respects with FINRA’s rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules is true, complete and correct in all material respects.

(ii) *Statistical and Market-Related Data.* All statistical, demographic and market-related data included in the Registration Statement, the Pricing Disclosure Package or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(jj) *No Unlawful Contributions or Other Payments.* Neither the Company nor any of its Subsidiaries nor, to the best knowledge of the Company, any employee or agent of the Company or any of its Subsidiaries, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any applicable law or of the character required to be disclosed in the Registration Statement, the Pricing Disclosure Package or the Prospectus.

(kk) *Foreign Corrupt Practices Act.* Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, controlled affiliate or other person acting on behalf of the Company or any of its Subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its Subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any domestic government official, “foreign official” (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder, collectively, the “FCPA”) or employee from corporate funds; (iii) violated or is in violation of any provision of the FCPA or any applicable non-U.S. anti-bribery statute or regulation; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee; and the Company and its Subsidiaries and, to the knowledge of the Company, the Company’s other controlled affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(ii) *Money Laundering Laws.* The operations of the Company and its Subsidiaries are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the “Money Laundering Laws”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its Subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(mm) *OFAC.* Neither the Company nor any of its Subsidiaries nor, to the knowledge of the Company, after due inquiry, any director, officer, agent, employee, controlled affiliate or person acting on behalf of the Company or any of its Subsidiaries, is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“OFAC”) of the Treasury or the U.S. Department of State and including, without limitation, the designation as a “specially designated national” or “blocked person”, the United Nations Security Council, the European Union, His Majesty’s Treasury or other relevant sanctions authority (“Sanctions”), nor is the Company located, organized or resident in a country or territory that is the subject or target of Sanctions, including, without limitation, Cuba, Iran, North Korea, Syria, the Crimea Region and the non-government controlled areas of the Zaporizhzhia and Kherson Regions of Ukraine, the so-called Donetsk People’s Republic, the so-called Luhansk People’s Republic and any other Covered Region of Ukraine identified pursuant to Executive Order 14065 (each, a “Sanctioned Country”); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any Subsidiary, or any joint venture partner or other person or entity, (i) for the purpose of financing the activities of or business with any person, or in any country or territory, that at the time of such financing is the subject of Sanctions, (ii) to fund or facilitate any activities of or business in any Sanctioned Country or (iii) in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions.

(nn) *Brokers.* Except pursuant to this Agreement, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder’s fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(oo) *Forward-Looking Statements.* Each financial or operational projection or other “forward-looking statement” (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement, the Pricing Disclosure Package or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that it was false or misleading.

(pp) *Compliance with Data Privacy Laws.* To the Company’s knowledge, the Company and its Subsidiaries are, and at all prior times were, in material compliance with all applicable state and federal data privacy and security laws and regulations (collectively, the “Privacy Laws”). To ensure compliance with the Privacy Laws, the Company and its Subsidiaries have in place, comply with, and take commercially reasonable steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (as defined below) (the “Policies”). The Company and its Subsidiaries have at all times made all disclosures to users or customers required by the Privacy Laws, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any Privacy Laws in any material respect. The Company further certifies that neither it nor any Subsidiary: (i) has received written notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement from or with a governmental or regulatory authority or agency that imposes any obligation or liability under any Privacy Law.

(qq) *Cybersecurity.* Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, to the Company's knowledge, the Company and its Subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "IT Systems") are adequate for, and operate and perform as required in connection with the operation of the business of the Company and its Subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, the Company and its Subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and data, including "Personal Data," processed by them in connection with their businesses. "Personal Data" means the following data in the Company's and its Subsidiaries' possession or control and processed by them in connection with their business (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, individually identifiable bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by GDPR; (iv) any information which would qualify as "protected health information" under HIPAA; and (v) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or individually identifiable sexual orientation. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, to the Company's knowledge, (i) there have been no breaches, violations, outages or unauthorized uses of or accesses to same nor any incidents under internal review or investigations relating to the same; and (ii) the Company and its Subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

(rr) *No Rights to Purchase Preferred Stock.* The issuance and sale of the Shares as contemplated hereby will not cause any holder of any shares of capital stock, securities convertible into or exchangeable or exercisable for capital stock or options, warrants or other rights to purchase capital stock or any other securities of the Company to have any right to acquire any shares of preferred stock of the Company.

(ss) *Dividend Restrictions.* No Subsidiary of the Company is prohibited or restricted, directly or indirectly, from paying dividends to the Company, or from making any other distribution with respect to such Subsidiary's equity securities or from repaying to the Company or any other Subsidiary of the Company any amounts that may from time to time become due under any loans or advances to such Subsidiary from the Company or from transferring any property or assets to the Company or to any other Subsidiary.

(tt) *Sarbanes-Oxley.* The Company is in compliance in all material respects with all applicable effective provisions of the Sarbanes-Oxley Act of 2002 and the rules and regulations of the Commission promulgated thereunder.

(uu) *Margin Rules.* Neither the issuance, sale and delivery of the Shares nor the application of the proceeds thereof by the Company as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus will violate Regulation T, U or X of the Board of Governors of the Federal Reserve System or any other regulation of such Board of Governors.

(vv) *Exchange Act Filing.* A registration statement in respect of the shares of Common Stock has been filed on Form 8-A pursuant to Section 12(b) of the Exchange Act, which registration statement complies in all material respects with the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the shares of Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration.

(ww) *Integration.* Neither the Company nor its Subsidiaries, nor any of their respective affiliates, nor any person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause the offering of the Shares to be integrated with prior

offerings by the Company for purposes of the Securities Act that would require the registration of any such securities under the Securities Act.

4. Further Agreements of the Company. The Company covenants and agrees with the Representative that:

(a) *Required Filings.* The Company will file the final Prospectus with the Commission within the time periods specified by Rule 424(b) and Rule 430A, 430B or 430C under the Securities Act; and the Company will file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of the Prospectus and for so long as the delivery of a prospectus is required in connection with the offering or sale of the Shares; and the Company will furnish copies of the Prospectus to the Underwriters in New York City prior to 10:00 A.M., New York City time, on the business day next succeeding the date of this Agreement in such quantities as any Underwriter may reasonably request; and the Company will file promptly all filings required to be filed with the TSX and the OTCQB.

(b) *Delivery of Copies.* The Company will deliver, upon written request, without charge, (i) to each Underwriter, two signed copies of the Registration Statement as originally filed and each amendment thereto, in each case including all exhibits and consents filed therewith and documents incorporated by reference therein; and (ii) to each Underwriter (A) a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) and (B) during the Prospectus Delivery Period (as defined below), as many copies of the Prospectus (including all amendments and supplements thereto and documents incorporated by reference therein) as any Underwriter may reasonably request. As used herein, the term “Prospectus Delivery Period” means such period of time after the first date of the public offering of the Shares as in the opinion of counsel for the Representative a prospectus relating to the Shares is required by law to be delivered (or required to be delivered but for Rule 172 under the Securities Act) in connection with sales of the Shares by any Underwriter or dealer.

(c) *Amendments or Supplements.* Before filing any amendment or supplement to the Registration Statement, the Pricing Disclosure Package or the Prospectus, whether before or after the time that the Registration Statement becomes effective, the Company will furnish to each Underwriter and counsel for the Representative a copy of the proposed amendment or supplement for review and will not make, prepare, use, authorize, approve, refer to or file any such proposed amendment or supplement to which the Underwriter reasonably objects.

(d) *Notice to the Underwriters.* The Company will advise the Representative promptly, and confirm such advice in writing (which confirmation may be delivered by electronic mail), (i) when the Registration Statement has become effective; (ii) when any amendment to the Registration Statement has been filed or becomes effective; (iii) when any supplement to the Pricing Disclosure Package, the Prospectus or any Written Testing-the-Waters Communication or any amendment to the Prospectus has been filed or distributed; (iv) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or the receipt of any comments from the Commission relating to the Registration Statement or any other request by the Commission for any additional information including, but not limited to, any request for information concerning any Testing-the-Waters Communication; (v) of the issuance by the Commission or any other governmental or regulatory authority of any order suspending the effectiveness of the Registration Statement or preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package, the Prospectus or any Written Testing-the-Waters Communication or the initiation or, to the Company’s knowledge, threatening of any proceeding for that purpose or pursuant to Section 8A of the Securities Act; (vi) of the occurrence of any event or development within the Prospectus Delivery Period as a result of which the Prospectus, any of the Pricing Disclosure Package or any Written Testing-the-Waters Communication as then amended or supplemented would include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus, the Pricing Disclosure Package, any such Written Testing-the-Waters Communication is delivered to a purchaser, not misleading; and (vii) of the receipt by the Company of any notice with respect to any suspension of the qualification of the Shares for offer and sale in any jurisdiction or the initiation or, to the Company’s knowledge, threatening of any proceeding for such purpose; and the Company will use its best efforts to prevent the issuance of any such order suspending the effectiveness of the Registration Statement, preventing or suspending the use of any Preliminary Prospectus, any of the Pricing Disclosure Package or the Prospectus or any

Written Testing-the-Waters Communication or suspending any such qualification of the Shares and, if any such order is issued, will use its reasonable best efforts to obtain as soon as possible the withdrawal thereof.

(e) *Ongoing Compliance.* (1) If during the Prospectus Delivery Period (i) any event or development shall occur or condition shall exist as a result of which the Prospectus as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Prospectus to comply with applicable law, the Company will promptly notify each Underwriter thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission and furnish to each Underwriter and to such dealers as any Underwriter may designate such amendments or supplements to the Prospectus (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Prospectus as so amended or supplemented (or any document to be filed with the Commission and incorporated by reference therein) will not, in the light of the circumstances existing when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus will comply with applicable law and (2) if at any time prior to the Closing Date or any Additional Closing Date (i) any event or development shall occur or condition shall exist as a result of which the Pricing Disclosure Package as then amended or supplemented would include any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, not misleading or (ii) it is necessary to amend or supplement the Pricing Disclosure Package to comply with applicable law, the Company will promptly notify each Underwriter thereof and forthwith prepare and, subject to paragraph (c) above, file with the Commission (to the extent required) and furnish to each Underwriter and to such dealers as any Underwriter may designate such amendments or supplements to the Pricing Disclosure Package (or any document to be filed with the Commission and incorporated by reference therein) as may be necessary so that the statements in the Pricing Disclosure Package as so amended or supplemented will not, in the light of the circumstances existing when the Pricing Disclosure Package is delivered to a purchaser, be misleading or so that the Pricing Disclosure Package will comply with applicable law.

(f) *Blue Sky Compliance.* The Company will qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as the Underwriters shall reasonably request and will continue such qualifications in effect so long as required for distribution of the Shares; provided that the Company shall not be required to (i) qualify as a foreign corporation or other entity or as a dealer in securities in any such jurisdiction where it would not otherwise be required to so qualify, (ii) file any general consent to service of process in any such jurisdiction or (iii) subject itself to taxation in any such jurisdiction if it is not otherwise so subject.

(g) *Earnings Statement.* The Company will make generally available to its security holders and the Underwriters as soon as practicable an earnings statement (which need not be audited) that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 of the Commission promulgated thereunder covering a period of at least twelve months beginning with the first fiscal quarter of the Company occurring after the "effective date" (as defined in Rule 158) of the Registration Statement; provided that the Company will be deemed to have furnished such statements to its security holders and the Underwriters to the extent they are filed on EDGAR or any successor system.

(h) *Clear Market.* For a period of ninety (90) days after the date of the Prospectus, the Company will not (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, hedge, lend, or otherwise transfer or dispose of, directly or indirectly, or submit to, or file with, the Commission a registration statement under the Securities Act relating to, any shares of Stock or any securities convertible into or exercisable or exchangeable for Stock, or publicly disclose the intention to undertake any of the foregoing, or (ii) enter into any hedging, swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Stock or any such other securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Stock or such other securities, in cash or otherwise, without the prior written consent of the Representative, other than the Shares to be sold hereunder.

The restrictions described above do not apply to (i) the issuance of shares of Stock or securities convertible into or exercisable for shares of Stock pursuant to the conversion or exchange of convertible or exchangeable securities or the exercise of warrants or options (including net exercise) or the settlement of restricted stock units ("RSUs") (including net settlement), in each case outstanding on the date of this Agreement and described in the Prospectus; (ii) grants of stock options, stock awards, restricted stock, RSUs, or other equity awards and the issuance of shares of

Stock or securities convertible into or exercisable or exchangeable for shares of Stock (whether upon the exercise of stock options or otherwise) to the Company's employees, officers, directors, advisors, or consultants pursuant to the terms of an inducement plan or an equity compensation plan in effect as of the Closing Date and any Additional Closing Date, as the case may be, and described in the Prospectus; (iii) the issuance of shares of Stock, or securities convertible into, exercisable for, or which are otherwise exchangeable for, Stock, immediately following the Closing Date, in acquisitions, strategic transactions of assets or acquisition of equity of another entity or in connection with a transaction with an unaffiliated third party that includes a bona fide commercial relationship (including joint ventures, marketing or distribution arrangements, collaboration agreements, intellectual property license agreements, or lending agreements or arrangements), provided that such recipients enter into a lock-up agreement with the Representative; or (iv) the filing of any registration statement on Form S-8 relating to securities granted or to be granted pursuant to any plan in effect on the date of this Agreement and described in the Prospectus or any assumed benefit plan pursuant to an acquisition or similar strategic transaction.

(i) *Use of Proceeds.* The Company will apply the net proceeds from the sale of the Shares as described in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus under the heading "Use of Proceeds."

(j) *No Stabilization.* Neither the Company nor its Subsidiaries will take, and the Company will ensure that its controlled affiliates will not take, directly or indirectly, any action designed to or that could reasonably be expected to cause or result in any stabilization or manipulation of the price of the Stock and will not take any action prohibited by Regulation M under the Exchange Act in connection with the distribution of the Shares contemplated hereby.

(k) *Exchange Approval; Continued Listing.* The Company's Common Stock has been approved for listing on the NYSE American LLC. The Company will use its best efforts to effect and maintain the listing of its Common Stock on the NYSE American LLC for at least two (2) years after the Closing Date unless such listing is terminated as a result of a sale, merger or similar transaction approved by the holders of a majority of the voting securities of the Company.

(l) *Reports.* During the Prospectus Delivery Period, the Company shall file, on a timely basis, with the Commission all reports and documents required to be filed under the Exchange Act. For a period of one year from the date of this Agreement, so long as the Shares are outstanding, the Company will furnish to the Underwriters, as soon as commercially reasonable after the date on which they are available, copies of all reports or other communications (financial or other) furnished to holders of the Shares, and copies of any reports and financial statements furnished to or filed with the Commission or any national securities exchange or automatic quotation system; provided the Company will be deemed to have furnished such reports and financial statements to the Underwriters to the extent they are filed on EDGAR or any successor system.

5. Certain Agreements of the Representative. The Representative hereby represents and agrees that:

(a) It has not and will not use, authorize use of, refer to or participate in the planning for use of, any "free writing prospectus," as defined in Rule 405 under the Securities Act (which term includes use of any written information furnished to the Commission by the Company and not incorporated by reference into the Registration Statement and any press release issued by the Company).

(b) It has not and will not, without the prior written consent of the Company, use any free writing prospectus that contains the final terms of the Shares unless such terms have previously been included in a free writing prospectus filed with the Commission.

(c) It is not subject to any pending proceeding under Section 8A of the Securities Act with respect to the offering (and will promptly notify the Company if any such proceeding against it is initiated during the Prospectus Delivery Period).

6. Conditions of Underwriters' Obligations. The obligation of the Underwriters to purchase the Underwritten Shares on the Closing Date or the Option Shares on the applicable Additional Closing Date, as the case

may be, as provided herein is subject to the performance by the Company of its covenants and other obligations hereunder and to the following additional conditions:

(a) *Registration Compliance; No Stop Order.* No order suspending the effectiveness of the Registration Statement shall be in effect, and no proceeding for such purpose, or pursuant to Section 8A under the Securities Act shall be pending before or threatened by the Commission; the Prospectus and any free writing prospectus shall have been timely filed with the Commission under the Securities Act, to the extent required by Rule 433 under the Securities Act and in accordance with Section 4(a) hereof; and all requests by the Commission for additional information shall have been complied with to the reasonable satisfaction of the Underwriters.

(b) *Representations and Warranties.* The representations and warranties of the Company contained herein shall be true and correct on the date hereof and on and as of the Closing Date or such Additional Closing Date, as the case may be; and the statements of the Company and its officers made in any certificates delivered pursuant to this Agreement shall be true and correct on and as of the Closing Date or such Additional Closing Date, as the case may be.

(c) *No Material Adverse Change.* No event or condition of a type described in Section 3(h) hereof shall have occurred or shall exist, which event or condition is not described in the Pricing Disclosure Package (excluding any amendment or supplement thereto) and the Prospectus (excluding any amendment or supplement thereto) and the effect of which in the reasonable judgment of any Underwriter makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Underwritten Shares on the Closing Date or the Option Shares on such Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

(d) *Officer's Certificate.* The Representative shall have received on and as of the Closing Date or such Additional Closing Date, as the case may be, a certificate of the chief financial officer or chief accounting officer of the Company and one additional senior executive officer of the Company who is satisfactory to the Representative (i) confirming that such officers have carefully reviewed the Registration Statement, the Pricing Disclosure Package and the Prospectus and, to the knowledge of such officers, the representations set forth in Sections 3(a) and 3(b) hereof are true and correct, (ii) confirming that the other representations and warranties of the Company in this Agreement are true and correct and that the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date or such Additional Closing Date, as the case may be, and (iii) to the effect set forth in paragraphs (a), (b) and (c) above.

(e) *Comfort Letters.* On the date of this Agreement, the Closing Date or such Additional Closing Date, as the case may be, Rosenberg Rich Baker Berman, P.A. shall have furnished to the Representative, at the request of the Company, letters, dated the respective dates of delivery thereof and addressed to the Representative, in form and substance reasonably satisfactory to the Representative, containing statements and information of the type customarily included in accountants' "comfort letters" to underwriters with respect to certain of the financial statements and certain financial information contained in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided, that the letter delivered on the date of this Agreement, the Closing Date or such Additional Closing Date, as the case may be, shall use a "cut-off" date no more than three business days prior to such date of this Agreement, the Closing Date or such Additional Closing Date, as the case may be.

(f) *Opinion and 10b-5 Statement of Counsel for the Company.* Sheppard, Mullin, Richter & Hampton LLP, counsel for the Company, shall have furnished to the Representative, at the request of the Company, its written opinion and 10b-5 statement, dated as of the Closing Date or such Additional Closing Date, as the case may be, and addressed to the Representative, in form and substance reasonably satisfactory to the Representative.

(g) *No Legal Impediment to Issuance and Sale.* No action shall have been taken and no statute, rule, regulation or order shall have been enacted, adopted or issued by any federal, state or foreign governmental or regulatory authority that would, as of the Closing Date or such Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares by the Company; and no injunction or order of any federal, state or foreign court shall have been issued that would, as of the Closing Date or such Additional Closing Date, as the case may be, prevent the issuance or sale of the Shares by the Company.

(h) *Good Standing.* The Representative shall have received on and as of the Closing Date or such Additional Closing Date, as the case may be, satisfactory evidence of the good standing of the Company and its Subsidiaries in their respective jurisdictions of organization and their good standing in such other jurisdictions as the Representative may reasonably request, in each case in writing or any standard form of telecommunication from the appropriate governmental authorities of such jurisdictions.

(i) *Lock-up Agreements.* The “lock-up” agreements, each substantially in the form of Annex C hereto, delivered by certain officers and directors of the Company relating to sales and certain other dispositions of shares of Stock or certain other securities, to you on or before the date hereof, shall be in full force and effect on the date of this Agreement, the Closing Date or such Additional Closing Date, as the case may be.

(j) *CFO Certificate.* On the Closing Date or such Additional Closing Date, as the case may be, the Company shall have furnished to the Representative a certificate, dated the respective dates of delivery thereof and addressed to the Representative, of its chief financial officer with respect to certain financial data contained in the Registration Statement, Pricing Disclosure Package and the Prospectus, providing “management comfort” with respect to such information, in form and substance reasonably satisfactory to the Representative.

(k) *Secretary’s Certificate.* On the Closing Date or such Additional Closing Date, as the case may be, the Representative shall have received a certificate of the Company signed by the Secretary of the Company, dated as of such Closing Date or Additional Closing Date, as the case may be, certifying: (i) that each of the Company’s certificate of incorporation and bylaws attached to such certificate is true and complete, has not been modified and is in full force and effect; (ii) that the resolutions of the Company’s board of directors relating to the offering of the Shares and this Agreement attached to such certificate are in full force and effect and have not been modified; and (iii) the good standing of the Company and each of its Subsidiaries (except in such jurisdictions where the concept of good standing is not applicable). The documents referred to in such certificate shall be attached to such certificate.

(l) *Additional Documents.* On or prior to the Closing Date or such Additional Closing Date, as the case may be, the Company shall have furnished to the Representative such further certificates and documents as the Representative may reasonably request.

(m) *Listing.* The Shares shall have been approved for listing on the NYSE American LLC, subject to official notice of issuance.

All opinions, letters, certificates and evidence mentioned above or elsewhere in this Agreement shall be deemed to be in compliance with the provisions hereof only if they are in form and substance reasonably satisfactory to counsel for the Representative.

7. Indemnification and Contribution.

(a) *Indemnification of the Underwriters.* The Company agrees to indemnify and hold harmless the Underwriters, each of their respective affiliates, directors and officers and each person, if any, who controls each Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, reasonable and documented legal fees and other reasonable and documented expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred) that arise out of, or are based upon, (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary in order to make the statements therein, not misleading, or (ii) any untrue statement or alleged untrue statement of a material fact contained in the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any “issuer information” filed or required to be filed pursuant to Rule 433(d) under the Securities Act, any Written Testing-the-Waters Communication, any road show as defined in Rule 433(h) under the Securities Act (a “road show”) or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), or caused by any omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading, in each case except insofar as such losses, claims, damages or liabilities arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to any Underwriter.

furnished to the Company in writing by such Underwriter expressly for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in paragraph (b) below.

(b) *Indemnification of the Company.* Each Underwriter, severally and not jointly, agree to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act to the same extent as the indemnity set forth in paragraph (a) above, but only with respect to any losses, claims, damages or liabilities (including, without limitation, reasonable and documented legal fees and other expenses incurred in connection with any suit, action, or proceeding or any claim asserted, as such fees and expenses are incurred) that arise out of, or are based upon, any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with any information relating to the Underwriters furnished to the Company in writing by the Underwriters expressly for use in the Registration Statement, the Prospectus (or any amendment or supplement thereto), any Preliminary Prospectus, any Written Testing-the-Waters Communication, any road show or any Pricing Disclosure Package (including any Pricing Disclosure Package that has subsequently been amended), it being understood and agreed upon that the only such information furnished by any Underwriter consists of the information under the caption "Underwriting —Indemnification", "Underwriting —Price Stabilization, Short Positions and Penalty Bids" and "Underwriting—Offer Restrictions Outside the United States" in the Prospectus furnished on behalf of the Underwriters.

(c) *Notice and Procedures.* If any suit, action, proceeding (including any governmental or regulatory investigation), claim or demand shall be brought or asserted against any person in respect of which indemnification may be sought pursuant to the preceding paragraphs of this Section 7, such person (the "Indemnified Person") shall promptly notify the person against whom such indemnification may be sought (the "Indemnifying Person") in writing; provided that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have under the preceding paragraphs of this Section 7 except to the extent that it has been materially prejudiced (through the forfeiture of substantive rights or defenses) by such failure; and provided, further, that the failure to notify the Indemnifying Person shall not relieve it from any liability that it may have to an Indemnified Person otherwise than under the preceding paragraphs of this Section 7. If any such proceeding shall be brought or asserted against an Indemnified Person and it shall have notified the Indemnifying Person thereof, the Indemnifying Person shall retain counsel reasonably satisfactory to the Indemnified Person (who shall not, without the consent of the Indemnified Person, be counsel to the Indemnifying Person) to represent the Indemnified Person and any others entitled to indemnification pursuant to this Section that the Indemnifying Person may designate in such proceeding and shall pay the reasonably incurred and documented fees and expenses in such proceeding and shall pay the reasonably incurred and documented fees and expenses of such counsel related to such proceeding, as incurred. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless (i) the Indemnifying Person and the Indemnified Person shall have mutually agreed to the contrary; (ii) the Indemnifying Person has failed within a reasonable time to retain counsel reasonably satisfactory to the Indemnified Person; (iii) the Indemnified Person shall have reasonably concluded that there may be legal defenses available to it that are different from or in addition to those available to the Indemnifying Person; or (iv) the named parties in any such proceeding (including any impleaded parties) include both the Indemnifying Person and the Indemnified Person and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood and agreed that the Indemnifying Person shall not, in connection with any proceeding or related proceeding in the same jurisdiction, be liable for the fees and expenses of more than one separate firm (in addition to any local counsel) for all Indemnified Persons, and that all such fees and expenses shall be paid or reimbursed as they are incurred. Any such separate firm for any Underwriter, its affiliates, directors and officers and any control persons of such Underwriter shall be designated in writing by such Underwriter and any such separate firm for the Company, its directors, its officers who signed the Registration Statement and any control persons of the Company shall be designated in writing by the Company. The Indemnifying Person shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the Indemnifying Person agrees to indemnify each Indemnified Person from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an Indemnified Person shall have requested that an Indemnifying Person reimburse the Indemnified Person for fees and expenses of counsel as contemplated by this paragraph, the Indemnifying Person shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by the Indemnifying Person of such request

and (ii) the Indemnifying Person shall not have reimbursed the Indemnified Person in accordance with such request prior to the date of such settlement. No Indemnifying Person shall, without the written consent of the Indemnified Person, effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnification could have been sought hereunder by such Indemnified Person, unless such settlement (x) includes an unconditional release of such Indemnified Person, in form and substance reasonably satisfactory to such Indemnified Person, from all liability on claims that are the subject matter of such proceeding and (y) does not include any statement as to or any admission of fault, culpability or a failure to act by or on behalf of any Indemnified Person.

(d) *Contribution.* If the indemnification provided for in paragraphs (a) or (b) above is unavailable to an Indemnified Person or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each Indemnifying Person under such paragraph, in lieu of indemnifying such Indemnified Person thereunder, shall contribute to the amount paid or payable by such Indemnified Person as a result of such losses, claims, damages or liabilities (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters on the other, from the offering of the Shares or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) but also the relative fault of the Company, on the one hand, and the Underwriters on the other, in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters on the other, shall be deemed to be in the same respective proportions as the net proceeds (before deducting expenses) received by the Company from the sale of the Shares and the total underwriting discounts and commissions received by the Underwriters in connection therewith, in each case as set forth in the table on the cover of the Prospectus, bear to the aggregate offering price of the Shares. The relative fault of the Company, on the one hand, and the Underwriters on the other, shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. Each Underwriter's obligations to contribute pursuant to this Section 7(d) are several and not joint.

(e) *Limitation on Liability.* The Company and the Representative agree that it would not be just and equitable if contribution pursuant to paragraph (d) above were determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in paragraph (d) above. The amount paid or payable by an Indemnified Person as a result of the losses, claims, damages and liabilities referred to in paragraph (d) above shall be deemed to include, subject to the limitations set forth above, any documented legal or other expenses reasonably incurred by such Indemnified Person in connection with any such action or claim. Notwithstanding the provisions of paragraphs (d) and (e), in no event shall any Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the offering of the Shares exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(f) *Non-Exclusive Remedies.* The remedies provided for in this Section 7 paragraphs (a) through (e) are not exclusive and shall not limit any rights or remedies which may otherwise be available to any Indemnified Person at law or in equity.

8. *Effectiveness of Agreement.* This Agreement shall become effective as of the date first written above upon the execution and delivery hereof by the parties hereto.

9. *Termination.* This Agreement may be terminated by the Representative, by notice to the Company, if after the execution and delivery of this Agreement and on or prior to the Closing Date or, in the case of the Option Shares, prior to the Additional Closing Date (i) trading generally shall have been suspended or materially limited on or by any of the New York Stock Exchange or The Nasdaq Stock Market; (ii) trading of any securities issued or guaranteed by the Company shall have been suspended on any exchange or in any over-the-counter market; (iii) a general moratorium on commercial banking activities shall have been declared by federal or New York State authorities; or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets

or any calamity or crisis, either within or outside the United States, that, in the reasonable judgment of the Representative, is material and adverse and makes it impracticable or inadvisable to proceed with the offering, sale or delivery of the Shares on the Closing Date or the Additional Closing Date, as the case may be, on the terms and in the manner contemplated by this Agreement, the Pricing Disclosure Package and the Prospectus.

10. Defaulting Underwriter.

(a) If, on the Closing Date or the Additional Closing Date, as the case may be, any Underwriter defaults on its obligation to purchase the Shares that it has agreed to purchase hereunder on such date, the non-defaulting Underwriters may in their discretion arrange for the purchase of such Shares by other persons satisfactory to the Company on the terms contained in this Agreement. If other persons become obligated or agree to purchase the Shares of a defaulting Underwriter, the non-defaulting Underwriters and the Company may agree to postpone the Closing Date or the Additional Closing Date, as the case may be, for up to five full business days in order to effect any changes that in the opinion of counsel for the Company and counsel for the Underwriters may be necessary in the Registration Statement and the Prospectus or in any other document or arrangement. As used in this Agreement, the term "Underwriter" includes, for all purposes of this Agreement unless the context otherwise requires, any person not listed in Schedule 1 hereto that, pursuant to this Section 10, purchases Shares that a defaulting Underwriter agreed but failed to purchase.

(b) If, after giving effect to any arrangements for the purchase of the Shares provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, does not exceed one-eleventh of the aggregate number of Shares to be purchased on such date, then the Company shall have the right to require each non-defaulting Underwriter to purchase the number of Shares that such Underwriter agreed to purchase hereunder on such date plus such Underwriter's pro rata share (based on the number of Shares that such Underwriter agreed to purchase on such date) of the Shares of such defaulting Underwriter or Underwriters for which such arrangements have not been made.

(c) If, after giving effect to any arrangements for the purchase of the Shares as provided in paragraph (a) above, the aggregate number of Shares that remain unpurchased on the Closing Date or the Additional Closing Date, as the case may be, exceeds one-eleventh of the aggregate amount of Shares to be purchased on such date, or if the Company shall not exercise the right described in paragraph (b) above, then this Agreement or, with respect to any Additional Closing Date, the obligation of the Underwriters to purchase Shares on the Additional Closing Date, as the case may be, shall terminate without liability on the part of the non-defaulting Underwriters. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company, except that the provisions of Section 7 hereof shall not terminate and shall remain in effect.

(d) Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have to the Company or any non-defaulting Underwriter for damages caused by its default.

11. Payment of Expenses.

(a) Whether or not the transactions contemplated by this Agreement are consummated or this Agreement is terminated, the Company will pay or cause to be paid the following: (i) the fees, disbursements and expenses of the Company's counsel and accountants in connection with the registration of the Shares under the Securities Act and all other expenses in connection with the preparation, printing, reproduction and filing of the Registration Statement, the Preliminary Prospectus, any Pricing Disclosure Package and the Prospectus (including all exhibits, amendments and supplements thereto) and the distribution thereof; (ii) the cost of printing or producing this Agreement, the Blue Sky survey, closing documents (including any compilations thereof) and any other documents in connection with the offering, purchase, sale and delivery of the Shares; (iii) all expenses in connection with the qualification of the Shares for offering and sale under state securities laws; (iv) all fees and expenses in connection with listing the Shares on any national securities exchange and delisting from any current exchange; (v) the filing fees incident to and in connection with, any required review by FINRA of the terms of the sale of the Shares (not to exceed \$10,000); (vi) the cost of preparing stock certificates, if applicable; (vii) the cost and charges of any transfer agent or registrar; (viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Shares, including without limitation, expenses associated with the production of road show slides and graphics, fees; and (ix) all other costs and expenses incident to the performance of

its obligations hereunder which are not otherwise specifically provided for in this Section 11. It is understood, however, that, except as provided in this Section 11 and Section 7 hereof, each Underwriter will pay all of its own costs and expenses; provided, however, that the Company will reimburse the Representative for all out-of-pocket expenses (including fees and expenses of its counsel) reasonably incurred and documented by it in connection with its engagement hereunder in an aggregate amount that shall not exceed \$180,000. Notwithstanding the foregoing, in the event that the transactions contemplated by this Agreement are not consummated, the Company will reimburse the Representative for all out-of-pocket expenses (including fees and expenses of its counsel) reasonably incurred and documented by it in connection with its engagement hereunder in an aggregate amount that shall not exceed \$50,000.

(b) Subject to the limitations of Section 11(a) above, if (i) this Agreement is terminated pursuant to Section 9, (ii) the Company for any reason fails to tender the Shares for delivery to the Underwriters or (iii) the Underwriters declines to purchase the Shares for any reason permitted under this Agreement, the Company agrees to reimburse the Underwriters for all out-of-pocket costs and expenses (including the fees and expenses of its counsel) reasonably incurred by the Underwriters in connection with this Agreement and the offering contemplated hereby. For the avoidance of doubt, it is understood that the Company shall not pay or reimburse any costs, fees or expenses incurred by any Underwriter that defaults on its obligation to purchase the Shares.

12. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and the officers and directors and any controlling persons referred to herein, and the respective affiliates of the Underwriters referred to in Section 7 hereof. Nothing in this Agreement is intended or shall be construed to give any other person any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision contained herein. No purchaser of Shares from any Underwriter shall be deemed to be a successor merely by reason of such purchase.

13. Survival. The respective indemnities, rights of contribution, representations, warranties and agreements of the Company and the Representative contained in this Agreement or made by or on behalf of the Company or the Underwriters pursuant to this Agreement or any certificate delivered pursuant hereto shall survive the delivery of and payment for the Shares and shall remain in full force and effect, regardless of any termination of this Agreement or any investigation made by or on behalf of the Company or the Underwriters or the directors, officers, controlling persons or affiliates referred to in Section 7 hereof.

14. Certain Defined Terms. For purposes of this Agreement, (a) except where otherwise expressly provided, the term "affiliate" has the meaning set forth in Rule 405 under the Securities Act; (b) the term "business day" means any day other than a day other than a Saturday, a Sunday, a legal holiday or a day on which banks are permitted or required to be closed in New York City and (c) the term "Subsidiary" has the meaning set forth in Rule 405 under the Securities Act.

15. Compliance with USA Patriot Act. In accordance with the requirements of the USA Patriot Act (Title III of Pub. L. 107-56 (signed into law October 26, 2001)), the Underwriters is required to obtain, verify and record information that identifies its clients, including the Company, which information may include the name and address of its clients, as well as other information that will allow the Underwriters to properly identify its clients.

16. Miscellaneous.

(a) Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted and confirmed by any standard form of telecommunication. Notices to the Underwriters shall be provided to the Representative c/o Lake Street Capital Markets, LLC, 121 South 8th Street, Suite 1000, Minneapolis, Minnesota 55402, Attention: Head of Investment Banking, with a copy (which shall not constitute notice) to Sullivan & Worcester LLP, 1251 Avenue of the Americas, New York, NY, 10020 Attention: David E. Danovitch, Esq. Notices to the Company shall be given to it at Birchtech Corp., 1810 Jester Drive, Corsicana, Texas 75109, Attention: Richard MacPherson, Chief Executive Officer, Email: [REDACTED], with a copy (which shall not constitute notice) to Sheppard, Mullin, Richter & Hampton, 321 North Clark Street, 32nd Floor, Chicago, IL 60654, Attention: Alexander M. Schwartz, Email: ASchwartz@sheppardmullin.com.

(b) Governing Law. This Agreement and any claim, controversy or dispute arising under or related to this Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(c) *Submission to Jurisdiction.* The Company hereby submits to the exclusive jurisdiction of the U.S. federal and New York state courts in the Borough of Manhattan in The City of New York in any suit or proceeding arising out of or relating to this Agreement or the transactions contemplated hereby. The Company waives any objection which it may now or hereafter have to the laying of venue of any such suit or proceeding in such courts. The Company agrees that final, non-appealable judgment in any such suit, action or proceeding brought in such court shall be conclusive and binding upon the Company and may be enforced in any court to the jurisdiction of which Company is subject by a suit upon such final, non-appealable judgment.

(d) *Waiver of Jury Trial.* Each of the parties hereto hereby waives any right to trial by jury in any suit or proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

(e) *Recognition of the U.S. Special Resolution Regimes.*

(i) In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

(ii) In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

As used in this Section 15(e):

“BHC Act Affiliate” has the meaning assigned to the term “affiliate” in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k).

“Covered Entity” means any of the following:

- (i) a “covered entity” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b);
- (ii) a “covered bank” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or
- (iii) a “covered FSI” as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b).

“Default Right” has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable.

“U.S. Special Resolution Regime” means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

(f) *Counterparts.* This Agreement may be signed in counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be an original and all of which together shall constitute one and the same instrument. This Agreement may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com or www.echosign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

(g) *Amendments or Waivers.* No amendment or waiver of any provision of this Agreement, nor any consent or approval to any departure therefrom, shall in any event be effective unless the same shall be in writing and signed by the parties hereto.

(h) *Headings.* The headings herein are included for convenience of reference only and are not intended to be part of, or to affect the meaning or interpretation of, this Agreement.

If the foregoing is in accordance with your understanding, please indicate your acceptance of this Agreement by signing in the space provided below.

Very truly yours,

BIRCHTECH CORP.

By: _____
Name: _____
Title: _____

Accepted: As of the date first written above
LAKE STREET CAPITAL MARKETS, LLC

By: _____
Name: _____
Title: _____

SCHEDULE 1

Underwriter	Number of Shares
Lake Street Capital Markets, LLC	
Huntington Securities, Inc.	
Total:	_____

ANNEX A

a. **Pricing Disclosure Package**

[·]

b. **Pricing Information Provided Orally by the Representative**

Public Offering Price per Share: \$[·]

Underwriting Discount per Share: \$[·]

Number of Underwritten Shares: [·]

Number of Option Shares: [·]

ANNEX B

WRITTEN TESTING-THE-WATERS COMMUNICATIONS

1. [·]

ANNEX C
FORM OF LOCK-UP AGREEMENT

[·], 2026

LAKE STREET CAPITAL MARKETS, LLC
121 South 8th Street, Suite 1000
Minneapolis, Minnesota 55402

Re: Birchtech Corp. — Public Offering

Ladies and Gentlemen:

The undersigned, an officer, director, and holder of common stock, par value of \$0.001 per share (the “Common Stock”), of Birchtech Corp. (the “Company”), or rights to acquire shares of Common Stock understands that you, as representative (the “Representative”) of the several underwriters (collectively, the “Underwriters” or, individually, an “Underwriter”), propose to enter into an underwriting agreement (the “Underwriting Agreement”) with the Company, providing for the public offering (the “Public Offering”) by the Underwriters of shares of the Common Stock (the “Shares”). Capitalized terms used herein and not otherwise defined shall have the meanings set forth in the Underwriting Agreement.

In consideration of the Underwriters’ agreement to proceed with the Public Offering and purchase the Shares, and for other good and valuable consideration receipt of which is hereby acknowledged, the undersigned hereby agrees that, without the prior written consent of the Representative, the undersigned will not, and will not cause any direct or indirect affiliate to, during the period beginning on the date hereof and ending at the close of business ninety (90) days after the date of final prospectus relating to the Public Offering (such period, the “Restricted Period”), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (including without limitation, Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the U.S. Securities and Exchange Commission (“SEC”), (collectively with the Common Stock, the “Lock-Up Securities”), (2) enter into any hedging, swap or other agreement or transaction that transfers, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise, (3) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities, or (4) publicly disclose the intention to do any of the foregoing. The undersigned acknowledges and agrees that the foregoing precludes the undersigned from engaging in any hedging or other transactions or arrangements (including, without limitation, any short sale or the purchase or sale of, or entry into, any put or call option, or combination thereof, forward, swap or any other derivative transaction or instrument, however described or defined) designed or intended, or which could reasonably be expected to lead to or result in, a sale or disposition or transfer (whether by the undersigned or any other person) of any economic consequences of ownership, in whole or in part, directly or indirectly, of any Lock-Up Securities, whether any such transaction or arrangement (or instrument provided for thereunder) would be settled by delivery of Lock-Up Securities, in cash or otherwise. The undersigned further confirms that it has furnished the Representative with the details of any transaction the undersigned, or any of its affiliates, is a party to as of the date hereof, which transaction would have been restricted by this Lock-Up Agreement (the “Lock-Up Agreement”) if it had been entered into by the undersigned during the Restricted Period.

Notwithstanding the foregoing, the undersigned may:

- (a) transfer or dispose of the undersigned’s Lock-Up Securities:
 - (i) as a bona fide gift or gifts, or for bona fide estate planning purposes,

- (ii) by will or intestacy,
- (iii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, or if the undersigned is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust (for purposes of this Lock-Up Agreement, “immediate family” shall mean any relationship by blood, current or former marriage, domestic partnership or adoption, not more remote than first cousin),
- (iv) to a corporation, partnership, limited liability company or other entity of which the undersigned or the immediate family of the undersigned are the legal and beneficial owner of all of the outstanding equity securities or similar interests,
- (v) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (iv) above,
- (vi) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, (A) to another corporation, partnership, limited liability company, trust or other business entity that is an affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned, or to any investment fund or other entity controlling, controlled by, managing or managed by or under common control with the undersigned or affiliates of the undersigned (including, for the avoidance of doubt, where the undersigned is a partnership, to its general partner or a successor partnership or fund, or any other funds managed by such partnership), or (B) as part of a distribution to members, partners, shareholders or other equityholders of the undersigned,
- (vii) by operation of law, such as pursuant to a qualified domestic order, divorce settlement, divorce decree or separation agreement, or related court order,
- (viii) to the Company from an employee of the Company upon death, disability or termination of employment, in each case, of such employee,
- (ix) to the Company in connection with the vesting, settlement, or exercise of restricted stock units, options, warrants or other rights to purchase shares of Common Stock (including, in each case, by way of “net” or “cashless” exercise), including for the payment of exercise price and tax and remittance payments due as a result of the vesting, settlement, or exercise of such restricted stock units, options, warrants or rights, provided that any such shares of Common Stock received upon such exercise, vesting or settlement (other than such shares as are transferred or surrendered to the Company in connection with such vesting, settlement or exercise event) shall be subject to the terms of this Lock-Up Agreement, and provided further that any such restricted stock units, options, warrants or rights are held by the undersigned pursuant to an agreement or equity awards granted under a stock incentive plan or other equity award plan, each such agreement or plan which is described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or
- (x) pursuant to a bona fide third-party tender offer, merger, consolidation or other similar transaction that is approved by the Board of Directors of the Company and made to all holders of the Company’s capital stock involving a Change of Control (as defined below) of the Company (for purposes hereof, “Change of Control” shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than the Underwriters pursuant to the Public Offering), of shares of capital stock if, after such transfer, such person or group of affiliated persons would hold more than 75% of the outstanding voting securities of the Company (or the surviving entity)); provided that in the event that such tender offer, merger, consolidation or other similar transaction is not completed, the undersigned’s Lock-Up Securities shall remain subject to the provisions of this Lock-Up Agreement;

provided, in the case of clauses (i)-(vi), that (A) such transfer shall not involve a disposition for value, (B) the transferee agrees in writing with the Representative and the Company to be bound by the terms of this Lock-Up Agreement, and (C) such transfer would not require any filing under Section 16(a) of the Exchange Act and no such

filings is voluntarily made, except in the case of clauses (i) and (ii), in which case a filing under Section 16(a) of the Exchange Act is permitted if required by SEC rules, but may not be voluntarily made;

(b) exercise outstanding options, settle restricted stock units or other equity awards or exercise outstanding warrants pursuant to plans described in the Registration Statement, the Pricing Disclosure Package and the Prospectus; provided that any Lock-up Securities received upon such exercise, vesting or settlement shall be subject to the terms of this Lock-Up Agreement; provided that if the undersigned is required to make any filing under Section 16(a) of the Exchange Act, or other public filing, report or announcement during the Restricted Period, the undersigned shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this clause and that the shares of Common Stock received upon the exercise or settlement, as applicable, of the stock option, warrant or restricted stock unit or other right or vesting event are subject to this Lock-Up Agreement, and no public filing, report or announcement shall be voluntarily made;

(c) establish trading plans pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Lock-Up Securities (each such plan, a "Trading Plan"); provided that (1) such Trading Plans do not provide for the transfer of Lock-Up Securities during the Restricted Period and (2) no filing by any party under the Exchange Act or other public announcement shall be required or made voluntarily in connection with such Trading Plan during the Restricted Period in contravention of this Lock-Up Agreement; and

(d) pledge Lock-Up Securities in a bona fide transaction that are in effect as of the date hereof to a lender of the undersigned.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Lock-Up Agreement and that this Lock-Up Agreement has been duly authorized (if the undersigned is not a natural person) and constitutes the legal, valid and binding obligation of the undersigned, enforceable in accordance with its terms. Upon request, the undersigned will execute any additional documents necessary in connection with the enforcement hereof. Any obligations of the undersigned shall be binding upon the successors and assigns of the undersigned from the date of this Lock-Up Agreement.

In furtherance of the foregoing, the Company, and any duly appointed transfer agent for the registration or transfer of the securities described herein, are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Lock-Up Agreement.

The undersigned acknowledges and agrees that the Representative has not provided any recommendation or investment advice nor has the Representative solicited any action from the undersigned with respect to the Public Offering of the Shares and the undersigned has consulted its own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate. The undersigned further acknowledges and agrees that, although the Representative may be required or choose to provide certain Regulation Best Interest and Form CRS disclosures to you in connection with the Public Offering, the Representative is not making a recommendation to you to enter into this Lock-Up Agreement and nothing set forth in such disclosures is intended to suggest that the Representative is making such a recommendation.

The undersigned understands that, (i) if the Underwriting Agreement does not become effective by March 31, 2026, (ii) if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares to be sold thereunder, (iii) the Company notifies the Representative in writing prior to the execution of the Underwriting Agreement that it does not intend to proceed with the Public Offering, or (iv) prior to payment for the Shares, the Registration Statement is withdrawn prior to the execution of the Underwriting Agreement, the Lock-Up Agreement shall automatically terminate and be of no further force or effect and undersigned shall be released from all obligations under this Lock-Up Agreement. The undersigned understands that the Representative is entering into the Underwriting Agreement and proceeding with the Public Offering in reliance upon this Lock-Up Agreement.

The undersigned hereby consents to receipt of this Lock-Up Agreement in electronic form and understands and agrees that this Lock-Up Agreement may be signed electronically. In the event that any signature is delivered by facsimile transmission, electronic mail, or otherwise by electronic transmission (including any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) evidencing an intent to sign this Lock-

Up Agreement, such facsimile transmission, electronic mail or other electronic transmission shall create a valid and binding obligation of the undersigned with the same force and effect as if such signature were an original. Execution and delivery of this Lock-Up Agreement by facsimile transmission, electronic mail or other electronic transmission is legal, valid and binding for all purposes.

This Lock-Up Agreement and any claim, controversy or dispute arising under or related to this Lock-Up Agreement shall be governed by and construed in accordance with the laws of the State of New York.

[Signature page follows]

Very truly yours,

Name of Security Holder (*Print exact name*)

By: _____
Signature

If not signing in an individual capacity:

Name of Authorized Signatory (*Print*)

Title of Authorized Signatory (*Print*)

*(indicate capacity of person signing if signing
as custodian, trustee, or on behalf of an entity)*



Sheppard, Mullin, Richter & Hampton LLP
12275 El Camino Real, Suite 100
San Diego, California 92130-4092
858.720.8900 main
858.509.3691 fax
www.sheppardmullin.com

February 3, 2026

VIA ELECTRONIC MAIL

Birchtech Corp.
1810 Jester Drive
Corsicana, Texas 75109

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Birchtech Corp., a Delaware corporation (the “Company”), in connection with the issuance of this opinion which relates to a Registration Statement on Form S-1 (File No. 333-292701) (the “Registration Statement”), including a related prospectus filed with the Registration Statement (the “Prospectus”), filed by the Company with the United States Securities and Exchange Commission (the “Commission”) under the Securities Act of 1933, as amended (the “Securities Act”), covering the offering of up to \$23,000,000 of shares (the “Shares”) of common stock, par value \$0.001 per share (the “Common Stock”), including \$3,000,000 of shares of Common Stock purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are to be sold by the Company to several underwriters pursuant to an underwriting agreement by and between the Company and Lake Street Capital Markets, LLC, as representative of the several underwriters named in Schedule 1 thereto (the “Underwriting Agreement”).

This opinion letter is being delivered in accordance with the requirements of Item 601(b)(5)(i) of Regulation S-K under the Securities Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the Prospectus, other than as expressly stated herein with respect to the issuance of the Shares.

In connection with this opinion, we have examined originals or copies (certified or otherwise identified to our satisfaction) of (i) the Company’s Certificate of Incorporation as currently in effect, (ii) the Company’s Second Amended and Restated Bylaws as currently in effect, (iii) the Registration Statement, all exhibits thereto and related Prospectus, (iv) the form of Underwriting Agreement, and (v) such corporate records, agreements, documents and other instruments, and such certificates or comparable documents of public officials or of officers and representatives of the Company, as we have deemed relevant and necessary as a basis for the opinion hereinafter set forth. We have also examined originals or copies, certified or otherwise identified to our satisfaction, of such records of the Company and such agreements, certificates and receipts of public officials, certificates of officers or other representatives of the Company and others, and such other documents as we have deemed necessary or appropriate as a basis for the opinions stated below.

In our examination, we have assumed (a) the genuineness of all signatures, including endorsements, (b) the legal capacity and competency of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties, (c) the authenticity of all documents submitted to us as originals, (d) the conformity to original documents of all documents submitted to us as facsimile, electronic, certified or photostatic copies, and the authenticity of the originals of such copies, (e) the accuracy, completeness and authenticity of certificates of public officials, (f) the truth, accuracy and completeness of the information, representations and warranties contained in the instruments, documents, certificates and records we have reviewed, and (g) the legal capacity for all purposes relevant hereto of all natural persons and, with respect to all parties to agreements or instruments relevant hereto other than the Company, that such parties had the requisite power and authority (corporate or otherwise) to execute, deliver and perform such agreements or instruments, that such

agreements or instruments have been duly authorized by all requisite action (corporate or otherwise), executed and delivered by such parties and that such agreements or instruments are the valid, binding and enforceable obligations of such parties. As to any facts relevant to the opinions stated herein that we did not independently establish or verify, we have relied upon statements and representations of officers and other representatives of the Company and others and of public officials.

It is understood that this opinion is to be used only in connection with the offer and sale of the securities being registered while the Registration Statement is effective under the Securities Act.

Based upon the foregoing and subject to the qualifications and assumptions stated herein, we are of the opinion that the Shares have been duly authorized by all requisite corporate action on the part of the Company under the Delaware General Corporation Law ("DGCL") and, when the Shares are delivered and paid for in accordance with the terms of the final Underwriting Agreement, and when evidence of the issuance thereof is duly recorded in the Company's books and records, the Shares will be validly issued, fully paid and non-assessable. In rendering the foregoing opinions, we have assumed that (a) the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL and (b) upon the issue of any of the shares of Common Stock, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock the Company is then authorized to issue under its governing documents.

Our opinions are expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the securities covered by the Registration Statement or any other agreements or transactions that may be related thereto or contemplated thereby. We are expressing no opinion as to any obligations that parties other than the Company may have under or in respect of the securities covered by the Registration Statement or as to the effect that their performance of such obligations may have upon any of the matters referred to above. No opinion may be implied or inferred beyond the opinion expressly stated above.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. We also hereby consent to the reference to our firm under the heading "Legal Matters" in the Prospectus which is a part of the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations of the Commission promulgated thereunder.

The opinions which we render herein are limited to those matters governed by the DGCL and we express no opinion with respect to any other laws. No opinion is expressed herein with respect to the qualification of the securities covered by the Registration Statement under the securities or blue sky laws of any state or any foreign jurisdiction.

This opinion letter is rendered as of the date first written above and we disclaim any obligation to advise you of facts, circumstances, events or developments which hereafter may be brought to our attention and which may alter, affect or modify the opinion expressed herein.

Regards,

/s/ Sheppard, Mullin, Richter & Hampton LLP

SHEPPARD, MULLIN, RICHTER & HAMPTON LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the inclusion in this Registration Statement of Birchtech Corp. on Form S-1/A of our report dated March 31, 2025, except for the effects of the reverse stock split discussed in Note 4, as to which the date is January 13, 2026, with respect to our audits of the financial statements of Birchtech Corp. as of December 31, 2024 and 2023 and for each of the two years ended December 31, 2024, which report appears in the Prospectus, which is part of this Registration Statement. Our report includes an explanatory paragraph as to Birchtech Corp's ability to continue as a going concern.

We also consent to the reference to our Firm under the heading "Experts" in such Prospectus.

/s/ Rosenberg Rich Baker Berman, P.A.

Somerset, New Jersey
February 3, 2026
