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

**Form 10-K**

(Mark One)

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

For the fiscal year ended: December 31, 2024

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 001-33059

**Fuel Tech, Inc.**

(Exact name of registrant as specified in its charter)

Delaware  
(State of Incorporation)

20-5657551  
(I.R.S. ID)

Fuel Tech, Inc.  
27601 Bella Vista Parkway  
Warrenville, IL 60555-1617  
(630) 845-4500  
www.ftek.com

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	FTEK	NASDAQ

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes  No

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

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

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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 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	<input type="checkbox"/>	Accelerated Filer	<input type="checkbox"/>
Non-accelerated Filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financials statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to (§240.10D-1(b)).

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

As of June 30, 2024, the aggregate market value of the registrant’s common stock held by non-affiliates of the registrant was approximately \$27,929,553 based on the closing sale price as reported on the NASDAQ National Market System.

As of February 28, 2025, there were 30,708,273 shares of common stock outstanding.

**Documents incorporated by reference:**

Portions of the registrant’s definitive Proxy Statement for the 2025 Annual Meeting of Shareholders, which will be filed no later than 120 days after the close of the registrant’s fiscal year ended December 31, 2024, are incorporated by reference into Part III of this report.

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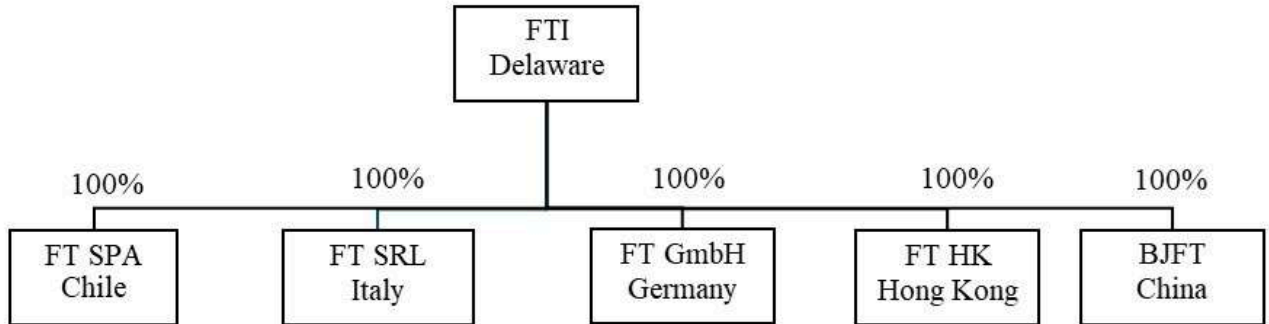
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<b><u>Term</u></b>	<b><u>Definition</u></b>
AIG	Ammonia Injection Grid
APC	Air Pollution Control Technology
ASCR®	A trademark used to describe our Advanced Selective Catalytic Reduction process
BACT	Best Available Control Technology
BREF	Best Available Reference Technology. European emission requirements
CFD	Computational Fluid Dynamics
CKM	Chemical Kinetics Modeling
DGI®	Dissolved Gas Infusion
EPA	The United States Environmental Protection Agency
ESP	Electrostatic Precipitator
FGC	Flue Gas Conditioning
FUEL CHEM®	A trademark used to describe our fuel and flue gas treatment processes, including its TIFI® Targeted In-Furnace Injection™ technology to control slagging, fouling, corrosion and a variety of sulfur trioxide-related issues
GSG™	A trademark used to describe our Graduated Straightening Grid
HERT™ High Energy Reagent Technology™	A trademark used to describe one of our SNCR processes for the reduction of NOx
I-NOx®	Systems can include SNCR components along with SCR technology, which includes AIG and GSG™ system
NOx	Oxides of nitrogen
NOxOUT®	A trademark used to describe one of our SNCR processes for the reduction of NOx
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
TIFI® Targeted In-Furnace Injection™	A trademark used to describe our proprietary technology that enables the precise injection of a chemical reagent into a boiler or furnace as part of a FUEL CHEM program
UDI™	Urea Direct Injection as the process to provide urea reagent directly into a duct for SCR applications
ULTRA®	A trademark used to describe our process for generating ammonia for use as a Selective Catalytic Reduction reagent

### Fuel Tech, Inc. and Subsidiaries

December 31, 2024



FTI	- Fuel Tech, Inc.
FT SPA	- Fuel Tech SpA
FT SRL	- Fuel Tech Srl
FTGmbH	- Fuel Tech GmbH
FT HK	- Fuel Tech (HK) Holding Limited
BJFT	- Beijing Fuel Tech Environmental Technologies Co., Ltd.

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## PART I

### Forward-Looking Statements

This Annual Report on Form 10-K contains “forward-looking statements,” as defined in Section 21E of the Securities Exchange Act of 1934, as amended, that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and reflect our current expectations regarding our future growth, results of operations, cash flows, performance and business prospects, and opportunities, as well as assumptions made by, and information currently available to, our management. We have tried to identify forward-looking statements by using words such as “anticipate,” “believe,” “plan,” “expect,” “intend,” “will,” and similar expressions, but these words are not the exclusive means of identifying forward-looking statements.

For us, particular uncertainties that could cause our actual results to be materially different than those expressed in our forward-looking statements include:

- our success in winning new contract awards;
- global economic and geopolitical conditions and related impacts, including spending and demand for our products and global supply chain disruptions and price inflation, will continue to adversely impact our business operations, financial performance, results of operations, financial position, the prices of our securities and the achievement of our strategic objectives;
- changes in macroeconomic and market conditions and market volatility, including inflation, interest rates, and the impact of such changes and volatility on our customers' financial position and businesses;
- the amount and timing of our cash flows and earnings, which may be impacted by customer, supplier, competitive, contractual and other dynamics and conditions;
- market developments or customer actions that may affect demand and the financial performance of major industries and customers we serve, such as secular, cyclical and competitive pressures in the electric power industry; pricing, the timing of customer investment and other factors in energy markets; and other shifts in the competitive landscape for our products and services;
- operational execution by our businesses, including our success in improving operational performance;
- changes in law, regulation or policy that may affect our businesses;
- our decisions about investments in research and development, and new products, services and platforms, and our ability to launch new products in a cost-effective manner;
- our ability to increase or maintain margins through implementation of operational changes, restructuring and other cost reduction measures;
- the impact of actual or potential failures of our products or third-party products with which our products are integrated, and related reputational effects;
- the impact of potential information technology, cybersecurity or data security breaches at our company or third parties; and
- the other factors that are described in "Risk Factors" in this form 10-K report.

These or other uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements. This document includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially.

### ITEM 1 - BUSINESS

As used in this Annual Report on Form 10-K, the terms “we,” “us,” or “our,” refer to Fuel Tech, Inc. and our wholly owned subsidiaries.

#### GENERAL

We are a leading technology company engaged in the worldwide development, commercialization and application of sustainable state-of-the-art proprietary technologies for air pollution control, process optimization, water treatment and advanced engineering services. These technologies enable our customers to operate efficiently in a cost-effective and environmentally sustainable manner.

- The Company’s nitrogen oxide (NOx) reduction technologies include NOxOUT<sup>®</sup>, HERT<sup>™</sup> High Energy Reagent Technology<sup>™</sup>, and Advanced Selective Non-Catalytic Reduction (SNCR) systems, ASCR<sup>®</sup> Advanced Selective Catalytic Reduction systems, and I-NOx<sup>®</sup> Integrated NOx Reduction Systems, which utilize various combinations of these systems, along with the UDI<sup>™</sup> Urea Direct Injection system for Selective Catalytic Reduction (SCR) reagent supply, and the ULTRA<sup>®</sup> process for safe ammonia generation. These technologies have established Fuel Tech as a leader in NOx reduction, with installations on over 1,300 units worldwide.
- Fuel Tech’s Air Pollution Control (APC) technologies include particulate control with Electrostatic Precipitator (ESP) products and services with experience on units up to 700 MW. Flue Gas Conditioning (FGC) systems include treatment using sulfur trioxide (SO<sub>3</sub>) and ammonia-based conditioning agents to improve the performance of ESPs by modifying the properties of fly ash particles. Fuel Tech’s particulate control technologies have been installed on more than 125 units worldwide.
- Our FUEL CHEM technologies revolve around the unique application of chemical injection programs which improve the efficiency, reliability, fuel flexibility, boiler heat rate and environmental status of combustion units by controlling slagging, fouling, corrosion, opacity and acid plume, as well as the formation of sulfur trioxide, ammonium bisulfate, particulate matter, sulfur dioxide, and carbon dioxide. We use our proprietary TIFI<sup>®</sup> Targeted In-Furnace Injection<sup>™</sup> processes to apply specialty chemical programs to units burning a wide variety of fuels including coal, heavy oil, biomass, and municipal waste. These TIFI<sup>®</sup> programs incorporate design, modeling, equipment, reagent, and service to provide complete customized on-site programs designed to improve plant operations and provide a return on investment in addition to helping meet emission regulatory requirements.
- Water treatment technologies include DGI<sup>®</sup> Dissolved Gas Infusion Systems which utilize a proprietary channel injector and a patented saturator to provide a competitive advantage over conventional water and wastewater treatment by infusing oxygen, carbon dioxide or other gases into water. An innovative alternative to current technologies among other applications, DGI<sup>®</sup> systems can deliver supersaturated oxygen solutions and other gas-water combinations to target process applications or environmental issues. This infusion process has a variety of applications in the water and wastewater segments, including irrigation, treatment of natural waters, aquaculture, supply of oxygen for biological remediation, wastewater odor management, pH adjustment, re-carbonization, and alkalinity control, etc. DGI<sup>®</sup> technology benefits include improved treatment performance and reduced treatment time, and the potential for reduced energy consumption, along with lower installation and operating costs. The DGI<sup>®</sup> technology is currently in the demonstration phase and we expect additional revenue generating demonstrations and opportunities throughout 2025. Third party validation testing of the efficiency of transferring oxygen to a treatment basin has been completed and results have been published.

Many of our products and services rely heavily on our Computational Fluid Dynamics (CFD) and Chemical Kinetics Modeling (CKM) capabilities, which are enhanced by internally developed, high-end visualization software. These capabilities, coupled with our innovative technologies and multi-disciplined team approach, enable us to provide practical solutions to some of our customers' most challenging issues.

[Table of Contents](#)**AIR POLLUTION CONTROL (APC)***Regulations and Markets: Domestic*

The future growth of our APC technology segment is dependent upon the adoption and enforcement of environmental regulations in the United States (U.S.) and globally. In the U.S., federal and state laws regulating the emission of NOx are the primary driver in our APC technology segment. The principal regulatory drivers currently in effect are as follows:

*Clean Air Act (CAA):* The CAA requires the U.S. Environmental Protection Agency (EPA) to establish national ambient air quality standards (NAAQS) at levels that are protective of public health with an adequate margin of safety. The six pollutants specified include: Ozone, Particulate Matter, Nitrogen Dioxide, Sulfur Dioxide, Lead, and Carbon Monoxide. The NAAQS provisions require that states comply with ozone and particulate emissions standards. NOx emissions are a precursor to ozone formation and contribute to fine particulate emissions. Since 1990, EPA rules and programs have been established at the regional and federal level to help states in their mission to define and meet their State Implementation Plans for attainment. The NAAQS ground-level ozone standards that were issued in 1997 were made more stringent in 2008 and again in 2015. The EPA kept the 2020 NAAQS ozone standard at 70 parts per billion, the same limit as 2015. The ozone NAAQs will be reviewed again in 2025, with industry analysts expecting no change in emissions requirements.

In March 2023, EPA issued a Federal Implementation Plan (FIP) to address NOx emissions from upwind sources on downwind states. The issuance of the FIP was preceded by the EPA's rejection of the proposed State Implementation Plans (SIPs) submitted by many of the upwind states pursuant to the CAA. The issuance of the FIP, which was made pursuant to the Good Neighbor provision of the CAA, was likely to require a significant number of upwind sources to provide additional NOx controls to help downwind states meet the 2020 ozone NAAQS requirements starting in 2024 for utility power units and starting in 2026 for industrial sources. This FIP is also referred to as the EPA Good Neighbor Rule. The US Supreme Court ruled in June 2024 to stay the Rule for a number of affected states after other states had been granted a stay by various Circuit Courts. EPA vacated the entire Good Neighbor Rule in November 2024 and publicly stated it would look to address concerns raised by the US Supreme Court and reissue the Good Neighbor Rule. Without the Good Neighbor Rule, downwind states are on record that they may challenge the upwind states in court as to not meeting the Good Neighbor obligations as defined in the CAA. The downwind states may not be able to meet their emission standards due to the contribution of NOx emissions from upwind states. Fuel Tech will monitor the potential impact on these upcoming NOx emission requirements.

*Clean Air Visibility Rule (CAVR):* The CAVR, also known as the Regional Haze rule, is part of the Clean Air Act and was finalized in 2005. Under CAVR, certain States are required to submit implementation plans to the EPA to comply with the Regional Haze requirements, and updates are required every five years. A new CAVR was issued in January 2017 which extended the review period to every ten years. NOx emissions contribute to ground level ozone which can contribute to localized haze, and many State Implementation Plans (SIP) are addressing NOx reduction as part of CAVR compliance. Environmental organizations have filed lawsuits against EPA for failure to approve SIPs for the second round of CAVR compliance which is required prior to 2028. The overall obligation of CAVR is to return the U.S. scenic areas to "active" visibility by 2064.

*New Unit Permits:* New gas fired units for both electricity generation and industrial use will require Best Available Control Technology (BACT) as a permit requirement. SCR technology is very often BACT for NOx, and these permit requirements generate new market opportunities.

*Consent Decrees:* Consent decree activity through the U.S. Department of Justice or EPA may require emission sources to meet individual requirements. Sources may also agree to specific air pollution requirements with states or environmental groups.

*Regulations and Markets: International*

We also sell air pollution control systems outside the U.S., specifically in Europe, South Africa, CentrSouth America, India (under a license agreement) and in the Pacific Rim. The demand for our technologies comes from specific governmental regulations in NOx and particulate matter emission limits which vary by country. We expect that there will be further opportunities to implement our technologies globally in 2025.

The European Union's Best Available Reference Technology (BREF) emission guidelines continue to be implemented gradually starting from large utility boilers down to small industrial units. The last major update of the BREF guidelines reduced NOx limit values by up to 25% which in some cases required an upgrade of the first-generation NOx abatement systems. That has presented new opportunities for Fuel Tech, especially on biomass and waste incineration plants. New system opportunities are also being identified and followed in hydrogen production, chemical production and in petrochemical industries. European engineering companies are supplying power generation and flue gas treatment systems to industrial and utility customers globally. Middle Eastern countries, especially Saudi Arabia have become a major focus for these companies due to the local initiatives for reducing pollution and improving tourism. Fuel Tech's NOx control technologies can be integrated into both new and existing combustion systems supplied into this market.

In South Africa, the state-owned utility Eskom and metallurgical companies are continuing with refurbishing aging ESPs and adding FGC technology to further improve ESP performance. Fuel Tech is well placed to compete for this business with our local partner Lesedi.

Brazil's Sao Paulo state has announced stricter NOx emission requirements which will impact local cement, steel and glass production industries. Fuel Tech has established local partnerships to bring our SNCR, SCR and FGC technologies to this market.

The Indian government has prioritized sulfur oxide treatment over NOx abatement in the refurbishment of thermal power units. However, new biomass fired boilers are expected to be outfitted with SNCR technology. Particulate matter emission reductions continue to be an area of focus in the country and that presents an ongoing opportunity for Fuel Tech's FGC technology. These technologies will be implemented through a collaboration with our local partner ISGEC.

[Table of Contents](#)*Products*

Our NOx reduction and particulate control technologies are installed worldwide on over 1,300 combustion units, including utility, industrial and municipal solid waste applications. Our products include customized NOx control systems and our proprietary ULTRA® technology, which converts urea-to-ammonia on site and provides safe reagent for use in SCR systems.

- **SCR Systems and Services:** Our SCR systems control NOx emissions from industrial and utility sources including boilers, incinerators, kilns, reformers and many other types of heat recovery equipment firing coal, natural gas, oil, and a variety of process gases and waste fuels. The SCR systems typically include urea or ammonia storage and delivery subsystems, reagent injection systems in the form of an Ammonia Injection Grid (AIG), catalyst reactor vessel and SCR catalyst. In addition, other related services, including start-ups, maintenance support and general consulting services for SCR systems, AIG design and tuning to help optimize catalyst performance, and catalyst management services to help optimize catalyst life, are now offered to customers around the world. We also specialize in CFD models, which simulate fluid and gas flow by generating a virtual replication of real-world geometry and operating inputs. We design flow corrective devices, such as turning vanes, ash screens, static mixers and our GSG™ Graduated Straightening Grid. Our SCR systems utilize urea or ammonia as the SCR catalyst reagent to achieve NOx reductions of up to 90% from industrial combustion sources.
- **ULTRA® Technology:** Our ULTRA® process is designed to convert urea to ammonia safely and economically for use as a reagent in the SCR process for NOx reduction. Recent local objections in the ammonia permitting process have raised concerns regarding the safety of ammonia shipment and storage in quantities sufficient to supply SCR. In addition, the Department of Homeland Security has characterized anhydrous ammonia as a Toxic Inhalation Hazard commodity. The safe conversion of urea to ammonia just prior to injection into the flue gas duct is particularly important near densely populated cities, major waterways, harbors or islands, or where the storage or transport of anhydrous or aqueous ammonia is a safety concern. UDI™ Urea Direct Injection systems utilize direct injection of urea reagent without the need for an ammonia injection grid.
- **SNCR Systems:** Our NOxOUT® and HERT™ SNCR processes use urea or ammonia reagent injected into a variety of combustion furnaces to reduce NOx by up to 25% - 50% for utilities and by potentially significantly greater amounts for industrial units. Capital costs ranging from \$5 - \$20/kW for utility boilers and with total annualized operating costs range from \$1,000 - \$2,000/ton of NOx removed. Advanced SNCR (ASNCR) systems are also available to improve performance and minimize reagent costs through in-furnace monitoring and an advanced control system.
- **I-NOx® Systems:** Our I-NOx® systems can include SNCR components combined with SCR technology. Together, these systems provide up to 90% NOx reduction at significantly lower capital and operating costs than conventional SCR systems while providing greater operational flexibility to plant operators. The capital costs for I-NOx® systems can range from \$30 - \$150/kW depending on boiler size and configuration, which is significantly less than that of conventional SCRs, which can cost \$300/kW or more, while operating costs are competitive with those experienced by conventional SCR systems.
- **ESP and FGC Processes and Services:** ESP technologies for particulate control include ESP products and services including ESP Inspection Services, Performance Modeling, and Performance and Efficiency Upgrades, along with engineering capability for ESP retrofits. FGC systems include treatment using sulfur trioxide (SO3) and ammonia-based systems to improve the performance of ESPs by modifying the properties of fly ash particles. Our ULTRA® technology can provide the ammonia system feed requirements for FGC applications as a safe alternative to ammonia reagent-based systems. FGC systems offer a lower capital cost approach to improving ash particulate capture versus the alternative of installing larger ESPs or utilizing fabric filter technology to meet targeted emissions and opacity limits. Fuel Tech's particulate control technologies have been installed on more than 125 units worldwide.

A market factor for the APC product line is the continued use of coal and natural gas and the growth of biomass for global electricity production. The growth of natural gas in the U.S. for industrial applications in support of traditional electricity generation, as well as the increased demand in support of the growth of data centers which require significant power generation capability, has increased the need for SCR technology since it often meets the definition of BACT and is required on new industrial units.

Sales of APC products were \$11.2 million and \$13.5 million for the years ended December 31, 2024 and 2023, respectively.

*APC Competition*

Competition with our products may be expected from companies supplying SCR Systems, SNCR systems, ESP retrofits and FGC technologies. In addition, we experience competition in the urea-to-ammonia conversion market.

The SCR process is an effective and proven method of control for removal of NOx up to 90%. SCR systems have a high capital cost of \$300+/kW on retrofit coal applications. Companies including Babcock Power, Babcock & Wilcox (B&W) Company, CECO Environmental and Mitsubishi are active SCR system and reagent feed system providers.

The use of both urea and ammonia as the reagent for the SNCR process can reduce NOx by 30% - 70%, depending on a number of factors. Ammonia can be effective on incinerators and on Circulating Fluidized Bed combustion units, but has limited applicability for most utility boilers, where urea is dominant. The ammonia-based systems utilize either anhydrous or aqueous ammonia, both of which are hazardous substances. Competitors for ammonia based SNCR include CECO Environmental, B&W, and Yara, with CECO Environmental and B&W for urea based SNCR systems.

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ESP retrofit competitors include B&W and Southern Environmental. FGC competition includes Chemithon, Inc.

Lastly, with respect to urea-to-ammonia conversion technologies, our controlled urea decomposition system competes with ammonia-based processes.

*APC Backlog*

Consolidated APC segment backlog at December 31, 2024 was \$6.2 million versus backlog at December 31, 2023 of \$7.5 million. The Company expects to recognize revenue on approximately \$4.5 million of the backlog over the next 12 months with the remaining recognized thereafter.

**FUEL CHEM***Product and Markets*

The FUEL CHEM® technology segment revolves around the unique application of specialty chemicals to improve the efficiency, reliability and environmental status of plants operating in the electric utility, industrial, pulp and paper, waste-to-energy, university and district heating markets. FUEL CHEM programs are currently in place on combustion units in North America, Mexico, Europe, and the Pacific Rim, treating a wide variety of solid and liquid fuels, including coal, heavy oil, black liquor, biomass and municipal waste.

Central to the FUEL CHEM approach is the introduction of chemical reagents, such as magnesium hydroxide, to combustion units via in-body fuel application (pre-combustion) or via direct injection (post-combustion) utilizing our proprietary TIFI® technology. By attacking performance-hindering problems, such as slagging, fouling and corrosion, as well as the formation of sulfur trioxide (SO<sub>3</sub>), and ammonium bisulfate, our programs offer numerous operational, financial and environmental benefits to owners of boilers, furnaces and other combustion units.

A key market factor for this product line is the continued use of coal for global electricity production. In 2024, coal accounted for approximately 15% of all U.S. electricity generation and roughly 35% of global electricity generation. Major coal consumers include the U.S., China and India. Additional market dynamics include a growing, worldwide utilization of biomass for both steam and electrical production, and the continued use of heavy fuel oil for power generation. The principal markets for this product line are electric power plants burning coals with slag-forming constituents such as sodium, iron and high levels of sulfur. Sodium is typically found in the Powder River Basin coals of Wyoming and Montana. High sulfur content can give rise to unacceptable levels of SO<sub>3</sub> formation especially in plants with SCR systems and flue gas desulfurization units (scrubbers). As coal units strive to compete in electricity supply markets, lower cost, higher slagging fuels can create more operational challenges which TIFI® Programs can help mitigate. The current Mexican government is utilizing more indigenous fuel sources for power generation because the international market for high sulfur fuel oil (what Mexico produces) has been significantly reduced with the adoption of the new International Maritime Organization restrictions. Fuel Tech's TIFI® systems can help with SO<sub>3</sub> mitigation at these oil-fired power generation units.

The combination of slagging coals and SO<sub>3</sub>-related issues, such as "blue plume" formation, air pre-heater fouling and corrosion, SCR fouling and the proclivity to suppress certain mercury removal processes, represents an attractive market potential for Fuel Tech.

Sales of the FUEL CHEM products were \$13.9 million and \$13.6 million, for the years ended December 31, 2024 and 2023, respectively.

*Competition*

Competition for our FUEL CHEM product line includes chemicals sold by specialty chemical companies, such as Imerys, Environmental Energy Services, Inc., and SUEZ Water Technologies. No technologically comparable substantive competition currently exists for our TIFI® technology, which is designed primarily for slag control and SO<sub>3</sub> abatement, but there can be no assurance that such lack of substantive competition will continue.

**INTELLECTUAL PROPERTY**

We own 36 granted patents worldwide including 13 US patents and 23 non-US patents. We have five patent applications pending: including two in the U.S. and three in non-U.S. jurisdictions. These patents and applications cover some 41 inventions, 24 associated with our NO<sub>x</sub> reduction business, eight associated with the FUEL CHEM business, and nine associated with water treatment. Our granted patents have expiration dates ranging from November of 2028 to August of 2042.

Management believes that the protection provided by the numerous claims in the above referenced patents or patent applications is substantial and affords us a significant competitive advantage in our business. Accordingly, any significant reduction in the protection afforded by these patents or any significant development in competing technologies could have a material adverse effect on our business.

**EMPLOYEES**

At December 31, 2024, we had 72 employees, 67 in North America, and five in Europe. We enjoy good relations with our employees and are not a party to any labor management agreement.

**HUMAN CAPITAL RESOURCES**

We believe our employees are our most valuable asset and we endeavor to provide a safe, inclusive, high-performance culture where our people can thrive. As such, we continually work to recruit, develop, engage, train and protect our employees. The following are key human capital measures and objectives on which we currently focus.

*Employee Total Compensation and Benefits Philosophy.* We provide access to benefits and offer programs that support work-life balance and overall well-being, including financial, physical and mental health resources, such as those listed below.

Financial	Health and Wellness	Work-Life Balance
Competitive Base Pay	Medical, Dental and Vision Benefits	Paid time off, paid holidays and jury duty pay
Corporate Objectives Plan (Potential Annual Bonus Based on Achievement of Qualitative Milestones)	Flexible Spending Accounts and Health Savings Accounts	Paid Parental Leave (maternity, paternity, adoption)
Corporation Incentive Plan (Potential Annual Bonus Based on Company's Achievement of Operating Income)	On-site and complimentary Vaccinations	Employee Assistance Program (mental health, legal, financial services)
401(k) Retirement Savings Plan with Company Match (Traditional and Roth)		Flexible Work Arrangements
Life Insurance		Tuition Reimbursement
Short-term and Long-term Disability Insurance		Complimentary on-line learning and training

*Commitment to Safe Working Environment.* All employees are required to understand and obey local laws, to report any suspected violations, and to act in accordance with our Code of Conduct.

*Compensation Equity.* We conduct comprehensive pay equity analyses encompassing all staff members and job levels at appropriate intervals. We believe we have made compensation adjustments to rectify compensation disparities. We have also implemented hiring and promotional practices to support our goal of ensuring offers to new employees or to employees being promoted internally are aligned with the market and equitable on an internal basis.

*Talent Acquisition and Retention.* We strive to attract, develop and retain high-performing talent, and we support and reward employee performance. Programs to strengthen our talent include an employee referral program, tuition reimbursement, continued training and development and succession planning. We prioritize employee engagement and transparency by implementing programs and processes to ensure our employees have opportunities to ask questions, voice concerns, and share feedback. This is accomplished in part by conducting employee satisfaction surveys as part of the annual review process, and quarterly town hall meetings. In 2024, our employee turnover rate was approximately 11%.

[Table of Contents](#)**AVAILABLE INFORMATION**

We are a fully integrated company using a suite of advanced technologies to provide boiler optimization, efficiency improvement and air pollution reduction and control solutions to utility and industrial customers worldwide. Originally incorporated in 1987 under the laws of the Netherlands Antilles as Fuel-Tech N.V., we were domesticated in the United States on September 30, 2006, and continue as a Delaware corporation with our corporate headquarters at 27601 Bella Vista Parkway, Warrenville, Illinois, 60555-1617. Fuel Tech maintains an Internet website at [www.ftek.com](http://www.ftek.com). Our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Exchange Act are made available through our website as soon as reasonably practical after we electronically file or furnish the reports to the Securities and Exchange Commission. Our website also contains our Corporate Governance Guidelines and Code of Ethics and Business Conduct, as well as the charters of the Audit, Compensation, and Nominating and Corporate Governance committees of the Board of Directors. All of these documents are available in print without charge to stockholders who request them. Information on our website is not incorporated into this report.

**ITEM 1A - RISK FACTORS**

The following is a discussion of the material risk factors; however, they may not be the only risks that we may face. The risks described below should not be considered a complete list of potential risks that we face, and additional risks and uncertainties not currently known to us or that we currently consider immaterial may also negatively impact our business. If any of these risks develop into actual or expected events, our business, financial condition, results of operations or cash flows could be materially and adversely affected, and, as a result, the trading price of our common stock could decline. You should carefully consider the risk factors described below, together with the other information included in this Annual Report on Form 10-K, before you decide to invest in our securities. Please read the cautionary notice regarding forward-looking statements under the heading "Forward-Looking Statements."

**RISKS RELATED TO OUR PRODUCTS AND PRICING****Our Product Portfolio Lacks Diversification**

We have two broad technology segments that provide advanced engineering solutions to meet the pollution control, efficiency improvement, and operational optimization needs of coal, biomass and natural gas-fired energy-related facilities worldwide. They are as follows:

- The Air Pollution Control technology segment includes technologies to reduce NOx emissions in flue gas generated by the firing of natural gas, coal, or biomass from boilers, incinerators, furnaces and other stationary combustion sources. These include NOxOUT<sup>®</sup> and HERT<sup>™</sup> SNCR systems, and SCR systems. Our SCR systems can also include AIG, and GSG<sup>™</sup> systems to provide high NOx reductions at significantly lower capital and operating costs than conventional SCR systems. ULTRA<sup>®</sup> technology creates ammonia at a plant site using safe urea for use with any SCR application. ESP technologies make use of electrostatic precipitator products and services to reduce particulate matter. FGC systems are chemical injection systems offered in markets outside the U.S. and Canada to enhance electrostatic precipitator and fabric filter performance in controlling particulate emissions.
- The FUEL CHEM<sup>®</sup> technology segment which uses chemical processes in combination with advanced CFD and CKM boiler modeling for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in coal-fired furnaces and boilers through the addition of chemicals into the furnace using TIFI<sup>®</sup> Targeted In-Furnace Injection<sup>™</sup> technology.

An adverse development in our advanced engineering solutions business as a result of competition, technological change, government regulation, customers converting to use natural gas or other fuels, or any other factor could have a significantly greater impact than if we maintained more diverse operations.

**We Face Substantial Competition**

Competition in the Air Pollution Control market comes from competitors utilizing their own NOx reduction processes, including SCR systems, SNCR systems, ammonia and urea-based delivery systems for SNCR and SCR, which do not infringe our patented or proprietary technologies. Indirect competition will also arise from business practices such as the purchase rather than the generation of electricity, fuel switching, closure or de-rating of units, and sale or trade of pollution credits and emission allowances. Utilization by customers of such processes or business practices or combinations thereof may adversely affect our pricing and participation in the NOx control market if customers elect to comply with regulations by methods other than the purchase of our Air Pollution Control products. See Item 1 "Products" and "APC Competition" in the *Air Pollution Control* segment overview.

Competition for our FUEL CHEM markets include chemicals sold by specialty chemical companies, such as Imerys, Environmental Energy Services, Inc., and SUEZ Water Technologies.

**Our Dependence Upon Fixed-price Contracts Could Adversely Affect our Operating Results**

The majority of our air pollution control projects are currently performed on a fixed-price basis. Under a fixed-price contract, we agree on the price that we will receive for the entire project, based upon a defined scope, which includes specific assumptions and project criteria. If our estimates of the costs to complete the project are below the actual costs that we incur, our margins will decrease, or we may incur a loss. The revenue, cost and gross profit realized on a fixed-price contract will often vary from the estimated amounts because of unforeseen conditions or changes in job conditions and variations in labor and equipment productivity over the term of the contract. While our fixed-price contracts are typically not individually material to our operating results, if we are unsuccessful in mitigating these risks, we may realize gross profits that are different from those originally estimated and incur reduced profitability or losses on projects. Depending on the size of a project, these variations from estimated contract performance could have a significant effect on our operating results. In general, turnkey contracts to be performed on a fixed-price basis involve an increased risk of significant variations. Generally, our contracts and projects vary in length, depending on the size and complexity of the project, project owner demands and other factors. The foregoing risks are exacerbated for projects with longer-term durations and the inherent difficulties in estimating costs and of the interrelationship of the integrated services to be provided under these contracts whereby unanticipated costs or delays in performing part of the contract can have compounding effects by increasing costs of performing other parts of the contract.

**Customers May Cancel or Delay Projects**

Customers may cancel or delay projects for reasons beyond our control. Our orders normally contain cancellation provisions that permit us to recover our costs, and, for most contracts, a portion of our anticipated profit in the event a customer cancels an order. If a customer elects to cancel an order, we may not realize the full amount of revenues included in our backlog. If projects are delayed, the timing of our revenues could be adversely affected and projects may remain in our backlog for extended periods of time. Revenue recognition occurs over long periods of time and is subject to unanticipated delays. If we receive relatively large orders in any given quarter, fluctuations in the levels of our quarterly backlog can result because the backlog in that quarter may reach levels that may not be sustained in subsequent quarters.

**Our Operating Results May Be Adversely Affected by Product Pricing**

We typically experience significant competition for both of our technology segments which may require us to lower our product prices in order to remain competitive and have a corresponding adverse impact on our realized gross margins and operating profitability. See the risk factor entitled "We Face Substantial Competition" above.

**Our Customer Base Is Highly Concentrated**

A small number of customers have historically accounted for a significant portion of our revenues. During 2024, our five largest customers accounted for approximately 49% of our net revenues, with our largest customer accounting for approximately 16% of our net revenues. There can be no assurance that all significant customers will continue to purchase our

products in the same quantities that they have in the past. The loss of any one of our significant customers or a material reduction in sales to a significant customer could have a material adverse effect on our sales and results of operations.

## **RISKS RELATED TO OUR BUSINESS**

### **Our Financial Performance May Vary Significantly From Period to Period**

Our annual revenues and earnings have varied in the past and are likely to vary in the future. Our contracts generally stipulate customer specific delivery terms and may have contract cycles of a year or more, which subjects these contracts to many factors beyond our control. In addition, contracts that are significantly larger in size than our typical contracts tend to intensify their impact on our annual operating results. Furthermore, as a significant portion of our operating costs are fixed, an unanticipated decrease in our revenues, a delay or cancellation of orders in backlog, or a decrease in the demand for our products, may have a significant impact on our annual operating results. Therefore, our annual operating results may be subject to significant variations and our operating performance in one period may not be indicative of our future performance.

[Table of Contents](#)**Energy Transition**

The strategic priorities and financial performance of our businesses are subject to market and other dynamics related to decarbonization, which can pose risks in addition to opportunities for those businesses. Given the nature of our businesses and the industries we serve, we must anticipate and respond to market, technological, regulatory and other changes driven by broader trends related to decarbonization efforts in response to climate change. These changes present both risks and opportunities for our businesses, many of which provide products and services to customers in sectors like power generation that have historically been carbon intensive and will remain important to efforts globally to lower greenhouse gas emissions for decades to come. For example, the significant decreases in recent years in the levelized cost of energy for renewable sources of power generation (such as wind and solar), along with ongoing changes in government, investor, customer and consumer policies, commitments, preferences and considerations related to climate change, in some cases have adversely affected, and are expected to continue to affect, the demand for and the competitiveness of products and services related to carbonaceous fuel-based power generation, including sales of new air pollution control equipment and the utilization and servicing needs for existing power plants. Continued shifts toward greater penetration by renewables in both new capacity additions and the proportionate share of power generation, particularly depending on the pace and timeframe for such shifts across different markets globally, could have a material adverse effect on our business and our consolidated results.

**Our Manufacturing Operations Are Dependent on Third-party Suppliers**

Although we are not dependent on any one supplier, we are dependent on the ability of our third-party suppliers to supply our raw materials, as well as certain specific component parts. The third-party suppliers upon which we depend may default on their obligations to us due to bankruptcy, insolvency, lack of liquidity, adverse economic conditions, operational failure, fraud, loss of key personnel, or other reasons. We cannot assure that our third-party suppliers will dedicate sufficient resources to meet our scheduled delivery requirements or that our suppliers will have sufficient resources to satisfy our requirements during any period of sustained demand. Failure of suppliers to supply, or delays in supplying, our raw materials or certain components, or allocations in the supply of certain high demand raw components, for any reason, including, without limitation, disruptions in our suppliers' business activities due to cybersecurity incidents, terrorist activity, public health crises, fires or other natural disasters could materially adversely affect our operations and ability to meet our own delivery schedules on a timely and competitive basis. Additionally, our third-party suppliers may provide us with raw materials or component parts that fail to meet our expectations or the expectations of our customers, which could subject us to product liability claims, other claims and litigation.

**Our Use of Subcontractors Could Potentially Harm our Profitability and Business Reputation**

Occasionally we act as a prime contractor in some of the engineered projects we undertake. In our capacity as lead provider and when acting as a prime contractor, we perform a portion of the work on our projects with our own resources and typically subcontract activities such as manufacturing and installation work. In our industry, the lead contractor is normally responsible for the performance of the entire contract, including subcontract work. Thus, when acting as a prime contractor, we are subject to risk associated with the failure of one or more subcontractors to perform as anticipated.

We employ subcontractors at various locations around the world to meet our customers' needs in a timely manner, meet local content requirements and reduce costs. Subcontractors perform all of our manufacturing for customers. The use of subcontractors decreases our control over the performance of these functions and could result in project delays, escalated costs and substandard quality. These risks could adversely affect our profitability and business reputation. In addition, many of our competitors, who have greater financial resources and greater bargaining power than we have, use the same subcontractors that we use and could potentially influence our ability to hire these subcontractors. If we were to lose relationships with key subcontractors, our business could be adversely impacted.

**Operational Execution**

Operational challenges could have a material adverse effect on our business, reputation, financial position, results of operations and cash flows. The Company's financial results depend on the successful execution of our businesses' operating plans across all steps of the engineering and design, manufacture, installation and service lifecycle. We continue working to improve the operations and execution of our businesses and our ability to make the desired improvements will be a significant factor in our overall financial performance. Operational failures in any of our business segments that result in quality problems or potential product, environmental, health or safety risks, could have a material adverse effect on our business, reputation, financial position and results of operations. In addition, for some large-scale projects we may be required by our customer to take on the full scope of engineering, procurement, construction or other services. These types of projects often pose unique risks related to their location, scale, complexity, duration and pricing or payment structure. Performance issues or schedule delays can arise due to inadequate technical expertise, unanticipated project modifications, developments at project sites, environmental, health and safety issues, execution by or coordination with suppliers, subcontractors or consortium partners, financial difficulties of our customers or significant partners or compliance with government regulations, and these can lead to cost overruns, contractual penalties, liquidated damages and other adverse consequences. Operational, quality or other issues at large projects, or across our projects portfolio more broadly, can adversely affect our business, reputation or results of operations.

**We Rely on Several Key Employees Whose Absence or Loss Could Disrupt our Operations or Be Adverse to our Business**

We are highly dependent on the experience of our management in the continuing development of our operations. The loss of the services of certain of these individuals would have a material adverse effect on our business. Although we have employment and non-competition agreements with certain of our key employees, as a practical matter, those agreements will not assure the retention of our employees, and we may not be able to enforce all of the provisions in any employment or non-competition agreement. Our future success will depend in part on our ability to attract and retain qualified personnel to manage our development and future growth. We cannot guarantee that we will be successful in attracting and retaining such personnel. Our failure to recruit additional key personnel could have a material adverse effect on our financial condition, results of operations and cash flows.

**Increasing Costs for Manufactured Components May Adversely Affect our Profitability**

Our products utilize a variety of manufactured components, including metallurgical catalysts, storage tanks, pumps and fans. The current economic environment has resulted, and may continue to result, in price volatility and inflation of these costs. Further increases in the price of these items could further materially increase our operating costs and materially adversely affect our profit margins if we are unable to successfully pass such costs on to our customers.

**Cybersecurity**

Increased cybersecurity requirements, vulnerabilities, threats and more sophisticated and targeted computer crime pose a risk to our systems, networks, products, solutions, services and data. Increased global cybersecurity vulnerabilities, threats, computer viruses and more sophisticated and targeted cyber-related attacks such as ransomware, as well as cybersecurity failures resulting from human error and technological errors, pose a risk to the security of Fuel Tech and its customers', partners', suppliers' and third-party service providers' infrastructure, products, systems and networks and the confidentiality, availability and integrity of Fuel Tech's and its customers' data. As the perpetrators of such attacks become more capable, and as critical infrastructure is increasingly becoming digitized, the risks in this area continue to grow. There can be no assurance that our efforts to mitigate cybersecurity risks by employing a number of measures, including employee training, monitoring and testing, vulnerability testing and maintenance of protective systems and contingency plans, will be sufficient to prevent, detect and limit the impact of cyber-related attacks, and we remain vulnerable to known or unknown threats. A significant cyber-related attack could result in other negative consequences, including damage to our reputation or competitiveness, remediation, increased digital infrastructure or other costs that are not covered by insurance, litigation or regulatory action.

**We May Not Be Able to Successfully Protect our Patents and Proprietary Rights**

We hold licenses to or own a number of patents for our products and processes. In addition, we also have numerous patent applications pending both in the U.S. and abroad. There can be no assurance that any of our pending patent applications will be granted or that our outstanding patents will not be challenged, overturned or otherwise circumvented by competitors. In foreign markets, the absence of harmonized patent laws makes it more difficult to ensure consistent respect for our patent rights in emerging markets. In addition, certain critical technical information relating to our products which is not patented is held as trade secret, and protected by trade secret laws and restrictions on disclosure contained in

our confidentiality and licensing agreements. There can be no assurance that such protections will prove adequate or that we will have adequate remedies against contractual counterparties for disclosure of our trade secrets or other violations of our intellectual property rights. See Item 1 above under the caption "*Intellectual Property.*"

**Our Results May Be Affected By Foreign Operations**

We currently have foreign operations predominantly in Europe with our office located in Gallarate, Italy. The future business opportunities in this market are dependent on the continued implementation and enforcement of regulatory policies that will benefit our technologies, the acceptance of our engineering solutions in such markets, the ability of potential customers to utilize our technologies on a competitive, cost-effective basis, and our ability to protect and enforce our intellectual property rights.

[Table of Contents](#)**We May Not Be Able to Purchase Raw Materials on Commercially Advantageous Terms**

Our FUEL CHEM technology segment is dependent, in part, upon a supply of magnesium hydroxide. Any adverse changes in the availability of this chemical will likely have an adverse impact on ongoing operation of our FUEL CHEM programs. On March 4, 2009, we entered into a Restated Product Supply Agreement (PSA) with Martin Marietta Magnesia Specialties, LLC (MMMS) in order to assure the continuance of a stable supply from MMMS of magnesium hydroxide products for our requirements in the U.S. and Canada. The term of the PSA expires on December 31, 2025. Pursuant to the PSA, MMMS supplies us with magnesium hydroxide products manufactured pursuant to our specifications and we have agreed to purchase from MMMS, and MMMS has agreed to supply, 100% of our requirements for such magnesium hydroxide products for our customers who purchase such products for delivery in the U.S. and Canada. There can be no assurance that we will be able to obtain a stable source of magnesium hydroxide in markets outside the U.S.

**RISKS RELATED TO OUR INDUSTRY****Demand for Our APC and FUEL CHEM Products is Affected by External Market Factors**

Reduced coal-fired electricity demand across the U.S. has led to production declines. Contributing factors to this decline in coal-fired generation were: 1) lower natural gas prices which allowed utility operators to increase the amount of power generated from natural gas plants, 2) increased cost of environmental compliance with current environmental regulations, 3) constrained funding for capital projects, and 4) the increased production of electricity from renewable sources, such as wind and solar.

**Our Business Is Dependent on Continuing Air Pollution Control Regulations and Enforcement**

Our business is significantly impacted by and dependent upon the regulatory environment surrounding the electricity generation market. Our business will be adversely impacted to the extent that regulations are repealed or amended to significantly reduce the level of required NOx or particulate matter reduction, or to the extent that regulatory authorities delay or otherwise minimize enforcement of existing laws. Additionally, long-term changes in environmental regulation that threaten or preclude the use of coal or other fossil fuels as a primary fuel source for electricity production which result in the reduction or closure of a significant number of fossil fuel-fired power plants may adversely affect our business, financial condition and results of operations. See Item 1 above under the caption "Regulations and Markets" in the *Air Pollution Control* segment overview.

**GENERAL RISK FACTORS****Geopolitical and Unexpected Events May Impact New or Existing Projects and Prices and Availability of Raw Materials, Energy and Other Materials.**

These events may also impact energy and regulatory policy nationally or regionally for the impacted regions. Such disruptions could have a material adverse effect on our business and financial results.

**ITEM 1B - UNRESOLVED STAFF COMMENTS**

None

**ITEM 1C - CYBERSECURITY****Risk Assessment and Strategy**

Fuel Tech regularly evaluates cybersecurity risk from computer viruses and more sophisticated and targeted cyber-related attacks such as ransomware, as well as cybersecurity failures resulting from human error and technological errors. Such risks are reviewed by our Information Technology Steering Committee on a quarterly basis, or more frequently if deemed appropriate.

Our overall strategy in combatting known cybersecurity risks includes a variety of individual tactics, including:

- the use of antivirus software, virtual private networks, email security, as well as other software to prevent and detect data intrusions.
- the deployment of updates and patches as they are available and maintaining the current versions of major software to reduce the exposure to vulnerabilities.
- the use of third-party service to conduct mandatory online training for all employees regarding identifying and avoiding cyber-security risks.
- the review of the security procedures used by third parties that may host or otherwise have access to Fuel Tech's data.
- the deployment of third-party cyber-security experts to perform penetration testing on our internal and external networks and systems in an effort to identify potential vulnerabilities.
- if necessary, the use of third-party security experts if and when an incident is detected

We are not aware of having experienced any material cybersecurity incidents. We are not aware of any existent cybersecurity threats that would materially affect, or are reasonably likely to materially affect, our business strategy, results of operations or financial conditions. For more information, please see "Cybersecurity" under Item 1A "Risk Factors" above.

**Management Oversight**

Day-to day management of cybersecurity threats is conducted by our Information Technology department which is charged with identifying and reporting threats to senior management. On a quarterly basis, cybersecurity is reviewed by our Information Technology Steering Committee, which is comprised of our Chief Executive Officer, Chief Financial Officer, General Counsel and Head of Information Technology.

**Board Oversight**

The Audit Committee of our Board of Directors, which is composed of all non-employee directors, is responsible for oversight of management's efforts to eliminate cybersecurity risks.

**ITEM 2 - PROPERTIES**

We own an office building in Warrenville, Illinois, which has served as our corporate headquarters since June 23, 2008. This facility, with approximately 40,000 square feet of office space, is sufficient to meet our requirements for the foreseeable future.

We also operate from leased office facilities and we do not segregate any of these leased facilities by operating business segment. The terms of the Company's primary lease arrangements as of December 31, 2024 are as follows:

- The Gallarate, Italy building lease, for approximately 1,335 square feet, runs through April 30, 2031. This facility serves as the operating headquarters for our European operations.
- The Aurora, IL warehouse lease, for approximately 11,000 square feet, runs through March 31, 2031. This facility serves as an outside warehouse facility.

**ITEM 3 - LEGAL PROCEEDINGS**

From time to time we are involved in litigation with respect to matters arising from the ordinary conduct of our business. In the opinion of management, based upon presently available information, either adequate provision for anticipated costs have been accrued or the ultimate anticipated costs will not materially affect our consolidated financial position, results of operations, or cash flows.

See Note 9 "Commitments and Contingencies" in the Notes to the Consolidated Financial Statements in this Annual Report on Form 10-K.

**ITEM 4 – MINE SAFETY DISCLOSURES**

Not Applicable

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## PART II

### ITEM 5 - MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASE OF EQUITY SECURITIES

#### Market

Our common stock has been traded since September, 1993 on The NASDAQ Stock Market, Inc, where it trades under the symbol FTEK.

#### Holders

As of February 28, 2025, there were 50 holders of record of our common stock, which does not include the number of beneficial owners whose common stock was held in street name or through fiduciaries.

#### Dividends

We have never paid cash dividends on the common stock and have no current plan to do so in the foreseeable future. The declaration and payment of dividends on the common stock is subject to the discretion of our Board of Directors. The decision of the Board of Directors to pay future dividends will depend on general business conditions, the effect of a dividend payment on our financial condition, and other factors the Board of Directors may consider relevant. The current policy of the Board of Directors is to reinvest earnings in operations to promote future growth.

### ITEM 6 - RESERVED

### ITEM 7 - MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS *(amounts in thousands of dollars)*

*Management's discussion and analysis ("MD&A") should be read in conjunction with the consolidated financial statements and accompanying notes included in Item 8 of this Annual Report on Form 10-K, which include additional information about our accounting policies, practices and the transactions underlying our financial results. The preparation of our consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts in our consolidated financial statements and the accompanying notes including various claims and contingencies related to lawsuits, taxes, environmental and other matters arising during the normal course of business. We apply our best judgment, our knowledge of existing facts and circumstances and actions that we may undertake in the future in determining the estimates that affect our consolidated financial statements. We evaluate our estimates on an ongoing basis using our historical experience, as well as other factors we believe appropriate under the circumstances, such as current economic conditions, and adjust or revise our estimates as circumstances change. As future events and their effects cannot be determined with precision, actual results may differ from these estimates.*

#### Overview

In 2024, the Company continued to successfully execute on existing orders. We continue to invest in development of new technologies to expand our product offerings into the water and waste-water treatment market. Our capital resources are sufficient for our immediate and longer-term needs, and we continue to enjoy the services and support of a dedicated workforce. We expect that our cost control efforts will maintain our existing levels of operating expenditures and the diminishing effects of the pandemic should lead to an improved market outlook.

#### Key Operating Factors

Sales growth for our two reportable business segments is dependent upon the continued utilization of carbon-based fuels, such as natural gas and coal, for the generation of electric power. For our APC market segment, sales are driven primarily by our customers need to comply with federal, state and local regulatory mandates for the reduction or control of emissions of NOx. For our FUEL CHEM market segment, sales are dependent primarily upon our customers usage of our chemical technologies in order to mitigate slagging and fouling on coal or oil based combustion units in order to enjoy longer run times without the necessity of taking the combustion unit off line for cleaning.

We believe continued demand for our products will be led by the increased demand for electricity in emerging markets and new industries that are highly dependent upon electric power, such as the mega-computers required in order to power artificial intelligence and cryptocurrencies. While the market will continue to shift towards alternate forms of power generation continues, we anticipate natural gas and coal will remain significant sources of electricity generation in the future.

Our FUEL CHEM segment showed improved performance in 2024, experiencing an increase in segment revenues compared to 2023. Revenue growth was driven by the return of previously dormant customers as well as a new commercial program which was added following a successful site demonstration.

Our APC business experienced a decline in revenues and segment operating profits in 2024 compared to 2023 primarily due to customer-driven project delays and project timing. Despite this, we are encouraged by the pace and depth of our business development activities, which reflect an increased focus on global emissions protocols across a variety of fuel sources. Our Consolidated APC backlog at year end was \$6,175.

#### Market Pressures

Our senior management team monitors and manages our ability to operate effectively as the result of market pressures. In particular, we are currently experiencing inflationary pressures for certain materials and labor, and long lead times for equipment components embodied in our products such as pumps, fans and catalysts. We continue to monitor the activities of our existing and alternate suppliers and have taken other mitigating actions to mitigate supply disruptions; however, we cannot guarantee that we can continue to do so in the future. In this event, our business, results and financial condition could be adversely affected.

#### Background

We have two broad technology segments that provide advanced engineered solutions to meet the pollution control, efficiency improvement and operational optimization needs of energy-related facilities worldwide. They are as follows:

##### *Air Pollution Control Technologies*

The Air Pollution Control technology segment includes technologies to reduce NOx emissions in flue gas generated by the firing of natural gas, biomass or coal from boilers, incinerators, furnaces and other stationary combustion sources. These include SCR systems and NOxOUT and HERT™ SNCR systems. Our SCR systems can also include AIG, and GSG™ systems to provide high NOx reductions at significantly lower capital and operating costs than conventional SCR systems. ULTRA® technology creates ammonia at a plant site using safe urea for use with any SCR application. ESP technologies make use of electrostatic precipitator products and services to reduce particulate matter. FGC systems are chemical injection systems offered in markets outside the U.S. and Canada to enhance electrostatic precipitator and fabric filter performance in controlling particulate emissions. We distribute our products through our direct sales force and third-party sales agents.

##### *FUEL CHEM Technologies*

The FUEL CHEM technology segment, which uses chemical processes in combination with advanced CFD and CKM boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in coal-fired furnaces and boilers through the addition of chemicals into the furnace using TIFI® Targeted In-Furnace Injection™ technology. Fuel Tech sells its FUEL CHEM program through its direct sales force and agents to industrial and utility power-generation facilities. FUEL CHEM programs have been installed on combustion units in North America, Europe, and the Pacific Rim, treating a wide variety of solid and liquid fuels, including coal, heavy oil, biomass and municipal waste. The FUEL CHEM program improves the efficiency, reliability and environmental status of plants operating in the electric utility, industrial, pulp and paper, waste-to-energy, university and district heating markets and offers numerous operational, financial and environmental benefits to owners of boilers, furnaces and other combustion units.

The key market dynamic for both technology segments is the continued use of fossil fuels, especially coal, as the principal fuel source for global electricity production. In 2024, coal accounted for approximately 15% of all U.S. electricity generation and roughly 35% of global electricity generation. Major coal consumers include China, the U.S. and India.

### Critical Accounting Policies and Estimates

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the U.S. (GAAP), which require us to make estimates and assumptions. We believe that certain accounting policies (see Note 1 to the consolidated financial statements) involve a higher degree of judgment, estimates and assumptions and are deemed critical. We routinely discuss our critical accounting policies with the Audit Committee of the Board of Directors.

#### *Revenue Recognition: Air Pollution Control Technology*

Fuel Tech's APC contracts are typically six to eighteen months in length. A typical contract will have three or four critical operational measurements that, when achieved, serve as the basis for us to invoice the customer via progress billings. At a minimum, these measurements will include the generation of engineering drawings, the shipment of equipment and the completion of a system performance test.

As part of most of its contractual APC project agreements, Fuel Tech will agree to customer-specific acceptance criteria that relate to the operational performance of the system that is being sold. These criteria are determined based on modeling that is performed by Fuel Tech personnel, which is based on operational inputs that are provided by the customer. The customer will warrant that these operational inputs are accurate as they are specified in the binding contractual agreement. Further, the customer is solely responsible for the accuracy of the operating condition information; typically all performance guarantees and equipment warranties granted by us are voidable if the operating condition information is inaccurate or is not met.

Since control transfers over time, revenue is recognized based on the extent of progress towards completion of the single performance obligation. Fuel Tech uses the cost-to-cost input measure of progress for our contracts since it best depicts the transfer of assets to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost input measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. Costs to fulfill include all internal and external engineering costs, equipment charges, inbound and outbound freight expenses, internal and site transfer costs, installation charges, purchasing and receiving costs, inspection costs, warehousing costs, project personnel travel expenses and other direct and indirect expenses specifically identified as project- or product-line related, as appropriate (e.g. test equipment depreciation and certain insurance expenses). Unexpected or unknown costs could affect the timing of revenue recognition and the cumulative profitability of the related projects.

Fuel Tech's APC product line also includes ancillary revenue for post contractual goods and services. Revenue associated with these activities are recognized at a point in time when delivery of goods or completion of the service obligation is performed.

Fuel Tech has installed over 1,300 units with APC technology and normally provides performance guarantees to our customers based on the operating conditions for the project. As part of the project implementation process, we perform system start-up and optimization services that effectively serve as a test of actual project performance. We believe that this test, combined with the accuracy of the modeling that is performed, enables revenue to be recognized prior to the receipt of formal customer acceptance.

As of December 31, 2024 and 2023, we had no construction contracts in progress that were identified as a loss contract.

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the consolidated balance sheets. In our Air Pollution Control technology segment, amounts are billed as work progresses in accordance with agreed-upon contractual terms. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets. These assets are reported on the consolidated balance sheet on a contract-by-contract basis at the end of each reporting period. At December 31, 2024, 2023, and 2022 contract assets for APC technology projects were approximately \$2,075, \$2,285, and \$3,082, respectively, and are included in accounts receivable on the consolidated balance sheets.

However, the Company will periodically bill in advance of costs incurred before revenue is recognized, resulting in contract liabilities. These liabilities are reported on the consolidated balance sheet on a contract-by-contract basis at the end of each reporting period. Contract liabilities were \$721, \$1,279, and \$372 at December 31, 2024, 2023, and 2022, respectively, and are included in other accrued liabilities on the consolidated balance sheets.

#### *Assessment of Potential Impairment of Goodwill*

Goodwill is not amortized but rather is reviewed annually as of the first day of the fourth quarter, or more frequently if indicators arise, for impairment. Such indicators include a decline in expected cash flows, a significant adverse change in legal factors or in the business climate, unanticipated competition, a decrease in our market capitalization to an amount less than the carrying value of our assets, or slower growth rates, among others. We do not have any indefinite-lived intangible assets other than goodwill.

Goodwill is allocated among and evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. We have two reporting units: the FUEL CHEM segment and the APC technology segment. Goodwill is only related to the FUEL CHEM segment.

Our evaluation of goodwill impairment involves first assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. We may bypass this qualitative assessment, or determine that based on our qualitative assessment considering the totality of events and circumstances including macroeconomic factors, industry and market considerations, current and projected financial performance, a sustained decrease in our share price, or other factors, that additional impairment analysis is necessary. This additional analysis involves comparing the current fair value of a reporting unit to its carrying value. Fuel Tech uses a discounted cash flow (DCF) model to determine the current fair value of its FUEL CHEM reporting unit as this methodology was deemed to best quantify the present values of our expected future cash flows and yield a fair value that should be in line with the aggregate market value placed on the outstanding common stock as reflected by the current stock price multiplied by the outstanding shares of common stock. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volumes and prices, costs to produce and working capital changes. Events outside our control, specifically market conditions that impact revenue growth assumptions, could significantly impact the fair value calculated. Management considers historical experience and all available information at the time the fair values of its reporting units are estimated. However, actual fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of goodwill.

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The application of our DCF model in estimating the fair value of each reporting segment is based on the 'net asset' approach to business valuation. In using this approach for each reportable segment, we forecast segment revenues and expenses out to perpetuity and then discount the resulting cash flows to their present value using an appropriate discount rate. The forecast considers, among other items, the current and expected business environment, expected changes in the fixed and variable cost structure as the business grows, and a revenue growth rate that we feel is both achievable and sustainable. The discount rate used is composed of a number of identifiable risk factors, including equity risk, company size, and certain company-specific risk factors such as our debt-to-equity ratio, among other factors, that when added together, results in a total return that a prudent investor would demand for an investment in our Company. In the event the estimated fair value of a reporting unit per the DCF model is less than the carrying value, we would record an impairment charge for the amount by which the carrying value exceeds the estimated fair value of the reporting unit.

The Company utilizes Accounting Standards Update (ASU) 2017-04, Intangibles-Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment for the annual goodwill impairment test.

Fuel Tech performed its annual goodwill impairment analysis for its FUEL CHEM reporting unit as of October 1, 2024 and determined that no impairment of goodwill existed within the FUEL CHEM technology segment.

#### *Impairment of Long-Lived Assets*

Under the guidance set forth in Accounting Standards Update (ASU) 2014-08, Property, Plant and Equipment (Topic 360), long-lived assets, including property and equipment and intangible assets, are reviewed for impairment when events and circumstances indicate that the carrying amount of the assets (or asset group) may not be recoverable. If impairment indicators exist, we perform a more detailed analysis and an impairment loss is recognized when either estimated future undiscounted cash flows expected to result from the use of the asset (or asset group) and its eventual disposition are less than the carrying amount or the determined fair value is less than the carrying amount. This process of analyzing impairment involves examining the operating condition of individual assets (or asset group) and estimating a fair value based upon current condition, relevant market factors and the remaining estimated operational life compared to the asset's remaining depreciable life. Quoted market prices and other valuation techniques are used to determine expected fair value. We performed a detailed analysis of potential long-lived asset impairment during the fourth quarter of 2024 and determined no impairment exists. There was no impairment recorded during 2024.

A significant portion of our property and equipment is comprised of assets deployed at customer locations relating to our FUEL CHEM technology asset group, and due to the shorter-term duration over which this equipment is depreciated, the likelihood of impairment is mitigated. The discontinuation of a FUEL CHEM program at a customer site would most likely result in the re-deployment of all or most of the affected assets to another customer location rather than an impairment.

#### *Valuation Allowance for Deferred Income Taxes*

Deferred tax assets represent deductible temporary differences and net operating loss and tax credit carryforwards. A valuation allowance is recognized if it is more likely than not that some portion of the deferred tax asset will not be realized. At the end of each reporting period, management reviews the realizability of the deferred tax assets. As part of this review, we consider if there are taxable temporary differences that could generate taxable income in the future, if there is the ability to carry back the net operating losses or credits, if there is a projection of future taxable income, and if there are any tax planning strategies that can be readily implemented. As required by ASC 740 "Income Taxes", a valuation allowance must be established when it is more likely than not that all or a portion of a deferred tax asset will not be realized. This assessment resulted in a valuation allowance on our deferred tax assets of \$13,697 and \$15,699 at December 31, 2024 and 2023, respectively.

#### *Stock-Based Compensation*

We recognize compensation expense for employee equity awards ratably over the requisite service period of the award, adjusted for estimated forfeitures.

We utilize the Black-Scholes option-pricing model to estimate the fair value of stock option awards. Determining the fair value of stock options using the Black-Scholes model requires judgment, including estimates for (1) risk-free interest rate - an estimate based on the yield of zero-coupon treasury securities with a maturity equal to the expected life of the option; (2) expected volatility - an estimate based on the historical volatility of our common stock for a period equal to the expected life of the option; and (3) expected life of the option - an estimate based on historical experience including the effect of employee terminations.

#### **Recently Issued Accounting Pronouncements**

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which provides guidance for additional disclosures around the tax rate reconciliation and other tax disclosures. The standard will become effective for the annual reporting period beginning on January 1, 2025 for Fuel Tech. Application of the amendments should be applied prospectively but retrospective application is permitted. The Company is reviewing the impact of this new pronouncement and expects to incorporate the additional disclosures prospectively in the Tax note when the ASU is adopted.

In November 2024, the FASB issued ASU 2024-03, Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses, which requires public business entities to disclose in the notes to their financial statements disaggregated information about certain costs and expenses in both annual and interim filings. The standard will become effective for the annual reporting period beginning January 1, 2027 for Fuel Tech. The Company is reviewing the impact of this new pronouncement and expects to incorporate the additional disclosures in the relevant footnotes when the ASU is adopted.

[Table of Contents](#)**2024 versus 2023**

Highlights for the year ended December 31, 2024, compared to 2023:

	For the years ended December 31,		
	2024	2023	Change
<b>Revenues</b>	\$ 25,133	\$ 27,081	\$ (1,948)
<b>Costs and expenses:</b>			
Cost of sales	14,510	15,425	(915)
Selling, general and administrative	13,761	12,803	958
Research and development	1,564	1,511	53
Total costs and expenses	29,835	29,739	96
<b>Operating loss</b>	(4,702)	(2,658)	(2,044)
Interest expense	—	(21)	21
Interest income	1,251	1,300	(49)
Other income (expense), net	1,585	(90)	1,675
<b>Loss before income taxes</b>	(1,866)	(1,469)	(397)
Income tax expense	(77)	(69)	(8)
<b>Net loss</b>	\$ (1,943)	\$ (1,538)	\$ (405)

**Revenues**

Revenues for the years ended December 31, 2024 and 2023 were \$25,133 and \$27,081, respectively. The year-over-year decrease of \$1,948 or 7%, was driven by the decrease in revenue in our APC technology segment in our U.S. operations, partially offset by an increase in our FUEL CHEM technology segment revenues. Our U.S. revenues decreased by \$3,595, or 17%, from \$21,397 in 2023 to \$17,802 in 2024, and our international revenues increased by \$1,647, or 29%, from \$5,684 in 2023 to \$7,331 in 2024.

Revenues for the APC technology segment were \$11,242 for the year ended December 31, 2024, a decrease of \$2,241, or 17%, versus fiscal 2023. The decrease in APC revenue for the twelve-month period ending December 31, 2024 in comparison to the prior year amount was principally related to the timing of project execution and customer driven delays. Consolidated APC backlog was \$6,175 and \$7,458 at December 31, 2024 and 2023, respectively. Our backlog at December 31, 2024 consists of U.S. domestic projects totaling \$1,877 and international projects totaling \$4,298.

Revenues for the FUEL CHEM technology segment for the year ended December 31, 2024 were \$13,891, an increase of \$293, or 2%, versus fiscal 2023. The increase in FUEL CHEM revenue was due primarily to renewed orders from previously dormant customers as well as the addition of a new customer following a successful site demonstration. We remain focused on attracting new customers in our FUEL CHEM business for both coal and non-coal applications. Our ability to attract new coal customers continues to be affected by the electric demand market, fuel switching as a result of low natural gas prices, and growth of renewable wind and solar power.

**Cost of sales and gross margin**

Consolidated cost of sales for the years ended December 31, 2024 and 2023 was \$14,510 and \$15,425, respectively. Consolidated gross margin percentages for the years ended December 31, 2024 and 2023 were 42% and 43%, respectively. The gross margins for the APC technology segment decreased to 37% in 2024 from 38% in 2023. The overall decrease in gross margin in the APC technology segment is primarily due to product and project mix. Gross margin percentage for the FUEL CHEM technology segment decreased to 46% from 48% for the years ended December 31, 2024 and 2023. This decrease is primarily due to demonstration costs and other administrative costs associated with new and previously dormant accounts.

**Selling, general and administrative**

Selling, general and administrative expenses for the years ended December 31, 2024 and 2023 were \$13,761 and \$12,803, respectively. The increase of \$958, or 7%, is primarily attributed to the following:

- An increase in employee related costs of \$542
- An increase in professional services and other expenses of \$251
- An increase in depreciation expense of \$122
- An increase in office and administrative costs relating to our foreign subsidiaries of \$43

**Depreciation and Amortization**

Depreciation and amortization are calculated using the straight-line method and included in selling, general and administrative expense. For the years ended December 31, 2024 and 2023, the Company recorded depreciation of \$403 and \$281 and amortization of \$57 and \$61, respectively.

**Research and development**

Research and development expenses were \$1,564 and \$1,511 for the years ended December 31, 2024 and 2023, respectively. The expenditures in our research and development expenses were focused on new product development efforts in the pursuit of commercial applications for technologies outside of our traditional markets, and in the development and analysis of new technologies that could represent incremental market opportunities. Expenditures were mainly attributed to water treatment technologies and more specifically, our DGI® Dissolved Gas Infusion Systems, an innovative alternative to current gas transfer and chemical replacement technologies. This infusion process has a variety of applications in the water and wastewater segments, including irrigation, treatment of natural waters, supply of oxygen for biological remediation, wastewater odor management, pH adjustment, re-carbonization, etc. DGI® technology benefits include improved treatment performance and reduced treatment time, and the potential for reduced energy consumption, along with lower installation and operating costs. Third party validation testing of the efficiency of transferring oxygen to a treatment basin has been completed and results have been published.

**Interest income**

Interest income was \$1,251 for the year ended December 31, 2024 compared to \$1,300 for the same period in 2023. Interest income decreased due to a decrease in the balance held in money market funds.

**Other income (expense), net**

Other income, net was \$1,585 for the year ended December 31, 2024 compared to Other expense, net of \$90 for the same period in 2023. The increase of \$1,675 is due primarily to the employee retention credit.

**Income tax expense**

For the year ended December 31, 2024, we recorded an income tax expense of \$77 on pre-tax loss of \$1,866. Our effective tax rates were (2.9)% and (4.8)% for the years ended December 31, 2024 and 2023, respectively. For the year ended December 31, 2023, we recorded an income tax expense of \$69 on pre-tax income of \$1,469. The effective tax rate for the year ended December 31, 2024 differed from the federal statutory rate of 21% as a result of establishing a deferred tax liability associated with a certain book-to-tax timing difference.

[Table of Contents](#)**Liquidity and Sources of Capital**

At December 31, 2024, we had cash and cash equivalents of \$8,510 (which includes \$631 of cash equivalents) and working capital of \$23,764 versus cash and cash equivalents of \$17,578 (which includes \$5,083 of cash equivalents) and working capital of \$32,633 at December 31, 2023. We have no outstanding debt other than our outstanding letters of credit, under our Investment Collateral Security agreement with BMO Harris Bank, N.A. (the Investment Collateral Security agreement), which does not have any financial covenants. We expect to continue operating under this arrangement for the foreseeable future.

Operating activities used cash of \$3,433 for the year ended December 31, 2024, primarily due to the employee retention credit receivable of \$1,677, an increase in accounts receivable balances of \$1,127, a decrease in accrued liabilities and other non-current liabilities of \$312, and adjustments for non-cash items from our net loss from continuing operations for non-cash interest income on held-to-maturity securities of \$132, partially offset by a decrease in prepaid expenses, other current assets, and other non-current assets of \$292, an increase in accounts payable balances of \$519, a decrease in inventory balances of \$41, and adjustments for non-cash items from our net loss from continuing operations for depreciation and amortization of \$460 and stock compensation expense of \$446.

Operating activities provided cash of \$696 for the year ended December 31, 2023, primarily due to a decrease in accounts receivable balances of \$1,039 and an increase in accrued expenses and other non-current liabilities of \$1,239, partially offset by an increase in accounts payable balances of \$295 and adjustments for non-cash items from our net loss from continuing operations for interest income on held-to-maturity securities of \$433, depreciation and amortization of \$342 and stock compensation expense of \$389.

Investing activities used cash of \$5,443 and \$6,444 for the years ended December 31, 2024 and 2023, respectively. Investing activities for the years ended December 31, 2024 and 2023 primarily consisted of purchases of HTM debt securities as investments of \$18,060 and \$14,026, respectively, and the purchases of equipment and patent related costs of \$378 and \$418, respectively. Investing activities for the years ended December 31, 2024 and 2023 were partially funded by the maturities of debt securities of \$12,995 and \$8,000, respectively.

Financing activities used cash of \$95 and provided cash of \$42 for the years ended December 31, 2024 and 2023. In 2024, the financing activity was related to taxes paid on behalf of equity award participants on the vesting of restricted stock units. In 2023, the financing activity was related to proceeds from the exercise of stock options.

We continue to monitor our liquidity needs and in response to our recent periods of net losses have taken measures to reduce expenses and restructure operations which we feel are necessary to ensure we maintain sufficient working capital and liquidity to operate the business and invest in our future. We have evaluated our ongoing business needs and considered the cash requirements of our base business of Air Pollution Control and FUEL CHEM. This evaluation included consideration of customer and revenue trends in our APC and FUEL CHEM business segments, current operating structure and expenditure levels, and other research and development initiatives. Based on this analysis, management believes that currently we have sufficient cash and working capital to operate our base APC and FUEL CHEM businesses. We believe our current cash position and net cash flows expected to be generated from operations are adequate to fund planned operations of the Company for the next 12 months.

We expect capital expenditures in 2025 for the DGI® business, maintenance of field equipment, computer and systems, and general office equipment. We expect to fund our capital expenditures with cash from operations or cash on hand.

The Company's investment policy provides for \$20,000 in funds at BMO Harris Bank (BMO Harris) to be invested in held-to-maturity debt securities of United States (US) Treasuries, including Notes, Bonds, and Bills, or US Government Agency securities. The funds are held in money market funds until they are invested in those securities. The investments are structured to create a maturity "ladder" where the proceeds from maturities are re-invested to maintain a balance of short- and long-term investments based on the expected business needs. Maturities are between three and thirty-six months.

The Company's Investment Collateral Security agreement with BMO Harris is used for the sole purpose of issuing standby letters of credit and requires us to pledge our investments as collateral for 150% of the aggregate face amount of outstanding standby letters of credit. The Company pays 250 basis points on the face values of outstanding letters of credit. There are no financial covenants set forth in the Investment Collateral Security agreement. At December 31, 2024, the Company had outstanding standby letters of credit totaling approximately \$1,860 under the Investment Collateral Security agreement. At December 31, 2024, the investments held as collateral totaled \$2,790. Fuel Tech is committed to reimbursing the issuing bank for any payments made by the bank under these instruments. The outstanding standby letters of credit mature as follows:

	<u>Total</u>	<u>2025</u>	<u>2026</u>	<u>Thereafter</u>
Standby letters of credit and bank guarantees	\$ 1,860	\$ 1,166	\$ 694	\$ —
Total	<u>\$ 1,860</u>	<u>\$ 1,166</u>	<u>\$ 694</u>	<u>\$ —</u>

**ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

Our earnings and cash flow are subject to fluctuations due to changes in foreign currency exchange rates. We do not enter into foreign currency forward contracts or into foreign currency option contracts to manage this risk due to the nature of the transactions involved.

We are also exposed to changes in interest rates primarily due to our debt arrangement (refer to Note 11 to the consolidated financial statements). A hypothetical 100 basis point adverse move in interest rates along the entire interest rate yield curve would not have a materially adverse effect on interest expense during the year ended December 31, 2024.

[Table of Contents](#)**ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA****Report of Independent Registered Public Accounting Firm**

To the Stockholders and the Board of Directors of Fuel Tech, Inc.

**Opinion on the Financial Statements**

We have audited the accompanying consolidated balance sheets of Fuel Tech, Inc. and its subsidiaries (the Company) as of December 31, 2024 and 2023, the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for the years then ended, and the related notes to the consolidated financial statements (collectively, the financial statements). In our opinion, the 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 years then ended, in conformity with accounting principles generally accepted in the United States of America.

**Basis for Opinion**

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. 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 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 audit 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 provide 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.

**Impairment of Goodwill**

As described in Note 1 of the financial statements, goodwill is tested for impairment at least annually as of the first day of the Company's fourth quarter, or more frequently if events or changes in circumstances indicate that the carrying value may not be recoverable. The Company's evaluation of goodwill impairment involves the comparison of the fair value of the Company's reporting units to their carrying values. The Company uses a discounted cash flow analysis to determine the current fair value of the Company's FUEL CHEM reporting unit. This requires management to make significant estimates and assumptions including estimates of future growth rates, operating margins and discount rates based on the estimated weighted average cost of capital for the business. Changes in these assumptions could have a significant impact on the fair value, which could have an impact on the conclusion of impairment, if any.

The Company performed its impairment analysis as of October 1, 2024. As part of the impairment assessment, the Company's management determined that the fair value of the FUEL CHEM reporting unit exceeded its carrying value. As a result, no impairment charge was recorded in the consolidated statement of operations for the year ended December 31, 2024. Key financial assumptions used to determine the discounted cash flows of the reporting unit were developed by management.

We identified the evaluation of goodwill impairment as a critical audit matter because of the significant assumptions and judgments made by management within the discounted cash flow analysis used to determine the fair value of the Company's FUEL CHEM reporting unit. Auditing the reasonableness of management's key assumptions, including revenue growth rates, operating margins, and discount rates involved a high degree of auditor judgment and an increased effort, including the use of our fair value specialists.

Our audit procedures related to revenue growth rates, operating margins, and the discount rate used to evaluate the Company's FUEL CHEM reporting unit for impairment included the following, among others:

- With the assistance of our fair value specialists, we evaluated the reasonableness of the discount rate and tested the relevance and reliability of source information underlying the determination of the rate, tested the mathematical accuracy of the calculation, and developed a range of independent estimates and compared those to the rate selected by management.
- We evaluated reasonableness of management's forecasted revenue growth rates and operating margins by comparing to historical results and industry forecasts.
- We evaluated management's ability to accurately forecast revenue and operating margins by comparing management's prior forecasts to actual results.
- We evaluated the impact of changes to significant assumptions on the determination of whether impairment exists.

[Table of Contents](#)**Revenue Recognition**

As described in Note 1 of the financial statements, revenue for the Company's Air Pollution Control technology contracts is recognized based on the extent of progress towards completion of the contract compared to the estimated effort to complete the contract. The Company uses a cost-to-cost input method of measuring progress on these contracts. Under the cost-to-cost input measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred.

We identified revenue recognition over time for the Company's Air Pollution Control technology contracts as a critical audit matter because of certain significant assumptions management makes when measuring progress, including assumptions related to expected total costs to complete the contract. Auditing these assumptions involved a high degree of auditor judgment and an increase in audit effort due to the impact these assumptions have on the amount of revenue recognized.

Our audit procedures related to the evaluation of management's estimation of revenue recognized include the following, among others:

- We evaluated management's ability to accurately forecast project costs by comparing management's prior forecasts of estimated costs to actual results.
- We evaluated management's ability to accurately forecast project costs by comparing a sample of budgeted project costs to source information and obtaining an understanding of how the budget was prepared.
- We selected a sample of customer contracts and evaluated management's calculation of revenue recognized over time by performing the following procedures:
  - Evaluating whether contract terms that may affect revenue recognition were identified and properly considered and performance obligations were appropriately identified.
  - Obtaining and reviewing contracts with customers, including change orders to evaluate whether the transaction price was appropriately identified.
  - Testing management's revenue recognition calculation model for mathematical accuracy.
  - Assessing the validity of data used in the model for completeness and accuracy by agreeing, on a sample basis, key data inputs to source documents, including job costing reports and project budgets.

/s/ RSM US LLP

We have served as the Company's auditor since 2010.

Chicago, Illinois  
March 4, 2025

[Table of Contents](#)**Fuel Tech, Inc.**  
**Consolidated Balance Sheets**

(in thousands of dollars, except share and per-share data)

	December 31,	
	2024	2023
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 8,510	\$ 17,578
Short-term investments	10,184	12,136
Accounts receivable, less current expected credit loss of \$106 and \$111, respectively	9,368	6,729
Inventories, net	397	439
Prepaid expenses and other current assets	1,160	1,439
Total current assets	29,619	38,321
Property and equipment, net	5,084	4,539
Goodwill	2,116	2,116
Other intangible assets, net	327	358
Right-of-use operating lease assets	585	609
Long-term investments	10,875	3,664
Other assets	191	781
Total assets	<u>\$ 48,797</u>	<u>\$ 50,388</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 2,915	\$ 2,421
Accrued liabilities:		
Operating lease liabilities - current	77	81
Employee compensation	1,248	1,252
Other accrued liabilities	1,615	1,934
Total current liabilities	5,855	5,688
Operating lease liabilities - non-current	548	533
Deferred income taxes	176	172
Other liabilities	263	281
Total liabilities	6,842	6,674
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Common stock, \$.01 par value, 40,000,000 shares authorized, 31,767,329 and 31,361,303 shares issued, and 30,708,273 and 30,385,297 shares outstanding in 2024 and 2023, respectively	317	313
Additional paid-in capital	165,295	164,853
Accumulated deficit	(119,472)	(117,529)
Accumulated other comprehensive loss	(1,915)	(1,748)
Nil coupon perpetual loan notes	76	76
Treasury stock, at cost (Note 5)	(2,346)	(2,251)
Total stockholders' equity	41,955	43,714
Total liabilities and stockholders' equity	<u>\$ 48,797</u>	<u>\$ 50,388</u>

See notes to consolidated financial statements.

[Table of Contents](#)**Fuel Tech, Inc.****Consolidated Statements of Operations***(in thousands of dollars, except share and per-share data)*

	For the years ended December 31,	
	2024	2023
<b>Revenues</b>	\$ 25,133	\$ 27,081
<b>Costs and expenses:</b>		
Cost of sales	14,510	15,425
Selling, general and administrative	13,761	12,803
Research and development	1,564	1,511
Total costs and expenses	29,835	29,739
<b>Operating loss</b>	(4,702)	(2,658)
Interest expense	—	(21)
Interest income	1,251	1,300
Other income (expense), net	1,585	(90)
<b>Loss before income taxes</b>	(1,866)	(1,469)
Income tax expense	(77)	(69)
<b>Net loss</b>	\$ (1,943)	\$ (1,538)
<b>Net loss per common share:</b>		
<b>Basic net loss per common share</b>	\$ (0.06)	\$ (0.05)
<b>Diluted net loss per common share</b>	\$ (0.06)	\$ (0.05)
<b>Weighted-average number of common shares outstanding:</b>		
Basic	30,572,000	30,348,000
Diluted	30,572,000	30,348,000

See notes to consolidated financial statements.

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**Fuel Tech, Inc.**  
**Consolidated Statements of Comprehensive Loss**  
*(in thousands of dollars)*

	For the years ended December 31,	
	2024	2023
Net loss	\$ (1,943)	\$ (1,538)
Other comprehensive loss:		
Foreign currency translation adjustments	(167)	(20)
Total other comprehensive loss	(167)	(20)
Comprehensive loss	<u>\$ (2,110)</u>	<u>\$ (1,558)</u>

See notes to consolidated financial statements.

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**Fuel Tech, Inc.**  
**Consolidated Statements of Stockholders' Equity**  
*(in thousands of dollars or shares, as appropriate)*

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Nil Coupon Perpetual Loan Notes	Treasury Stock	Total
	Shares	Amount						
<b>Balance at December 31, 2022</b>	30,296	313	164,422	(115,991)	(1,728)	76	(2,251)	\$ 44,841
Net loss	—	—	—	(1,538)	—	—	—	(1,538)
Foreign currency translation adjustments	—	—	—	—	(20)	—	—	(20)
Stock compensation expense	—	—	389	—	—	—	—	389
Exercise of stock options	44	—	42	—	—	—	—	42
Common shares issued upon vesting of restricted stock units	45	—	—	—	—	—	—	—
<b>Balance at December 31, 2023</b>	<b>30,385</b>	<b>313</b>	<b>164,853</b>	<b>(117,529)</b>	<b>(1,748)</b>	<b>76</b>	<b>(2,251)</b>	<b>\$ 43,714</b>
Net loss	—	—	—	(1,943)	—	—	—	(1,943)
Foreign currency translation adjustments	—	—	—	—	(167)	—	—	(167)
Stock compensation expense	—	—	446	—	—	—	—	446
Common shares issued upon vesting of restricted stock units	406	4	(4)	—	—	—	—	—
Taxes paid on behalf of equity award participants	(83)	—	—	—	—	—	(95)	(95)
<b>Balance at December 31, 2024</b>	<b>30,708</b>	<b>\$ 317</b>	<b>\$ 165,295</b>	<b>\$ (119,472)</b>	<b>\$ (1,915)</b>	<b>\$ 76</b>	<b>\$ (2,346)</b>	<b>\$ 41,955</b>

See notes to consolidated financial statements.

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**Fuel Tech, Inc.**  
**Consolidated Statements of Cash Flows**  
*(in thousands of dollars)*

	For the years ended December 31,	
	2024	2023
<b>OPERATING ACTIVITIES</b>		
Net loss	\$ (1,943)	\$ (1,538)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation	403	281
Amortization	57	61
Loss on sale of equipment	—	10
Non-cash interest income on held-to-maturity securities	(132)	(433)
Provision for credit losses, net of recoveries	(4)	—
Deferred income taxes	4	(5)
Stock-based compensation, net of forfeitures	446	389
Changes in operating assets and liabilities:		
Accounts receivable	(1,127)	1,039
Employee retention credit receivable	(1,677)	—
Inventories	41	(46)
Prepaid expenses, other current assets and other non-current assets	292	(6)
Accounts payable	519	(295)
Accrued liabilities and other non-current liabilities	(312)	1,239
Net cash (used in) provided by operating activities	<u>(3,433)</u>	<u>696</u>
<b>INVESTING ACTIVITIES</b>		
Purchases of equipment and patents	(378)	(418)
Purchases of debt securities	(18,060)	(14,026)
Maturities of debt securities	12,995	8,000
Net cash used in investing activities	<u>(5,443)</u>	<u>(6,444)</u>
<b>FINANCING ACTIVITIES</b>		
Proceeds from exercise of stock options	—	42
Taxes paid on behalf of equity award participants	(95)	—
Net cash (used in) provided by financing activities	<u>(95)</u>	<u>42</u>
Effect of exchange rate fluctuations on cash	(97)	(44)
<b>Net decrease in cash and cash equivalents</b>	<b>(9,068)</b>	<b>(5,750)</b>
Cash and cash equivalents at beginning of period	17,578	23,328
<b>Cash and cash equivalents at end of period</b>	<b>\$ 8,510</b>	<b>\$ 17,578</b>
<b>Supplemental Cash Flow Information:</b>		
Cash income taxes paid, net	\$ 52	\$ 12
Non-cash transfer from other non-current assets to property and equipment	597	—

See notes to consolidated financial statements.

[Table of Contents](#)**Notes to Consolidated Financial Statements**

(in thousands of dollars, except share and per-share data)

**1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES****Organization**

Fuel Tech, Inc. and subsidiaries ("Fuel Tech", the "Company", "we", "us" or "our") develops and provides proprietary technologies for air pollution control, process optimization, water treatment, and advanced engineering services. Our primary focus is on the worldwide marketing and sale of Air Pollution Control (APC) technologies and our FUEL CHEM program.

The Company's nitrogen oxide (NOx) reduction technologies reduce nitrogen oxide emissions from boilers, furnaces and other stationary combustion sources. To reduce NOx emissions, our technologies utilize advanced combustion modification techniques and post-combustion NOx control approaches including non-catalytic, catalytic and combined systems. The Company also provides solutions for the mitigation of particulate matter, including particulate control with electrostatic precipitator products and services, and using Flue Gas Conditioning (FGC) systems which modify the ash properties of particulate for improved collection efficiency. Our FUEL CHEM program is based on proprietary TIFI® Targeted In-Furnace™ Injection technology, in combination with advanced Computational Fluid Dynamics (CFD) and Chemical Kinetics Modeling (CKM) boiler modeling, in the unique application of specialty chemicals to improve the efficiency, reliability, fuel flexibility, boiler heat rate, and environmental status of combustion units by controlling slagging, fouling, corrosion, and opacity. Water treatment technologies include DGI® Dissolved Gas Infusion Systems which utilize a patented gas-infusing saturator vessel and a patent-pending channel injector to deliver supersaturated oxygen-water solutions and potentially other gas-liquid combinations to target process applications or environmental issues within the municipal and industrial water sectors. The infusion process has a variety of potential applications in the water and wastewater treatment sector, including aquaculture, agriculture/horticulture, pulp & paper, tanneries, landfill leachate, irrigation, treatment of natural waters, wastewater odor management as well as supplying oxygen or other gases for biochemical reactions and pH adjustment.

Our business is materially dependent on the continued existence and enforcement of air quality regulations, particularly in the U.S. We have expended significant resources in the research and development of new technologies in building our proprietary portfolio of air pollution control, fuel and boiler treatment chemicals, computer modeling and advanced visualization technologies. Many of Fuel Tech's products and services rely heavily on the Company's CFD modeling capabilities, which are enhanced by internally developed, high-end visualization software.

International revenues were \$7,331 and \$5,684 for the years ended December 31, 2024 and 2023, respectively. These amounts represented 29% and 21% of Fuel Tech's total revenues for the respective periods of time. Foreign currency changes did not have a material impact on the calculation of these percentages. We have a foreign office in Gallarate, Italy.

**Basis of Presentation**

The consolidated financial statements include the accounts of Fuel Tech and its wholly owned subsidiaries.

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the U.S. (GAAP). The books and records of subsidiaries located in foreign countries are maintained according to generally accepted accounting principles in those countries. Upon consolidation, the Company evaluates the differences in accounting principles and determines whether adjustments are necessary to convert the foreign financial statements to the accounting principles upon which the consolidated financial statements are based. All intercompany transactions have been eliminated.

**Political, Geopolitical and Unexpected Events**

Management cannot predict the full impact of political, geopolitical and unexpected events which may impact new or existing projects and prices and availability of raw materials, energy and other materials. These events may also impact energy and regulatory policy nationally or regionally for the impacted regions. Such disruptions could have a material adverse effect on our business and financial results. The Company continues to monitor the potential impacts on the business.

**Liquidity**

We have experienced net losses in recent years. We continue to monitor our liquidity needs and have taken measures to reduce expenses and restructure operations, which we feel are necessary to ensure we maintain sufficient working capital and liquidity to operate the business and invest in our future. As a result, we have evaluated our ongoing business needs, and considered the cash requirements of our APC and FUEL CHEM businesses. This evaluation included consideration of the following: a) customer and revenue trends in our APC and FUEL CHEM business segments, b) current operating structure and expenditure levels, c) current availability of working capital, and d) support for our research and development initiatives. We believe our current cash position and net cash flows expected to be generated from operations are adequate to fund planned operations of the Company.

**Use of Estimates**

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company uses estimates in accounting for, among other items, revenue recognition, allowance for credit losses, income tax provisions, excess and obsolete inventory reserve, impairment of long-lived assets, and warranty expenses. Actual results could differ from those estimates.

[Table of Contents](#)**Fair Value Measurements**

The carrying values of cash and cash equivalents, accounts receivable, and accounts payable are reasonable estimates of their fair value due to their short-term nature.

We apply authoritative accounting guidance for fair value measurements of financial and non-financial assets and liabilities. This guidance defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis and clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the standard establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

- Level 1 – Observable inputs to the valuation methodology such as quoted prices in active markets for identical assets or liabilities
- Level 2 – Inputs to the valuation methodology including quoted prices for similar assets or liabilities in active markets, quoted prices for identical assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived principally from or corroborated by observable market data by correlation or other means
- Level 3 – Significant unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own estimates and assumptions or those expected to be used by market participants. Generally, these fair value measures are model-based valuation techniques such as discounted cash flows, option pricing models, and other commonly used valuation techniques

Transfers between levels of the fair value hierarchy are recognized based on the actual date of the event or change in circumstances that caused the transfer. We had no assets or liabilities that were valued using level 2 or level 3 inputs and therefore there were no transfers between levels of the fair value hierarchy during the periods ended December 31, 2024 and 2023.

**Cash and cash equivalents**

We consider all highly liquid debt investments with original maturities from the date of purchase of three months or less as cash equivalents. Cash equivalents include investments in money market funds. At December 31, 2024, we had cash on hand of approximately \$548 at our Beijing, China subsidiary that is subject to certain local regulations that may limit the immediate availability of these funds outside of China. Cash on hand at our Italy subsidiary totaled approximately \$1,176 at December 31, 2024. Cash on hand at our Chilean subsidiary totaled approximately \$159 at December 31, 2024.

The following table provides a reconciliation of cash and cash equivalents reported within the Consolidated Balance Sheet that sum to the total of the same such amounts shown in the Consolidated Statements of Cash Flows:

	December 31, 2024	December 31, 2023
Cash	\$ 7,879	\$ 12,495
Cash equivalents	631	5,083
Total cash and cash equivalents shown in the Consolidated Statements of Cash Flows	<u>\$ 8,510</u>	<u>\$ 17,578</u>

**Investments**

The Company's investment policy provides for \$20,000 in funds at BMO Harris Bank (BMO Harris) to be invested in held-to-maturity debt securities. A portion of the funds invested are restricted as collateral under the Investment Collateral Security agreement (see Note 11). At December 31, 2024, the amount of funds collateralized under the Investment Collateral Security agreement is \$2,790 relating to existing standby letters of credit that is comprised of \$1,860 with varying maturity dates and expire no later than June 30, 2026.

Our investments in debt securities consist of United States (US) Treasury securities, including Notes, Bonds, and Bills, and US Government Agency securities, which are designated as held-to-maturity (HTM) and stated at amortized cost. The Company has the positive intent and ability to hold these investments to maturity and does not expect to sell any debt securities before maturity to settle an obligation under the Investment Collateral Security agreement. The typical maturities of our HTM investments range from three to thirty-six months. HTM debt investments with original maturities of approximately three months or less from the date of purchase are classified within cash and cash equivalents. HTM debt investments with original maturities at the date of purchase greater than approximately three months and remaining maturities of less than one year are classified as short-term investments. HTM debt investments with remaining maturities beyond one year are classified as long-term investments. Interest income, including amortization of premium and accretion of discount, are included on the Consolidated Statements of Operations in Interest income under the effective yield method. Accrued interest is included in Prepaid expenses and other current assets on the Consolidated Balance Sheets. Due to the creditworthiness of the entities issuing these securities, there is no impairment recorded related to the unrealized losses.

The following table provides the amortized cost, gross unrealized gains and losses, and fair value of our HTM debt securities:

	December 31,	
	2024	2023
Held-to-maturity debt securities:		
Amortized cost	\$ 21,059	\$ 15,800
Gross unrecognized gains	50	—
Gross unrecognized losses	(33)	(86)
Fair value	<u>\$ 21,076</u>	<u>\$ 15,714</u>

The following table provides the amortized cost and fair value of debt securities by maturities at December 31, 2024:

	Amortized Cost	Fair Value
Within one year	\$ 10,184	\$ 10,200
After one year through two years	10,875	10,876
Total	<u>\$ 21,059</u>	<u>\$ 21,076</u>

**Foreign Currency Risk Management**

Our earnings and cash flows are subject to fluctuations due to changes in foreign currency exchange rates. We do not enter into foreign currency forward contracts or into foreign currency option contracts to manage this risk due to the nature of the transactions involved.

**Accounts Receivable**

Accounts receivable consist of amounts due to us in the normal course of our business, are not collateralized, and normally do not bear interest. Accounts receivable includes contract assets, billings occurring subsequent to revenue recognition under Accounting Standards Codification (ASC) 606 *Revenue from Contracts with Customers*. At December 31, 2024 and

2023, unbilled receivables were approximately \$2,075 and \$2,285, respectively. Refer to Note 2 for further detail.

[Table of Contents](#)**Allowance for Credit Losses**

Fuel Tech measures expected credit losses based on historical experience, current conditions and reasonable and supportable forecasts per the guidance set forth in Accounting Standards Update (ASU) 2019-10, Financial Instruments - Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842). For trade receivables and other financial instruments, we use a forward-looking expected loss model for recognizing credit losses which reflects losses that are probable.

For the general risk categories, the Company uses historical losses over a fixed period, excluding certain write-off activity that was not considered credit loss events, to determine the historical credit loss. Historical loss rates are then adjusted to consider current economic conditions, and past, current, and future events and circumstances when determining expected credit losses. Investments in financial assets issued by US Government and Government Agency are considered as having zero expected credit losses and are excluded from the allowance for credit loss calculation.

The allowance for credit losses is our management's best estimate of the amount of credit losses in accounts receivable. At the end of each reporting period, the allowance for credit losses balance is reviewed relative to management's assessment and is adjusted if deemed necessary. Bad debt write-offs are made when management believes it is probable a receivable will not be recovered. The table below sets forth the components of the Allowance for Credit Losses for the years ended December 31.

Year	Balance at January 1	Provision charged to expense	Write-offs / Recoveries	Balance at December 31
2023	\$ 110	\$ 24	\$ (23)	\$ 111
2024	\$ 111	\$ —	\$ (5)	\$ 106

**Prepaid expenses and other current assets**

Prepaid expenses and other current assets are short-term commitments of typically three to six months for future payments and can be redeemed at a discount or applied to future vendor payments.

**Inventories**

Inventories consist primarily of equipment constructed for resale and spare parts and are stated at the lower of cost or net realizable value, using the weighted-average cost method. At December 31, 2024 and 2023, inventory included equipment constructed for resale of \$176 and \$207, respectively, and spare parts, net of reserves of \$221 and \$232, respectively. Usage is recorded in cost of sales in the period that parts were issued to a project, used to service equipment, or sold to customers. Equipment constructed for resale that is in process is recorded in Other assets. In process equipment for inventory recorded as other assets was \$44 and \$618 as of December 31, 2024 and 2023, respectively.

Inventories are periodically evaluated to identify obsolete or otherwise impaired parts 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. The excess and obsolete inventory reserve balance was \$613 at December 31, 2024 and 2023.

**Foreign Currency Translation and Transactions**

Assets and liabilities of consolidated foreign subsidiaries are translated into U.S. dollars at exchange rates in effect at year end. Revenues and expenses are translated at average exchange rates prevailing during the year. Gains or losses on foreign currency transactions and the related tax effects are reflected in net loss. The resulting translation adjustments are included in stockholders' equity as part of accumulated other comprehensive loss.

**Accumulated Other Comprehensive Loss**

	December 31,	
	2024	2023
<b>Foreign currency translation</b>		
Balance at beginning of period	\$ (1,748)	\$ (1,728)
Other comprehensive loss:		
Foreign currency translation adjustments (1)	(167)	(20)
Balance at end of period	\$ (1,915)	\$ (1,748)
<b>Total accumulated other comprehensive loss</b>	<b>\$ (1,915)</b>	<b>\$ (1,748)</b>

(1) In all periods presented, there were no tax impacts related to functional currency translation adjustments.

**Research and Development**

Research and development costs are expensed as incurred, except in the case of costs incurred related to capitalizable equipment. Research and development projects funded by customer contracts are reported as part of cost of goods sold. Internally funded research and development expenses are reported as operating expenses.

**Product/System Warranty**

We typically warrant our air pollution control products and systems against defects in design, materials and workmanship for one to two years. A provision for estimated future costs relating to warranty expense is recorded when the products/systems become commercially operational.

**Goodwill**

Goodwill is evaluated for impairment at the reporting unit level, which is defined as an operating segment or one level below an operating segment. Goodwill of our reporting units is assigned upon acquisition after considering the nature of the net assets giving rise to the goodwill and how each reporting unit would enjoy the benefits and synergies of the net assets acquired. We have two reporting units for goodwill evaluation purposes: the FUEL CHEM technology reporting unit and the APC technology reporting unit. There is no goodwill associated with our APC technology reporting unit. The entire goodwill balance of \$2,116 was allocated to the FUEL CHEM technology reporting unit as of December 31, 2024 and 2023.

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Goodwill is tested for impairment at least annually as of the first day of our fourth quarter, or more frequently if events or changes in circumstances indicate that the carrying value may not be recoverable. Our evaluation of goodwill impairment involves first assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. We may bypass this qualitative assessment, or determine that based on our qualitative assessment considering the totality of events and circumstances including macroeconomic factors, industry and market considerations, current and projected financial performance, a sustained decrease in our share price, or other factors, that additional impairment analysis is necessary. This additional analysis involves comparing the current fair value of our reporting units to their carrying values. We use a discounted cash flow (DCF) model to determine the current fair value of our FUEL CHEM reporting unit. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volumes and prices, costs to produce and working capital changes. Management considers historical experience and all available information at the time the fair values of its reporting units are estimated. However, actual fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of goodwill. Fuel Tech performed its annual goodwill impairment analysis as of October 1, 2024 and determined that no impairment of goodwill existed. The Company did not recognize a charge for goodwill impairment for the periods ended December 31, 2024 and 2023.

**Other Intangible Assets**

Management reviews other finite-lived intangible assets, patent assets, trade names, and lease assets 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.

During the years ended December 31, 2024 and 2023, Fuel Tech recorded no patent or trademark abandonment charges.

Third-party costs related to the development of patents are included within other intangible assets on the consolidated balance sheets. The third-party costs capitalized as patent costs during the years ended December 31, 2024 and 2023 were \$26 and \$28, respectively. Third-party costs are comprised of legal fees that relate to the review and preparation of patent disclosures and filing fees incurred to present the patents to the required governing body.

Our intellectual property portfolio has been a significant building block for the APC and FUEL CHEM technology segments. The patents are essential to the generation of revenue for our businesses and are essential to protect us from competition in the markets in which we serve. These costs are being amortized on the straight-line method over the period beginning with the patent issuance date and ending on the patent expiration date. Patent maintenance fees are charged to operations as incurred.

Amortization expense from continuing operations for intangible assets was \$57 and \$61 for the years ended December 31, 2024 and 2023, respectively. The table below shows the amortization period and other intangible asset cost by intangible asset as of December 31, 2024 and 2023, and the accumulated amortization and net intangible asset value in total for all other intangible assets.

Description of Other Intangibles	Amortization Period (years)	2024			2023		
		Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Patent assets	1 - 20	852	(525)	327	826	(468)	358
Total		<u>\$ 852</u>	<u>\$ (525)</u>	<u>\$ 327</u>	<u>\$ 826</u>	<u>\$ (468)</u>	<u>\$ 358</u>

The table below shows the estimated future amortization expense for intangible assets:

Year	Estimated Amortization Expense
2025	\$ 36
2026	35
2027	35
2028	35
2029	29
Thereafter	157
Total	<u>\$ 327</u>

**Property and Equipment**

Property and equipment is stated at historical cost and does not include capital in process expenditures yet to be capitalized. Provisions for depreciation are computed by the straight-line method, using estimated useful lives that range based on the nature of the asset. Leasehold improvements are depreciated over the shorter of the associated lease term or the estimated useful life of the asset. Depreciation expense was \$403 and \$281 for the years ended December 31, 2024 and 2023, respectively. The table below shows the depreciable life and cost by asset class as of December 31, 2024 and 2023, and the accumulated depreciation and net book value in total for all classes of assets.

Description of Property and Equipment	Depreciable Life (years)	2024		2023	
		\$		\$	
Land		\$ 1,050		\$ 1,050	
Building	39	3,950		3,950	
Building and leasehold improvements	3 - 39	2,677		2,655	
Field equipment	3 - 4	13,004		12,100	
Computer equipment and software	2 - 3	2,017		2,049	
Furniture and fixtures	3 - 10	1,305		1,307	
Vehicles	5	37		32	
Construction in process		2		99	
Total cost		<u>24,042</u>		<u>23,242</u>	
Less accumulated depreciation		<u>(18,958)</u>		<u>(18,703)</u>	
Total net book value		<u>\$ 5,084</u>		<u>\$ 4,539</u>	

Property and equipment is reviewed for impairment when events and circumstances indicate that the carrying amount of the assets (or asset group) may not be recoverable. If impairment indicators exist, we perform a more detailed analysis and an impairment loss is recognized when estimated future undiscounted cash flows expected to result from the use of the asset (or asset group) and its eventual disposition are less than the carrying amount. This process of analyzing impairment involves examining the operating condition of individual assets (or asset group) and estimating a fair value based upon current condition, relevant market factors and remaining estimated operational life compared to the asset's remaining depreciable life. Quoted market prices and other valuation techniques are used to determine expected cash flows. We performed a detailed analysis of potential long-lived asset impairment during the fourth quarter of 2024 and determined no impairment exists. There was no impairment recorded during 2024 or 2023.



[Table of Contents](#)**Revenue Recognition**

The Company recognizes revenue when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services. The majority of our contracts have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. Sales, value add, and other taxes we collect concurrent with revenue-producing activities are excluded from revenue.

*Air Pollution Control Technology*

Fuel Tech's APC contracts are typically six to eighteen months in length. A typical contract will have three or four critical operational measurements that, when achieved, serve as the basis for us to invoice the customer via progress billings. At a minimum, these measurements will include the generation of engineering drawings, the shipment of equipment and the completion of a system performance test.

As part of most of its contractual APC project agreements, Fuel Tech will agree to customer-specific acceptance criteria that relate to the operational performance of the system that is being sold. These criteria are determined based on modeling that is performed by Fuel Tech personnel, which is based on operational inputs that are provided by the customer. The customer will warrant that these operational inputs are accurate as they are specified in the binding contractual agreement. Further, the customer is solely responsible for the accuracy of the operating condition information; typically all performance guarantees and equipment warranties granted by us are voidable if the operating condition information is inaccurate or is not met.

Since control transfers over time, revenue is recognized based on the extent of progress towards completion of the single performance obligation. Fuel Tech uses the cost-to-cost input measure of progress for our contracts since it best depicts the transfer of assets to the customer which occurs as we incur costs on our contracts. Under the cost-to-cost input measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. Costs to fulfill include all internal and external engineering costs, equipment charges, inbound and outbound freight expenses, internal and site transfer costs, installation charges, purchasing and receiving costs, inspection costs, warehousing costs, project personnel travel expenses and other direct and indirect expenses specifically identified as project- or product-line related, as appropriate (e.g. test equipment depreciation and certain insurance expenses).

Fuel Tech's APC product line also includes ancillary revenue for post contractual goods and services. Revenue associated with these activities are recognized at point in time when delivery of goods or completion of the service obligation is performed.

Fuel Tech normally provides performance guarantees to our customers based on the operating conditions for the project. As part of the project implementation process, we perform system start-up and optimization services that effectively serve as a test of actual project performance. We believe that this test, combined with the accuracy of the modeling that is performed, enables revenue to be recognized prior to the receipt of formal customer acceptance.

*FUEL CHEM*

Revenues from the sale of chemical products are recognized when control transfers to customer upon shipment or delivery of the product based on the applicable shipping terms. We generally recognize revenue for these arrangements at a point in time based on our evaluation of when the customer obtains control of the promised goods or services.

[Table of Contents](#)**Cost of Sales**

Cost of sales includes all internal and external engineering costs, equipment and chemical charges, inbound and outbound freight expenses, internal and site transfer costs, installation charges, purchasing and receiving costs, inspection costs, warehousing costs, project personnel travel expenses and other direct and indirect expenses specifically identified as project- or product line-related, as appropriate (e.g., test equipment depreciation and certain insurance expenses). Certain depreciation and amortization expenses related to tangible and intangible assets, respectively, are allocated to cost of sales. We classify shipping and handling costs in cost of sales in the consolidated statements of operations.

**Selling, General and Administrative Expenses**

Selling, general and administrative expenses primarily include the following categories except where an allocation to the cost of sales line item is warranted due to the project- or product-line nature of a portion of the expense category: salaries and wages, employee benefits, non-project travel, insurance, legal, rent, accounting and auditing, recruiting, telephony, employee training, Board of Directors' fees, auto rental, office supplies, dues and subscriptions, utilities, real estate taxes, commissions and bonuses, marketing materials, postage and business taxes. Departments comprising the selling, general and administrative line item primarily include the functions of executive management, finance and accounting, investor relations, regulatory affairs, marketing, business development, information technology, human resources, sales, legal and general administration.

**Income Taxes**

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, the provision for income taxes represents income taxes paid or payable (or received or receivable) for the current year plus the change in deferred taxes during the year. Deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid, and result from differences between the financial and tax bases of our assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. In evaluating the need for a valuation allowance, management considers all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, projections of future profitability within the carryforward period, including from tax planning strategies, and our experience with similar operations. Negative evidence includes items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of a deferred tax asset based on existing projections of income. Deferred tax assets for which no valuation allowance is recorded may not be realized upon changes in facts and circumstances.

Tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more likely than not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitation has expired or the appropriate taxing authority has completed their examination even though the statute of limitations remains open. Interest and penalties related to uncertain tax positions are recognized as part of the provision for income taxes and are accrued beginning in the period that such interest and penalties would be applicable under relevant tax law until such time that the related tax benefits are recognized.

**Leases**

The Company applies the provisions of ASC 842, Leases. The Company determines if an arrangement is a lease at inception by evaluating whether the arrangement conveys the right to use an identified asset and whether the Company obtains substantially all of the economic benefits from and has the ability to direct the use of the asset. Right-of-use (ROU) assets and lease liabilities are recognized at the lease commencement date based on the present value of the future minimum lease payments over the lease term. Operating ROU assets also include the impact of any lease incentives. Operating leases are included in right-of-use operating lease assets, operating lease liabilities - current, and operating lease liabilities - non-current on our Consolidated Balance Sheets.

Operating lease ROU assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of future payments. The operating lease ROU asset also includes any lease payments made and excludes lease incentives and initial direct costs incurred. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise that option. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

We have lease agreements with lease and non-lease components, and we elected the practical expedient to not separate lease and non-lease components for the majority of our leases. For certain equipment leases, such as vehicles, we account for the lease and non-lease components as a single lease component. We also elected the practical expedient for leases with an initial term of 12 months or less.

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### Stock-Based Compensation

Our stock-based employee compensation plan, referred to as the Fuel Tech, Inc. 2024 Long-Term Incentive Plan (2024 Plan), was adopted in June 2024 and replaced our prior incentive plan which was approved by our stockholders in 2014 (LTIP). No further grants will be made from the LTIP. Awards granted under the LTIP that were outstanding upon adoption of the 2024 Plan will be added to the shares available to be used for future awards to participants in the Incentive Plans if the awards are forfeited or otherwise canceled or upon expiration. The 2024 Plan and LTIP are referred to collectively as the Incentive Plans.

The Incentive Plans allow for awards to be granted to participants in the form of non-qualified stock options, incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and bonuses or other forms of share-based or non-share-based awards or combinations thereof. Participants in the Incentive Plans may be our directors, officers, employees, consultants or advisors (except consultants or advisors in capital-raising transactions) as the directors determine are key to the success of our business. There are a maximum of 4,215,272 shares that may be issued or reserved for awards to participants under the Incentive Plans as of December 31, 2024. Based on the existing issued or reserved awards under the Incentive Plans, there are 2,957,150 shares available to be used for future awards to participants in the Incentive Plans as of December 31, 2024.

### Defined Contribution Plan

We have a retirement savings plan available for all our U.S. employees who have met minimum length-of-service requirements. Our contributions are determined based upon amounts contributed by the employees with additional contributions made at the discretion of the Board of Directors. Costs related to this plan were \$249 and \$233 in 2024 and 2023, respectively.

### Basic and Diluted Earnings per Common Share

Basic earnings per share excludes the antidilutive effects of stock options, restricted stock units (RSUs), warrants, and the nil coupon non-redeemable convertible unsecured loan notes (see Note 6). Diluted earnings per share includes the dilutive effect of the nil coupon non-redeemable convertible unsecured loan notes, RSUs, warrants, and unexercised in-the-money stock options, except in periods of net loss where the effect of these instruments is antidilutive. Out-of-the-money stock options and warrants are excluded from diluted earnings per share because they are unlikely to be exercised and would be anti-dilutive if they were exercised. At December 31, 2024 and 2023, basic earnings per share is equal to diluted earnings per share because all outstanding stock awards, warrants, and convertible loan notes are considered anti-dilutive during periods of net loss. At December 31, 2024 and 2023, we had weighted-average outstanding equity awards of 168,900 and 390,900, respectively, and 2,850,000 warrants in both periods, which were antidilutive or represent out-of-the-money options for the purpose of calculation of the diluted earnings per share. As of December 31, 2024 and 2023, 274,900 and 246,500 incremental equity awards were antidilutive, respectively, because of the net loss in the year then ended. These equity awards could potentially dilute basic EPS in future years.

The table below sets forth the weighted-average shares used at December 31, in calculating earnings (loss) per share:

	2024	2023
Basic weighted-average shares	30,572,000	30,348,000
Conversion of unsecured loan notes	—	—
Unexercised options and unvested restricted stock units	—	—
Diluted weighted-average shares	<u>30,572,000</u>	<u>30,348,000</u>

### Risk Concentrations

Financial instruments that potentially subject the Company to a significant concentration of credit risk consist primarily of cash and cash equivalents and accounts receivable. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. However, management believes the Company is not exposed to significant credit risk due to the financial position of its primary depository institution where a significant portion of its deposits are held.

For the year ended December 31, 2024, we had two customers which individually represented greater than 10% of revenues. These two customers contributed revenues to the FUEL CHEM technology segment. In total these two customers represented 27% of consolidated revenues. We had no customer that accounted for greater than 10% of our current assets as of December 31, 2024.

For the year ended December 31, 2023, we had two customers which individually represented greater than 10% of revenues. These two customers contributed revenues to the FUEL CHEM technology segment. In total these two customers represented 36% of consolidated revenues. We had no customer that accounted for greater than 10% of our current assets as of December 31, 2023.

We control credit risk through requiring milestone payments on long-term contracts, performing ongoing credit evaluations of its customers, and in some cases obtaining security for payment through bank guarantees and letters of credit.

Our FUEL CHEM technology segment is dependent, in part, upon a supply of magnesium hydroxide. Any adverse changes in the availability of this chemical will likely have an adverse impact on ongoing operation of our FUEL CHEM programs. Our supplier of magnesium hydroxide, Martin Marietta Magnesia Specialties, LLC (MMMS) assures the continuance of a stable supply from MMMS of magnesium hydroxide products for our requirements in the U.S. and Canada. MMMS supplies us with magnesium hydroxide products manufactured pursuant to our specifications and we have agreed to purchase from MMMS, and MMMS has agreed to supply, 100% of our requirements for such magnesium hydroxide products for our customers who purchase such products for delivery in the U.S. and Canada. There can be no assurance that we will be able to obtain a stable source of magnesium hydroxide in markets outside the U.S.

### Treasury Stock

We use the cost method to account for common stock repurchases. During the year ended December 31, 2024, we withheld 83,050 shares of our common stock, valued at approximately \$95, to settle personal tax withholding obligations that arose as a result of restricted stock units that vested. There were no shares withheld during the year ended December 31, 2023 to settle personal tax withholding obligations as a result of restricted stock unit vesting. Refer to Note 5, "Treasury Stock," for further discussion.

### Recently Issued Accounting Pronouncements

In December 2023, the FASB issued ASU 2023-09, Income Taxes (Topic 740): Improvements to Income Tax Disclosures, which provides guidance for additional disclosures around the tax rate reconciliation and other tax disclosures. The standard will become effective for the annual reporting period beginning on January 1, 2025 for Fuel Tech. Application of the amendments should be applied prospectively but retrospective application is permitted. The Company is reviewing the impact of this new pronouncement and expects to incorporate the additional disclosures in the Tax note when the ASU is adopted.

In November 2024, the FASB issued ASU 2024-03, Income Statement – Reporting Comprehensive Income – Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses, which requires public business entities to disclose in the notes to their financial statements disaggregated information about certain costs and expenses in both annual and interim filings. The standard will become effective for the annual reporting period beginning January 1, 2027 for Fuel Tech. The Company is reviewing the impact of this new pronouncement and expects to incorporate the additional disclosures in the relevant footnotes when the ASU is adopted.

### CARES Act

On March 27, 2020, the U.S. government enacted the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") to provide certain relief as a result of the COVID-19 pandemic. The CARES Act provides tax relief, along with other stimulus measures, including a provision for an Employee Retention Credit ("ERC"), which allows for employers to claim a refundable tax credit against the employer share of Social Security tax for qualifying periods in 2020 and 2021. Under the provisions of the CARES Act, the Company is eligible for a refundable employee retention credit subject to certain criteria.

As there is no authoritative guidance under U.S. GAAP on accounting for government assistance to for-profit business entities, we account for the ERC by analogy to International Accounting Standard ("IAS") 20, Accounting for Government Grants and Disclosure of Government Assistance. In accordance with IAS 20, management determined it has reasonable assurance for receipt of the ERC and recorded the ERC benefit of \$1,677 as other income on the Consolidated Statement of Operations for the year ended December 31, 2024 and as a component of Accounts Receivable on the Consolidated Balance Sheet as of December 31, 2024.

[Table of Contents](#)**2. REVENUE RECOGNITION***Disaggregated Revenue by Product Technology*

The following table presents our revenues disaggregated by product technology:

	Twelve Months Ended December 31,	
	2024	2023
<b>Air Pollution Control</b>		
Technology solutions	\$ 7,897	\$ 9,497
Spare parts	1,616	2,239
Ancillary revenue	1,729	1,747
<b>Total Air Pollution Control technology</b>	<b>11,242</b>	<b>13,483</b>
<b>FUEL CHEM</b>		
FUEL CHEM technology solutions	13,891	13,598
<b>Total Revenues</b>	<b>\$ 25,133</b>	<b>\$ 27,081</b>

*Disaggregated Revenue by Geography*

The following table presents our revenues disaggregated by geography, based on the location of the end-user:

	Twelve Months Ended December 31,	
	2024	2023
United States	\$ 17,802	\$ 21,397
<b>Foreign Revenues</b>		
Americas	924	577
Europe	2,146	2,558
South Africa	2,570	163
Pacific Rim and other	1,691	2,386
<b>Total Foreign Revenues</b>	<b>7,331</b>	<b>5,684</b>
<b>Total Revenues</b>	<b>\$ 25,133</b>	<b>\$ 27,081</b>

*Timing of Revenue Recognition*

The following table presents the timing of our revenue recognition:

	Twelve Months Ended December 31,	
	2024	2023
Products transferred at a point in time	\$ 17,236	\$ 17,584
Products and services transferred over time	7,897	9,497
<b>Total Revenues</b>	<b>\$ 25,133</b>	<b>\$ 27,081</b>

*Contract Balances*

The timing of revenue recognition, billings and cash collections results in billed accounts receivable, unbilled receivables (contract assets), and customer advances and deposits (contract liabilities) on the Consolidated Balance Sheets. In our APC technology segment, amounts are billed as work progresses in accordance with agreed-upon contractual terms. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets. These assets are reported on the Consolidated Balance Sheet on a contract-by-contract basis at the end of each reporting period. At December 31, 2024, 2023, and 2022 contract assets for APC technology projects were approximately \$2,075, \$2,285, and \$3,082, respectively, and are included in accounts receivable on the consolidated balance sheets.

However, the Company will periodically bill in advance of costs incurred before revenue is recognized, resulting in contract liabilities. These liabilities are reported on the consolidated balance sheet on a contract-by-contract basis at the end of each reporting period. Contract liabilities were \$721, \$1,279, and \$372 at December 31, 2024, 2023, and 2022, respectively, and are included in other accrued liabilities on the consolidated balance sheets.

Changes in the contract asset and liability balances during the year ended December 31, 2024, were not materially impacted by any other items other than amounts billed and revenue recognized as described previously. Revenue recognized that was included in the contract liability balance at the beginning of the period was \$1,276 and \$368 for the years ended December 31, 2024 and 2023, respectively, which represented primarily revenue from progress toward completion of our APC technology contracts.

As of December 31, 2024 and 2023 we had no construction contracts in progress that were identified as a loss contract.

*Remaining Performance Obligations*

Remaining performance obligations, represents the transaction price of APC technology booked orders for which work has not been performed. As of December 31, 2024, the aggregate amount of the transaction price allocated to remaining performance obligations was \$6,175. The Company expects to recognize revenue on approximately \$4,515 of the remaining performance obligations over the next 12 months with the remaining recognized thereafter.

*Practical Expedients and Exemptions*

We generally expense sales commissions on a ratable basis when incurred because the amortization period would have been one year or less. These costs are recorded within selling, general and administrative expenses within the Consolidated Statements of Operations. A practical expedient was elected to not recognize shipping and handling costs as a separate performance obligation under ASC 606.

[Table of Contents](#)*Accounts Receivable*

The components of accounts receivable are as follows:

	As of	
	December 31, 2024	December 31, 2023
Trade receivables	\$ 5,375	\$ 4,300
Unbilled receivables	2,075	2,285
Receivable for employee retention credit	1,677	—
Other short-term receivables	347	255
Allowance for credit losses	(106)	(111)
Total accounts receivable	<u>\$ 9,368</u>	<u>\$ 6,729</u>

**3. INCOME TAXES**

Within the calculation of the Company's annual effective tax rate, the Company has used assumptions and estimates that may change as a result of future guidance, interpretation, and rule-making from the Internal Revenue Service, the SEC, and the FASB and/or various other taxing jurisdictions. For example, the Company anticipates that the state jurisdictions will continue to determine and announce their conformity to the U.S. Tax Act which could have an impact on the annual effective tax rate.

On August 16, 2022, President Biden signed into law the Inflation Reduction Act (IRA) of 2022, which, among other things, imposes a new 15% corporate Alternative Minimum Tax (AMT) based on audited financial statement income ("AFSI") applicable to corporations with a three-year average AFSI over \$1 billion. The AMT was effective starting with the 2023 tax year and, if applicable, corporations must pay the greater of the regular corporate income tax or the AMT. Although NOL carryforwards created through the regular corporate income tax system cannot be used to reduce the AMT, financial statement net operating losses can be used to reduce AFSI and the amount of AMT owed. The IRA of 2022 as enacted requires the U.S. Treasury to provide regulations and other guidance necessary to administer the AMT, including further defining allowable adjustments to determine AFSI, which directly impacts the amount of AMT to be paid. Based on interim guidance issued by the U.S. Treasury in late December 2022, the Company was not subject to the AMT in 2023 or 2024. Further, the Company believes that it is more likely than not it will not be subject to the AMT beginning 2025. The Company continues to evaluate the impacts of the Inflation Reduction Act of 2022 but does not expect this legislation to have a material impact on the Company's financial statements.

For tax years beginning before January 1, 2022, taxpayers can make an election with respect to research and experimental (R&E) expenditures incurred in connection with a trade or business to either currently deduct or defer and amortize such expenditures over a period of not less than 60 months. However, the Tax Cuts and Jobs Act of 2017 (TCJA) requires taxpayers to capitalize R&E expenditures effective for taxable years beginning after December 31, 2021. R&E expenditures attributable to US-based research must be amortized over a period of 5 years and R&E expenditures attributable to research conducted outside of the US must be amortized over a period of 15 years. Further, the statute provides that the definition of R&E expenditures includes amounts paid or incurred in connection with the development of any software. The Company has recorded a deferred tax asset of \$2,233 related to research and experimental expenditures for the year ending December 31, 2024.

The U.S. Tax Cuts and Jobs Act of 2017, or the Tax Act, imposed a mandatory transition tax on accumulated foreign earnings as of December 31, 2017 and created a new territorial tax system in which we recognize the tax impact of including certain foreign earnings in U.S. taxable income as a period cost. For the years ended December 31, 2024 and 2023, we incurred income tax expense under the global intangible low-taxed income, or GILTI, provisions and have treated it as a component of income tax expense in the period incurred.

The components of loss before taxes for the years ended December 31, are as follows:

<u>Origin of loss before taxes</u>	2024	2023
United States	\$ (1,740)	\$ (1,772)
Foreign	(126)	303
Loss before income taxes	<u>\$ (1,866)</u>	<u>\$ (1,469)</u>

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Significant components of income tax expense for the years ended December 31, are as follows:

	2024	2023
<b>Current:</b>		
Federal	\$ —	\$ —
State	(51)	(19)
Foreign	(22)	(55)
<b>Total current</b>	<b>(73)</b>	<b>(74)</b>
<b>Deferred:</b>		
Federal	(2)	2
State	(2)	3
<b>Total deferred</b>	<b>(4)</b>	<b>5</b>
<b>Income tax expense</b>	<b>\$ (77)</b>	<b>\$ (69)</b>

A reconciliation between the provision for income taxes calculated at the U.S. federal statutory income tax rate and the consolidated income tax expense in the consolidated statements of operations for the years ended December 31, is as follows:

	2024	2023
Provision at the U.S. federal statutory rate	21.0%	21.0%
State taxes, net of federal benefit	4.9%	4.7%
Foreign tax rate differential	0.2%	(0.6)%
Valuation allowance	105.6%	(4.9)%
Chile outside basis differential	(0.8)%	—%
Italy IRES/IREP	—%	(3.8)%
Accrual to return	2.1%	(5.8)%
Research and development credit	11.2%	5.4%
State rate change	0.9%	(1.4)%
Share based compensation	(9.0)%	(6.7)%
Net Operating Loss expiration	(144.3)%	—%
Other Deferred true up	6.4%	(6.6)%
Global Intangible Low-Taxed Income (GILTI) inclusion	—%	(4.4)%
Other	(1.1)%	(1.7)%
<b>Income tax expense effective rate</b>	<b>(2.9)%</b>	<b>(4.8)%</b>

The deferred tax assets and liabilities at December 31 are as follows:

	2024	2023
<b>Deferred tax assets:</b>		
Stock compensation expense	\$ 80	\$ 250
Royalty accruals	10	10
Bad debt allowance	51	52
Net operating loss carryforwards	9,067	12,048
Credit carry-forwards	1,472	1,134
Inventory reserve	154	153
Depreciation	433	548
Research and Development Costs	2,233	1,053
Other	399	606
<b>Total deferred tax assets</b>	<b>13,899</b>	<b>15,854</b>
<b>Deferred tax liabilities:</b>		
Goodwill	(296)	(238)
Intangible assets	(82)	(89)
<b>Total deferred tax liabilities</b>	<b>(378)</b>	<b>(327)</b>
Net deferred tax asset before valuation allowance	13,521	15,527
Valuation allowances for deferred tax assets	(13,697)	(15,699)
<b>Net deferred tax liability</b>	<b>\$ (176)</b>	<b>\$ (172)</b>

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The change in the valuation allowance for deferred tax assets for the years ended December 31 is as follows:

Year	Balance at January 1	Charged to costs and expenses	(Deductions)/Other	Balance at December 31
2023	\$ 15,627	72	—	\$ 15,699
2024	\$ 15,699	(2,002)	—	\$ 13,697

For the years ended December 31, 2024 and 2023, there were \$0 and \$42 exercises of stock options, respectively.

As required by ASC 740, we recognize the financial statement benefit of a tax position only after determining that the relevant tax authority would more likely than not sustain the position following an audit. For tax positions meeting the more-likely-than-not threshold, the amount recognized in the financial statements is the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement with the relevant tax authority.

The table below sets forth a reconciliation of the beginning and ending amount of unrecognized tax benefit.

Year	Balance at January 1	Change in positions taken in a current period	Balance at December 31
2023	\$ 293	33	\$ 326
2024	\$ 326	144	\$ 470

If upon examination interest and penalties related to unrecognized tax benefits were assessed, they would be included in income tax expense for all periods presented. There were no interest and penalties recognized in income tax expense during the years ended December 31, 2024 and 2023. There were no unrecognized tax benefits as of December 31, 2024 and 2023. There is unrecognized tax benefit of \$470 and \$326 for the years ended December 31, 2024 and 2023, respectively, that would impact the future effective tax rate, if recognized. We believe the unrecognized tax benefit will change in the next twelve months, either due to the generation or utilization of research and development credits. We are unable to estimate the amount of change. Tax years December 31, 2014 through December 31, 2024 remain open to assessment related to the unrecognized tax benefit.

We are subject to taxation in the U.S., various states, and in non-U.S. jurisdictions. Our U.S. income tax returns are primarily subject to examination from 2021 through 2023; however, U.S. tax authorities also have the ability to review prior tax years to the extent loss carryforwards and tax credit carryforwards are utilized. The open years for the non-U.S. tax returns range from 2016 through 2023 based on local statutes.

Management periodically estimates our probable tax obligations using historical experience in tax jurisdictions and informed judgments. There are inherent uncertainties related to the interpretation of tax regulations in the jurisdictions in which we transact business. The judgments and estimates made at a point in time may change based on the outcome of tax audits, as well as changes to or further interpretations of regulations. If such changes take place, there is a risk that the tax rate may increase or decrease in any period. Tax accruals for tax liabilities related to potential changes in judgments and estimates for both federal and state tax issues are included in current liabilities on the consolidated balance sheet.

The investment in foreign subsidiaries other than Fuel Tech S.p.A (Chile) and Beijing Fuel Tech is considered to be indefinite in duration and therefore we have not provided a provision for deferred U.S. income taxes on the unremitted earnings from those subsidiaries. A provision has not been established because it is not practicable to determine the amount of unrecognized deferred tax liability for such unremitted foreign earnings and because it is our present intention to reinvest the undistributed earnings indefinitely.

As required by ASC 740, a valuation allowance must be established when it is more likely than not that all or a portion of a deferred tax asset will not be realized. We have approximately \$27,054 of U.S. net operating loss carryforwards available to offset future U.S. taxable income as of December 31, 2024. The net operating loss carry-forwards related to tax losses generated in years ending December 31, 2018 and before in the U.S. totaling \$8,378 begin to expire in 2036. Further, we have tax loss carry-forwards of approximately \$6,459 available to offset future foreign income in Italy as of December 31, 2024. We have recorded a full valuation allowance against the deferred tax asset because we cannot anticipate when or if this entity will have taxable income sufficient to utilize the net operating losses in the future. There is no expiration of the net operating loss carry-forwards related to tax losses generated in prior years in Italy. Finally, we have tax loss carry-forwards of approximately \$1,098 available to offset future foreign income in China as of December 31, 2024.

As of December 31, 2019, the investment in Fuel Tech S.p.A (Chile) was no longer considered to be indefinite and a provision for deferred U.S. income taxes was recorded. As of December 31, 2023, the provision for deferred U.S. income taxes related to the Fuel Tech S.p.A (Chile) investment was \$149. As of December 31, 2024, Fuel Tech S.p.A (Chile) was still included in continuing operations. As a result an additional (\$13) was recorded, adjusting the total consideration to \$136. The deferred income taxes associated with this investment are offset by a valuation allowance of (\$136).

[Table of Contents](#)**4. COMMON STOCK**

At December 31, 2024 and 2023, respectively, we had 31,767,329 and 31,361,303 shares of common stock issued and 30,708,273 and 30,385,297 outstanding, with an additional 6,715 shares reserved for issuance upon conversion of the nil coupon non-redeemable convertible unsecured loan notes (see Note 6). As of December 31, 2024, we had 4,215,272 shares reserved for issuance upon the exercise or vesting of equity awards, of which 176,000 are stock options that are currently exercisable (see Note 8).

**5. TREASURY STOCK**

Common stock held in treasury totaled 1,059,056 and 976,006 with a cost of \$2,346 and \$2,251 at December 31, 2024 and 2023, respectively. These shares were withheld from employees to settle personal tax withholding obligations that arose as a result of restricted stock units that vested during the periods presented.

**6. NIL COUPON NON-REDEEMABLE CONVERTIBLE UNSECURED LOAN NOTES**

At December 31, 2024 and 2023, we had a principal amount of \$76 of nil coupon non-redeemable convertible unsecured perpetual loan notes (Loan Notes) outstanding. The Loan Notes are convertible at any time into common stock at rates of \$6.50 and \$11.43 per share, depending on the note. As of December 31, 2024, the nil coupon loan notes were convertible into 6,715 shares of common stock. Based on our closing stock price of \$1.05 at December 31, 2024, the aggregate fair value of the common stock that the holders would receive if all the loan notes were converted would be approximately \$7, which is less than the principal amount of the loans outstanding as of that date. The Loan Notes bear no interest and have no maturity date. They are repayable in the event of our dissolution and the holders do not have the option to cash-settle the notes. Accordingly, they have been classified within stockholders' equity in the accompanying balance sheets. The notes do not hold distribution or voting rights unless and until converted into common stock.

For the years ended December 31, 2024 and 2023, there were no Loan Notes repurchased by the Company.

**7. WARRANTS**

On February 11, 2021, Fuel Tech entered into a securities purchase agreement to issue and sell, in a private placement, 5,000,000 shares of common stock and 2,500,000 warrants exercisable for a total of 2,500,000 shares of common stock with an exercise price of \$5.10 per Warrant Share, at a purchase price of \$5.1625 per Share and associated warrant. The Warrants expire on the five and one-half year anniversary of the effective date of the registration statement registering the Warrant Shares for resale. In addition, the Company issued to the placement agent Warrants to purchase up to 350,000 shares of common stock. The Placement Agent Warrants are exercisable at an exercise price of \$6.45 per share of common stock and expire on the five and one-half year anniversary of the effective date of the registration statement registering the Shares and the Warrant Shares for resale.

The issuance of warrants to purchase shares of the Company's common stock are summarized as follows:

	Shares
Outstanding as of December 31, 2023	2,850,000
Granted	—
Exercised	—
Outstanding as of December 31, 2024	2,850,000

The following table summarizes information about warrants outstanding and exercisable at December 31, 2024:

Range of Exercise Price	Number Outstanding/ Exercisable	Weighted-Average Remaining Life in Years	Weighted-Average Exercise Price
\$ 5.10	2,500,000	1.62	\$ 5.10
\$ 6.45	350,000	1.62	\$ 6.45
	<u>2,850,000</u>		

**8. STOCK-BASED COMPENSATION**

Our stock-based employee compensation plan, referred to as the Fuel Tech, Inc. 2024 Long-Term Incentive Plan (2024 Plan), was adopted in June 2024 and replaced our prior incentive plan which was approved by our stockholders in 2014 (LTIP). No further grants will be made from the LTIP. The 2024 Plan and LTIP are referred to collectively as the Incentive Plans.

Under the Incentive Plans, awards may be granted to participants in the form of Non-Qualified Stock Options, Incentive Stock Options, Stock Appreciation Rights, Restricted Stock, RSUs, Performance Awards, Bonuses or other forms of share-based or non-share-based awards or combinations thereof. Participants in the Incentive Plans may be our directors, officers, employees, consultants or advisors (except consultants or advisors in capital-raising transactions) as the directors determine are key to the success of our business. There are a maximum of 4,215,272 shares that may be issued or reserved for awards to participants under the Incentive Plans. At December 31, 2024, we had 2,957,150 equity awards available for issuance under the Incentive Plans.

We did not record any excess tax benefits within income tax expense for the years ended December 31, 2024 and 2023. Given the Company has a full valuation allowance on its deferred tax assets, there were no excess tax benefits to record. In addition, we account for forfeitures of awards based on an estimate of the number of awards expected to be forfeited and adjusting the estimate when it is no longer probable that the employee will fulfill the service condition.

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Stock-based compensation is included in selling, general and administrative costs in our consolidated statements of operations. The components of stock-based compensation from continuing operations for the years ended December 31, 2024 and 2023 were as follows:

	For the Year Ended December 31,	
	2024	2023
Stock options and restricted stock units, net of forfeitures	\$ 446	\$ 389
After-tax effect of stock based compensation	\$ 446	\$ 389

**Stock Options**

The stock options granted to employees under the Incentive Plan have a 10-year life and they vest as follows: 50% after the second anniversary of the award date, 25% after the third anniversary, and the final 25% after the fourth anniversary of the award date. Fuel Tech calculates stock compensation expense for employee option awards based on the grant date fair value of the award, less expected annual forfeitures, and recognizes expense on a straight-line basis over the four-year service period of the award. Stock options granted to members of our Board of Directors vest immediately. Stock compensation for these awards is based on the grant date fair value of the award and is recognized in expense immediately.

Fuel Tech uses the Black-Scholes option pricing model to estimate the grant date fair value of employee stock options. The principal variable assumptions utilized in valuing options and the methodology for estimating such model inputs include: (1) risk-free interest rate – an estimate based on the yield of zero-coupon treasury securities with a maturity equal to the expected life of the option; (2) expected volatility – an estimate based on the historical volatility of Fuel Tech's common stock for a period equal to the expected life of the option; and (3) expected life of the option – an estimate based on historical experience including the effect of employee terminations.

There were no stock options granted during the years ended December 31, 2024 and 2023.

The following table presents a summary of our stock option activity and related information for the years ended December 31:

	2024		2023	
	Number of Options	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
Outstanding at beginning of year	270,500	\$ 3.09	384,500	\$ 2.98
Granted	—	—	—	—
Exercised	—	—	(44,000)	0.96
Expired or forfeited	(94,500)	5.22	(70,000)	3.85
Outstanding at end of year	176,000	\$ 1.94	270,500	\$ 3.09
Exercisable at end of year	176,000	\$ 1.94	270,500	\$ 3.09
Weighted-Average Remaining Contractual Life (years)		1.18		1.56
Aggregate Intrinsic Value		\$ 4		\$ 4

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on our closing stock price of \$1.05 as of December 31, 2024, which would have been received by the option holders had those options holders exercised their stock options as of that date.

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

Options Outstanding and Exercisable			
Range of Exercise Prices	Number of Options	Weighted-Average Remaining Contractual Life (years)	Weighted-Average Exercise Price
\$0.96 - \$1.27	44,000	2.9	\$ 0.97
\$1.28 - \$2.01	27,000	1.4	1.58
\$2.02 - \$2.44	105,000	0.4	2.44
	176,000	1.2	\$ 1.94

As of and for the 12 months ended December 31, 2024, there was no non-vested stock option activity and no total unrecognized compensation cost related to non-vested stock options granted under the Incentive Plan. There were no options exercised during the year ended December 31, 2024. Fuel Tech received proceeds of \$42 from the exercise of stock options during the year ended December 31, 2023. It is our policy to issue new shares upon option exercises, loan conversions, and vesting of restricted stock units. We have not used cash and do not anticipate any future use of cash to settle equity instruments granted under share-based payment arrangements. Shares received for exercise of stock options come from newly issued shares.

**Restricted Stock Units**

RSUs granted to employees vest over time based on continued service (typically vesting over a period between two to four years), and RSUs granted to directors vest after a one year vesting period based on continued service. Such time-vested RSUs are valued at the date of grant based on the closing price of the Common Shares on the grant date. Compensation cost, adjusted for estimated forfeitures, is amortized on a straight-line basis over the requisite service period.

In addition to the time vested RSUs, in 2023 the Company entered into an Executive Performance RSU Award Agreement (the "Agreement") with certain officers, including its President and Chief Executive Officer, Chief Financial Officer and Senior Vice President, Sales (each a "Participating Executive") pursuant to which each Participating Executive will have the opportunity to earn a specified amount of RSUs based on Fuel Tech's performance in 2023 and 2024. The target amount of RSUs for each of four possible RSU award components is set for each Participating Executive for 2023 and 2024.

The Agreement provides for four possible RSU awards: "Look-Back RSUs," "Total Revenue RSUs," "New Business Growth RSUs," and "Operating Income Growth" RSUs. If the Look-Back RSUs are awarded, these RSUs will follow a vesting schedule that provides for vesting of one-third of the granted Look-Back RSUs after the first anniversary of the grant determination date, one-third after the second anniversary date and one-third after the third anniversary date. If the Total Revenue RSUs, New Business Growth RSUs, or Operating Income Growth RSUs targets are achieved, these RSUs will follow a vesting schedule whereby 100% of the granted RSUs will vest one year following the grant determination date. All RSUs are valued at the date of grant based on the closing price of the Company's common stock on the grant date.

There were 106,000 RSU awards granted to Participating Executives in 2024 based on the Company's performance during the year ended December 31, 2023. The amount, if any, of actual RSU awards to be issued for the year ended December 31, 2024 is contingent on performance by the Participating Executive and the Company in the performance areas and for the measurement periods set forth in the Agreement as determined by the Company.

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During the years ended December 31, 2024 and 2023, there were 406,026 and 45,000 restricted stock units that vested with a grant date fair value of \$536 and \$62, respectively. As of December 31, 2024, there was \$1,024 of total unrecognized compensation cost related to all non-vested share-based compensation arrangements granted under the Incentive Plan. That cost is expected to be recognized over the remaining requisite service period of 1.2 years.

A summary of restricted stock unit activity for the years ended December 31, 2024 and 2023 is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested restricted stock units at December 31, 2022	767,048	\$ 1.32
Granted	1,040,200	1.26
Forfeited	—	—
Vested	(45,000)	1.37
Unvested restricted stock units at December 31, 2023	1,762,248	1.29
Granted	151,000	1.09
Forfeited	(425,100)	1.26
Vested	(406,026)	1.32
Unvested restricted stock units at December 31, 2024	1,082,122	\$ 1.26

#### Deferred Directors Fees

In addition to the Incentive Plan, Fuel Tech has a Deferred Compensation Plan for Directors (Deferred Plan). Under the terms of the Deferred Plan, Directors can elect to defer Directors' fees for shares of Fuel Tech common stock that are issuable at a future date as defined in the agreement. In accordance with ASC 718, Fuel Tech accounts for these awards as equity awards as opposed to liability awards. In 2024 and 2023, there was no stock-based compensation expense under the Deferred Plan.

#### 9. COMMITMENTS AND CONTINGENCIES

Fuel Tech is subject to various claims and contingencies related to, among other things, workers compensation, general liability (including product liability), and lawsuits. The Company records liabilities where a contingent loss is probable and can be reasonably estimated. If the reasonable estimate of a probable loss is a range, the Company records the most probable estimate of the loss or the minimum amount when no amount within the range is a better estimate than any other amount. The Company discloses a contingent liability even if the liability is not probable or the amount is not estimable, or both, if there is a reasonable possibility that a material loss may have been incurred.

From time to time we are involved in litigation with respect to matters arising from the ordinary conduct of our business. In the opinion of management, based upon presently available information, either adequate provision for anticipated costs have been accrued or the ultimate anticipated costs will not materially affect our consolidated financial position, results of operations, or cash flows. We do not believe we have any pending loss contingencies that are probable or reasonably possible of having a material impact on our consolidated financial position, results of operations or cash flows.

[Table of Contents](#)**Performance Guarantees**

The majority of Fuel Tech's long-term equipment construction contracts contain language guaranteeing that the performance of the system that is being sold to the customer will meet specific criteria. On occasion, performance surety bonds and bank performance guarantees/letters of credit are issued to the customer in support of the construction contracts as follows:

- in support of the warranty period defined in the contract; or
- in support of the system performance criteria that are defined in the contract.

As of December 31, 2024, we had outstanding bank performance guarantees and letters of credit in the amount of \$1,860 in support of equipment construction contracts that have not completed their final acceptance test or that are still operating under a warranty period. The performance guarantees and letters of credit expire on dates ranging from April 2025 through June 2026. The expiration dates may be extended if the project completion dates are extended. Our management believes it is probable that these projects will be successfully completed and that there will not be a material adverse impact on our operations from these bank performance guarantees and letters of credit. As a result, no liability has been recorded for these performance guarantees.

**Product Warranties**

Fuel Tech issues a standard product warranty with the sale of our products to customers. Our recognition of warranty liability is based primarily on analyses of warranty claims experience in the preceding years as the nature of our historical product sales for which we offer a warranty are substantially unchanged. This approach provides an aggregate warranty accrual that is historically aligned with actual warranty claims experienced. There was no change in the warranty liability included in the Other accrued liabilities line of the Consolidated Balance Sheet in 2024 and 2023. The warranty liability balance was \$159 at December 31, 2024 and 2023.

**10. LEASES**

The terms of the Company's two primary office space lease arrangements are as follows:

- The Gallarate, Italy building lease, for approximately 1,335 square feet, runs through April 30, 2031. This facility serves as the operating headquarters for our European operations.
- The Aurora, IL warehouse lease, for approximately 11,000 square feet, runs through March 31, 2031. This facility serves as an outside warehouse facility.

The Company also has two additional operating leases related to certain office equipment and one short-term lease. Our leases have remaining lease terms of 0.3 years to 6.3 years. Our leases do not contain any material residual value guarantees or material restricted covenants and we currently have no material sublease arrangements. We have no financing leases as defined under ASC 842.

Total operating lease expense is as follows:

	2024	2023
Operating lease cost	\$ 180	\$ 188
Short-term lease cost	9	15
Total lease cost	<u>\$ 189</u>	<u>\$ 203</u>

The weighted average remaining lease terms were 6.18 years and 6.58 years as of December 31, 2024 and 2023, respectively. The weighted average discount rates were 8.25% and 8.00% as of December 31, 2024 and 2023, respectively.

Remaining maturities of our existing lease liabilities as of December 31, 2024 were as follows:

Year Ending December 31,	Operating Leases
2025	\$ 125
2026	121
2027	125
2028	129
2029	131
Thereafter	171
Total lease payments	<u>\$ 802</u>
Less imputed interest	<u>(177)</u>
Total	<u>\$ 625</u>

The following is the balance sheet classification of our existing lease liabilities:

	2024	2023
Operating lease liabilities - current	\$ 77	\$ 81
Operating lease liabilities - non-current	548	533
Total operating lease liabilities	<u>\$ 625</u>	<u>\$ 614</u>

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Supplemental cash flow information related to leases was as follows:

	For the Twelve Months ended December 31, 2024	For the twelve months ended December 31, 2023
Cash paid for amounts included in the measurement of lease liabilities	\$ 132	\$ 150
Leased assets obtained in exchange for operating lease liabilities	95	533

## 11. DEBT FINANCING

The Company's Investment Collateral Security agreement with BMO Harris is used for the sole purpose of issuing standby letters of credit and requires us to pledge our investments as collateral for 150% of the aggregate face amount of outstanding standby letters of credit. The Company pays 250 basis points on the face values of outstanding letters of credit. There are no financial covenants set forth in the Investment Collateral Security agreement. At December 31, 2024, the Company had outstanding standby letters of credit totaling approximately \$1,860 under the Investment Collateral Security agreement. At December 31, 2024, the investments held as collateral totaled \$2,790. Fuel Tech is committed to reimbursing the issuing bank for any payments made by the bank under these instruments.

## 12. BUSINESS SEGMENT AND GEOGRAPHIC FINANCIAL DATA

### Business Segment Financial Data

We segregate our financial results into two reportable segments representing two broad technology segments as follows:

- The Air Pollution Control technology segment includes technologies to reduce NOx emissions in flue gas generated by the firing of natural gas or coal from boilers, incinerators, furnaces and other stationary combustion sources. These include NOxOUT® and HERT™ Selective Non-Catalytic Reduction systems and Selective Catalytic Reduction (SCR) systems. Our SCR systems can also include Ammonia Injection Grid, and GSG™ Graduated Straightening Grid systems to provide high NOx reductions at significantly lower capital and operating costs than conventional SCR systems. ULTRA® technology creates ammonia at a plant site using safe urea for use with any SCR application. ESP technologies make use of electrostatic precipitator products and services to reduce particulate matter. FGC systems are chemical injection systems offered in markets outside the U.S. and Canada to enhance electrostatic precipitator and fabric filter performance in controlling particulate emissions.
- The FUEL CHEM® technology segment, which uses chemical processes in combination with advanced CFD and CKM boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in coal-fired furnaces and boilers through the addition of chemicals into the furnace using TIFI® Targeted In-Furnace Injection™ technology.

The "Other" classification includes those profit and loss items not allocated to either reportable segment. There are no inter-segment sales that require elimination.

Our Chief Executive Officer (CEO) serves as our Chief Operating Decision Maker (CODM) and is responsible for reviewing segment performance and making decisions regarding resource allocation. We evaluate performance and allocate resources based on revenue and gross margin by reportable segment. We do not allocate selling, general and administrative expenses, interest, other non-operating income or expense items, or taxes to segments. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. We do not review assets by reportable segment, but rather, in aggregate for the Company as a whole.

Information about reporting segment net sales and gross margin from continuing operations are provided below:

For the year ended December 31, 2024	Air Pollution Control Segment	FUEL CHEM Segment	Other	Total
Revenues from external customers	\$ 11,242	\$ 13,891	\$ —	\$ 25,133
Cost of sales	(7,050)	(7,460)	—	(14,510)
Gross margin	4,192	6,431	—	10,623
Selling, general and administrative	—	—	(13,761)	(13,761)
Research and development	—	—	(1,564)	(1,564)
Operating income (loss) from continuing operations	\$ 4,192	\$ 6,431	\$ (15,325)	\$ (4,702)

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For the year ended December 31, 2023	Air Pollution Control Segment	FUEL CHEM Segment	Other	Total
Revenues from external customers	\$ 13,483	\$ 13,598	\$ —	\$ 27,081
Cost of sales	(8,410)	(7,015)	—	(15,425)
Gross margin	5,073	6,583	—	11,656
Selling, general and administrative	—	—	(12,803)	(12,803)
Research and development	—	—	(1,511)	(1,511)
Operating income (loss) from continuing operations	<u>\$ 5,073</u>	<u>\$ 6,583</u>	<u>\$ (14,314)</u>	<u>\$ (2,658)</u>

**Geographic Segment Financial Data**

Information concerning our operations by geographic area is provided below. Revenues are attributed to countries based on the location of the end-user. Assets are those directly associated with operations of the geographic area. We manage our assets on a total company basis, not by operating segment. Therefore, our CODM does not regularly review any asset information by operating segment and accordingly, we do not report asset information by operating segment.

For the years ended December 31,	2024	2023
Revenues:		
United States	\$ 17,802	\$ 21,397
Other Foreign	7,331	5,684
	<u>\$ 25,133</u>	<u>\$ 27,081</u>

As of December 31,	2024	2023
Assets:		
United States	\$ 44,430	\$ 46,487
Foreign	4,367	3,901
	<u>\$ 48,797</u>	<u>\$ 50,388</u>

**13. RESTRUCTURING ACTIVITIES**

On January 18, 2019, the Company announced a planned suspension of its APC business operation in China (Beijing Fuel Tech). This action was part of Fuel Tech's ongoing operational improvement initiatives designed to prioritize resource allocation, reduce costs, and drive profitability for the Company on a global basis. The transition associated with the suspension of the APC business includes staff rationalization, supplier and partner engagement, and the monetization of certain assets. The remaining transition activities include the execution of the remaining activities to satisfy the requirements for the remaining APC projects in China (with a backlog totaling approximately \$3 as of December 31, 2024) and those related to subsidiary closure.

The following table presents our revenues and net loss in China for the years ended December 31, 2024 and 2023:

	2024	2023
Total revenues	\$ —	\$ 2
Net loss	(53)	(50)

The following table presents net assets in China as of December 31, 2024 and 2023:

	2024	2023
Total assets	\$ 788	\$ 846
Total liabilities	84	67
Total net assets	<u>\$ 704</u>	<u>\$ 779</u>

Total assets primarily consist of cash and other receivables. Total liabilities consist of accounts payable and certain accrued liabilities.

The Company recorded no restructuring charges for the years ended December 31, 2024 and 2023.

[Table of Contents](#)**14. ACCRUED LIABILITIES**

The components of other accrued liabilities are as follows:

	As of	
	December 31, 2024	December 31, 2023
Contract liabilities (Note 2)	\$ 721	\$ 1,279
Deferred revenue	360	103
Warranty reserve (Note 9)	159	159
Accrued professional fees	86	101
Other accrued liabilities	289	292
Total other accrued liabilities	<u>\$ 1,615</u>	<u>\$ 1,934</u>

[Table of Contents](#)**ITEM 9 - CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None

**ITEM 9A - CONTROLS AND PROCEDURES****Disclosure Controls and Procedures**

Under the supervision and with the participation of our Chief Executive Officer and Principal Financial Officer, our management evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act), as of the end of the period covered by this Annual Report on Form 10-K (the "Evaluation Date"). Based upon that evaluation, our Chief Executive Officer and Principal Financial Officer concluded that, as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

**Change in Internal Controls**

There has been no change in the Company's internal control over financial reporting during the year covered by this report that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

**Management's Report on Internal Control Over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) under the Exchange Act. As required by Rule 13a-15(c) under the Exchange Act, our management has carried out an evaluation, with the participation of the Chief Executive Officer and Principal Financial Officer, of the effectiveness of its internal control over financial reporting as of the end of the last fiscal year. The framework on which such evaluation was based is contained in the report entitled "Internal Control—Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO Report") in 2013.

Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on its assessment, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2024, based on criteria in "Internal Control - Integrated Framework" issued by the COSO in 2013.

**ITEM 9B - OTHER INFORMATION**

None

**PART III****ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information required by this Item will be set forth under the captions “Election of Directors,” “Directors and Executive Officers of Fuel Tech,” “Compensation Committee,” “Audit Committee,” and “Financial Experts” in our definitive Proxy Statement related to the 2025 Annual Meeting of Stockholders (the “Proxy Statement”) and is incorporated by reference.

We have adopted a Code of Ethics and Business Conduct (the “Code”) that applies to all employees, officers and directors, including the Chief Executive Officer and Principal Financial Officer. A copy of the Code is available free of charge to any person on written or telephone request to our Legal Department at the address or telephone number described in Item 1 under the heading “Available Information.” The Code is also available on our website at [www.ftek.com](http://www.ftek.com).

Other information concerning our directors and executive officers and relating to corporate governance will be set forth under the captions “Election of Directors,” “Audit Committee,” “Compensation and Nominating Committee,” “Financial Experts,” “Corporate Governance” and “General” in our Proxy Statement related to the 2025 Annual Meeting of Stockholders and is incorporated by reference.

**ITEM 11 - EXECUTIVE COMPENSATION**

Information required by this Item will be set forth under the caption “Executive Compensation” in our definitive Proxy Statement and is incorporated by reference.

**ITEM 12 - SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS**

The following table provides information for all equity compensation plans as of the fiscal year ended December 31, 2024, under which our securities were authorized for issuance:

<u>Plan Category</u>	<u>Number of Securities to be issued upon exercise of outstanding options and vesting of restricted stock units</u>	<u>Weighted-average exercise price of outstanding options</u>	<u>Number of securities remaining available for future issuance under equity compensation plan excluding securities listed in column (a)</u>
	(a)	(b)	(c)
Equity compensation plans approved by security holders	1,258,122	\$ 1.94	2,957,150

Further information required by this Item will be set forth under the caption “Principal Stockholders and Stock Ownership of Management” in the definitive Proxy Statement and is incorporated by reference.

**ITEM 13 - CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Information required by this Item will be set forth under the captions “Compensation Committee Interlocks and Insider Participation” and “Certain Relationships and Related Transactions” in our definitive Proxy Statement and is incorporated by reference.

**ITEM 14 - PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information required by this Item will be set forth under the caption “Approval of Appointment of Auditors” in our definitive Proxy Statement and is incorporated by reference.

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## PART IV

## ITEM 15 - EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

## (a) (1) Financial Statements

The financial statements identified below and required by Part II, Item 8 of this Form 10-K are set forth above.

Management's Report on Internal Control Over Financial Reporting  
 Report of Independent Registered Public Accounting Firm (PCAOB ID: 49)  
 Consolidated Balance Sheets as of December 31, 2024 and 2023  
 Consolidated Statements of Operations for Years Ended December 31, 2024 and 2023  
 Consolidated Statements of Comprehensive Loss for Years Ended December 31, 2024 and 2023  
 Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2024 and 2023  
 Consolidated Statements of Cash Flows for the Years Ended December 31, 2024 and 2023  
 Notes to Consolidated Financial Statements

## (2) Financial Statement Schedules

All other schedules have been omitted because of the absence of the conditions under which they are required or because the required information, where material, is shown in the financial statements or the notes thereto.

## (3) Exhibits

Exhibit	Description	Filed Herewith	Incorporated by Reference			
			Form	Period ending	Exhibit	Filing date
3.1	<a href="#">Certificate of Incorporation of Fuel Tech, Inc.</a>		8-K		3.2	10/5/2006
3.2	<a href="#">Certificate of Conversion of Fuel Tech, Inc.</a>		8-K		3.1	10/5/2006
3.3	<a href="#">Amended and Restated By-Laws of Fuel Tech, Inc. dated as of May 28, 2015</a>		8-K		3.1	6/1/2015
4.1	<a href="#">Instrument Constituting US \$19,200,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated December 21, 1989</a>		10-Q	9/30/2009	4.1	11/4/2009
4.2	<a href="#">First Supplemental Instrument Constituting US \$3,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated July 10, 1990</a>		10-Q	9/30/2009	4.2	11/4/2009
4.3	<a href="#">Instrument Constituting US \$6,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated March 12, 1993</a>		10-Q	9/30/2009	4.3	11/4/2009
4.4*	<a href="#">Fuel Tech, Inc. 2014 Long-Term Incentive Plan</a>		S-8		4.1	3/31/2014
4.5*	<a href="#">Fuel Tech, Inc. 2024 Long-Term Incentive Plan</a>	X				
4.6*	<a href="#">Fuel Tech, Inc. Form of Non-Executive Director Stock Option Agreement</a>		10-K	12/31/2006	4.6	3/6/2007
4.7	<a href="#">Fuel Tech, Inc. Form of 2014 Long-Term Incentive Plan Non-Employee Director's Stock Option Agreement</a>		10-Q	6/30/2014	4.2	8/11/2014
4.8*	<a href="#">Fuel Tech, Inc. Form of Common Stock Warrant</a>		8-K		4.1	2/18/2021
4.9*	<a href="#">Fuel Tech, Inc. Form of Placement Agent Warrant</a>		8-K		4.2	2/18/2021
4.10*	<a href="#">Fuel Tech, Inc. Form of Restricted Stock Unit Agreement (2014 Long-Term Incentive Plan)</a>		10-Q	6/30/2014	4.1	8/11/2014
4.11*	<a href="#">Fuel Tech, Inc. Form of 2014 Long-Term Incentive Plan Stock Option Agreement</a>		10-Q	3/31/2015	10.2	5/11/2015
4.12*	<a href="#">Form of 2023 Fuel Tech, Inc. Executive Performance RSU Agreement</a>		8-K		99.1	5/10/2023

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4.13*	<a href="#">Form of Change of Control Severance Agreement</a>	8-K		99.2	5/10/2023
10.1	<a href="#">Form of Indemnity Agreement between Fuel Tech, Inc. and its Directors and Officers.</a>	8-K		99.1	2/7/2007
10.2*	<a href="#">2023 Corporate Incentive Plan of Fuel Tech, Inc.</a>	8-K		99.1	3/3/2023
10.3*	<a href="#">2024 Corporate Incentive Plan of Fuel Tech, Inc.</a>	8-K		99.1	3/28/2024
10.4*	<a href="#">2023 Corporate Objectives Plan of Fuel Tech, Inc.</a>	8-K		99.2	3/3/2023
10.5*	<a href="#">2024 Corporate Objectives Plan of Fuel Tech, Inc.</a>	8-K		99.2	3/28/2024
10.6*	<a href="#">2023 Fuel Tech, Inc. FUEL CHEM Officer Sales Commission Plan</a>	8-K		99.2	12/12/2022
10.7*	<a href="#">2024 Fuel Tech, Inc. FUEL CHEM Officer Sales Commission Plan</a>	8-K		99.2	12/08/2023
10.8*	<a href="#">2025 Fuel Tech, Inc. FUEL CHEM Officer Sales Commission Plan</a>	8-K		99.2	12/12/2024
10.9*	<a href="#">2023 Fuel Tech, Inc. APC Officer and NSM Sales Commission Plan</a>	8-K		99.1	12/12/2022
10.10*	<a href="#">2024 Fuel Tech, Inc. APC Officer and NSM Sales Commission Plan</a>	8-K		99.1	12/08/2023
10.11*	<a href="#">2025 Fuel Tech, Inc. APC Officer and NSM Sales Commission Plan</a>	8-K		99.1	12/12/2024
10.12*	<a href="#">Employment Agreement dated August 31, 2009, between William E. Cummings, Jr. and Fuel Tech, Inc.</a>	10-K	12/31/2009	10.10	3/14/2010
10.13*	<a href="#">Employment Agreement, dated September 20, 2010 between Vincent J. Arnone and Fuel Tech, Inc.</a>	10-K	12/31/2011	10.21	3/5/2012
10.14*	<a href="#">Engagement Letter, dated February 11, 2021, by and between Fuel Tech, Inc. and H.C. Wainwright &amp; Co.</a>	8-K		1.1	2/18/2021
10.15*	<a href="#">Employment Agreement, dated July 8, 1996, between Ellen T. Albrecht and Fuel Tech, Inc.</a>	10-K		10.13	3/8/2022
10.16*	<a href="#">Form of Securities Purchase Agreement</a>	8-K		10.1	2/18/2021
10.17*	<a href="#">Form of Registration Rights Agreement</a>	8-K		10.2	2/18/2021
19	<a href="#">Insider Trading Policy of Fuel Tech, Inc.</a>				X
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm.</a>				X
31.1	<a href="#">Certifications of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>				X
31.2	<a href="#">Certifications of principal financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</a>				X
32	<a href="#">Certification of Chief Executive Officer and principal financial officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</a>				X
101.1	INS				Inline XBRL Instance Document.
101.2	SCH				Inline XBRL Taxonomy Extension Schema Document.
101.3	CAL				Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.4	DEF				Inline XBRL Taxonomy Extension Definition Linkbase Document.
101.5	LAB				Inline XBRL Taxonomy Extension Label Linkbase Document.
101.6	PRE				Inline XBRL Taxonomy Extension Presentation Linkbase Document.
104					Cover Page Interactive Data File (embedded within the Inline XBRL and contained in Exhibit 101)
*					Indicates a management contract or compensatory plan or arrangement.
**					Portions of this document have been omitted pursuant to a request for confidential treatment and the omitted information has been filed separately with the Securities and Exchange Commission.

**ITEM 16 - FORM 10-K SUMMARY**

None.

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**SIGNATURES AND CERTIFICATIONS**

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

FUEL TECH, INC.

Date: March 4, 2025

By: /s/ Vincent J. Arnone  
Vincent J. Arnone  
President and Chief Executive Officer  
(Principal Executive Officer)

Date: March 4, 2025

By: /s/ Ellen T. Albrecht  
Ellen T. Albrecht  
Vice President, Chief Financial Officer and Treasurer  
(Principal Financial Officer)

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Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been duly signed below by the following persons on behalf of Fuel Tech, Inc. and in the capacities and on the date indicated.

Date: March 4, 2025

<u>Signature</u>	<u>Title</u>
<u>/s/ Vincent J. Arnone</u> Vincent J. Arnone	President and Chief Executive Officer (Principal Executive Officer)
<u>/s/ Ellen T. Albrecht</u> Ellen T. Albrecht	Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)
<u>/s/ Douglas G. Bailey</u> Douglas G. Bailey	Director
<u>/s/ Dennis L. Zeitler</u> Dennis L. Zeitler	Director
<u>/s/ Sharon L. Jones</u> Sharon L. Jones	Director

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