FUEL TECH, INC.
Form 10-K/A
April 01, 2013
Table of Contents

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K/A

(Amendment No. 1)

(Mark One)

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]**

For the fiscal year ended: December 31, 2012

OR

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]**

For the transition period from _____ to _____

Commission File No. 001-33059

Fuel Tech, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-5657551**
(State or other jurisdiction of incorporation of organization)	**(I.R.S. Employer Identification Number)**

Fuel Tech, Inc.

27601 Bella Vista Parkway

Warrenville, IL 60555-1617

630-845-4500

www.ftek.com

(Address and telephone number of principal executive offices)

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

Common Stock $0.01 par value per share	**The NASDAQ Stock Market, Inc.**
(Title of Class)	**(Name of Exchange on Which Registered)**

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 x

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

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 x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted to Rule 405 of Regulation S-T (§229.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, non-accelerated filer or a smaller reporting company (as defined in rule 12b-2 under the Securities Exchange Act of 1934).

Large Accelerated Filer ¨	Accelerated Filer x
Non-accelerated Filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company ¨

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

The aggregate market value of the voting stock held by non-affiliates of the registrant at June 30, 2012 was approximately $100,062,000 based on the closing stock price as reported on the NASDAQ Stock Exchange.

Indicate number of shares outstanding of each of the registered classes of Common Stock at April 1, 2013: 22,102,549 shares of Common Stock, $0.01 par value.

Documents incorporated by reference:

Certain portions of the registrant s definitive Proxy Statement for the annual meeting of stockholders to be held in 2013 are incorporated by reference in Parts II, III, and IV hereof.

Table of Contents

TABLE OF CONTENTS

Table of Contents

TABLE OF DEFINED TERMS

Term	Definition
ABC	American Bailey Corporation
AIG	Ammonia Injection Grid
ASCR	A trademark used to describe Fuel Tech s Advanced Selective Catalytic Reduction process
CAAA	Clean Air Act Amendments of 1990
CAIR	Clean Air Interstate Rule
CAVR	Clean Air Visibility Rule
CFD	Computational Fluid Dynamics
Common Shares	Shares of the Common Stock of Fuel Tech
Common Stock	Common Stock of Fuel Tech
EPA	The U.S. Environmental Protection Agency
FGC	Flue Gas Conditioning
FUEL CHEM®	A trademark used to describe Fuel Tech s 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	Graduated Straightening Grid
HERT High Energy Reagent Technology	A trademark used to describe a Fuel Tech Selective Non-Catalytic Reduction Process
Loan Notes	Nil-coupon, non-redeemable convertible unsecured loan notes of Fuel Tech
NO_x	Oxides of nitrogen
NO_xOUT®	A trademark used to describe Fuel Tech s Selective Non-Catalytic Reduction process for the reduction of NO_x
NO_xOUT-SCR®	A trademark used to describe Fuel Tech s direct injection of urea as a catalyst reagent
NO_xOUT CASCADE®	A trademark used to describe Fuel Tech s combination of Selective Non-Catalytic Reduction and Selective Catalytic Reduction
SCR	Selective Catalytic Reduction
SIP Call	State Implementation Plan Regulation
SNCR	Selective Non-Catalytic Reduction
TCI® Targeted Corrosion Inhibition	A trademark used to describe the FUEL CHEM program designed for high-temperature slag and corrosion control, principally in waste-to-energy boilers
TIFI® Targeted In-Furnace Injection	A trademark used to describe Fuel Tech s proprietary technology that enables the precise injection of a chemical reagent into a boiler or furnace as part of a FUEL CHEM program
ULTRA	A trademark used to describe Fuel Tech s process for generating ammonia for use as a Selective Catalytic Reduction reagent

Table of Contents

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (the 2012 Form 10-K/A) is being filed by the Company to include audited financial statements for the year ended December 31, 2012, as well as the other information previously omitted, as described below, from the Company s Annual Report on Form 10-K for the year ended December 31, 2012 filed with the Securities and Exchange Commission (the SEC) on March 18, 2012 (the Original 2012 Form 10-K). For the convenience of the reader, this Form 10-K/A sets forth the Original 2012 Form 10-K in its entirety, as amended by, and to reflect, the inclusion of the Omitted Information.

The Original 2012 Form 10-K omitted the Company s audited financial statements for the year ended December 31, 2012 (the 2012 Audit) and related information, including Item 6. Selected Financial Data, Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations, Item 7A. Quantitative and Qualitative Disclosures About Market Risks, Item 8. Financial Statements and Supplementary Data, Item 9A. Controls and Procedures, Exhibit 21, Exhibit 23.1 and complete certifications on Exhibit 31.1, Exhibit 31.2, and Exhibit 3 (collectively, such items and exhibits, the Omitted Information).

As previously disclosed in the Original 2012 Form 10-K and the Company s Report on Form 12b-25 filed with the SEC on March 18, 2013, the Company s independent registered public accounting firm, McGladrey LLP (McGladrey), advised the Company s Audit Committee that it had identified a matter that raised questions in relation to the SEC s auditor independence rules. Specifically, an entity associated with McGladrey provided certain bookkeeping and payroll processing services to the Company s subsidiary in China which were not consistent with the auditor independence rules. The services were provided in 2010 and 2011 and in the first quarter of 2012; the fees for the services were insignificant. McGladrey noted for the Audit Committee that during each of these periods, its audit engagement team was not aware of the services being provided to the Company s subsidiary in China. McGladrey advised the Audit Committee that it believes that this matter did not compromise or impair its integrity or objectivity with respect to conducting its audits and issuing reports on the Company s consolidated financial statements, and the Audit Committee upon careful evaluation agreed with these conclusions. As an additional measure taken in response to the matter described above, the Audit Committee engaged another independent accounting firm to perform an audit of the Company s subsidiary in China for the year ended December 31, 2012. This firm has completed its audit and has provided the results of its audit work to McGladrey, and McGladrey has issued its report on the Company s consolidated financial statements for the 2012 Audit.

This Form 10-K/A has been signed as of the date of this Form 10-K/A and all certifications of the Company s Chief Executive Officer and Chief Financial Officer are given as of the date of this Form 10-K/A.

Table of Contents

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 identi forward-looking statements. These statements are based on information currently available to us and are subject to various risks, uncertainties, and other factors, including, but not limited to, those discussed herein under the caption Risk Factors that could cause our actual growth, results of operations, financial condition, cash flows, performance and business prospects and opportunities to differ materially from those expressed in, or implied by, these statements. Except as expressly required by the federal securities laws, we undertake no obligation to update such factors or to publicly announce the results of any of the forward-looking statements contained herein to reflect future events, developments, or changed circumstances or for any other reason. Investors are cautioned that all forward-looking statements involve risks and uncertainties, including those detailed in Fuel Tech s filings with the Securities and Exchange Commission. See Risk Factors in Item 1A.

ITEM 1 - BUSINESS

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

Fuel Tech

Fuel Tech is a fully integrated company that uses 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., Fuel Tech became domesticated in the United States on September 30, 2006, and continues as a Delaware corporation with its corporate headquarters at 27601 Bella Vista Parkway, Warrenville, Illinois, 60555-1617. Fuel Tech maintains an Internet website at 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 Securities Exchange Act of 1934 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. Also available on our website are the Company s 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.

Fuel Tech s special focus is the worldwide marketing of its nitrogen oxide (NO_x) reduction and FUEL CHEM® technologies. The Air Pollution Control (APC) technology segment reduces NO_x emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources by utilizing combustion optimization techniques and Low NO_x and Ultra Low NO_x Burners; NO_xOUT® and HERT High Energy Reagent Technology SNCR systems; systems that incorporate Advanced SCR (ASCR) and NO_xOUT CASCADE® technologies, ULTRA and NO_xOUT-SCR® technologies; and Ammonia Injection Grid (AIG) and Graduated Straightening Grid (GSG) technologies. Fuel Tech s APC technology business is materially dependent on the continued existence and enforcement of worldwide air quality regulations. The FUEL CHEM technology segment improves the efficiency, reliability and environmental status of combustion units by controlling slagging, fouling and corrosion, as well as the formation of sulfur trioxide, ammonium bisulfate, particulate matter ($PM_{2.5}$), carbon dioxide, and unburned carbon in fly ash through the addition of chemicals into the fuel or via TIFI® Targeted In-Furnace Injection programs. Fuel Tech has other technologies, both commercially available and in the development stage, all of which are related to APC and FUEL CHEM processes or are similar in their technological base.

American Bailey Corporation

Douglas G. Bailey, Chairman, Chief Executive Officer, President, and Director of Fuel Tech, is a stockholder of American Bailey Corporation (ABC), which is a related party. Please refer to Note 10 to the consolidated financial statements in this document for information about transactions between Fuel Tech and ABC. Additionally, see the more detailed information relating to this subject under the caption Certain Relationships and Related Transactions in Fuel Tech s definitive Proxy Statement to be distributed in connection with Fuel Tech s 2013 Annual Meeting of Stockholders, which information is incorporated by reference.

Air Pollution Control

Regulations and Markets: Domestic

The U.S. air pollution control market, and more specifically federal and state NO_x regulations, currently is the primary driver in Fuel Tech s APC technology segment. This market is dependent on air pollution regulations and their continued enforcement. These regulations are based on the Clean Air Act Amendments of 1990, which require reductions in NO_x emissions on varying timetables with respect to various sources of emissions. The EPA s efforts to implement these regulations have been complicated by legal challenges in the Federal courts.

Table of Contents

The SIP Call: In 1994, governors of 11 Northeastern states, known collectively as the Ozone Transport Region, signed a Memorandum of Understanding requiring utilities to reduce their NO_x emissions by 55% to 65% from 1990 levels by May 1999. In 1998, the Environmental Protection Agency (EPA) announced more stringent regulations. Under the State Implementation Plan (SIP) Call, a regulation promulgated under the Amendments (discussed further below), over 1,000 utility and large industrial boilers in 19 states were required to achieve NO_x reduction targets by May 31, 2004. The Ozone Transport SIP Call regulation, designed to mitigate the effects of wind-aided ozone transported from the Midwestern and Southeastern U.S. into the Northeastern non-attainment areas, required, following the litigation described below, 19 states to make even deeper aggregate reductions of 85% from 1990 levels by May 31, 2004. Additionally, most other states with non-attainment areas were also required to meet ambient air quality standards for ozone by 2007.

The SIP Call was the subject of litigation, but an appellate court of the U.S. District Court of Appeals for the District of Columbia Circuit upheld the validity of this regulation. The D.C. Circuit Court s ruling was later affirmed by the U.S. Supreme Court in 2001 when, in a unanimous decision, the Supreme Court upheld EPA s authority to revise the National Ambient Air Quality Standard for ozone to 0.080 parts per million averaged through an eight-hour period from the then current 0.120 parts per million for a one-hour period. This more stringent standard provided clarity and impetus for air pollution control efforts well beyond the then current ozone attainment requirement. In keeping with this trend, the Supreme Court, only days later, denied industry s attempt to stay the SIP Call, effectively exhausting all means of appeal. The ozone standard is currently 0.075 parts per million averaged over an eight-hour period, a level established in May 2008. EPA is planning to propose an updated ozone standard in December 2013, with a final rule scheduled for mid-2014.

CAIR: On December 23, 2003, the EPA proposed a new regulation affecting the SIP Call states by specifying more expansive NO_x reduction. This rule, known as the Clean Air Interstate Rule (CAIR), was adopted by the EPA in 2005. CAIR specifies that additional annual NO_x reduction requirements be extended to most SIP-affected units in 28 Eastern states, while permitting a cap and trade format similar to the SIP Call. The Company estimates an additional 1,300 electric generating units using coal and other fuels to be affected by this rule. In an action related to CAIR, on June 15, 2005, the EPA issued the Clean Air Visibility Rule (CAVR), which is a nationwide initiative to improve federally preserved areas through reduction of NO_x and other pollutants. CAVR expands the NO_x reduction market to Western states unaffected by CAIR or the SIP Call. Compliance begins in 2013 and CAVR will potentially affect an additional 230 Western coal-fired electric-generating units. In addition, CAVR, along with the anticipated updated EPA rule for eight-hour ozone attainment, have the potential to impact thousands of boilers and industrial units in multiple industries nationwide for units burning coal and other fuels starting in 2013.

On July 11, 2008, the U.S. District Court of Appeals for the District of Columbia Circuit vacated the CAIR regulations under the premise that the EPA exceeded its authority when the rule was created in 2005. The court found more than several fatal flaws in the rule but did not take issue with the concept that NO_x emissions are to be controlled or the limits and thresholds established by CAIR. In vacating the rule in its entirety, the court remanded to EPA to promulgate a rule consistent with the D.C. Circuit Court s opinion. On December 23, 2008, the D.C. Circuit Court granted a petition by the EPA to keep the CAIR regulation in place while the EPA conducted further proceedings consistent with the court s prior opinion. In summary, the court stated that allowing CAIR to remain in effect until it is replaced by a rule consistent with our opinion would at least temporarily preserve the environmental values covered by CAIR. CAIR was re-instated and required the affected states to be in year-round NO_x emission compliance beginning January 1, 2009.

CSAPR: As a replacement for CAIR, EPA issued the Cross State Air Pollution Rule (CSAPR) in July 2011. CSAPR included more stringent NO_x regulations affecting 27 states, with compliance for the first phase in 2012, with additional reductions required in the second phase by 2014. Under CSAPR, state emission caps were designated to mitigate the emission impact on downwind states by controlling emissions from upwind states. If sources within a state caused the state to exceed its assurance limit, severe penalties including a two-for-one reduction based on each source s contribution percentage of the state overage would be applied. A stay on CSAPR was ordered by the D.C. Circuit Court on December 30, 2011, pending resolution of litigation filed by a number of states and companies with combustion sources. The D.C. Circuit Court vacated CSAPR on August 21, 2012. The decision identified issues with EPA procedures and authority of certain CSAPR provisions which were not consistent with the Clean Air Act. On October 5, 2012, EPA filed for an en banc review of CSAPR by the full DC Circuit Court, which was rejected on January 24, 2013. As a result of the demise of CSAPR, CAIR was once again re-instated.

The primary driver of CSAPR, CAIR and any EPA rule relating to NOx and ozone standards is the Federal Clean Air Act which includes National Ambient Air Quality Standards for criteria pollutants. Even following the vacating of CSAPR, these fundamental emission requirements continue to remain in effect and states must comply with the requirements of this law, and new NAAQS standards for nitrogen dioxide (NO_2) were issued in 2010, and tighter ozone standards are expected in 2014.

Regulations and Markets: International

Fuel Tech also sells NO_x control systems outside the United States, specifically in Europe, Latin America, and in the Pacific Rim, including the People s Republic of China (China). Under European Union Directives and new regulations in Chile, certain power plants must come into compliance with specified NO_x reduction targets by 2016.

China also continues to represent an attractive opportunity for Fuel Tech as the government set pollution control and energy conservation and efficiency improvements as top priorities as part of tightened standards that were issued in 2012. Fuel Tech has viable technologies to help achieve these objectives. China s dominant reliance on coal as an energy resource is not expected to

Table of Contents

change in the foreseeable future. China alone is forecasted to account for 76% of the projected increase in world coal use through 2035. Clean air will continue to be a pressing issue, especially given China s robust economic growth, expected growth in thermal power production, and an increasingly expanded role in international events and organizations.

China s Ministry of Environmental Protection issued regulations to be implemented as part of the Twelfth Five-Year Plan, running from 2011 to 2015, in support of reducing harmful pollutants and further defining the technologies recommended to achieve the reductions. The regulations for NO_x apply to all thermal power units that have a steaming rate of 65 tons per hour (155 megawatts (MW)) or larger. Newly constructed units and existing units that were approved subsequent to December 31, 2003, must meet the same stringent emission standard, while certain existing units approved prior to December 31, 2003 must meet a standard that is less stringent. In addition, all units that are in Key Regions must achieve the same standard as the newly constructed units. Key Regions are defined as those areas that are highly developed or highly populated and are sensitive to environmental overloading. All existing coal and oil-fired thermal units must comply with the proposed regulation by January 1, 2014 while all new units were scheduled to comply by January 1, 2012.

In addition, the regulation noted that NO_x reduction should be achieved via the use of Low NO_x Burners and Over-Fire Air systems in combination with Selective Non-Catalytic Reduction (SNCR) or SCR, where appropriate, to achieve required emissions levels. The combination of SNCR and SCR technologies in tandem is also considered as a viable technology choice.

While the current regulations do not specifically comment on the use of urea as the preferred reducing reagent in the NO_x control process in high population density areas, Fuel Tech believes that technologies to convert urea to ammonia will be deployed in Key Regions in support of safety objectives, and this practice has already been implemented in major cities such as Beijing, Guangzhou and Shanghai.

Fuel Tech has established a market position in NO_x control resulting from the initial national demonstration projects utilizing NO_xOUT CASCADE® technology at Jiangsu Kanshan (two new 600 MW units), NO_xOUT SNCR® technology at Jiangyin Ligang (four new 600 MW units) and Inner Mongolia (two new 600 MW units), and ULTRA technology on projects in Beijing (multiple projects on units of varying sizes including two district heating units), Zhejiang (four 1000 MW retrofit units), Shanxi (two new 660 MWunits) and Liaoning (two new 330 MW units). These projects have established Fuel Tech s NO_xcontrol technologies as being acceptable for use in reducing NO_x emissions and have resulted in additional contracts in China. The regulations established in support of the NO_x standards defined as part of the Twelfth Five-Year Plan will offer potential business opportunities for Fuel Tech and its suite of NO_x technologies.

Products

Fuel Tech s NO_xreduction technologies are installed worldwide on over 700 combustion units, including utility, industrial and municipal solid waste applications. Our products include customized NO_x control systems and our patented ULTRA™ technology, which converts urea-to-ammonia on site which provides safe reagent for use in Selective Catalytic Reduction (SCR) systems.

Low NO_x Burners and Ultra Low NO_x Burners (LNB and ULNB) are available for coal-, oil-, and gas-fired industrial and utility units. Each system application is specifically designed to maximize NO_x reduction. Computational fluid dynamics combustion modeling is used to validate the design prior to fabrication of equipment. NO_x reductions can range from 40%-60% depending on the fuel type. Over-Fire Air (OFA) systems stage combustion for enhanced NO_x reduction. Additional NO_x reductions, beyond Low NO_x Burners, of 35% - 50% are possible on different boiler configurations on a range of fuel types. Combined overall reductions range from 50% - 70%, with overall capital costs ranging from $10 - $20/kW and total costs ranging from $300 - $1,500/ton of NO_x removed, depending on the scope.

Fuel Tech s NO_xOUT® and HERT SNCR processes use non-hazardous urea as the reagent rather than ammonia. Both the NO_xOUT® and HERT processes on their own are capable of reducing $NO_x$by up to 25% - 50% for utilities and by potentially significantly greater amounts for industrial units in many types of plants with capital costs ranging from $5 - $20/kW for utility boilers and with total annualized operating costs ranging from $1,000 - $2,000/ton of NO_x removed.

Fuel Tech s Advanced Selective Catalytic Reduction (ASCR) systems include LNB, OFA, and SNCR components, along with a downsized SCR catalyst, Ammonia Injection Grid (AIG), and Graduated Straightening Grid (GSG) systems to provide up to 90% NO_x reduction at significantly lower capital and operating costs than conventional SCR systems while providing greater operational flexibility to plant operators. The capital costs for ASCR 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 SCR systems. The NO_xOUT CASCADE® and NO_xOUT-SCR® processes are basic types of ASCR systems which use just SNCR and SCR catalyst components. The NO_xOUT CASCADE® systems can achieve 60% - 70% NO_x reduction, with capital costs being a portion of the ASCR values defined above. Fuel Tech s NOxOUT-SCR® process utilizes urea as the SCR catalyst reagent to achieve NO_x reductions of up to 85% from smaller stationary combustion sources with capital and operating costs competitive with equivalently sized, standard SCR systems.

Fuel Tech s ULTRA process is designed to convert urea to ammonia safely and economically for use as a reagent in the SCR process for NO_x 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.

Table of Contents

This is contributing to new restrictions by rail carriers on the movement of anhydrous ammonia and to an escalation in associated rail transport and insurance rates. Overseas, new coal-fired power plants incorporating SCR systems are expected to be constructed at a rapid rate in China, and Fuel Tech s ULTRA process is believed to be a market leader for the safe conversion of urea to ammonia just prior to injection into the flue gas duct, which is particularly important near densely populated cities, major waterways, harbors or islands, or where the transport of anhydrous or aqueous ammonia is a safety concern.

Fuel Tech s SCR group provides process design optimization, performance testing and improvement, and catalyst selection services for SCR systems on coal-fired boilers. In addition, other related services, including start-ups, maintenance support and general consulting services for SCR systems, Ammonia Injection Grid 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. Fuel Tech also specializes in both physical experimental models, which involve construction of scale models through which fluids are tested, and computational fluid dynamics models, which simulate fluid flow by generating a virtual replication of real-world geometry and operating inputs. Fuel Tech designs flow corrective devices, such as turning vanes, ash screens, static mixers and our patent pending Graduated Straightening Grid (GSG). Fuel Tech s models help clients optimize performance in flow critical equipment, such as selective catalytic reactors in SCR systems, where the effectiveness and longevity of catalysts are of utmost concern. The Company s modeling capabilities are also applied to other power plant systems where proper flow distribution and mixing are important for performance, such as flue gas desulphurization scrubbers, electrostatic precipitators, air heaters, exhaust stacks and carbon injection systems for mercury removal.

The key market dynamic for the APC product line is the continued use of coal as the principal fuel source for global electricity production. Coal currently accounts for approximately 42% of all U.S. electricity generation and roughly 80% of Chinese electricity generation. Major coal consumers include China, the United States and India.

Sales of the NO_x reduction technologies were $62.4 million, $50.9 million, and $40.9 million for the years ended December 31, 2012, 2011 and 2010, respectively.

NO_x Reduction Competition

Competition with Fuel Tech s NO_x reduction suite of products may be expected from companies supplying urea SNCR systems, combustion modification products, SCR systems and ammonia SNCR systems. In addition, Fuel Tech experiences competition in the urea-to-ammonia conversion market.

Combustion modifications, including Low NO_x Burners and Over-Fire Air systems, can be fitted to most types of boilers with cost and effectiveness varying with specific boilers. Combustion modifications may yield up to 20% - 60% NO_x reduction economically with capital costs ranging from $10 - $20/kW and total costs ranging from $300 - $1,500/ton of NO_x removed. The modifications are designed to reduce the formation of NO_x and are typically the first NO_x reduction efforts employed. Companies such as Alstom, Babcock Power, Inc., The Babcock & Wilcox Burner Business, Combustion Components Associates, Inc., Foster Wheeler Corporation, and Siemens are active competitors in the Low NO_x Burner business. Once NO_x is formed, then the SCR process is an effective and proven method of control for removal of NO_x up to 90%. SCR systems have a high capital cost of $300+/kW on retrofit coal applications. Such companies as Alstom, Babcock Power, The Babcock & Wilcox Company, Foster Wheeler Corporation, Peerless Manufacturing Company, and Hitachi, are active SCR system providers, or providers of the catalyst itself.

The use of ammonia as the reagent for the SNCR process can reduce NO_x by 30% - 70% on incinerators, but has limited applicability in the utility industry. Ammonia system capital costs range from $5 - $20/kW, with annualized operating costs ranging from $1,000 - $3,000/ton of NO_x removed. These systems require the use of either anhydrous or aqueous ammonia, both of which are hazardous substances.

In addition to or in lieu of using the foregoing processes, certain customers may elect to close or de-rate plants, purchase electricity from third-party sources, switch from higher to lower NO_x-emitting fuels or purchase NO_x emission allowances.

Lastly, with respect to urea-to-ammonia conversion technologies, a competitive approach to Fuel Tech s controlled urea decomposition system is available from Wahlco, Inc., which manufactures a system that hydrolyzes urea under high temperature and pressure.

APC BACKLOG

Consolidated APC segment backlog at December 31, 2012 was $46.7 million versus backlog at December 31, 2011 of $30.8 million. A substantial portion of the backlog as of December 31, 2012 should be recognized as revenue in fiscal 2013, although the timing of such revenue

recognition in 2013 is subject to the timing of the expenses incurred on existing projects.

Table of Contents

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 and Europe, 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 Fuel Tech s proprietary TIFI® technology. By attacking performance-hindering problems, such as slagging, fouling and corrosion, as well as the formation of sulfur trioxide (SO_3), ammonium bisulfate (ABS), particulate matter ($PM_{2.5}$), carbon dioxide (CO_2), NO_x and unburned carbon in fly ash, the Company s programs offer numerous operational, financial and environmental benefits to owners of boilers, furnaces and other combustion units.

The key market dynamic for this product line is the continued use of coal as the principal fuel source for global electricity production. Coal currently accounts for approximately 42% of all U.S. electricity generation and roughly 80% of Chinese electricity generation. Major coal consumers include the United States, China and India.

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 (PRB) coals of Wyoming and Montana. Iron is typically found in coals produced in the Illinois Basin region. High sulfur content is typical of Illinois Basin coals and certain Appalachian coals. High sulfur content can give rise to unacceptable levels of SO_3 formation especially in plants with SCR systems and flue gas desulphurization units (scrubbers).

The combination of slagging coals and SO_3-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 attractive market potential for Fuel Tech.

A potentially large fuel treatment market exists in Mexico, where high-sulfur, low-grade fuel oil containing vanadium and nickel is a major source for electricity production and refinery steam production. The presence of these metallic constituents and high sulfur promotes slag build-up and high and low temperature corrosion of combustion units, and releases acid gas emissions from the stack. Fuel Tech has successfully treated such units with its TIFI and in-fuel technologies. To capitalize on this market opportunity, the Company has a license implementation agreement that expires in 2015 with options for renewal with a Mexican company to implement our TIFI program for utility and industrial end user customers in Mexico. Since 2011, our TIFI program has been in continuous use on three boilers located at a power plant in Mexico (110 MW generating capacity). In addition, we have installed TIFI equipment on three boilers at a separate power plant (610 MW) in connection with the implementation agreement. The first of these units has successfully undergone an initial test in 2011.

Sales of the FUEL CHEM products were $35.2 million, $42.7 million, and $40.9 million for the years ended December 31, 2012, 2011, and 2010, respectively.

Competition

Competition for Fuel Tech s FUEL CHEM product line includes chemicals sold by specialty chemical and combustion engineering companies, such as Ashland Inc., Environmental Energy Services, Inc., and GE Infrastructure. No technologically comparable substantive competition currently exists for Fuel Tech s TIFI technology, which is designed primarily for slag control and SO_3 abatement, but there can be no assurance that such lack of substantive competition will continue.

INTELLECTUAL PROPERTY

The majority of Fuel Tech s products are protected by U.S. and non-U.S. patents. Fuel Tech owns 76 granted patents worldwide and 3 allowed utility model patents in China. Fuel Tech has 96 patent applications pending; including 12 in the United States, 81 pending in non-U.S. jurisdictions, and 3 utility model applications in China. These patents and applications cover some 36 inventions, 17 associated with the NO_x reduction business, 9 associated with the FUEL CHEM business and 10 associated with non-commercialized technologies. Our patents have expiration dates ranging from April 12, 2013 to November 9, 2028. The average remaining duration of our patents is approximately eight years. Three invention patents in Taiwan are due to expire in 2013.

Fuel Tech believes that the protection provided by the numerous claims in the above referenced patents or patent applications is substantial, and affords Fuel Tech a significant competitive advantage in its 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 Fuel Tech s business.

EMPLOYEES

At December 31, 2012, Fuel Tech had 184 employees, 147 in North America, 27 in China, 9 in Europe and 1 in Chile. Fuel Tech enjoys good relations with its employees and is not a party to any labor management agreement.

Table of Contents

ITEM 1A - RISK FACTORS

Investors in Fuel Tech should be mindful of the following risk factors relative to Fuel Tech s business.

Lack of Diversification

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

The Air Pollution Control technology segment includes technologies to reduce NO_x emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources. These include Low and Ultra Low NO_x Burners (LNB and ULNB), Over-Fire Air (OFA) systems, NO_xOUT® and HERT Selective Non-Catalytic Reduction (SNCR) systems, and Advanced Selective Catalytic Reduction (ASCR) systems. The ASCR system includes ULNB, OFA, and SNCR components, along with a downsized SCR catalyst, Ammonia Injection Grid (AIG), and Graduated Straightening Grid (GSG) systems to provide high NO_x reductions at significantly lower capital and operating costs than conventional SCR systems. The NO_xOUT CASCADE® and NO_xOUT-SCR® processes are basic types of ASCR systems, using just SNCR and SCR catalyst components. ULTRA technology creates ammonia at a plant site using safe urea for use with any SCR application. Flue Gas Conditioning 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 Computational Fluid Dynamics (CFD) and Chemical Kinetics Modeling (CKM) boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in furnaces and boilers through the addition of chemicals into the furnace using TIFI® Targeted In-Furnace Injection technology.

An adverse development in Fuel Tech s advanced engineering solution business as a result of competition, technological change, government regulation, or any other factor could have a significantly greater impact than if Fuel Tech maintained more diverse operations.

Competition

Competition in the Air Pollution Control market comes from competitors utilizing their own NO_x reduction processes, including SNCR systems, Low NO_x Burners, Over-Fire Air systems, flue gas recirculation, ammonia SNCR, SCR and, with respect to particular uses of urea not infringing Fuel Tech s patents (see Item 1 Intellectual Property in the *Air Pollution Control* segment overview). Competition will also come 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 Fuel Tech s pricing and participation in the NO_x control market if customers elect to comply with regulations by methods other than the purchase of Fuel Tech s suite of Air Pollution Control products. See Item 1 *Products* and *NO_x Reduction Competition* in the *Air Pollution Control* segment overview.

Competition in the FUEL CHEM markets includes chemicals sold by specialty chemical and combustion engineering companies, such as GE Infrastructure, Ashland Inc. and Environmental Energy Services, Inc. As noted previously, no significant competition currently exists for Fuel Tech s patented TIFI technology, which is designed primarily for slag control and SO_3 abatement. However, there can be no assurance that such lack of significant competition will continue.

Dependence on and Change in Air Pollution Control Regulations and Enforcement

Fuel Tech s 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 NO_x 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, based on the theory that gases emitted therefrom impact climate change through a greenhouse effect, and result in the reduction or closure of a significant number of fossil fuel-fired power plants, may adversely affect the Company s business, financial condition and results of operations. See Item 1 above under the caption *Regulations and Markets* in the *Air Pollution Control* segment overview.

Protection of Patents and Proprietary Rights

Fuel Tech holds licenses to or owns a number of patents for our products and processes. In addition, we also have numerous patents pending. There can be no assurance that pending patent applications will be granted or that outstanding patents will not be challenged or circumvented by competitors. Moreover, the absence of harmonized patent laws outside of the United States makes it more difficult to ensure consistent respect for our patent rights in emerging markets. Certain critical technology relating to our products is protected by trade secret laws and by confidentiality and licensing agreements. There can be no assurance that such protection will prove adequate or that we will have adequate remedies against contractual counterparties for disclosure of our trade secrets or violations of Fuel Tech s intellectual property rights. See Item 1 above under the caption Intellectual Property.

Table of Contents

Foreign Operations

In 2007, we expanded our operations in China by establishing a wholly-owned subsidiary in Beijing. The Asia-Pacific region, particularly China, offers significant market opportunities for Fuel Tech as nations in this region look to establish regulatory policies for improving their environment and utilizing fossil fuels, especially coal, efficiently and effectively. In 2012, we expanded our operations in Latin America by establishing a wholly-owned subsidiary in Chile. The future business opportunities in these markets are dependent on the continued implementation of regulatory policies that will benefit our technologies, the acceptance of Fuel Tech s engineering solutions in such markets, the ability of potential customers to utilize Fuel Tech s technologies on a cost-effective basis, and our ability to protect and enforce our intellectual property rights.

Product Pricing and Operating Results

The onset of significant competition for either of the technology segments might have an adverse impact on product pricing and a resulting adverse impact on realized gross margins and operating profitability.

Raw Material Supply and Pricing

The FUEL CHEM technology segment is dependent, in part, upon a supply of magnesium hydroxide. Any adverse change 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 United States and Canada until December 31, 2013, the date of the expiration of the PSA. Magnesium hydroxide products are a significant component of the FUEL CHEM programs. 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 United States and Canada. There can be no assurance that Fuel Tech will be able to obtain a stable source of magnesium hydroxide in markets outside the United States.

Customer Access to Capital Funds

Uncertainty about current economic conditions in the United States and globally poses risk that Fuel Tech s customers may postpone spending for capital improvement projects in response to tighter credit markets, negative financial news and/or decline in demand for electricity generated by combustion units, all of which could have a material negative effect on demand for the Fuel Tech s products and services.

Customer Concentration

A small number of customers have historically accounted for a material portion of Fuel Tech s revenues. There can be no assurance that Fuel Tech s current customers will continue to place orders, that orders by existing customers will continue at the levels of previous periods, or that Fuel Tech will be able to obtain orders from new customers. The loss of one or more of our customers could have a material adverse effect on our sales and operating results.

Domestic Credit Facility

Fuel Tech is party to a $15 million domestic revolving credit agreement with JPMorgan Chase Bank, N.A. As of December 31, 2012, there were no outstanding borrowings on this facility and Fuel Tech was in compliance with all financial covenants contained in the agreement. In addition, Beijing Fuel Tech Environmental Technologies Company, Ltd. has a RMB $35 million (approximately $5.5 million) revolving credit facility with JPMorgan Chase Bank (China) Company Limited. As of December 31, 2012, there were no outstanding borrowings on this facility. In the event of any default on the part of Fuel Tech or Beijing Fuel Tech under either of these agreements, the lender is entitled to accelerate payment of any amounts outstanding and may, under certain circumstances, cancel the facilities. If the Company were unable to obtain a waiver for a breach of covenant and the lender accelerated the payment of any outstanding amounts, such acceleration may cause the Company s cash position to significantly deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require the Company to obtain alternate financing.

ITEM 1B - UNRESOLVED STAFF COMMENTS

None

8

Table of Contents

ITEM 2 - PROPERTIES

Fuel Tech owns 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, was purchased for approximately $6,000,000 and subsequently built out and furnished for an additional cost of approximately $5,500,000. This facility will meet our growth requirements for the foreseeable future.

Fuel Tech and its subsidiaries also operate from leased office facilities in Stamford, Connecticut; Durham, North Carolina; Gallarate, Italy and Beijing, China. Fuel Tech does not segregate any of its leased facilities by operating business segment. The terms of the Company s four material lease arrangements are as follows:

The Stamford, Connecticut building lease term, for approximately 6,440 square feet, runs from February 1, 2010 to December 31, 2019. The facility houses certain administrative functions including Investor Relations.

The Beijing, China building lease term, for approximately 5,800 square feet, runs from September 1, 2012 to August 31, 2013. This facility serves as the operating headquarters for our Beijing Fuel Tech operation. Fuel Tech has the option to extend the lease term at a market rate to be agreed upon between Fuel Tech and the lessor.

The Durham, North Carolina building lease term, for approximately 16,000 square feet, runs from November 1, 2005 to April 30, 2014. Fuel Tech has no option to extend the lease.

The Gallarate, Italy building lease term, for approximately 1,300 square feet, runs from July 1, 2005 to April 30, 2013. This facility serves as the operating headquarters for our Italy operations.

ITEM 3 - LEGAL PROCEEDINGS

We are from time to time involved in litigation incidental to our business. We are not currently involved in any litigation in which we believe an adverse outcome would have a material effect on our business, financial conditions, results of operations, or prospects.

In 2011, Fuel Tech filed a series of civil actions in the Second People s Intermediate Court of Beijing against Liu Minghui, Zhu Limin and related parties who formerly worked with or for Fuel Tech (collectively, the Defendants.) As a result of one of the civil actions, Fuel Tech was granted ownership of a Chinese patent filed in China by certain of the Defendants pertaining to air pollution control technologies. In a related action filed by certain of the Defendants before the Chinese Patent Review Board, two separate China patents held by Fuel Tech for use in China relating to its ULTRA product line were invalidated. All of the above referenced actions have concluded.

ITEM 4 MINE SAFETY DISCLOSURES

Not Applicable

Table of Contents

PART II

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

Market

Fuel Tech s Common Shares have been traded since September 1993 on The NASDAQ Stock Market, Inc. The trading symbol is FTEK.

Prices

The table below sets forth the high and low sales prices during each calendar quarter since January 2011.

2012	High	Low
Fourth Quarter	$ 4.38	$ 3.49
Third Quarter	5.51	4.16
Second Quarter	5.57	3.49
First Quarter	6.76	5.25

2011	High	Low
Fourth Quarter	$ 7.01	$ 4.70
Third Quarter	7.46	3.77
Second Quarter	9.00	5.78
First Quarter	11.20	7.04

Dividends

Fuel Tech has never paid cash dividends on its common stock and has no current plan to do so in the foreseeable future. The declaration and payment of dividends on the Common Stock are subject to the discretion of the Company s 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 Company s Board of Directors is to reinvest earnings in operations to promote future growth.

Share Repurchase Program

In August 2011, Fuel Tech s Board of Directors authorized the repurchase of up to $6 million of its outstanding common shares through December 31, 2012. This initial program was completed in the quarter ended March 31, 2012. In May 2012, the Board of Directors authorized a second repurchase program allowing the Company to repurchase up to an additional $6 million of its outstanding common shares through June 30, 2013 and this repurchase program was completed September 2012. The share repurchase programs were funded through the Company s existing cash on hand. Purchases made pursuant to the programs are made in the open market. The timing, manner, price and amount of any repurchases are determined by the Company in its discretion and are subject to economic and market conditions, stock price, applicable legal requirements, and other factors.

During the course of the share repurchase programs, Fuel Tech repurchased an aggregate of 2,306,590 common shares for a total cost of approximately $12,000 including commissions of approximately $76. These acquired shares have been retired and are no longer shown as issued or outstanding shares.

The following table summarizes our share repurchase programs since their inception:

Period	Total Number of Shares	Average Price Paid Per Share	Total Cost	Maximum Dollar Value of Shares

	Purchased			That May Yet Be Purchased Under the Program
Phase One Program				
August 25, 2011 through September 30, 2011	571,554	$ 5.89	$ 3,367	$ 2,633
October 1, 2011 through December 31, 2011	130,160	5.71	744	1,889
January 1, 2012 through March 31, 2012	334,636	5.64	1,889	
Phase Two Program				
April 1, 2012 through June 30, 2012	1,124,797	4.70	5,290	710
July 1, 2012 through September 30, 2012	145,443	4.88	710	
Total	2,306,590	$ 5.20	$ 12,000	$

Table of Contents

Holders

Based on information from the Company s Transfer Agent and from banks and brokers, the Company estimates that, as of February 11, 2013, there were approximately 11,400 beneficial holders and 222 registered stockholders of Fuel Tech s Common Shares.

Transfer Agent

The Transfer Agent and Registrar for the Common Shares is Computershare Shareowner Services LLP, 480 Washington Boulevard, Jersey City, New Jersey 07310-1900.

Performance Graph

The following line graph compares Fuel Tech s total return to stockholders per share of Common Stock for the five years ended December 31, 2012 to that of the NASDAQ Composite Index and the WilderHill Progressive Energy Index for the period December 31, 2007 through December 30, 2012.

Table of Contents

ITEM 6 - SELECTED FINANCIAL DATA

Selected financial data are presented below as of the end of and for each of the fiscal years in the five-year period ended December 31, 2012. The selected financial data should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2012, and Management s Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this report and the schedules thereto. As a result of the acquisitions of substantially all of the assets of Advanced Combustion Technology, Inc. in the first quarter of 2009, and Tackticks, LLC and FlowTack, LLC in the fourth quarter of 2008, the Company s condensed consolidated results for the periods presented are not directly comparable.

	For the years ended December 31				
CONSOLIDATED STATEMENT of OPERATIONS DATA (in thousands of dollars, except for share and per-share data)	2012	2011	2010	2009	2008
Revenues	$ 97,644	$ 93,668	$ 81,795	$ 71,397	$ 81,074
Cost of sales	56,899	49,857	46,821	42,444	44,345
Selling, general and administrative and other costs and expenses	35,545	34,162	31,037	32,034	30,502
Operating income (loss)	5,200	9,649	3,937	(3,081)	6,227
Net income (loss)	2,776	6,148	1,753	(2,306)	3,360
Basic income (loss) per common share	$ 0.12	$ 0.26	$ 0.07	$ (0.10)	$ 0.14
Diluted income (loss) per common share	$ 0.12	$ 0.25	$ 0.07	$ (0.10)	$ 0.14
Weighted-average basic shares outstanding	22,709,000	24,095,000	24,213,000	24,148,000	23,608,000
Weighted-average diluted shares outstanding	23,535,000	24,633,000	24,405,000	24,148,000	24,590,000

	December 31				
CONSOLIDATED BALANCE SHEET DATA (in thousands of dollars)	2012	2011	2010	2009	2008
Working capital	$ 38,918	$ 43,626	$ 36,645	$ 30,578	$ 43,956
Total assets	105,897	112,990	103,203	92,262	88,631
Long-term obligations	715	1,347	1,482	2,196	1,389
Total liabilities	21,661	23,977	19,293	14,040	15,056
Stockholders equity (1)	84,236	89,013	83,910	78,222	73,575

Notes:

(1) Stockholders equity includes the principal amount of nil coupon non-redeemable perpetual loan notes. See Note 6 to the consolidated financial statements.

Table of Contents

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

Background

Fuel Tech, Inc. (Fuel Tech) has 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 NO_x emissions in flue gas from boilers, incinerators, furnaces and other stationary combustion sources. These include Low and Ultra Low NO_x Burners (LNB and ULNB), OFA systems, NO_xOUT and HERT SNCR systems, and ASCR systems. The ASCR system includes ULNB, OFA, and SNCR components, along with a downsized SCR catalyst, AIG, and GSG systems to provide high NO_x reductions at significantly lower capital and operating costs than conventional SCR systems. The NO_xOUT CASCADE and NO_xOUT-SCR processes are basic types of ASCR systems, using just SNCR and SCR catalyst components. ULTRA technology creates ammonia at a plant site using safe urea for use with any SCR application. Flue Gas Conditioning 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. Fuel Tech distributes its products through its direct sales force and 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 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, China, and India, 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. Coal currently accounts for approximately 42% of all U.S. electricity generation and roughly 80% of Chinese electricity generation. Major coal consumers include China, the United States and India.

Critical Accounting Policies and Estimates

The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America, which require us to make estimates and assumptions. We believe that of our accounting policies (see Note 1 to the consolidated financial statements), the following involve a higher degree of judgment and complexity and are deemed critical. We routinely discuss our critical accounting policies with the Company s Audit Committee.

Revenue Recognition

Revenues from the sales of chemical products are recorded when title transfers, either at the point of shipment or at the point of destination, depending on the contract with the customer.

Fuel Tech uses the percentage of completion method of accounting for equipment construction, equipment supply and license contracts that are sold within the Air Pollution Control technology segment. Under the percentage of completion method, revenues are recognized as work is performed based on the relationship between actual construction costs incurred and total estimated costs at completion. Construction costs include all direct costs such as materials, labor, and subcontracting costs, and indirect costs allocable to the particular contract such as indirect labor, tools and equipment, and supplies. Revisions in completion estimates and contract values are made in the period in which the facts giving rise to the revisions become known and can influence the timing of when revenues are recognized under the percentage of completion method of accounting. Such revisions have historically not had a material effect on the amount of revenue recognized. Provisions are made for estimated losses on uncompleted contracts in the period in which such losses are determined. As of December 31, 2012, Fuel Tech had two construction contracts in progress that were identified as loss contracts and a provision for losses in the amount of $57 was recorded in other accrued liabilities on the consolidated balance sheets. As of December 31, 2011, Fuel Tech had one construction contract in progress that was identified

as a loss contract and a provision for losses in the amount of $201 was recorded in other accrued liabilities on the consolidated balance sheets.

Fuel Tech s APC contracts are typically eight to sixteen 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.

Table of Contents

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 mathematical 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; all performance guarantees and equipment warranties granted by us are void if the operating condition information is inaccurate or is not met.

Accounts receivable includes unbilled receivables, representing revenues recognized in excess of billings on uncompleted contracts under the percentage of completion method of accounting. At December 31, 2012 and December 31, 2011, unbilled receivables were approximately $15,661 and $11,334, respectively, and are included in accounts receivable on the consolidated balance sheet. Billings in excess of costs and estimated earnings on uncompleted contracts were $1,777 and $3,895 at December 31, 2012 and December 31, 2011, respectively, and are included in other accrued liabilities on the consolidated balance sheet.

Fuel Tech has installed over 700 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.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is the Company s best estimate of the amount of credit losses in accounts receivable. In order to control and monitor the credit risk associated with our customer base, we review the credit worthiness of customers on a recurring basis. Factors influencing the level of scrutiny include the level of business the customer has with Fuel Tech, the customer s payment history and the customer s financial stability. Receivables are considered past due if payment is not received by the date agreed upon with the customer, which is normally 30 days. Representatives of our management team review all past due accounts on a weekly basis to assess collectability. At the end of each reporting period, the allowance for doubtful accounts balance is reviewed relative to management s collectability assessment and is adjusted if deemed necessary through a corresponding charge or credit to bad debts expense, which is included in selling, general, and administrative expenses in the consolidated statements of operations. Bad debt write-offs are made when management believes it is probable a receivable will not be recovered. Our historical credit loss has been insignificant.

Assessment of Potential Impairments of Goodwill and Intangible Assets

Goodwill and indefinite-lived intangible assets are not amortized, but rather are reviewed annually (in the fourth quarter) or more frequently if indicators arise, for impairment. The Company does not have any indefinite-lived intangible assets other than goodwill. 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.

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. Fuel Tech has two reporting units which are reported in the FUEL CHEM segment and the APC technology segment. As of December 31, 2012 and 2011, goodwill allocated to the FUEL CHEM technology segment was $1,723 and goodwill allocated to the APC technology segment was $19,328.

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 two reporting units as this methodology was deemed to best quantify the present values of the Company s expected future cash flows and yield a fair value that should be in line with the aggregate market value placed on the Company via the current stock price multiplied by the outstanding common shares. 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 the Company s 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.

The application of our DCF model in estimating the fair value of each reporting segment is based on the income 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.

Table of Contents

In the event the estimated fair value of a reporting unit per the DCF model is less than the carrying value, additional analysis would be required. The additional analysis would compare the carrying amount of the reporting unit s goodwill with the implied fair value of that goodwill, which would involve the use of valuation experts. The implied fair value of goodwill is the excess of the fair value of the reporting unit over the fair values assigned to all of the assets and liabilities of that unit as if the reporting unit was acquired in a business combination and the fair value of the reporting unit represented the purchase price. If the carrying value of goodwill exceeds its implied fair value, an impairment loss equal to such excess would be recognized, which could significantly and adversely impact reported results of operations and stockholders equity.

Based upon the nature of the goodwill recorded on the balance sheets as of December 31, 2012 and 2011, the Company believes that, in order for an impairment to occur, our actual revenue growth and associated operating margins in future periods would need to differ materially from the projected revenue growth and margin estimates included in our current cash flow forecasts, particularly as it relates to the APC reporting unit. In addition, other economic events may be indicators of impairment, such as suppressed consolidated revenues, a reduction in our market capitalization to an amount that is lower than our current enterprise value, reduced overall cash flows, or declining APC order backlog. Management does not believe that any of these events have resulted in any indications of asset impairment as it pertains to Fuel Tech s business.

Impairment of Long-Lived Assets and Amortizable Intangible Assets

Long-lived assets, including property, plant and equipment (PP&E) and intangible assets, are reviewed for impairment when events and circumstances indicate that the carrying amount of the assets (or asset groups) may not be recoverable. If impairment indicators exists, 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 groups) 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. However, due to the nature of our PP&E, which is comprised mainly of assets related to our headquarters building and equipment deployed at customer locations for our FUEL CHEM programs, and the shorter-term duration over which FUEL CHEM 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, Fuel Tech 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.

Stock-Based Compensation

Fuel Tech recognizes 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 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.

In addition, Fuel Tech utilizes a Monte Carlo valuation pricing model to determine the fair value of certain restricted stock units (RSUs) that contain market conditions. Determining the fair value of these RSUs requires judgment and involves simulating potential future stock prices based on estimates for the risk-free interest rate, stock volatility, and correlations between our stock price and the stock prices of a peer group of companies.

If any of these assumptions differ significantly from actual, stock-based compensation expense could be impacted.

15

Table of Contents

Recently Adopted Accounting Standards

In June 2011, the Financial Accounting Standards Board (FASB) issued amended disclosure requirements for the presentation of comprehensive income. The amended guidance eliminates the option to present components of other comprehensive income (OCI) as part of the statement of changes in equity. Under the amended guidance, all changes in OCI are to be presented either in a single continuous statement of comprehensive income or in two separate but consecutive financial statements. In addition, in December 2011, the FASB issued an amendment to this accounting standard which defers the requirement to present components of reclassifications of other comprehensive income on the face of the income statement. This guidance was effective as of the beginning of our 2012 fiscal year. Accordingly, we have presented the components of net income and other comprehensive income for the three-year period ending December 31, 2012 as two separate but consecutive statements. We will continue to monitor the FASB s activities related to the deferral of the presentation and disclosure of reclassification adjustments from other comprehensive income to net income, but it will only affect our financial statement presentation and will have no impact to our consolidated financial results.

In May 2011, the FASB issued guidance titled Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standard (IFRS), to converge fair value measurement and disclosure guidance in U.S. GAAP with the guidance in the International Accounting Standards Board s concurrently issued IFRS 13, Fair Value Measurement. This accounting guidance does not modify the requirements for when fair value measurements apply; rather, it generally provides clarifications on how to measure and disclose fair value under the Accounting Standards Codification 820, Fair Value Measurement. The amendments in this accounting guidance are effective prospectively for interim and annual periods beginning after December 15, 2011. Early adoption is not permitted for public entities. We adopted the provisions of this amendment on January 1, 2012 and it did not have a material impact on our financial statements.

In July 2012, the FASB issued changes to the testing of indefinite-lived intangible assets for impairment, similar to the goodwill changes issued in September 2011. These changes provide an entity the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not (more than 50%) that the fair value of an indefinite-lived intangible asset is less than its carrying amount. Such qualitative factors may include the following: macroeconomic conditions; industry and market considerations; cost factors; overall financial performance; and other relevant entity-specific events. If an entity elects to perform a qualitative assessment and determines that an impairment is more likely than not, the entity is then required to perform the existing two-step quantitative impairment test, otherwise no further analysis is required. An entity also may elect not to perform the qualitative assessment and, instead, proceed directly to the two-step quantitative impairment test. These changes become effective for Fuel Tech for any indefinite-lived intangible asset impairment test performed on January 1, 2013 or later, although early adoption is permitted. Management has determined these changes will not have an impact on the Consolidated Financial Statements.

In December 2011, the FASB issued changes to the disclosure of offsetting assets and liabilities. These changes require an entity to disclose both gross information and net information about both instruments and transactions eligible for offset in the statement of financial position and instruments and transactions subject to an agreement similar to a master netting arrangement. The enhanced disclosures will enable users of an entity s financial statements to understand and evaluate the effect or potential effect of master netting arrangements on an entity s financial position, including the effect or potential effect of rights of setoff associated with certain financial instruments and derivative instruments. These changes become effective for Fuel Tech on January 1, 2013. Management has determined that the adoption of these changes will not have an impact on the Consolidated Financial Statements.

2012 versus 2011

Revenues for the years ended December 31, 2012 and 2011 were $97,644 and $93,668, respectively. The year-over-year increase of $3,976, or 4%, was predominantly driven by increased revenue in the APC technology segment, offset by reduced revenues in the FUEL CHEM segment. International revenues for the years ended December 31, 2012 and 2011 were $27,219 and $17,591, respectively, or 28% and 19% of consolidated revenues. The increase in our foreign revenues of $9,628, or 55%, is primarily attributable to continued growth in our China operations as well as a large new project based in Chile.

Revenues for the APC technology segment were $62,441 for the year ended December 31, 2012, an increase of $11,511, or 23%, versus fiscal 2011. This increase is predominantly attributed to increased orders for APC products primarily in foreign markets and the timing and recognition of work in progress on those APC orders. The Company expects demand for its APC products to remain strong based on new and existing air pollution control regulations around the world, particularly in China. Backlog for the years ended December 31, 2012 and 2011 was $46.7 million and $30.8 million, respectively.

Revenues for the FUEL CHEM technology segment for the year ended December 31, 2012 were $35,203, a decrease of $7,535, or 18% versus fiscal 2011. The decrease is due to decreased sales volume at existing customer accounts in part due to the lower demands for electricity and fuel switching by customers to take advantage of low natural gas prices. These factors led to coal combustion units operating at less than full capacity

which resulted in a corresponding decrease in our overall year-to-date revenue. Another factor contributing to the decrease in overall year-to-year revenues for 2012 was a non-recurring sale of installation-related work totaling $1.3 million that occurred in 2011.

Cost of sales for the years ended December 31, 2012 and 2011 were $56,899 and $49,857, respectively. Cost of sales as a percentage of revenues for the years ended December 31, 2012 and 2011 were 58% and 53%, respectively. Cost of sales as a

Table of Contents

percentage of revenue for the APC technology segment increased to 64% in 2012 from 56% in 2011. The increase is attributed to an increase in lower margin international projects. Cost of sales as a percentage of revenue for the FUEL CHEM technology segment decreased to 48% in 2012 from 50% in 2011 due in part to a non-recurring sale of lower margin installation work recognized in the first two quarters of 2011, which diluted the margin percentage for that year-to-year period.

Selling, general and administrative expenses for the years ended December 31, 2012 and 2011 were $32,682 and $33,446, respectively. The decrease of $764, or 2%, is primarily attributed to the following:

A decrease in stock compensation expense of $1,504.

Internal commissions and bonuses decreased $1,432 as a result of decreased profits in both of the product segments. A decrease in the 2011 contingent gain in the amount of $758 related to the earn-out for the ACT acquisition

A decrease in legal expenses of $340.

An increase of costs associated with our international operations of $1,215 due mainly to increased personnel and business expansion of our China subsidiary.

An increase in salaries and wages and other employee related expenses of $752 as a result of an increase of headcount from 168 to 184.

Research and development (R&D) expenses were $2,863 and $1,474 for the years ended December 31, 2012 and 2011, respectively. The increase in R&D expenditures is aligned with the Company s increased emphasis on investing in new product design and innovation for our product lines. Fuel Tech has maintained its focused approach in the pursuit of commercial applications for its technologies outside of its traditional markets, and in the development and analysis of new technologies that could represent incremental market opportunities domestically and abroad.

Interest income for the year ended December 31, 2012 increased by $43 to $78 versus 2011 predominantly due to an increase in the average return on the Company s interest-bearing accounts in which the cash is invested. Interest expense of $93 was recorded in 2012 on the debt incurred to start-up activities at Fuel Tech s office in Beijing, China, compared to $148 in the prior year. Finally, the decrease in other expense is due primarily to the impact of foreign exchange rates as it relates to settlement of balances denominated in foreign currencies.

For the year ended December 31, 2012, Fuel Tech recorded income tax expense of $2,302 on the Company s pre-tax income of $5,078. Our effective tax rate of 45.3% exceeded the federal statutory rate of 34% as a result of increases from state taxes, the effect of our permanent items, the effect of income tax rate differences between the U.S and China, and losses from our Italian subsidiary for which we were not able to record a tax benefit as a result of the valuation allowance placed on that entity s net operating losses. These increases were offset by reductions in our reserves for uncertain tax positions related to research credits taken on our tax returns during 2008 through 2010. These reductions were the result of a lapse in the statute of limitations for the 2008 year and the settlement of our IRS audit examinations for the 2009 and 2010 tax years. For the year end December 31, 2011, Fuel Tech recorded an income tax expense of $3,109 on the Company s pre-tax income of $9,257.

2011 versus 2010

Revenues for the years ended December 31, 2011 and 2010 were $93,668 and $81,795, respectively. The year-over-year increase of $11,873, or 15%, was predominantly driven by increased revenue in both the APC technology and FUEL CHEM segments. International revenues for the years ended December 31, 2011 and 2010 were $17,591 and $12,793, respectively. The increase of $4,798 in foreign revenues is attributed to our China operations.

Revenues for the APC technology segment were $50,930 for the year ended December 31, 2011, an increase of $10,013, or 25%, versus fiscal 2010. This increase is predominantly attributed to higher activity on capital projects driven by governmental regulations. Backlog for the years ended December 31, 2011 and 2010 was $30.8 million and $19.3 million, respectively.

Revenues for the FUEL CHEM technology segment for the year ended December 31, 2011 were $42,738, an increase of $1,860, or 5% versus fiscal 2010. During 2011, Fuel Tech added revenue from 9 new units to its existing customer base. Revenue from coal-fired units increased by $1,911 or 5%.

Cost of sales for the years ended December 31, 2011 and 2010 were $49,857 and $46,821, respectively. Cost of sales as a percentage of revenues for the years ended December 31, 2011 and 2010 were 53% and 57%, respectively. Cost of sales as a percentage of revenue for the APC technology segment decreased to 56% in 2011 from 66% in 2010. The decrease is attributed to the mix of higher margin project business. Cost of sales as a percentage of revenue for the FUEL CHEM technology segment increased to 50% in 2011 from 48% in 2010 due to the effect of a $2,000 successful demonstration fee recorded during 2010 without offsetting program costs and other costs normally associated with a foreign demonstration.

Selling, general and administrative expenses for the years ended December 31, 2011 and 2010 were $33,446 and $30,857, respectively. The increase of $2,589, or 8%, is primarily attributed to the following:

Internal and external commissions and bonuses increased $2,048 as a result of increased revenue and profits from both of the product segments.

Fees paid to outside service providers increased $1,118 as a result of strategic and operational activities.

Table of Contents

Costs associated with our international operations increased $706 due mainly to increased hiring and business expansion in our China subsidiary.

Bad debt expense increased $460 due to the write-off of certain receivables no longer expected to be collected.

Partially offsetting these amounts was a decrease in stock compensation expense of $1,455 due to the full vesting of options with a comparative higher value than more recent grants.

Research and development (R&D) expenses were $1,474 and $948 for the years ended December 31, 2011 and 2010, respectively. The increase in R&D expenditures is aligned with the Company s increased emphasis on investing in new product design and innovation for our product lines. Fuel Tech has maintained its focused approach in the pursuit of commercial applications for its technologies outside of its traditional markets, and in the development and analysis of new technologies that could represent incremental market opportunities domestically and abroad.

Interest income for the year ended December 31, 2011 increased by $24 to $35 versus 2010 predominantly due to a increase in the average return on the Company s interest-bearing accounts in which the cash is invested. Interest expense of $148 was recorded in 2011 on the debt incurred to start-up activities at Fuel Tech s office in Beijing, China, compared to $143 in the prior year. Finally, the modest change in other income/(expense) is due to the impact of foreign exchange rates as it relates to balances denominated in foreign currencies that are translated into U.S. dollars for reporting purposes.

For the year ended December 31, 2011, Fuel Tech recorded income tax expense of $3,109 on the Company s pre-tax income of $9,257. Our effective tax rate of 33.6% approximated the federal statutory rate of 34% as a result of increases from state taxes and the effect of our permanent items offset by the effect of income tax rate differences between the U.S and China and losses from our Italian subsidiary for which we were not able to record a tax benefit as a result of the valuation allowance placed on that entity s net operating losses. For the year end December 31, 2010, Fuel Tech recorded an income tax expense of $1,933 on the Company s pre-tax income of $3,686.

Liquidity and Sources of Capital

At December 31, 2012, Fuel Tech had cash and cash equivalents of $24,453 and working capital of $38,918 versus cash and cash equivalents of $28,229 and working capital of $43,626 at December 31, 2011. Operating activities provided $8,667 of cash for the year ended December 31, 2012, primarily due to the add back of non-cash items from our net income of $2,776 including stock compensation expense of $1,306, depreciation and amortization of $3,089, as well as an increase in accounts payable of $2,327 due to the timing of vendor invoices and related payments and a decrease in our accounts receivable balance of $4,248 due to the timing of cash collections. Partially offsetting these items were subtractions of non-cash items from our net income including an increase in our deferred income tax provision of $458, as well as an increase in our inventory, prepaid expenses, and other current assets of $2,009, and a decrease in accrued liabilities and other noncurrent liabilities of $2,579.

Operating activities provided $4,858 of cash for the year ended December 31, 2011, primarily due to the add back of non-cash items from our net income of $6,148 including stock compensation expense of $2,810 and depreciation and amortization of $3,720, as well as an increase in accounts payable, accrued expenses, and other non-current liabilities of $5,260 due to the timing of vendor invoices and related payments and a decrease in our inventory balance of $504 due to decreases in various inventory component parts. Partially offsetting these items were subtractions of non-cash items from our net income including an increase in our provision for doubtful accounts of $348, an increase in our deferred income tax provision of $793, and a gain from the revaluation of the earn-out related to our acquisition of Advanced Combustion Technology of $758, as well as an increase in accounts receivable of $13,279 due to the timing of customer receipts and progress billings on projects and an increase in our prepaid expense and other current assets of $723.

Investing activities used cash of $2,534 and $2,406 for the years ended December 31, 2012 and 2011, respectively, related to the purchases of equipment and patents to support the operations of our business.

Financing activities used cash of $9,115 for the year ended December 31, 2012 related primarily to the repayment of our debt in China of $1,187 and for payments to repurchase our common stock in the amount of $7,889. The Company used cash from financing activities for the year ended December 31, 2011 of $4,820 related primarily to payments made on our debt in China in the amount of $1,162 and for payments to repurchase our common stock in the amount of $4,111.

On June 30, 2011, Fuel Tech amended its existing revolving credit facility (the Facility) with JPMorgan Chase Bank, N.A (JPM Chase) to extend the maturity date through June 30, 2013. The amendment decreases the total borrowing base of the facility to $15,000 from $25,000 and

contains a provision to increase the facility up to a total principal amount of $25,000 upon approval from JPM Chase. The Facility is unsecured, bears interest at a rate of LIBOR plus a spread range of 250 basis points to 375 basis points, as determined under a formula related to the Company s leverage ratio, and has the Company s Italian subsidiary, Fuel Tech S.r.l., as a guarantor. Fuel Tech can use this Facility for cash advances and standby letters of credit. As of December 31, 2012 and 2011, there were no outstanding borrowings on the amended credit facilities.

The Facility contains several debt covenants with which the Company must comply on a quarterly or annual basis, including a maximum Funded Debt to EBITDA Ratio (or Leverage Ratio , as defined in the Facility) of 1.5:1.0 based on the four trailing quarterly periods. Maximum funded debt is defined as all borrowed funds, outstanding standby letters of credit and bank guarantees. EBITDA includes after tax earnings with add backs for interest expense, income taxes, depreciation and amortization, and stock-based compensation expenses. In addition, the Facility covenants include an annual capital expenditure limit of $10,000 and a minimum tangible net worth of $50,000, adjusted upward for 50% of net income generated and 100% of all capital issuances. At December 31, 2012, the Company was in compliance with all financial covenants specified by the Facility.

Table of Contents

At December 31, 2012 and 2011, the Company had outstanding standby letters of credit and bank guarantees totaling approximately $7,432 and $1,374, respectively, on its domestic credit facility in connection with contracts in process. Fuel Tech is committed to reimbursing the issuing bank for any payments made by the bank under these instruments. At December 31, 2012 and 2011, there were no cash borrowings under the domestic revolving credit facility and approximately $7,568 and $13,626, respectively, was available for future borrowings. The Company pays a commitment fee of 0.25% per year on the unused portion of the revolving credit facility.

On June 29, 2012, Beijing Fuel Tech Environmental Technologies Company, Ltd. (Beijing Fuel Tech), a wholly-owned subsidiary of Fuel Tech, entered into a new revolving credit facility (the China Facility) agreement with JPM Chase for RMB 35 million (approximately $5,541), which expires on June 30, 2013. This new credit facility replaced the previous RMB 35 million facility that expired on June 28, 2012. The facility is unsecured, bears interest at a rate of 125% of the People s Bank of China (PBOC) Base Rate, and is guaranteed by Fuel Tech. Beijing Fuel Tech can use this facility for cash advances and bank guarantees. As of December 31, 2012 and 2011, Beijing Fuel Tech had borrowings outstanding in the amount of $ 0 and $1,181, respectively. These borrowings were subject to interest rates of approximately 7.0% and 7.6% at December 31, 2012 and December 31, 2011, respectively.

At December 31, 2012 and 2011, the Company had outstanding standby letters of credit and bank guarantees totaling approximately $1,112 and $750, respectively, on its Beijing Fuel Tech revolving credit facility in connection with contracts in process. At December 31, 2012 and 2011, approximately $4,429 and $3,580 was available for future borrowings.

In the event of default on either the domestic facility or the China facility, the cross default feature in each allows the lending bank to accelerate the payments of any amounts outstanding and may, under certain circumstances, allow the bank to cancel the facility. If the Company were unable to obtain a waiver for a breach of covenant and the bank accelerated the payment of any outstanding amounts, such acceleration may cause the Company s cash position to deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require the Company to obtain alternate financing to satisfy the accelerated payment.

Interest payments in the amount of $93 and $148 were made during the years ended December 31, 2012 and 2011, respectively.

In the opinion of management, Fuel Tech s expected near-term revenue growth will be driven by the timing of penetration of the coal-fired utility marketplace via utilization of its TIFI technology, by utility and industrial entities adherence to the NO_x reduction requirements of the various domestic environmental regulations, and by the expansion of both business segments in non-U.S. geographies. Fuel Tech expects its liquidity requirements to be met by the operating results generated from these activities.

Contractual Obligations and Commitments

In its normal course of business, Fuel Tech enters into agreements that obligate the Company to make future payments. The contractual cash obligations noted below are primarily related to supporting the ongoing operations of the business.

Payments due by period in thousands of dollars

Contractual Cash Obligations	Total	2013	2014-2015	2016-2017	Thereafter
Operating lease obligations	2,426	629	637	580	580
Total	$ 2,426	$ 629	$ 637	$ 580	$ 580

Interest payments in the amount of $93, $148, and $143 were made during the years ended December 31, 2012, 2011 and 2010, respectively.

Fuel Tech, in the normal course of business, uses bank performance guarantees and letters of credit in support of construction contracts with customers 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.

Table of Contents

In addition, Fuel Tech uses bank performance guarantees with standby letters of credit and performance surety bonds as security for contract performance and other obligations as needed in the normal course of business. As of December 31, 2012, Fuel Tech had outstanding bank performance obligations that may or may not result in cash obligations as follows:

Commitment expiration by period in thousands of dollars

Commercial Commitments	Total	2013	2014-2015	2016-2017	Thereafter
Standby letters of credit and bank guarantees	$ 8,544	$ 5,388	$ 2,434	$ 722	$
Performance Surety Bonds	$	$	$	$	$
Total	$ 8,544	$ 5,388	$ 2,434	$ 722	$

Off-Balance-Sheet Transactions

There were no other off-balance-sheet transactions other than the obligations and commitments listed above during the three-year period ended December 31, 2012.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Fuel Tech s 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.

Fuel Tech is also exposed to changes in interest rates primarily due to its debt arrangement (refer to Note 9 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 upcoming year ended December 31, 2013.

Table of Contents

ITEM 8 - FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders

Fuel Tech, Inc. and Subsidiaries

We have audited the accompanying consolidated balance sheets of Fuel Tech, Inc. and Subsidiaries as of December 31, 2012 and 2011, and the related consolidated statements of operations, comprehensive income, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2012. We also have audited Fuel Tech, Inc. and Subsidiaries internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Fuel Tech, Inc. and Subsidiaries management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management s Report on Internal Control Over Financial Reporting appearing under Item 9A. Our responsibility is to express an opinion on these financial statements and an opinion on the Company s internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company s internal control over financial reporting is a process 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. A company s internal control over financial reporting includes those policies and procedures that *(a)* pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; *(b)* provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and *(c)* provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

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.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Fuel Tech, Inc. and Subsidiaries as of December 31, 2012 and 2011, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2012, in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, Fuel Tech, Inc. and Subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ McGladrey LLP

Schaumburg, Illinois
April 1, 2013

21

Table of Contents

Fuel Tech, Inc.

Consolidated Balance Sheets

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

	December 31, 2012	2011
ASSETS		
Current assets:		
Cash and cash equivalents	$ 24,453	$ 28,229
Marketable securities	44	57
Accounts receivable, net of allowance for doubtful accounts of $460 and $430, respectively	30,169	34,346
Inventories	513	311
Prepaid expenses and other current assets	3,956	2,026
Income taxes receivable	156	1,124
Deferred income taxes	573	163
Total current assets	59,864	66,256
Property and equipment, net of accumulated depreciation of $19,421 and $18,239, respectively	13,749	13,625
Goodwill	21,051	21,051
Other intangible assets, net of accumulated amortization of $4,270 and $3,385, respectively	4,838	5,442
Deferred income taxes	3,688	3,798
Other assets	2,707	2,818
Total assets	$ 105,897	$ 112,990
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Short-term debt	$	$ 1,181
Accounts payable	12,828	10,476
Accrued liabilities:		
Employee compensation	3,175	4,902
Other accrued liabilities	4,943	6,071
Total current liabilities	20,946	22,630
Other liabilities	715	1,347
Total liabilities	21,661	23,977
COMMITMENTS AND CONTINGENCIES (Note 8)		
Stockholders equity:		
Common stock, $.01 par value, 40,000,000 shares authorized, 22,111,675 and 23,644,301 shares issued, and 22,102,549 and 23,644,301 outstanding in 2012 and 2011, respectively	221	237
Additional paid-in capital	133,498	132,350
Accumulated deficit	(49,128)	(44,031)
Accumulated other comprehensive (loss) income	(392)	381
Nil coupon perpetual loan notes	76	76
Treasury stock, 9,126 and 0 shares in 2012 and 2011, respectively, at cost	(39)	
Total stockholders equity	84,236	89,013

Total liabilities and stockholders equity	$ 105,897	$ 112,990

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,		
	2012	2011	2010
Revenues	$ 97,644	$ 93,668	$ 81,795
Costs and expenses:			
Cost of sales	56,899	49,857	46,821
Selling, general and administrative	32,682	33,446	30,857
Gain on revaluation of ACT liability		(758)	(768)
Research and development	2,863	1,474	948
	92,444	84,019	77,858
Operating income	5,200	9,649	3,937
Interest expense	(93)	(148)	(143)
Interest income	78	35	11
Other expense	(107)	(279)	(119)
Income before taxes	5,078	9,257	3,686
Income tax expense	(2,302)	(3,109)	(1,933)
Net income	$ 2,776	$ 6,148	$ 1,753
Net income per common share:			
Basic	$ 0.12	$ 0.26	$ 0.07
Diluted	$ 0.12	$ 0.25	$ 0.07
Weighted-average number of common shares outstanding:			
Basic	22,709,000	24,095,000	24,213,000
Diluted	23,535,000	24,633,000	24,405,000

See notes to consolidated financial statements.

Table of Contents

Fuel Tech, Inc.

Consolidated Statements of Comprehensive Income

(*in thousands of dollars, as appropriate*)

	For the years ended December 31,		
	2012	2011	2010
Net income	$ 2,776	$ 6,148	$ 1,753
Other comprehensive income (loss):			
Foreign currency translation adjustments	(765)	103	(26)
Unrealized (losses)/gains from marketable securities, net of tax	(8)	35	
Total other comprehensive (loss) income	(773)	138	(26)
Comprehensive income	$ 2,003	$ 6,286	$ 1,727

See notes to consolidated financial statements.

Table of Contents

Fuel Tech, Inc.

Consolidated Statements of Stockholders Equity

(*in thousands of dollars or shares, as appropriate*)

	Common Stock		Additional Paid-in	Accumulated	Accumulated Other Comprehensive	Nil Coupon Perpetual	Treasury	
	Shares	Amount	Capital	Deficit	Income (Loss)	Loan Notes	Stock	Total
Balance at December 31, 2009	**24,212**	**$ 242**	**$ 125,458**	**$ (47,828)**	**$ 269**	**$ 81**	**$**	**$ 78,222**
Net loss				1,753				1,753
Foreign currency translation adjustments					(26)			(26)
Exercise of stock options	1		10					10
Repurchase of nil coupon perpetual loan notes						(5)		(5)
Tax benefit from stock compensation expense								
Stock compensation expense			4,274					4,274
Tax effect of expired vested options								