FUEL TECH, INC.
Form 10-K
March 24, 2016
Table of Contents

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K
(Mark One)

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

For the fiscal year ended: December 31, 2015
OR

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

For the transition period from to
Commission File Number 001-33059

Fuel Tech, Inc.
(Exact name of registrant as specified in its charter)

Delaware	20-5657551
(State of Incorporation)	(I.R.S. ID)

Fuel Tech, Inc.
27601 Bella Vista Parkway
Warrenville, IL 60555-1617
(630) 845-4500
www.ftek.com
Securities registered pursuant to Section 12(b) of the Act:

COMMON STOCK, $0.01 par value per share	NASDAQ

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No ý
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ¨ No ý
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 ý 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 pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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, a non-accelerated filer, or a smaller reporting company. See the definitions of "large" accelerated filer, "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

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

As of June 30, 2015, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $45,681,000 based on the closing sale price as reported on the NASDAQ National Market System.

As of February 29, 2016, there were 23,167,216 shares of common stock outstanding.

Documents incorporated by reference:

Portions of the definitive Proxy Statement to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on May 19, 2016 are incorporated by reference into Part III.

Table of Contents

TABLE OF CONTENTS

Table of Contents

TABLE OF DEFINED TERMS

Term	Definition
AIG	Ammonia Injection Grid
ASCR™	A trademark used to describe our Advanced Selective Catalytic Reduction process
CAIR	Clean Air Interstate Rule
CAVR	Clean Air Visibility Rule
CSAPR	Cross-State Air Pollution Rule
CFD	Computational Fluid Dynamics
EPA	The U.S. Environmental Protection Agency
ESP	Electrostatic Precipitator
FGC	Flue Gas Conditioning
FUEL CHEM®	A trademark used to describe our fuel and flue gas treatment processes, including its TIFI® Targeted In-Furnace Injection™ technology to control slagging, fouling, corrosion and a variety of sulfur trioxide-related issues
GSG™	Graduated Straightening Grid
HERT™ High Energy Reagent Technology™	A trademark used to describe one of our SNCR processes for the reduction of NOx
NO_x	Oxides of nitrogen
NO_xOUT®	A trademark used to describe one of our SNCR processes for the reduction of NOx
NO_xOUT-SCR®	A trademark used to describe our direct injection of urea as a catalyst reagent
NO_xOUT CASCADE®	A trademark used to describe our process for the combination of SNCR and SCR technologies
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
TIFI® Targeted In-Furnace Injection™	A trademark used to describe our proprietary technology that enables the precise injection of a chemical reagent into a boiler or furnace as part of a

	FUEL CHEM program
ULTRA™	A trademark used to describe our process for generating ammonia for use as a Selective Catalytic Reduction reagent

Table of Contents

1

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 identifying 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 our 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," or "our," refer to Fuel Tech, Inc. and our wholly-owned subsidiaries.

GENERAL

We are a leading technology company engaged in the worldwide development, commercialization and application of state-of-the-art proprietary technologies for air pollution control, process optimization, combustion efficiency and advanced engineering services. These technologies enable our customers to operate efficiently in a cost-effective and environmentally sustainable manner. We operate as a fully integrated company to apply our extensive knowledge of carbonaceous fuel and combustion engineering to serve a variety of end markets. Our Air Pollution Control (APC) and FUEL CHEM® business processes rely heavily on our unique ability to inject chemical slurries into combustion units, in precise concentrations and locations, to achieve a desired outcome. Our Fuel Conversion business is a development stage opportunity focused on creating and manufacturing value-added engineered carbon feedstock products for carbon feedstock customer markets.

Our APC technologies include advanced combustion modification techniques including low NO_x burners and over fire air systems, along with post-combustion nitrogen oxide (NO_x) control approaches, including NO_xOUT® and HERT™ Selective Non-Catalytic Reduction (SNCR) and Rich Reagent Injection (RRI) systems. Our Advanced Selective Catalytic Reduction (ASCR) system utilizes the combination of combustion systems and SNCR to provide a cost effective alternative to high capital cost, standalone conventional SCR systems while providing similar NO_x reduction levels. The ULTRA™ system generates ammonia on-site for SCR systems using safe urea reagent. Our SCR group provides process design optimization, performance testing and improvement, and catalyst selection services for SCR systems on coal-fired boilers. These technologies have established us as a leader in NO_x reduction, with installations on over 1,000 units worldwide, where coal, fuel oil, natural gas, municipal waste, biomass, and other fuels are utilized.

- Our FUEL CHEM technologies revolve around the unique application of chemical injection programs which improve the efficiency, reliability, fuel flexibility and environmental status of combustion units by controlling slagging, fouling, corrosion, opacity and acid plume, as well as the formation of sulfur trioxide, ammonium bisulfate, particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), and carbon dioxide (CO_2). We use our patented TIFI® Targeted In-Furnace Injection™ processes to apply specialty chemical programs to units burning a wide variety of fuels including coal, heavy oil, biomass, and municipal waste. These TIFI programs incorporate design, modeling, equipment,

reagent, and service to provide complete customized on-site programs designed to improve plant operations and provide a return on investment in addition to helping meet emission regulatory requirements.

The Fuel Conversion business represents the continuing evolution of a new research and business development initiative we first commenced in 2014 following our acquisition of intellectual property rights and know-how related to the CARBONITE® fuel conversion process and technology. The goal of our Fuel Conversion technology is to convert coals of various grades into value-added engineered carbon feedstock products that are designed to be high in energy content and manufactured to contain other customizable carbon feedstock characteristics desirable in a variety of carbon feedstock use applications. Our Fuel Conversion technology has a number of potential applications including certain coal replacement, electric arc furnace reductant, ferro-alloy feedstock, and mercury reduced carbon feedstock. During 2015,

Table of Contents

we have been testing and developing certain engineered carbon feedstock products for specific market applications. We are in the process of evaluating the commercialization of these product offerings with prospective customers.

Many of our products and services rely heavily on our computational fluid dynamics and chemical kinetics modeling capabilities, which are enhanced by internally developed, high-end visualization software. These capabilities, coupled with our innovative technologies and multi-disciplined team approach, enable us to provide practical solutions to some of our customers' most challenging issues.

AIR POLLUTION CONTROL

Regulations and Markets: Domestic

The continued growth of our APC technology segment is dependent upon the adoption and enforcement of increasingly stringent environmental regulations in the U.S. and globally. In the U.S., federal and state laws regulating the emission of NO_x are the primary driver in our APC technology segment. The principal regulatory drivers currently in effect are as follows:

Clean Air Act: The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to establish national ambient air quality standards (NAAQS) at levels that are protective of public health with an adequate margin of safety. The six pollutants specified include: Ozone (O_3), Particulate Matter (PM), Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_2), Lead, and Carbon Monoxide (CO). The NAAQS provisions require that states comply with ozone and particulate emissions standards. NO_x emissions are a precursor to ozone formation and also contribute to fine particulate emissions ($PM_{2.5}$), which has been the recent regulatory driver through the Cross-State Air Pollution Rule (CSAPR). NO_x emissions were targeted as contributors to fine particulate emissions and ozone emissions. Since 1990, programs have been established by the EPA at the regional and federal level to help states in their mission to define and meet their State Implementation Plans (SIPs) for attainment. NAAQS PM standards were issued in 1997, with more stringent standards issued in 2006 and 2012. The NAAQS ozone standards issued in 1997 were made more stringent in 2008. On October 1, 2015, the EPA strengthened the NAAQS for ground-level ozone by reducing the minimum acceptable level from 75 to 70 parts per billion (ppb).

Cross-State Air Pollution Rule (CSAPR): On July 7, 2011, the Environmental Protection Agency passed the Cross-State Air Pollution Rule (CSAPR) under the “good neighbor” provision of the Clean Air Act to reduce emissions of SO_2 and NO_x from power plants in the eastern half of the United States. This rule replaces the Clean Air Transport Rule (CATR) and focuses on reducing air emissions contributing to fine particle ($PM_{2.5}$) and ozone nonattainment that often travel across state lines; including SO_2 and NO_x which contribute to $PM_{2.5}$ transport. CSAPR affected 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. The timing of CSAPR's implementation has been affected by a number of court actions. In December 2011, CSAPR was stayed prior to implementation due to lawsuits filed by various states and combustion sources, and in August 2012 the U.S. Circuit Court of Appeals, D.C. Circuit, vacated CSAPR and remanded it to the EPA. The U.S. Supreme Court reversed that decision in April, 2014. Following the remand of the case to the D.C. Circuit, the EPA requested that the court lift the CSAPR stay and toll the CSAPR compliance deadlines by three years. In October, 2014, the D.C. Circuit granted the EPA's request and, accordingly, CSAPR Phase 1 implementation commenced in 2015, with Phase 2 beginning in 2017.

Most recently, in November 2015, the EPA proposed an update to CSAPR for the 2008 ozone NAAQS. The rule is expected to be finalized in 2016.

Industrial Boiler MACT: In December 2011, the EPA re-proposed its new emissions rule for industrial, commercial and institutional boilers and process heaters, known as the Industrial Boiler Maximum Achievable Control Technology (MACT) standard. The EPA proposed the final rule on January 31, 2013, with compliance scheduled for January 2016. Emissions regulated include acid gas emissions including hydrochloric acid (HCl), carbon monoxide (CO), mercury, PM, and dioxins.

Clean Air Visibility Rule (CAVR: The Clean Air Visibility Rule (CAVR), also known as the Regional Haze rule, is part of the Clean Air Act and was finalized in 2005. Under CAVR, certain States are required to submit implementation plans to the EPA to comply with the Regional Haze requirements, and updates are required every five years. The overall obligation of CAVR is to return the US scenic areas to “active” visibility by 2064.
Consent Decrees: Consent decree activity through the US Department of Justice or EPA may require emission sources to meet individual requirements. Sources may also agree to specific air pollution requirements with states or environmental groups.

Table of Contents

Regulations and Markets: International

We also sell 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, existing coal fired power plants will need to meet tighter emission regulations, and come into compliance by 2019 or 2020 (country specific). The Latin American countries will also present some opportunities for SNCR systems with plants that have inter-company directives for curbing emissions, in the absence of national regulations. However, these opportunities will not be time sensitive, and will greatly depend on allocation of capital budgets from the parent companies.

China continues to represent an attractive opportunity for us as the government sets pollution control, energy conservation and efficiency improvements as top priorities, as part of tightened standards addressed by the super clean emission regulation officially released in December, 2015. We have viable technologies to help achieve these objectives. China's dominant reliance on coal as an energy resource is not expected to 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 and has become a political issue, especially given China's growing awareness of air pollution and increasingly expanded role in international events and organizations.

China's Ministry of Environmental Protection issued super clean emission regulations to be fully implemented by 2020, in support of reducing harmful pollutants and further defining the technologies recommended to achieve the reductions. Super clean emission requires NOx emission under 50 mg/Nm3, SO2 emission under 35 mg/Nm3 and particulate emission under 10 mg/Nm3. The regulations apply to all public utility units of 300MW or larger and private power generation units of 100MW or larger, and will be progressively implemented in the eastern region by 2017, the central region by 2018, and the western region by 2020. Newly constructed units and existing units must meet the same stringent emission standard. The existing units which cannot be retrofitted will be closed, particularly for units under 300MW as part of Thirteenth Five Year Plan-improving overall energy efficiency and clean emission from 2015-2020. In addition, Chinese government promotes the use of waste incineration plants to replace landfills with focus on major cities. New construction of MSW's units which are equipped with SNCR or SCR has been growing.

The European Industrial Emissions Directive (IED) sets the target for NOx emissions to be at or below 200 mg/Nm3 from 1st January 2016. 15 member states have applied for temporary derogation primarily due to aging coal-fired fleets and compliance time frames vary between 2016 and 2020. The implementation is country specific and each member country sets its own limits based on this guideline. Turkey, while not a member state, is also looking to meet this guideline as part of their bid to join the European Union. Presently, Fuel Tech is best positioned to compete in the UK market based on the relationships and partnerships built there over last several years. A number of coal-fired units in the UK are converting to biomass firing due to the subsidies available from the government. Other European countries that rely heavily on coal generation, and are impacted by the IED include Spain, Poland and Czech Republic. Turkey will also see modernization of its fleet of coal-based power generation.

The Latin American governments in general have not enacted NOx specific emission regulations (with the exception of Chile). However, certain companies have set internal targets for pollution control and these will present a few opportunities for Fuel Tech in the next 2 - 3 years. Current Chilean NOx emission limits for existing units are being met with retrofitting of Low NOx burners and OFA systems, while the new units are being fitted with SCRs. Further tightening of NOx limits may require the addition of SCRs to existing plants for compliance.

Products

Our NO_x reduction and particulate control technologies are installed worldwide on over 1000 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 and provides safe reagent for use in Selective Catalytic Reduction (SCR) systems.

- SNCR Systems: Our 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.

- Combined Systems: Our 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™) system. Together, these systems 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

Table of Contents

reduction, with capital costs being a portion of the ASCR values defined above. Our NO_xOUT-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.

- ULTRA Technology: Our ULTRA™ process is designed to convert urea to ammonia safely and economically for use as a reagent in the SCR process for 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. Overseas, new coal-fired power plants incorporating SCR systems are expected to be constructed at a rapid rate in China, and our 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.
- SCR Processes and Services: Our 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. We also specialize 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. We design flow corrective devices, such as turning vanes, ash screens, static mixers and our patent pending Graduated Straightening Grid (GSG™). Our 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.
- ESP Processes and Services: ESP technologies for particulate control include Electrostatic Precipitator (ESP) products and services including ESP Inspection Services, Performance Modeling, and Performance and Efficiency Upgrades, along with complete turnkey capability for ESP retrofits. Flue gas conditioning (FGC) systems include treatment using sulfur trioxide (SO_3) and ammonia (NH_3) based conditioning to improve the performance of ESPs by modifying the properties of the fly ash particle. Our ULTRA technology can provide the ammonia system feed requirements for FGC applications as a safe alternative to ammonia reagent based systems. FGC systems offer a lower capital cost approach to improving ash particulate capture versus the alternative of installing larger ESPs or utilizing fabric filter technology to meet targeted emissions and opacity limits. Fuel Tech’s particulate control technologies have been installed on more than 125 units worldwide.
- Burner 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.

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 39% of all U.S. electricity generation and roughly 67% of Chinese electricity generation. Major coal consumers include China, the United States and India.

Sales of APC products were $43.5 million, $42.0 million, and $72.6 million for the years ended December 31, 2015, 2014 and 2013, respectively.

NO_x Reduction Competition

Competition with our 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, we experience 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

Table of Contents

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 our controlled urea decomposition system competes with Wahlco, Inc., which manufactures a system that hydrolyzes urea under high temperature and pressure.

APC Backlog

Consolidated APC segment backlog at December 31, 2015 was $22.2 million versus backlog at December 31, 2014 of $18.0 million. A substantial portion of the backlog as of December 31, 2015 should be recognized as revenue in fiscal 2016, although the timing of such revenue recognition in 2016 is subject to the timing of the expenses incurred on existing projects.

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, and university and district heating markets. FUEL CHEM programs are currently in place on combustion units in North America, Mexico 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 our 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), and unburned carbon in fly ash, our 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 39% of all U.S. electricity generation and roughly 67% of Chinese electricity generation. Major coal consumers include the United States, China and India. Additional market dynamics include a growing, worldwide utilization of biomass for both steam and electrical production, as well as the strengthening of the pulp and paper industry worldwide, resulting in black liquor recovery boilers needing to maximize throughput.

The principal markets for this product line are electric power plants burning coals with slag-forming constituents such as sodium, iron and high levels of sulfur. Sodium is typically found in the Powder River Basin coals of Wyoming and Montana. 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 an attractive market potential for Fuel Tech.

Sales of the FUEL CHEM products were $30.2 million, $37.0 million, and $36.8 million for the years ended December 31, 2015, 2014 and 2013, respectively.

Competition

Competition for our 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

Table of Contents

substantive competition currently exists for our 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.

FUEL CONVERSION

The Fuel Conversion business represents a new business initiative we commenced in 2014. As described in Note 1 to the consolidated financial statements included in this Form 10-K, we acquired intellectual property rights and know-how related to the CARBONITE® Fuel Conversion process and technology. This process can convert coals of various grades into value-added products that are high in energy content, carbon-rich and contain less pollutants. Our Fuel Conversion technology has a number of potential applications including certain coal replacement, electric arc furnace reductant, ferro-alloy feedstock, and mercury reduced carbon feedstock. During 2015, we have been testing and developing the engineered carbon products for specific markets. We are in the process of evaluating the commercialization of these product offerings with prospective customers and considering alternatives. Refer to Item 1A. RISK FACTORS for further detail regarding the risk factors associated with this segment. We have not yet earned revenue from prospective customers.

INTELLECTUAL PROPERTY

The majority of our products are protected by U.S. and non-U.S. patents. We own 117 granted patents worldwide and 14 allowed utility model patents in China. We have 111 patent applications pending; including 13 in the United States and 98 in non-U.S. Jurisdictions. These patents and applications cover some 31 inventions, 15 associated with our NO_x reduction business, 13 associated with the FUEL CHEM business, one associated with Fuel Conversion business, and two associated with non-commercialized technologies. Our granted patents have expiration dates ranging from March of 2016 to August of 2035 .

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

EMPLOYEES

At December 31, 2015, we had 182 employees, 134 in North America, 38 in China, five in Europe and five in Chile. We enjoy good relations with our employees and are not a party to any labor management agreement.

RELATED PARTIES

Douglas G. Bailey, a member of our executive team, is a stockholder of American Bailey Corporation (ABC), which is a related party. Please refer to Note 11 to the consolidated financial statements in this Form 10-K for information about our transactions with ABC. Additionally, see the more detailed information relating to this subject under the caption “Certain Relationships and Related Transactions” in our definitive Proxy Statement to be distributed in connection with our 2016 Annual Meeting of Stockholders, which information is incorporated by reference.

AVAILABLE INFORMATION

We are a fully integrated company using a suite of advanced technologies to provide boiler optimization, efficiency improvement and air pollution reduction and control solutions to utility and industrial customers worldwide. Originally incorporated in 1987 under the laws of the Netherlands Antilles as Fuel-Tech N.V., we were domesticated in the United States on September 30, 2006, and continue as a Delaware corporation with our corporate headquarters at 27601 Bella Vista Parkway, Warrenville, Illinois, 60555-1617. Fuel Tech maintains an Internet website at www.ftek.com. Our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Exchange Act are made available through our website as soon as reasonably practical after we electronically file or furnish the reports to the Securities and Exchange Commission. Our website also contains our Corporate Governance Guidelines and Code of Ethics and

Business Conduct, as well as the charters of the Audit, Compensation, and Nominating and Corporate Governance committees of the Board of Directors. All of these documents are available in print without charge to stockholders who request them. Information on our website is not incorporated into this report.

Table of Contents

ITEM 1A - RISK FACTORS

Investors in our Common Shares should be mindful of the following risk factors relative to our business.

Our Product Portfolio Lacks Diversification

We have two broad technology segments that provide advanced engineering solutions to meet the pollution control, efficiency improvement, and operational optimization needs of coal-fired 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. ESP technologies make use of electrostatic precipitator products and services to reduce particulate matter. 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 our advanced engineering solution business as a result of competition, technological change, government regulation, customers converting to use natural gas or other fuels, or any other factor could have a significantly greater impact than if we maintained more diverse operations.

We Face Substantial Competition

Competition in the Air Pollution Control market comes from competitors utilizing their own NO_x reduction processes, including SNCR systems, Low NO_x Burners, Over-Fire Air systems, flue gas recirculation, ammonia SNCR and SCR, which do not infringe our patented technologies. Indirect competition will also arise from business practices such as the purchase rather than the generation of electricity, fuel switching, closure or de-rating of units, and sale or trade of pollution credits and emission allowances. Utilization by customers of such processes or business practices or combinations thereof may adversely affect our pricing and participation in the NO_x control market if customers elect to comply with regulations by methods other than the purchase of our Air Pollution Control products. See Item 1 “Products” and “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 NALCO (Ecolab), GE Infrastructure, and Environmental Energy Services, Inc.

Demand for Our APC and FUEL CHEM Products is Affected by External Market Factors

Reduced coal-fired electricity demand across the United States has led to coal-fired electricity production declines. Contributing to this decline in coal-fired generations were 1) lower natural gas prices which allowed utility operators to increase the amount of power generated from natural gas plants, 2) increased cost of environmental compliance with current environmental regulations, 3) constrained funding for capital projects, and 4) the uncertainty of regulation resulted in electricity generating unit operators delaying investment in NO_x emission remediation plans until such time as the United States Environmental Protection Agency further clarifies the regulations.

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

Our business is significantly impacted by and dependent upon the regulatory environment surrounding the electricity generation market. Our business will be adversely impacted to the extent that regulations are repealed or amended to significantly reduce the level of required 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 which result in the reduction or closure of a significant number of fossil fuel-fired power plants may adversely affect our business, financial condition and results of operations. See Item 1 above under the

Table of Contents

caption “Regulations and Markets” in the Air Pollution Control segment overview.

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

We hold licenses to or own a number of patents for our products and processes. In addition, we also have numerous patent applications pending both in the U.S. and abroad. There can be no assurance that any of our pending patent applications will be granted or that our outstanding patents will not be challenged, overturned or otherwise circumvented by competitors. In foreign markets, the absence of harmonized patent laws makes it more difficult to ensure consistent respect for our patent rights in emerging markets. In addition, certain critical technical information relating to our products which is not patented is held as trade secret, and protected by trade secret laws and restrictions on disclosure contained in our confidentiality and licensing agreements. There can be no assurance that such protections will prove adequate or that we will have adequate remedies against contractual counterparties for disclosure of our trade secrets or other violations of our intellectual property rights. See Item 1 above under the caption “Intellectual Property.”

Our Results May Be Affected By Foreign Operations

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

Our Operating Results May Be Adversely Affected by Product Pricing

The onset of significant competition for either of the technology segments might require us to lower our product prices in order to remain competitive and have a corresponding adverse impact on our realized gross margins and operating profitability. See the risk factor entitled “We Face Substantial Competition” above.

We May Not Be Able to Purchase Raw Materials on Commercially Advantageous Terms

Our FUEL CHEM technology segment is dependent, in part, upon a supply of magnesium hydroxide. Any adverse changes in the availability of this chemical will likely have an adverse impact on ongoing operation of our FUEL CHEM programs. On March 4, 2009, we entered into a Restated Product Supply Agreement (“PSA”) with Martin Marietta Magnesia Specialties, LLC (MMMS) in order to assure the continuance of a stable supply from MMMS of magnesium hydroxide products for our requirements in the United States and Canada. On October 31, 2013, we agreed to extend the term of the PSA to December 31, 2016. 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 we will be able to obtain a stable source of magnesium hydroxide in markets outside the United States.

Our Customer Base Is Highly Concentrated

A small number of customers have historically accounted for a significant portion of our revenues. There can be no assurance that our current customers will continue to place orders, that orders by existing customers will continue at the levels of previous periods, or that we 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.

We May Not Be Able to Borrow Funds Pursuant to our Credit Facilities

We are party to a $15 million domestic revolving credit agreement with JPMorgan Chase Bank, N.A. As of December 31, 2015, there were no outstanding borrowings on this facility and Fuel Tech was in compliance with all financial covenants contained in the agreement. In addition, our Chinese subsidiary, Beijing Fuel Tech Environmental Technologies Company, Ltd., has a RMB 35 million (approximately $5.392 million) revolving credit facility with JPMorgan Chase Bank (China) Company Limited. As of December 31, 2015, there were no outstanding borrowings under this facility. In the event of any default on our part 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 we 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 our cash position to significantly deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require us to obtain alternate financing.

Table of Contents

Our Fuel Conversion Business is in its Early Stages of Development

Our Fuel Conversion business is in the research and development stage and has not commenced commercial operations as of December 31, 2015. We have spent $2.8 and $0.3 million in research and development and other related costs for the years ended December 31, 2015 and 2014 respectively. During 2015, we have been testing and developing engineered carbon feedstock products for specific markets which are not yet commercially viable as of December 31, 2015. While we remain optimistic of our ability to develop and commercialize these products in the future, the possibility remains we may be unable to further develop these products to the extent required for use within the markets and customer bases we have identified.

Further, we will need to make substantial investments in order to be able to manufacture and develop the Fuel Conversion products which will require significant funding from outside sources. The ability of the Company to fund its potential future Fuel Conversion operations, including constructing new manufacturing facilities and/or acquiring and re-purposing existing manufacturing facilities to meet our specifications for our Fuel Conversion business, is dependent upon our ability to obtain additional financing when and as needed. If such funding is not attainable, the development of the Fuel Conversion business may be significantly delayed or stopped altogether.

We may be unable to obtain, maintain or renew permits or leases necessary for future operations of our Fuel Conversion business, which could hinder our ability to commence future operations

Future operations for our Fuel Conversion business will require us to obtain a number of permits that impose strict regulations on various environmental and operational matters. These, as well as our anticipated Fuel Conversion facilities and operations, would include permits issued by various federal, state and local agencies and regulatory bodies. The permitting rules, and the interpretations of these rules, are complex, change frequently and are often subject to discretionary interpretations by applicable regulators, all of which might make compliance more difficult or impractical, and might possibly preclude the continuance of commencing future operations in the Fuel Conversion business. Non-governmental organizations, environmental groups and individuals have certain statutory rights to engage in the permitting process and might comment upon, or object to, our anticipated requested permits. Such persons also have the right to bring citizen's lawsuits to challenge the issuance of permits, or the validity of environmental impact statements related thereto. If any permits or leases would not be issued or renewed in a timely fashion or at all, or if permits issued or renewed would be conditioned in a manner that restricts our ability to efficiently and economically conduct our future Fuel Conversion operations, our cash flows or profitability could be materially or adversely affected.

Table of Contents

ITEM 1B - UNRESOLVED STAFF COMMENTS
None

ITEM 2 - PROPERTIES
We own an office building in Warrenville, Illinois, which has served as our corporate headquarters since June 23, 2008. This facility, with approximately 40,000 square feet of office space, will meet our growth requirements for the foreseeable future.
We also operate from leased office facilities and we do not segregate any of these leased facilities by operating business segment. The terms of the Company's eight primary lease arrangements are as follows:

- The Stamford, Connecticut building lease, for approximately 6,440 square feet, runs from February 1, 2010 to December 31, 2019. The facility houses certain administrative functions such as Investor Relations and certain APC sales functions.
- The Beijing, China building lease, for approximately 8,000 square feet, runs from September 1, 2014 to August 31, 2017. This facility serves as the operating headquarters for our Beijing Fuel Tech operation.
- The Durham, North Carolina building lease, for approximately 16,000 square feet, runs from May 1, 2014 to April 30, 2017. This facility houses engineering operations. The landlord has exercised an option to terminate the lease effective June 30, 2016.
- The Gallarate, Italy building lease, for approximately 1,300 square feet, runs from May 1, 2013 to April 30, 2019. This facility serves as the operating headquarters for our European operations.
- The Westlake, Ohio building lease, for approximately 5,000 square feet, runs from May 1, 2014 to April 30, 2017. This facility houses engineering operations.
- The Aurora, IL warehouse lease, for approximately 11,000 square feet, runs from September 1, 2013 to December 31, 2020. This facility serves as an outside warehouse facility.
- The Overland Park, KS lease, for approximately 600 square feet, runs from October 16, 2015 to October 15, 2018. This facility serves primarily as a sales office.
- The Aberdeen Corners, GA lease, for an office suite, runs from June 1, 2015 to May 31, 2017. This facility primarily serves as a sales office.

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 condition, results of operations, or prospects.

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

Our Common Shares have been traded since September 1993 on The NASDAQ Stock Market, Inc, where it trades under the symbol FTEK.

Prices

The table below sets forth the high and low sales prices during each calendar quarter since January 2014.

2015	High	Low
Fourth Quarter	$2.54	$1.77
Third Quarter	2.42	1.76
Second Quarter	3.16	2.18
First Quarter	3.86	3.00

2014	High	Low
Fourth Quarter	$4.45	$3.61
Third Quarter	5.68	4.10
Second Quarter	6.77	4.96
First Quarter	8.50	4.90

Dividends

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

Holders

As of March 16, 2016, there were 123 holders of record of our common stock, which does not include the number of beneficial owners whose common stock was held in street name or through fiduciaries.

Performance Graph

The following line graph compares our total return to stockholders per common share for the five years ended December 31, 2015 to that of the NASDAQ Composite Index and the WilderHill Progressive Energy Index for the period December 31, 2010 through December 31, 2015.

Table of Contents

13

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, 2015. The selected financial data should be read in conjunction with the audited consolidated financial statements as of and for the year ended December 31, 2015, and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this report and the schedules thereto.

	For the years ended December 31				
CONSOLIDATED STATEMENT OF OPERATIONS DATA (in thousands of dollars, except for share and per-share data)	2015	2014	2013	2012	2011
Revenues	$73,664	$79,017	$109,338	$97,644	$93,668
Cost of sales	45,107	43,889	62,521	56,899	49,857
Selling, general and administrative and other costs and expenses	35,389	36,891	36,375	35,545	34,162
Goodwill and intangible assets impairment	1,425	23,400	—	—	—
Operating (loss) income	(8,257)	(25,163)	8,000	5,200	9,649
Net (loss) income	(12,380)	(17,725)	5,101	2,776	6,148
Basic (loss) income per common share	$(0.54)	$(0.78)	$0.23	$0.12	$0.26
Diluted (loss) income per common share	$(0.54)	$(0.78)	$0.23	$0.12	$0.25
Weighted-average basic shares outstanding	23,101,000	22,782,000	22,286,000	22,709,000	24,095,000
Weighted-average diluted shares outstanding	23,101,000	22,782,000	22,579,000	23,535,000	24,633,000

	December 31				
CONSOLIDATED BALANCE SHEET DATA (in thousands of dollars)	2015	2014	2013	2012	2011
Working capital	$35,865	$39,688	$48,619	$38,918	$43,626
Total assets	76,011	91,471	110,058	105,897	112,990
Long-term obligations	501	520	789	715	1,347
Total liabilities	17,037	19,170	21,435	21,661	23,977
Stockholders' equity (1)	58,974	72,301	88,623	84,236	89,013

Notes:

(1) Stockholders' equity includes the principal amount of nil coupon non-redeemable perpetual loan notes. See Note 7 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

We have three 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. Our ESP products and services include complete turnkey ESP retrofits and related services. 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. We distribute our products through our direct sales force and third-party sales agents.

FUEL CHEM Technologies

The FUEL CHEM technology segment, which uses chemical processes in combination with advanced CFD and CKM boiler modeling, for the control of slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in 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 39% of all U.S. electricity generation and roughly 67% of Chinese electricity generation. Major coal consumers include China, the United States and India.

Fuel Conversion

The Fuel Conversion business represents a new business initiative we commenced in 2014. As described in Note 1 to the consolidated financial statements included in this Form 10-K, we acquired intellectual property rights and know-how related to the CARBONITE® fuel conversion process and technology. This process can convert coals of various grades into value-added products that are high in energy content, carbon-rich and contain less pollutants. Our Fuel Conversion technology has a number of potential applications including certain coal replacement, electric arc furnace reductant, ferro-alloy feedstock, and mercury reduced carbon feedstock. During 2015, we have been testing and developing the engineered carbon products for specific markets. We are in the process of evaluating the

commercialization of these product offerings with prospective customers and considering alternatives. Refer to Item 1A. RISK FACTORS for further detail regarding the risk factors associated with this segment. We have not yet earned revenue from prospective customers.

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 Audit Committee of the Board of Directors.

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. We use the percentage of completion method of accounting for equipment

Table of Contents

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, 2015, we had two construction contracts in progress that were identified as loss contracts and a provision for losses in the amount of $3 was recorded in other accrued liabilities on the consolidated balance sheet. As of December 31, 2014, we had one construction contract in progress that was identified as a loss contract and a provision for losses in the amount of $4 was recorded in other accrued liabilities on the consolidated balance sheet.

Typically, our APC contracts are 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.

As part of most of our contractual APC project agreements, we contractually commit 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 our personnel, which is in turn based on operational inputs that are provided by the customer. Our 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, 2015 and December 31, 2014, unbilled receivables were approximately $7,312 and $9,904, respectively, and are included in accounts receivable on the consolidated balance sheet. Billings in excess of costs and estimated earnings on uncompleted contracts were $1,858 and $2,994 at December 31, 2015 and December 31, 2014, respectively, and are included in other accrued liabilities on the consolidated balance sheet.

We have installed over 1000 units with APC technology and normally provide 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 management’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 us, 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.

Assessment of Potential Impairments of Goodwill and Intangible Assets

Goodwill is not amortized, but rather is reviewed annually (in the fourth quarter) or more frequently if indicators arise, for impairment. We do 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. We have three reporting units: the FUEL CHEM segment, the APC technology segment and the Fuel Conversion segment.

Table of Contents

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 our expected future cash flows and yield a fair value that should be in line with the aggregate market value placed on the outstanding number of Common Shares as reflected by 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 our control, specifically market conditions that impact revenue growth assumptions, could significantly impact the fair value calculated. Management considers historical experience and all available information at the time the fair values of its reporting units are estimated. However, actual fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of goodwill.

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.

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. 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.

Fuel Tech performed its annual goodwill impairment analysis for each of its reporting units as of October 1, 2015 and determined that no impairment of goodwill existed within the FUEL CHEM technology segment. Goodwill related to APC technology reporting unit was fully impaired in the fourth quarter of 2014. APC technology segment failed the first step test because the estimated fair value of the reporting unit was less than its carrying value, a result significantly affected by Fuel Tech's market capitalization, and thus requiring additional analysis of the segment. Based on this additional analysis, Fuel Tech determined that the current fair value of the APC technology reporting unit was less than the fair value of the assets and liabilities of the unit, resulting in an implied fair value of goodwill of zero, and accordingly recorded a non-cash goodwill impairment charge of $23.4 million related to this segment.

The APC segment encompasses the integrated operations of the Company's acquisitions of Advanced Combustion Technology, Inc. (ACT) in 2009 and PECO in 2014. While goodwill impairment is tested for the segment as a whole, the changes in estimates that led to the goodwill impairment charge were most significantly related to the ACT acquisition. The impairment primarily resulted from the lower estimates of revenues and margins in the segment in the assessment forecast period. These lower estimates derive from (1) lower natural gas prices that allow utility operators

to switch to natural gas from coal and increase the amount of power generated from natural gas plants, (2) slower sales and smaller margins in the China market and (3) continued delays in investment in environmental remediation, particularly with respect to NOx technologies due to the regulatory environment.

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 group) may not be recoverable. If impairment indicators exist, we perform a more detailed analysis and an impairment loss is recognized when estimated future undiscounted cash flows expected to result from the use of the asset (or asset group) and its eventual disposition are less than the carrying amount. This process of analyzing impairment involves examining the operating condition of individual assets (or asset group) and estimating a fair value based upon current condition, relevant market factors and remaining estimated operational life compared to the asset's remaining depreciable life. Quoted market prices and other valuation techniques are used to determine expected cash flows. Due to the existence of impairment indicators as more fully described in Note 1 to our consolidated financial statements, we performed

Table of Contents

a more detailed analysis of potential long-lived and intangible asset impairment in the APC technology asset group during the fourth quarter of 2015 using the aforementioned undiscounted cash flows analysis.

In the fourth quarter of 2015, the Company performed an impairment test of the carrying value of our intangible assets to determine whether any impairment existed. The Company determined that the sum of the expected undiscounted cash flows attributable to certain intangible assets was less than its carrying value and that an impairment write-down was required. The impairment loss primarily related to the customer lists acquired in the 2009 acquisition of Advanced Combustion Technology and the 2014 acquisition of PECO. The Company calculated the estimated fair value of the intangible asset by summing the present value of the expected cash flows over its life. The impairment was calculated by deducting the present value of the expected cash flows from the carrying value. This assessment resulted in an impairment write-down of $1,425, which was included in “Goodwill and intangible assets impairment” in the accompanying Consolidated Statements of Operations for the year ended December 31, 2015.
A significant portion of our property and equipment is comprised of assets deployed at customer locations relating to our FUEL CHEM technology asset group, and due to the shorter-term duration over which this equipment is depreciated, the likelihood of impairment is mitigated. The discontinuation of a FUEL CHEM program at a customer site would most likely result in the re-deployment of all or most of the affected assets to another customer location rather than an impairment.

Valuation Allowance for Deferred Income Taxes

Deferred tax assets represent deductible temporary differences and net operating loss and tax credit carryforwards. A valuation allowance is recognized if it is more likely than not that some portion of the deferred tax asset will not be realized. At the end of each reporting period, management reviews the realizability of the deferred tax assets. As part of this review, we consider if there are taxable temporary differences that could generate taxable income in the future, if there is the ability to carry back the net operating losses or credits, if there is a projection of future taxable income, and if there are any tax planning strategies that can be readily implemented.

Stock-Based Compensation

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

We utilize the Black-Scholes option-pricing model to estimate the fair value of stock option awards. Determining the fair value of stock options using the Black-Scholes model requires judgment, including estimates for (1) risk-free interest rate - an estimate based on the yield of zero-coupon treasury securities with a maturity equal to the expected life of the option; (2) expected volatility - an estimate based on the historical volatility of our Common Shares 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, we utilize 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 results, stock-based compensation expense could be impacted.

Recently Issued Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014-09 "Revenue from Contracts with Customers" (Topic 606). This new accounting guidance on revenue recognition provides for a single five-step model

to be applied to all revenue contracts with customers. The new standard also requires additional financial statement disclosures that will enable users to understand the nature, amount, timing and uncertainty of revenue and cash flows relating to customer contracts. In August 2015, the FASB approved a one-year deferral to January 1, 2018. Early adoption is permitted as of the original effective date. The standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory. This new accounting guidance more clearly articulates the requirements for the measurement and disclosure of inventory. Topic 330, Inventory, currently requires an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. This new accounting guidance requires the

Table of Contents

measurement of inventory at lower of cost and net realizable value. ASU 2015-11 will be effective for the Company beginning on January 1, 2017. The adoption of this guidance in not expected to have a material impact on the Company's consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. The amendments in this Update require that deferred tax liabilities and assets be classified as non-current in a classified statement of financial position. Current accounting principles require an entity to separate deferred income tax liabilities and assets into current and non-current amounts in a classified statement of financial position. ASU 2015-17 will be effective for the Company beginning on January 1, 2017. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The amendments in this Update increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 will be effective for the Company beginning on January 1, 2019. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

2015 versus 2014

Revenues for the years ended December 31, 2015 and 2014 were $73,664 and $79,017, respectively. The year-over-year decrease of $5,353, or 7%, was principally driven by decreased revenue in our FUEL CHEM technology segment in both our United States (U.S.) and foreign operations, while our APC technology segment revenues increased marginally. Our U.S. revenues increased by $584 or 1% from $50,901 to $51,485, while our international revenues declined by $5,937 or 21% from $28,116 to $22,179.

Revenues for the APC technology segment were $43,485 for the year ended December 31, 2015, an increase of $1,454, or 3%, versus fiscal 2014. Revenues in our APC technology segment, which had been growing into 2013 largely through international sales, were adversely affected by a number of factors in 2015. First, the U.S. regulatory environment, while remaining favorable for our prospects, has not spurred capital investment in our products by electric power producers. Second, while general economic conditions in the U.S. have improved, energy demand for coal fired power plants has declined as utilities have switched to lower cost natural gas sources. At the same time, these sources have generally allowed utilities to meet their regulatory objectives with existing emissions investments. Sales in foreign locations have not been robust enough to offset reduced demand in the U.S. Foreign sales declined year-over-year by approximately $6.0 million. This is due largely to the completion of several large contracts in China offset by a large contract starting in Italy in 2015. While we expect to see improved order flow in our U.S. APC segment in 2016, any future orders will be dependent on our customers' capital investment decisions to install emissions control technologies in order to meet state or federal regulations. We continue to actively bid projects in our foreign markets during 2016 and will continue to look for growth opportunities within our chosen markets. Backlog for the years ended December 31, 2015 and 2014 was $22.2 million and $18.0 million, respectively.

Revenues for the FUEL CHEM technology segment for the year ended December 31, 2015 were $30,179, a decrease of $6,807, or 18% versus fiscal 2014. This decrease is principally associated with reduced product demand from our largest Fuel Chem customer. This customer's decision to reduce spending was based on a number of factors including cost of coal fire powered generation, energy demand and overall economic conditions affecting the plant. During 2015, our total revenue for this customer decreased from approximately $15 million in 2014 to $9 million in 2015 and we expect to see a further decline in 2016. We remain focused on attracting new customers in our FUEL CHEM business, for both coal and non-coal applications, but our ability to attract new coal customers continues to be affected by the soft electric demand market and fuel switching as a result of low natural gas prices.

Consolidated cost of sales for the years ended December 31, 2015 and 2014 were $45,107 and $43,889, respectively. Consolidated gross margin percentage for the years ended December 31, 2015 and 2014 were 39% and 44%, respectively. The gross margins for the APC technology segment decreased to 30% in 2015 from 37% in 2014. Gross margin percentage for the FUEL CHEM technology segment decreased slightly in 2015 to 52% from 53% in 2014.

During 2015 we recognized an impairment charge of $1.4 million for finite-lived APC segment intangible assets, and during 2014
we recognized an impairment charge of $23.4 million for our APC segment goodwill asset. A significant portion, $15.8 million, of our APC segment goodwill impairment recognized in 2014 and $1.1million of our APC segment intangible asset impairment
recognized in 2015 related to the acquisition of Advanced Combustion Technology, Inc. (“ACT”) which was completed on January 1, 2009.

Selling, general and administrative expenses for the years ended December 31, 2015 and 2014 were $31,116 and $35,432, respectively. The decrease of $4,316 or 12%, is primarily attributed to the following:

- An decrease in employee costs, primarily commissions and bonuses, totaling $1,029
- An decrease in non-employee commissions of $215
- An decrease in stock compensation expense of $539
- An increase in depreciation and amortization of $140
- An decrease in professional fees and consulting services of $455
- An decrease related to cleanup fees for a legacy facility of $325
- An decrease in bad debt expense of $127
- An decrease in office and administrative costs relating to our foreign subsidiaries of $1,211

Table of Contents

Research and development ("R&D") expenses were $4,273 and $1,459 for the years ended December 31, 2015 and 2014, respectively. Included in our 2015 and 2014 R&D expense was $2,826 and $277 expense pertaining to the development of our Fuel Conversion business, while the remaining expenditures were focused on new product development for our APC and Fuel Chem businesses. We plan to continue focusing on increased R&D efforts in the pursuit of commercial applications for our technologies outside of our traditional markets, and in the development and analysis of new technologies that could represent incremental market opportunities.

Interest income for the year ended December 31, 2015 decreased by $8 to $21 versus $29 in 2014. Interest expense of $27 was recorded in 2015, compared to $125 in the prior year. Finally, the decrease in net other expenses to $360 from $544 in the prior year is due primarily to the impact of foreign exchange rates as it relates to settlement of balances denominated in foreign currencies, particularly in Chile.

For the year ended December 31, 2015, we recorded an income tax expense of $3,757 on pre-tax loss of $8,623. Our effective tax rates were 43.6% and (31.3%) for the years ended December 31, 2015 and 2014, respectively. The effective tax rate for the year-ended December 31, 2015 differed from the the federal statutory rate of 34% as a result of establishing a full valuation allowance on our United States deferred tax assets and income from our Italian subsidiary for which we reversed a portion of our deferred income tax valuation allowances as a result of the entity's previously recorded net operating losses. For the year ended December 31, 2014, we recorded an income tax benefit of $8,078 on pre-tax loss of $25,803.

2014 versus 2013

Revenues for the years ended December 31, 2014 and 2013 were $79,017 and $109,338, respectively. The year-over-year decrease of $30,321, or 28%, was principally driven by decreased revenue in our APC technology segment in both our United States (U.S.) and foreign operations, while our FUEL CHEM technology segment revenue remained unchanged. Our U.S. revenues declined $12,374 or 20% from $63,275 to $50,901, while our International revenues declined $17,947 or 39% from $46,063 to $28,116.

Revenues for the APC technology segment were $42,031 for the year ended December 31, 2014, a decrease of $30,521, or 42%, versus fiscal 2013. Revenues in our APC technology segment, which had been growing into 2013 largely through international sales, were adversely affected by a number of factors in 2014. First, the U.S. regulatory environment, while remaining favorable for our prospects, has not spurred capital investment in our products by electric power producers. Second, while general economic conditions in the U.S. have improved, energy demand for coal fired power plants has declined as utilities have switched to lower cost natural gas sources. At the same time, these sources have generally allowed utilities to meet their regulatory objectives with existing emissions investments. Sales in foreign locations have not been robust enough to offset reduced demand in the U.S., as foreign sales have also declined due largely to the completion of a large contract in Chile which yielded a year-over-year decline of $10 million in revenue. During 2014 we completed two U.S. based acquisitions of new technology for particulate control which contributed $4.2 million of revenue and offset declines in our legacy technology offerings. While we do expect to see improved order flow in our U.S. APC segment in 2015, any future orders will be dependent on our customer's capital investment decisions to install emissions control technologies in order to meet state or federal regulations. We continue to actively bid projects in our foreign markets during 2015 and will continue to look for growth opportunities within our chosen markets. Backlog for the years ended December 31, 2014 and 2013 was $18.0 million and $22.4 million, respectively.

Revenues for the FUEL CHEM technology segment for the year ended December 31, 2014 were $36,986, an increase of $200, or 1% versus fiscal 2013. Our FUEL CHEM technology continues to be affected by the soft electric demand market and fuel switching as a result of low natural gas prices, which have led to unscheduled outages and coal

consumption units operating at less than full capacity.

Consolidated cost of sales for the years ended December 31, 2014 and 2013 were $43,889 and $62,521, respectively. Consolidated gross margin percentage for the years ended December 31, 2014 and 2013 were 44% and 43%, respectively. The gross margins for the APC technology segment decreased slightly to 37% in 2014 from 38% in 2013. Gross margin percentage for the FUEL CHEM technology segment remained flat at 53% in 2014 and 2013.

As more fully described in Note 1 to the consolidated financial statements, the Company performs an annual evaluation in the fourth quarter of each year for indications of potential impairment of goodwill and indefinite lived intangible assets. Our APC segment goodwill represented $23.4 million, or 92% of the total goodwill balance carried on our books. Our annual goodwill impairment test for our APC segment concluded that its full balance was impaired, leading to a charge of $23.4 million in the fourth quarter. A significant portion, $15.8 million, of our APC goodwill related to the acquisition of Advanced Combustion Technology, Inc. (“ACT”) which was completed on January 1, 2009. While the Company believes it will continue to benefit from this and other business acquisitions completed in the APC segment, the recent financial performance of the APC segment

Table of Contents

and specifically the ACT product line has not met our internal expectations and anticipated future cash flows have greater risks and uncertainties with regard to the timing and rate of growth. We continue to believe that promising long-term global market trends with regard to demand for our APC segment technologies appears to remain intact, but we are unable to ascertain the timing of such demand in the near term, and accordingly the present value of the forecasted future cash flows used in our goodwill impairment test has been reduced compared to prior years. Accordingly, we concluded that our APC segment goodwill balance was impaired during the fourth quarter of 2014 and as a result a $23.4 million charge was recorded in that period.

Selling, general and administrative expenses for the years ended December 31, 2014 and 2013 were $35,432 and $36,375, respectively. The decrease of $943 or 3%, is primarily attributed to the following:

- An decrease in employee costs, primarily commissions and bonuses, totaling $2,698
- An decrease in non-employee commissions of $629
- An increase in stock compensation expense of $524
- An increase in depreciation and amortization of $396
- An increase in professional fees and consulting services of $759
- An increase related to cleanup fees for a legacy facility of $325
- An increase in bad debt expense of $191
- An increase in office and administrative costs relating to our foreign subsidiaries of $147

Research and development (“R&D”) expenses were $1,459 and $2,442 for the years ended December 31, 2014 and 2013, respectively. We plan to continue focusing on increased R&D efforts in the pursuit of commercial applications for our technologies outside of our traditional markets, and in the development and analysis of new technologies that could represent incremental market opportunities.

Interest income for the year ended December 31, 2014 decreased by $29 to $29 versus $58 in 2013. Interest expense of $125 was recorded in 2014, compared to $56 in the prior year. Finally, the increase in net other expenses to $544 from $137 in the prior year is due primarily to the impact of foreign exchange rates as it relates to settlement of balances denominated in foreign currencies, particularly in Chile.

For the year ended December 31, 2014, we recorded an income tax benefit of $8,078 on pre-tax loss of $25,803. Our effective tax rate of 31% was lower than the federal statutory rate of 34% as a result of a decrease related to the non-deductible goodwill impairment charge offset by increases from state taxes 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 ended December 31, 2013, we recorded an income tax expense of $2,764 on pre-tax income of $7,865.

Liquidity and Sources of Capital

At December 31, 2015, we had cash and cash equivalents of $21,684 and working capital of $35,865 versus cash and cash equivalents of $18,637 and working capital of $39,688 at December 31, 2014.

Operating activities provided $6,928 of cash for the year ended December 31, 2015, primarily due to the add back of non-cash items from our net loss of $12,380 including stock compensation expense of $1,809, depreciation and amortization of $4,205, and a decrease in deferred income taxes of $4,916, as well as a decrease in our accounts receivable balance of $7,880 and an increase in our accounts payable balance of $1,817. Partially offsetting these items were subtractions of non-cash items from our net loss including gain on sale of equipment of $26, as well an increase in inventory of $560, an increase in prepaid expenses and other current and non-current assets of $1,245, and

a decrease in our accrued liabilities and other non-current liabilities of $913.

Operating activities provided $5,435 of cash for the year ended December 31, 2014, primarily due to the add back of non-cash items from our net loss of $17,725 including a goodwill impairment charge of $23,400, stock compensation expense of $2,322, depreciation and amortization of $4,306, and bad debt expense of $762, as well as a decrease in our accounts receivable balance of $6,117 and an increase in our accrued liabilities and other non-current liabilities of $906. Partially offsetting these items were subtractions of non-cash items from our net loss including deferred income taxes in the amount of $9,524, as well an decrease in our accounts payable balance of $3,600, an increase in inventory of $616, and an increase in prepaid expenses and other current and non-current assets of $913.

Investing activities used cash of $776 and $13,897 for the years ended December 31, 2015 and 2014, respectively. Investment activities for the year ended December 31, 2015 consisted of purchases of equipment, patents, and other intangibles of $802 and proceeds from sale of equipment of $26. Investment activities for the year ended December 31, 2014 consisted of purchases of equipment,

Table of Contents

patents, and other intangibles of $2,808, including our $3,010 acquisition of intellectual property rights related to the fuel conversion segment, as well as an investment to acquire two businesses located in Ohio in the amount of $8,079, net of cash acquired.

Financing activities used $1,875 of cash for the year ended December 31, 2015 which included a payment of our short-term debt in the amount of $1,623 and payments to repurchase our common stock in the amount of $252 for shares withheld to pay employee payroll taxes upon vesting of equity awards. Financing activities provided $0 of cash for the year ended December 31, 2014 which included proceeds and excess tax benefits from stock option exercises in the amount of $304, offset by payments to repurchase our common stock in the amount of $304 for shares withheld to pay employee payroll taxes upon vesting of equity awards.

On June 30, 2015, we amended our existing revolving credit facility (the Facility) with JPMorgan Chase Bank, N.A (JPM Chase) to extend the maturity date through June 30, 2017 and we again amended the facility on December 31, 2015 to modify certain covenants. Availability under the facility is $15,000 with 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 300 basis points, and has the Company's Italian subsidiary, Fuel Tech S.r.l., as a guarantor. We are allowed to use this Facility for cash advances and standby letters of credit.

The Facility contains several debt covenants tested on a quarterly or annual basis. The Facility requires a minimum trailing twelve-month EBITDA of $500 for quarters ending March 31, 2016 and June 30, 2016; beginning with the fiscal quarter ending September 30, 2016, the Facility requires a minimum EBITDA for the trailing twelve-month period then ended of not less than $1,000. EBITDA includes after tax earnings with add backs for interest expense, income taxes, depreciation and amortization, stock-based compensation expense, and other non-cash items. This covenant was waived by our bank through the period ending December 31, 2015. In addition, the Facility requires a minimum working capital requirement of $35,000, starting as of December 31, 2015. Finally, the Facility has an annual capital expenditure limit of $5,000. At December 31, 2015 we were in compliance with the financial covenants in effect at that date.

At December 31, 2015 and 2014, we had outstanding standby letters of credit and bank guarantees totaling approximately $7,803 and $8,284, respectively, on the facility in connection with contracts in process. We are required to reimburse JP Morgan Chase for any payments made by the bank under these instruments. At December 31, 2015 and 2014, there were no cash borrowings under the facility, approximately $7,197 and $6,716, respectively, was available for future borrowings. We pay a commitment fee of 0.25% per year on the unused portion of the revolving credit facility.

On June 26, 2015, our wholly-owned subsidiary, Beijing Fuel Tech Environmental Technologies Company, Ltd. (Beijing Fuel Tech) entered into a new revolving credit facility (the China Facility) agreement with JPM Chase for RMB 35 million (approximately $5,392), which expires on June 24, 2016. This new credit facility replaced the previous RMB 35 million facility that expired on June 26, 2015. 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, Inc. (the US parent Company). Beijing Fuel Tech can use this facility for cash advances and bank guarantees. As of December 31, 2015, Beijing Fuel Tech had no cash borrowings under the China Facility, and as of December 31, 2014 had borrowings outstanding in the amount of $1,625. These borrowings were subject to interest rates of approximately 6.8% at December 31, 2015 and 7.0% at December 31, 2014.

At December 31, 2015 and 2014, we had outstanding standby letters of credit and bank guarantees totaling approximately $57 and $336, respectively, under the China facility in connection with contracts in process. At December 31, 2015 and 2014, approximately $5,335 and $3,727 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 we 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 our cash position to deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require us to obtain alternate financing to satisfy the accelerated payment.

Interest payments in the amount of $27 and $125 were made during the years ended December 31, 2015 and 2014, respectively.

In the opinion of management, expected near-term revenue growth in our core APC and FUEL CHEM business segments will be driven by the timing of penetration of the coal-fired utility marketplace via utilization of our TIFI technology, by utility and industrial entities' adherence to the regulatory requirements of the various domestic environmental regulations, and by the expansion of both business segments in non-U.S. geographies. Management expects our liquidity requirements of our APC and FUEL CHEM business segments to be met by the operating results generated from these activities. As highlighted in Item 1A - Risk Factors, we will need to seek additional funding sources to commercialize the Fuel Conversion business.

Table of Contents

Contractual Obligations and Commitments

In our normal course of business, we enter into agreements obligating us 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	2016	2017-2018	2019-2020	Thereafter
Operating lease obligations	$2,493	$972	$1,082	$439	$—
Total	$2,493	$972	$1,082	$439	$—

Interest payments in the amount of $27, $125, and $56 were made during the years ended December 31, 2015, 2014 and 2013, respectively.

In the normal course of our business, we use 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.

In addition, we use 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, 2015, we 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	2016	2017	2018	Thereafter
Standby letters of credit and bank guarantees	$7,860	$6,048	$976	$836	$—
Performance Surety Bonds	$12,389	$7,791	$3,364	$1,234	$—
Total	$20,249	$13,839	$4,340	$2,070	$—

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, 2015.

ITEM 7A - QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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

We are also exposed to changes in interest rates primarily due to our debt arrangement (refer to Note 10 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, 2016.

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.

We have audited the accompanying consolidated balance sheets of Fuel Tech, Inc. as of December 31, 2015 and 2014, and the related consolidated statements of operations, comprehensive (loss) income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2015. We also have audited Fuel Tech, Inc.'s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Fuel Tech, Inc.'s 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. as of December 31, 2015 and 2014, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2015, in conformity with U.S. generally accepted

accounting principles. Also in our opinion, Fuel Tech, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

/s/ RSM US LLP

Chicago, Illinois
March 23, 2016

Table of Contents

Fuel Tech, Inc.
Consolidated Balance Sheets
(in thousands of dollars, except share and per-share data)

	December 31, 2015	2014
ASSETS		
Current assets:		
Cash and cash equivalents	$21,684	$18,637
Marketable securities	19	36
Accounts receivable, net	23,060	31,910
Inventories	1,653	1,111
Prepaid expenses and other current assets	3,889	4,094
Income taxes receivable	1,857	597
Deferred income taxes	239	1,953
Total current assets	52,401	58,338
Property and equipment, net	12,001	13,527
Goodwill	2,116	2,116
Other intangible assets, net	7,144	10,464
Deferred income taxes	992	5,649
Other assets	1,357	1,377
Total assets	$76,011	$91,471
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$—	$1,625
Accounts payable	8,942	7,310
Accrued liabilities:		
Employee compensation	1,645	2,007
Other accrued liabilities	5,949	7,708
Total current liabilities	16,536	18,650
Other liabilities	501	520
Total liabilities	17,037	19,170
COMMITMENTS AND CONTINGENCIES (Note 9)		
Stockholders' equity:		
Common stock, $.01 par value, 40,000,000 shares authorized, 23,419,008 and 23,027,704 shares issued, and 23,167,216 and 22,860,398 outstanding in 2015 and 2014, respectively	234	230
Additional paid-in capital	135,394	134,985
Accumulated deficit	(74,132)	(61,752)
Accumulated other comprehensive loss	(1,556)	(448)
Nil coupon perpetual loan notes	76	76
Treasury stock, 251,792 and 167,306 shares in 2015 and 2014, respectively, at cost	(1,042)	(790)
Total stockholders' equity	58,974	72,301
Total liabilities and stockholders' equity	$76,011	$91,471

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,		
	2015	2014	2013
Revenues	$73,664	$79,017	$109,338
Costs and expenses:			
Cost of sales	45,107	43,889	62,521
Selling, general and administrative	31,116	35,432	36,375
Research and development	4,273	1,459	2,442
Goodwill and intangible assets impairment	1,425	23,400	—
Total Costs and Expenses	81,921	104,180	101,338
Operating (loss) income	(8,257)	(25,163)	8,000
Interest expense	(27)	(125)	(56)
Interest income	21	29	58
Other expense	(360)	(544)	(137)
(Loss) Income before taxes	(8,623)	(25,803)	7,865
Income tax (expense) benefit	(3,757)	8,078	(2,764)
Net (loss) income	$(12,380)	$(17,725)	$5,101
Net (loss) income per common share:			
Basic	$(0.54)	$(0.78)	$0.23
Diluted	$(0.54)	$(0.78)	$0.23
Weighted-average number of common shares outstanding:			
Basic	23,101,000	22,782,000	22,286,000
Diluted	23,101,000	22,782,000	22,579,000

See notes to consolidated financial statements.

Table of Contents

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

	For the years ended December 31,		
	2015	2014	2013
Net (loss) income	$(12,380)	$(17,725)	$5,101
Other comprehensive (loss) income:			
Foreign currency translation adjustments	(1,097)	(489)	438
Unrealized (losses)/gains from marketable securities, net of tax	(11)	4	(9)
Total other comprehensive (loss) income	(1,108)	(485)	429
Comprehensive (loss) income	$(13,488)	$(18,210)	$5,530

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 Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Nil Coupon Perpetual Loan Notes	Treasury Stock	Total
	Shares	Amount						
Balance at December 31, 2012	22,102	$221	$133,498	$ (49,128)	$ (392)	$ 76	$(39)	$84,236
Net income				5,101				5,101
Foreign currency translation adjustments					438			438
Unrealized loss on marketable securities, net of tax					(9)			(9)
Exercise of stock options	195	2	809					811
Tax benefit from stock compensation expense			67					67
Stock compensation expense			1,798					1,798
Tax effect of expired vested options			(121)					(121)
Common shares issued upon vesting of restricted stock units	395	4	(3,255)					(3,251)
Treasury shares withheld	(99)						$(447)	(447)
Balance at December 31, 2013	22,593	$227	$132,796	$ (44,027)	$ 37	$ 76	$(486)	$88,623
Net loss				(17,725)				(17,725)
Foreign currency translation adjustments					(489)			(489)
Unrealized gain on marketable securities, net of tax					4			4
Exercise of stock options	60		297					297
Tax benefit from stock compensation expense			7					7
Stock compensation expense			2,322					2,322
Tax effect of expired vested options			(379)					(379)
Common shares issued upon vesting of restricted stock units	266	3	(58)					(55)

Treasury shares withheld	(59)						(304)	(304)
Balance at December 31, 2014	22,860	$230	$134,985	$ (61,752)	$ (448)	$ 76	$(790)	$72,301
Net loss				(12,380)				(12,380)
Foreign currency translation adjustments					(1,097)			(1,097)
Unrealized loss on marketable securities, net of tax					(11)			(11)
Stock compensation expense			1,809					1,809
Issuance of Deferred Director's shares	39	1	(71)					(70)
Tax effect of expired vested options			(908)			`		(908)
Common shares issued upon vesting of restricted stock units	352	3	(421)					(418)
Treasury shares withheld	(84)						(252)	(252)
Balance at December 31, 2015	23,167	$234	$135,394	$ (74,132)	$ (1,556)	$ 76	$(1,042)	$58,974

See notes to consolidated financial statements.

Table of Contents

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

	For the years ended December 31,		
	2015	2014	2013
OPERATING ACTIVITIES			
Net (loss) income	$(12,380)	$(17,725)	$5,101
Adjustments to reconcile net (loss) income to net cash provided by operating activities:			
Depreciation	2,067	1,922	2,175
Amortization	2,138	2,384	839
Gain on disposal of equipment	(26)	—	—
Allowance for doubtful accounts	—	762	707
Deferred income taxes	4,916	(9,524)	1,252
Stock compensation expense	1,809	2,322	1,798
Goodwill and intangible assets impairment	1,425	23,400	—
Changes in operating assets and liabilities, net of acquisitions:			
Accounts receivable	7,880	6,117	(6,970)
Inventories	(560)	(616)	77
Prepaid expenses, other current assets and other noncurrent assets	(1,245)	(913)	2,118
Accounts payable	1,817	(3,600)	(2,968)
Accrued liabilities and other noncurrent liabilities	(913)	906	(1,287)
Net cash provided by operating activities	6,928	5,435	2,842
INVESTING ACTIVITIES			
Purchases of property, equipment and patents	(802)	(2,808)	(1,754)
Proceeds from the sale of equipment	26	—	—
Purchases of other intangible assets	—	(3,010)	—
Payment for acquisitions, net of cash acquired	—	(8,079)	—
Net cash used in investing activities	(776)	(13,897)	(1,754)
FINANCING ACTIVITIES			
Net proceeds (payments) of short-term debt	(1,623)	—	1,614
Proceeds from exercises of stock options	—	297	811
Excess tax benefit from exercises of stock options	—	7	67
Treasury shares withheld	(252)	(304)	(447)
Net cash provided by (used in) financing activities	(1,875)	—	2,045
Effect of exchange rate fluctuations on cash	(1,230)	(639)	152
Net (decrease) increase in cash and cash equivalents	3,047	(9,101)	3,285
Cash and cash equivalents at beginning of year	18,637	27,738	24,453
Cash and cash equivalents at end of year	$21,684	$18,637	$27,738
Supplemental Cash Flow Information:			
Cash paid for:			
Interest	$27	$125	$56
Income taxes paid	$—	$—	$2,901

See notes to consolidated financial statements.

29

Table of Contents

Notes to Consolidated Financial Statements
(in thousands of dollars, except share and per-share data)

1. ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Organization

Fuel Tech, Inc. and subsidiaries ("Fuel Tech", the "Company", "we", "us" or "our") provides advanced engineered solutions for the optimization of combustion systems in utility and industrial applications. Our primary focus is on the worldwide marketing and sale of NOx reduction technologies as well as our FUEL CHEM program. The Company's NOx reduction technologies reduce nitrogen oxide emissions from boilers, furnaces and other stationary combustion sources.

Our FUEL CHEM program is based on proprietary TIFI® Targeted In-Furnace™ Injection technology, in combination with advanced Computational Fluid Dynamics (CFD) and Chemical Kinetics Modeling (CKM) boiler modeling, in the unique application of specialty chemicals to improve the efficiency, reliability and environmental status of combustion units by controlling slagging, fouling, corrosion, opacity and other sulfur trioxide-related issues in the boiler.

Our business is materially dependent on the continued existence and enforcement of air quality regulations, particularly in the United States. We have expended significant resources in the research and development of new technologies in building our proprietary portfolio of air pollution control, fuel and boiler treatment chemicals, computer modeling and advanced visualization technologies.

International revenues were $22,179, $28,116, and $46,063 for the years ended December 31, 2015, 2014 and 2013, respectively. These amounts represented 30%, 36%, and 42% of Fuel Tech's total revenues for the respective periods of time. Foreign currency changes did not have a material impact on the calculation of these percentages. We have foreign offices in Beijing, China and Gallarate, Italy.

Basis of Presentation

The consolidated financial statements include the accounts of Fuel Tech and its wholly-owned subsidiaries. All intercompany transactions have been eliminated.

Use of Estimates

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. The Company uses estimates in accounting for, among other items, revenue recognition, allowance for doubtful accounts, income tax provisions and warranty expenses. Actual results could differ from those estimates.

Fair Value of Financial Instruments

The carrying values of cash and cash equivalents, accounts receivable, and accounts payable are reasonable estimates of their fair value due to their short-term nature. The carrying amount of our short-term debt under our revolving line of credit facility approximates fair value due to its short-term nature and because the amount outstanding accrues interest at a variable market-based rate. Our marketable securities are carried at fair value based on quoted market prices in an active market.

Cash and Cash Equivalents

We include cash and investments having an original maturity of three months or less at the time of acquisition in cash and cash equivalents. We have never incurred realized or unrealized holdings gains or losses on securities classified as cash equivalents. Income resulting from short-term investments is recorded as interest income. At December 31, 2015, we had cash on hand of approximately $5,596 at our Beijing, China subsidiary that is subject to certain local regulations that may limit the immediate availability of these funds outside of China. Cash on hand at our Italy subsidiary totaled approximately $1,286 at December 31, 2015.

Foreign Currency Risk Management

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

nature of the transactions involved.

Table of Contents

Accounts Receivable

Accounts receivable consist of amounts due to us in the normal course of our business, are not collateralized, and normally do not bear interest. Accounts receivable includes unbilled receivables, representing costs and estimated earnings in excess of billings on uncompleted contracts under the percentage of completion method. At December 31, 2015 and 2014, unbilled receivables were approximately $7,312 and $9,904, respectively.

Allowance for Doubtful Accounts

The allowance for doubtful accounts is our management'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. The table below sets forth the components of the Allowance for Doubtful Accounts for the years ended December 31.

Year	Balance at January 1	Provision charged to expense	Write-offs / Recoveries	Balance at December 31
2013	$460	$ 1,175	$(446)	$1,189
2014	$1,189	$ 1,099	$(366)	$1,922
2015	$1,922	$ —	$(150)	$1,772

Prepaid expenses and other current assets

Prepaid expenses and other current assets includes Chinese banker acceptances of $2,144 and $2,259 as of December 31, 2015 and 2014. These are short-term commitments of typically 30 to 60 days for future payments and can be redeemed at a discount or applied to future vendor payments.

Inventories

Inventories consist primarily of spare parts and are stated at the lower of cost or market using the first-in, first-out method. Usage is recorded in cost of sales in the period that parts were issued to a project or used to service equipment. Inventories are periodically evaluated to identify obsolete or otherwise impaired parts and are written off when management determines usage is not probable.

Foreign Currency Translation and Transactions

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

31

Table of Contents

Accumulated Other Comprehensive (Loss) Income

The changes in accumulated other comprehensive (loss) income by component were as follows:

	December 31,	
	2015	2014
Foreign currency translation		
Balance at beginning of period	$(471)	$18
Other comprehensive (loss) income:		
Foreign currency translation adjustments (1)	(1,097)	(489)
Balance at end of period	$(1,568)	$(471)
Available-for-sale marketable securities		
Balance at beginning of period	$23	$19
Other comprehensive income (loss):		
Net unrealized holding gain (loss) (2)	(11)	4
Deferred income taxes (2)	—	—
Total other comprehensive income (loss)	(11)	4
Balance at end of period	$12	$23
Total accumulated other comprehensive (loss) income	$(1,556)	$(448)

(1) In all periods presented, there were no tax impacts related to rate changes and no amounts were reclassified to earnings.

(2) In all periods presented, there were no realized holding gains or losses and therefore no amounts were reclassified to earnings.

Research and Development

Research and development costs are expensed as incurred. Research and development projects funded by customer contracts are reported as part of cost of goods sold. Internally funded research and development expenses are reported as operating expenses.

Product/System Warranty

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

Goodwill

Goodwill is not amortized, but is reviewed annually or more frequently if indicators arise, for impairment. Our evaluation of goodwill impairment involves first assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. We may bypass this qualitative assessment, or determine that based on our qualitative assessment considering the totality of events and circumstances including macroeconomic factors, industry and market considerations, current and projected financial performance, a sustained decrease in our share price, or other factors, that additional impairment analysis is necessary. This additional analysis involves comparing the current fair value of our reporting units to their carrying values. We use a discounted cash flow (DCF) model to determine the current fair value of our two reporting units. A number of significant assumptions and estimates are involved in the application of the DCF model to forecast operating cash flows, including markets and market share, sales volumes and prices, costs to produce and working capital changes. Management considers historical experience and all available information at the time the fair values of its reporting units are estimated. However, actual fair values that could be realized in an actual transaction may differ from those used to evaluate the impairment of goodwill.

Goodwill is allocated to each of our reporting units, which is defined as an operating segment or one level below an operating segment, upon acquisition after considering the nature of the net assets giving rise to the goodwill and how each reporting unit would enjoy the benefits and synergies of the net assets acquired. Goodwill is also evaluated for impairment at the reporting unit level. We have two reporting units for goodwill evaluation purposes: the FUEL CHEM technology segment and the APC technology segment. There is no goodwill associated with either our APC or

Fuel Conversion business segment.

During the fourth quarter of 2014, we experienced a decrease in our stock price that caused our market capitalization to fall below the equity value on our consolidated balance sheet, which can be a potential indicator of goodwill impairment. This, along with an overall slowdown in APC technology segment orders and corresponding downward adjustments to our financial forecasts, was considered during a detailed evaluation of the fair value of our reporting units. Fuel Tech performed its annual goodwill impairment analysis for

Table of Contents

each of its reporting units as of October 1, 2014 and determined that no impairment of goodwill existed within the FUEL CHEM technology segment. At the same time, we determined that our APC technology reporting unit failed the first step test because the estimated fair value of the reporting unit was less than its carrying value, thus requiring additional analysis of the segment. Based on this additional analysis, Fuel Tech determined that the fair value of the APC technology reporting unit as of the test date was less than the fair value of the assets and liabilities of the unit, resulting in an implied fair value of goodwill of zero, and accordingly we recorded a non-cash goodwill impairment charge in the fourth quarter of 2014 of $23,400 representing the full carrying value of goodwill related to this reporting unit.

The following table shows our goodwill activity by reporting unit during the periods ending December 31, 2015 and 2014:

Reporting Unit	2015 Beginning Carrying Amount	Acquired Goodwill	Impairment Charge	Ending Carrying Amount
FUEL CHEM Technology Segment	$2,116	$—	$—	$2,116
APC Technology Segment	—	—	—	—
	$2,116	$—	$—	$2,116

Reporting Unit	2014 Beginning Carrying Amount	Acquired Goodwill	Impairment Charge	Ending Carrying Amount
FUEL CHEM Technology Segment	$2,116	$—	$—	$2,116
APC Technology Segment	18,935	4,465	(23,400)	—
	$21,051	$4,465	$(23,400)	$2,116

Other Intangible Assets

Management reviews other finite-lived intangible assets, which include customer lists and relationships, covenants not to compete, patent assets, trade names, and acquired technologies, for impairment when events or changes in circumstances indicate the carrying amount of an asset or asset group may not be recoverable. In the event that impairment indicators exist, a further analysis is performed and if the sum of the expected undiscounted future cash flows resulting from the use of the asset or asset group is less than the carrying amount of the asset or asset group, an impairment loss equal to the excess of the asset or asset group's carrying value over its fair value is recorded. Management considers historical experience and all available information at the time the estimates of future cash flows are made, however, the actual cash values that could be realized may differ from those that are estimated. In the fourth quarter of 2015, the Company performed an impairment test of the carrying value of our intangible assets to determine whether any impairment existed. The Company determined that the sum of the expected undiscounted cash flows attributable to certain intangible assets was less than its carrying value and that an impairment write-down was required. The impairment loss primarily related to the customer lists acquired in the 2009 acquisition of Advanced Combustion Technology and the 2014 acquisition of PECO. The Company calculated the estimated fair value of the intangible asset by summing the present value of the expected cash flows over its life. The impairment was calculated by deducting the present value of the expected cash flows from the carrying value. This assessment resulted in an impairment write-down of $1,425, which was included in “Goodwill and intangible assets impairment” in the accompanying Consolidated Statements of Operations for the year ended December 31, 2015.

Third-party costs related to the development of patents are included within other intangible assets on the consolidated balance sheets. As of December 31, 2015 and 2014, the net patent asset balance, excluding patents acquired in business acquisitions, was $1,699 and $1,583, respectively. The third-party costs capitalized as patent costs during the years ended December 31, 2015 and 2014 were $244 and $376, respectively. Third-party costs are comprised of legal

fees that relate to the review and preparation of patent disclosures and filing fees incurred to present the patents to the required governing body.

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

Table of Contents

In 2014 we acquired intangible assets as a result of the business acquisitions described in Note 2 in the amount of $5,158. In addition, we acquired intellectual property rights and know-how that was not part of a business acquisition in the amount of $3,010 related to the CARBONITE® fuel conversion process that has an estimated useful life of 5 years.

Amortization expense for intangible assets was $2,138, $2,384 and $839 for the years ended December 31, 2015, 2014 and 2013, respectively. The table below shows the amortization period and other intangible asset cost by intangible asset as of December 31, 2015 and 2014, and the accumulated amortization and net intangible asset value in total for all other intangible assets.

Description of Other Intangibles	Amortization Period	2015 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	2014 Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer relationships	4-15 years	$3,633	$ (3,114)	$519	$5,087	$ (2,690)	$2,397
Trademarks and trade names	4-8 years	441	(382)	59	441	(293)	148
Patent assets	1-15 years	3,007	(1,210)	1,797	2,764	(987)	1,777
Acquired technologies	5-8 years	7,515	(2,746)	4,769	7,974	(1,832)	6,142
Total		$14,596	$ (7,452)	$7,144	$16,266	$ (5,802)	$10,464

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

Year	Estimated Amortization Expense
2016	$1,700
2017	1,374
2018	1,269
2019	1,016
2020	564
Thereafter	1,221
Total	$7,144

Property and Equipment

Property and equipment is stated at historical cost. Provisions for depreciation are computed by the straight-line method, using estimated useful lives that range based on the nature of the asset. Leasehold improvements are depreciated over the shorter of the associated lease term or the estimated useful life of the asset. Depreciation expense was $2,067, $1,922, and $2,175 for the years ended December 31, 2015, 2014 and 2013, respectively. The table below shows the depreciable life and cost by asset class as of December 31, 2015 and 2014, and the accumulated depreciation and net book value in total for all classes of assets.

Description of Property and Equipment	Depreciable Life	2015	2014
Land		$1,440	$1,440
Building	39 years	4,535	4,535
Building and leasehold improvements	3-39 years	5,102	5,115
Field equipment	3-4 years	19,797	19,796
Computer equipment and software	2-3 years	2,978	3,005
Furniture and fixtures	3-10 years	1,527	1,525
Vehicles	5 years	36	36
Total cost		35,415	35,452
Less accumulated depreciation		(23,414)	(21,925)
Total net book value		$12,001	$13,527

Property and equipment is reviewed for impairment when events and circumstances indicate that the carrying amount of the assets (or asset group) may not be recoverable. If impairment indicators 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

Table of Contents

individual assets (or asset group) and estimating a fair value based upon current condition, relevant market factors and remaining estimated operational life compared to the asset's remaining depreciable life. Quoted market prices and other valuation techniques are used to determine expected cash flows. Due to the existence of impairment indicators as more fully described above, we performed a more detailed analysis of potential long-lived asset impairment in the APC technology asset group during the fourth quarter of 2015 using the aforementioned undiscounted cash flows analysis and concluded that no impairment of our fixed assets exists. A significant portion of our property and equipment is comprised of assets deployed at customer locations relating to our FUEL CHEM technology asset group, and due to the shorter-term duration over which this equipment is depreciated, the likelihood of impairment is mitigated. The discontinuation of a FUEL CHEM program at a customer site would most likely result in the re-deployment of all or most of the affected assets to another customer location rather than an impairment.

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.

We utilize the percentage of completion method of accounting for equipment construction 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, 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. The completed contract method is used for certain contracts when reasonably dependable estimates of the percentage of completion cannot be made. When the completed contract method is used, revenue and costs are deferred until the contract is substantially complete, which usually occurs upon customer acceptance of the installed product.

Cost of Sales

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

Selling, General and Administrative Expenses

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

Distribution Costs

We classify shipping and handling costs in cost of sales in the consolidated statements of operations.

Income Taxes

The provision for income taxes is determined using the asset and liability approach of accounting for income taxes. Under this approach, the provision for income taxes represents income taxes paid or payable (or received or receivable) for the current year plus the change in deferred taxes during the year. Deferred taxes represent the future tax consequences expected to occur when the reported amounts of assets and liabilities are recovered or paid, and

result from differences between the financial and tax bases of our assets and liabilities and are adjusted for changes in tax rates and tax laws when enacted. Valuation allowances are recorded to reduce deferred tax assets when it is more likely than not that a tax benefit will not be realized. In evaluating the need for a valuation allowance, management considers all potential sources of taxable income, including income available in carryback periods, future reversals of taxable temporary differences, projections of taxable income, and income from tax planning strategies, as well as all available positive and negative evidence. Positive evidence includes factors such as a history of profitable operations, projections of future profitability within the carryforward period, including from tax planning strategies, and our experience with similar operations. Negative evidence includes

Table of Contents

items such as cumulative losses, projections of future losses, or carryforward periods that are not long enough to allow for the utilization of a deferred tax asset based on existing projections of income. Deferred tax assets for which no valuation allowance is recorded may not be realized upon changes in facts and circumstances.

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

Stock-Based Compensation

Our stock-based employee compensation plan, referred to as the Fuel Tech, Inc. 2014 Long-Term Incentive Plan (Incentive Plan), was adopted in May 2014 and allows for awards to be granted to participants in the form of non-qualified stock options, incentive stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, and bonuses or other forms of share-based or non-share-based awards or combinations thereof. Participants in the Incentive Plan may be our directors, officers, employees, consultants or advisors (except consultants or advisors in capital-raising transactions) as the directors determine are key to the success of our business. There are a maximum of 4,400,676 shares that may be issued or reserved for awards to participants under the Incentive Plan as of December 31, 2015.

Basic and Diluted Earnings per Common Share

Basic earnings per share excludes the antidilutive effects of stock options, restricted stock units (RSUs) and the nil coupon non-redeemable convertible unsecured loan notes (see Note 7). Diluted earnings per share includes the dilutive effect of the nil coupon non-redeemable convertible unsecured loan notes, RSUs, and unexercised in-the-money stock options, except in periods of net loss where the effect of these instruments is antidilutive. Out-of-the-money stock options are excluded from diluted earnings per share because they are anti-dilutive. At December 31, 2015, 2014 and 2013, we had outstanding equity awards of 2,068,000, 1,628,000 and 1,623,000, respectively, that were antidilutive for the purpose of inclusion in the diluted earnings per share calculation because the exercise prices of the options were greater than the average market price of our common stock. As of December 31, 2015 and 2014, respectively, we had an additional 169,000 and 280,000 equity awards that were antidilutive because of the net loss in the year then ended. These equity awards could potentially dilute basic EPS in future years.

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

	2015	2014	2013
Basic weighted-average shares	23,101,000	22,782,000	22,286,000
Conversion of unsecured loan notes	—	—	7,000
Unexercised options and unvested restricted stock units	—	—	286,000
Diluted weighted-average shares	23,101,000	22,782,000	22,579,000

Risk Concentrations

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

For the year ended December 31, 2015, we had one customer which individually represented greater than 10% of revenues. This customer contributed primarily to our FUEL CHEM technology segment and represented 12% of consolidated revenues. We had no customers that accounted for greater than 10% of our current assets as of December 31, 2015.

For the year ended December 31, 2014, we had two customers which individually represented greater than 10% of revenues. One of these customers contributed primarily to our FUEL CHEM technology segment and represented 20% of consolidated revenues. The other customer contributed to our APC technology segment and represented 11% of our consolidated revenues. We had no customers that accounted for greater than 10% of our current assets as of December 31, 2014.

For the year ended December 31, 2013, we had two customer which individually represented greater than 10% of revenues. One of these customers contributed primarily to our FUEL CHEM technology segment and represented 14% of consolidated revenues. The other customer contributed to our APC technology segment and represented 18% of our consolidated revenues. We had no customers that accounted for greater than 10% of our current assets as of December 31, 2013.

Table of Contents

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

Available-for-Sale Marketable Securities

At the time of purchase, marketable securities are classified as available-for-sale as management has the intent and ability to hold such securities for an indefinite period of time, but not necessarily to maturity. Any decision to sell available-for-sale securities would be based on various factors, including, but not limited to asset/liability management strategies, changes in interest rates or prepayment risks and liquidity needs. Available-for-sale securities are carried at fair value with unrealized gains and losses, net of related deferred income taxes, recorded in equity as a separate component of other comprehensive income (OCI). Our marketable securities consist of a single equity investment with a fair value of $19 and $36 at December 31, 2015 and December 31, 2014, respectively. Purchases and sales of securities are recognized on a trade date basis. Realized securities gains or losses are reported in other income/(expense) in the Consolidated Statements of Operations. The cost of securities sold is based on the specific identification method. On a quarterly basis, we make an assessment to determine if there have been any events or circumstances to indicate whether a security with an unrealized loss is impaired on an other-than-temporary (OTTI) basis. This determination requires significant judgment. OTTI is considered to have occurred (1) if management intends to sell the security, (2) if it is more likely than not we will be required to sell the security before recovery of its amortized cost basis; or (3) the present value of the expected cash flows is not sufficient to recover the entire amortized cost basis. The credit-related OTTI, represented by the expected loss in principal, is recognized in non-interest income, while noncredit-related OTTI is recognized in OCI. For securities which we do expect to sell, all OTTI is recognized in earnings. Presentation of OTTI is made in the income statement on a gross basis with a reduction for the amount of OTTI recognized in OCI. Once an other-than-temporary impairment is recorded, when future cash flows can be reasonably estimated, future cash flows are re-allocated between interest and principal cash flows to provide for a level-yield on the security. We have not experienced any other-than-temporary impairments during the periods ended December 31, 2015, 2014 and 2013.

Treasury Stock

We use the cost method to account for its common stock repurchases. During the years ended December 31, 2015 and 2014, we withheld 84,486 and 58,649 shares of our Common Shares, valued at approximately $252 and $304, respectively, to settle personal tax withholding obligations that arose as a result of restricted stock units that vested. Refer to Note 6, “Treasury Stock,” for further discussion.

Recently Issued and Adopted Accounting Standards

In May 2014, the Financial Accounting Standards Board (FASB) issued ASU 2014-09 "Revenue from Contracts with Customers" (Topic 606). This new accounting guidance on revenue recognition provides for a single five-step model to be applied to all revenue contracts with customers. The new standard also requires additional financial statement disclosures that will enable users to understand the nature, amount, timing and uncertainty of revenue and cash flows relating to customer contracts. In August 2015, the FASB approved a one-year deferral to January 1, 2018. Early adoption is permitted as of the original effective date. The standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory. This new accounting guidance more clearly articulates the requirements for the measurement and disclosure of inventory. Topic 330, Inventory, currently requires an entity to measure inventory at the lower of cost or market. Market could be replacement cost, net realizable value, or net realizable value less an approximately normal profit margin. This new accounting guidance requires the measurement of inventory at lower of cost and net realizable value. ASU 2015-11 will be effective for the Company beginning on January 1, 2017. The adoption of this guidance in not expected to

have a material impact on the Company's consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. The amendments in this Update require that deferred tax liabilities and assets be classified as non-current in a classified statement of financial position. Current accounting principles require an entity to separate deferred income tax liabilities and assets into current and non-current amounts in a classified statement of financial position. ASU 2015-17 will be effective for the Company beginning on January 1, 2017. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). The amendments in this Update increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. ASU 2016-02 will be effective for the Company beginning on January 1, 2019. We are currently evaluating the impact of the new guidance on our financial statements and have not yet selected a transition approach to implement the standard.

Table of Contents

2. BUSINESS ACQUISITIONS

On April 30, 2014 Fuel Tech acquired 100% of the capital stock of Cleveland Roll Forming Environmental Division, Inc. d/b/a PECO (“PECO”), and FGC, Inc. ("FGC"), both Ohio corporations. Pursuant to the stock purchase agreements, PECO and FGC became wholly owned subsidiaries of Fuel Tech. Fuel Tech paid to the sellers total net cash consideration of $8,079, which consisted of the agreed upon purchase price of $8,250 plus a working capital adjustment of $391, less cash acquired of $562. The stock purchase agreements contain customary representations, warranties, and indemnities.

PECO specializes in electrostatic precipitator (ESP) rebuilds, retrofits and associated products and services. FGC specializes in flue gas conditioning to enhance electrostatic precipitator and fabric filter performance in boilers. These acquisitions broaden our APC product portfolio and grants us immediate access into the fast-growing particulate control market, creating opportunities both domestically and abroad.

The PECO and FGC acquisitions are being accounted for using the acquisition method of accounting whereby the total purchase price is allocated to tangible and intangible assets and liabilities based on their estimated fair market values on the date of acquisition. These fair value estimates are based on third party valuations.
The fair value of identifiable intangible assets was measured based upon significant inputs that were not observable in the market, and therefore are classified as Level 3. The key assumptions include: (i) management's projection of future cash flows based upon past experience and future expectations, and (ii) an assumed discount rate of 18.5% for PECO and 33.5% for FGC.
The following table summarizes the approximate fair values of the assets acquired and liabilities assumed at the date of acquisition and incorporates the measurement period adjustments since they were originally reported in our Form 10-Q for the period ended June 30, 2014. The fair value of the assets and liabilities assumed, and the related tax balances, are based on their estimated fair values as of the acquisition date.

	As Reported on June 30, 2014	Measurement Adjustments	Final Purchase Price Allocation
Current assets	$2,365	$26	$2,391
Property, plant and equipment	281	(281)	—
Identifiable intangible assets	—	5,158	5,158
Current and long-term liabilities assumed	(2,035)	(1,900)	(3,935)
Total identifiable net assets acquired	611	3,003	3,614
Goodwill	7,468	(3,003)	4,465
Total assets acquired	$8,079	$—	$8,079

The goodwill recorded in connection with the above acquisition is primarily attributable to the strong cash flow expected from the acquisitions as a result of the synergies with our APC technology segment expected to arise after the Company's acquisition of the businesses. However, as a result of factors not related to these acquisitions, all goodwill related to the APC technology segment was written off during 2014, as more fully described in Note 1. The goodwill and identifiable intangibles are not deductible for tax purposes.

The fair value assigned to finite lived intangible assets as a result of the acquisitions was as follows:

Description	Amount	Useful Life (Years)
Order backlog	$1,172	1.0
Trademarks	90	2.0
Customer relationships	870	4.0

Developed technology	3,230	7.0
Net assumed contractual obligations	(204)	1.0
Total identifiable assets acquired	$5,158	5.3

Table of Contents

The following table summarizes the net sales and earnings after income taxes of PECO and FGC since the acquisition date, April 30, 2014 through December 31, 2014, which is included in the consolidated statements of operations for the years ended December 31, 2014:

	Year Ended December 31, 2014
Revenue	$4,193
Net income (loss)	(120)
Net loss per Common Share	
Basic	$—
Diluted	$—

The following unaudited pro-forma information represents the Company's results of operations as if the acquisition date had occurred on January 1, 2013:

	Year Ended December 31,	
	2014	2013
Revenue	$84,713	$122,723
Net income / (loss)	(15,596)	6,508
Net income / (loss) per Common Share		
Basic	$(0.68)	$0.29
Diluted	$(0.68)	$0.29

The pro-forma results have been prepared for informational purposes only and include adjustments to eliminate acquisition related expenses of $59 and $0, amortization of acquired intangible assets with finite lives in the amount of $1,449 and $0, inter-company transactions resulting in a decrease in pro-forma gross margin of $70 and $500, and to record the income tax consequences of the pro-forma adjustments resulting in additional pro-forma tax expense of $561 and $242 in the years ended December 31, 2014 and 2013, respectively. These pro-forma results do not purport to be indicative of the results of operations that would have occurred had the purchases been made as of the beginning of the periods presented or of the results of operations that may occur in the future.

Transaction costs incurred related to the acquisition were $59 and are included in general and administrative expenses in the Consolidated Statement of Operations for the year ended December 31, 2014.

3. CONSTRUCTION CONTRACTS IN PROGRESS

The status of contracts in progress as of December 31, 2015 and 2014 is as follows:

	2015	2014
Costs incurred on uncompleted contracts	$94,686	$92,190
Estimated earnings	52,246	47,510
Earned revenue	146,932	139,700
Less billings to date	(141,478)	(132,790)
Total	$5,454	$6,910
Classified as follows:		
Costs and estimated earnings in excess of billings on uncompleted contracts	$7,312	$9,904
Billings in excess of costs and estimated earnings on uncompleted contracts	(1,858)	(2,994)
Total	$5,454	$6,910

Costs and estimated earnings in excess of billings on uncompleted contracts are included in accounts receivable on the consolidated balance sheet, while billings in excess of costs and estimated earnings on uncompleted contracts are included in other accrued liabilities on the consolidated balance sheet.

Table of Contents

As of December 31, 2015 we had two construction contracts in progress that were identified as loss contracts and a provision for losses of $3 was recorded in other accrued liabilities on the consolidated balance sheet. As of December 31, 2014, we had one construction contract in progress that was identified as a loss contract and a provision for losses of $4 was recorded in other accrued liabilities on the consolidated balance sheet.

4. INCOME TAXES

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

Origin of income before taxes	2015	2014	2013
United States	$(9,763)	$(25,142)	$6,025
Foreign	1,140	(661)	1,840
(Loss) income before taxes	$(8,623)	$(25,803)	$7,865

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

	2015	2014	2013
Current:			
Federal	$(1,155)	$158	$1,114
State	14	(34)	334
Foreign	120	1,108	836
Total current	(1,021)	1,232	2,284
Deferred:			
Federal	4,143	(7,260)	642
State	548	(959)	(78)
Foreign	87	(1,091)	(84)
Total deferred	4,778	(9,310)	480
Income tax (benefit) expense	$3,757	$(8,078)	$2,764

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

	2015	2014	2013
Provision at the U.S. federal statutory rate	(34.0)%	(34.0)%	34.0 %
State taxes, net of federal benefit	(5.2)%	(3.6)%	1.9 %
Foreign tax rate differential	(0.6)%	0.1 %	(2.5)%
Valuation allowance	72.3 %	1.2 %	2.9 %
Other true up	7.8 %	(0.4)%	(4.2)%
Stock-based compensation	— %	— %	(0.4)%
Intangible assets impairment and other non-deductibles	2.2 %	5.9 %	— %
Other	1.1 %	(0.5)%	3.4 %
Income tax expense (benefit) effective rate	43.6 %	(31.3)%	35.1 %

Table of Contents

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

	2015	2014
Deferred tax assets:		
Stock compensation expense	$3,394	$4,631
Goodwill	2,673	3,110
Royalty accruals - BJFT	992	—
Bad debt allowance - BJFT	333	—
Inter-company interest expense accrual - US tax	476	—
Net operating loss carryforwards	1,576	2,006
Credit carry-forwards	359	—
Other	637	2,419
Total deferred tax assets	10,440	12,166
Deferred tax liabilities:		
Depreciation	(777)	(1,096)
Intangible assets	(294)	(1,156)
Other	(306)	(306)
Total deferred tax liabilities	(1,377)	(2,558)
Net deferred tax asset before valuation allowance	9,063	9,608
Valuation allowances for deferred tax assets	(7,832)	(2,006)
Net deferred tax asset	$1,231	$7,602
Net deferred tax assets and liabilities are recorded as follows within the consolidated balance sheets:		
Current assets	$239	$1,953
Long-term assets (liabilities)	992	5,649
Net deferred tax asset	$1,231	$7,602

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

Year	Balance at January 1	Charged to costs and expenses	(Deductions)/Other	Balance at December 31
2013	$1,868	—	(35)	$1,833
2014	$1,833	—	173	$2,006
2015	$2,006	6,625	(799)	$7,832

For the years ended December 31, 2015, 2014 and 2013, we recorded tax benefits from the exercise of stock options in the amount of $0, $7 and $67, respectively. This amount was recorded as an increase in additional paid-in capital on the consolidated balance sheet and as cash from financing activities on the consolidated statements of cash flows. We also reduced the deferred tax asset related to stock-based compensation by $908 and $379 for fully vested options that expired unexercised and by $421 and $58 for the excess of stock-based compensation over the related tax benefit recognized for restricted stock units that vested during 2015 and 2014, respectively. These reductions in deferred tax assets were recorded against additional paid-in capital and had no impact on our results from operations.

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

Table of Contents

The following table summarizes our unrecognized tax benefit activity (excluding interest and penalties) during the years ended December 31, 2015, 2014 and 2013:

Description	2015	2014	2013
Balance at beginning of period	$117	$65	$39
Increases in positions taken in a current period	38	52	65
Decreases due to settlements	(15)	—	(39)
Decreases due to lapse of statute of limitations	—	—	—
Balance at end of period	$140	$117	$65

We recognize interest and penalties related to unrecognized tax benefits in income tax expense for all periods presented. The amount of interest and penalties that we recognized in income tax expense during the years ended December 31, 2015, 2014 and 2013 was $0, $0 and $0, respectively. The total amount of unrecognized tax benefits as of December 31, 2015, 2014 and 2013, including interest and penalties, was $140, $117 and $65, respectively, all of which if ultimately recognized will reduce our annual effective tax rate. None of the unrecognized tax benefit will be recognized into income in 2016 due to the lapsing of statutes of limitations.

We are subject to income taxes in the U.S. federal jurisdiction, and various states and foreign jurisdictions. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations and require significant judgment to apply. With few exceptions, we are no longer subject to U.S. federal, state and local, or non-U.S. income tax examinations by tax authorities for the years before 2012. We underwent examination for federal tax and state of Illinois purposes for the 2010 and 2011 tax years, and any potential tax obligations in those jurisdictions have been settled, or effectively settled, and are no longer subject to tax examination.

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

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

As required by ASC 740, a valuation allowance must be established when it is more likely than not that all or a portion of a deferred tax asset will not be realized. At December 31, 2015, we recorded a full valuation allowance of $6,554 on our United States (US) deferred tax assets since we cannot anticipate when or if we will have sufficient taxable income to utilize the deferred tax assets in the future. We have approximately $420 of US net operating loss carryforwards available to offset future US taxable income as of December 31, 2015. The net operating loss carry-forwards related to tax losses generated in prior years in the US begin to expire in 2035. Further, we have tax loss carry-forwards of approximately $4,473 available to offset future foreign income in Italy as of December 31, 2015. We have recorded a full valuation allowance against the resulting $1,230 deferred tax asset because we cannot anticipate when or if this entity will have taxable income sufficient to utilize the net operating losses in the future. There is no expiration of the net operating loss carry-forwards related to tax losses generated in prior years in Italy.

5. COMMON SHARES

At December 31, 2015 and 2014, respectively, we had 23,419,008 and 23,027,704 Common Shares issued and 23,167,216 and 22,860,398 outstanding, with an additional 6,715 shares reserved for issuance upon conversion of the nil coupon non-redeemable convertible unsecured loan notes (see Note 7). As of December 31, 2015, we had 4,400,676 shares reserved for issuance upon the exercise or vesting of equity awards, of which 1,191,125 are stock

options that are currently exercisable (see Note 8).

6. TREASURY STOCK

Common shares held in treasury totaled 251,792 and 167,306 with a cost of $1,042 and $790 at December 31, 2015 and 2014, respectively. These shares were withheld from employees to settle personal tax withholding obligations that arose as a result of restricted stock units that vested during the current and prior years.

Table of Contents

7. NIL COUPON NON-REDEEMABLE CONVERTIBLE UNSECURED LOAN NOTES

At December 31, 2015 and 2014, respectively, we had a principal amount of $76 of nil coupon non-redeemable convertible unsecured perpetual loan notes (the "Loan Notes") outstanding. The Loan Notes are convertible at any time into Common Shares at rates of $6.50 and $11.43 per share, depending on the note. As of December 31, 2015, the nil coupon loan notes were convertible into 6,715 common shares. Based on our closing stock price of $1.89 at December 31, 2015, the aggregate fair value of the common shares that the holders would receive if all the loan notes were converted would be approximately $13, which is less than the principal amount of the loans outstanding as of that date. The Loan Notes bear no interest and have no maturity date. They are repayable in the event of our dissolution and the holders do not have the option to cash-settle the notes. Accordingly, they have been classified within stockholders' equity in the accompanying balance sheet. The notes do not hold distribution or voting rights unless and until converted into common shares.

In 2015, 2014 and 2013, there were no Loan Notes repurchased by the Company.

8. STOCK-BASED COMPENSATION

Under our stock-based employee compensation plan, referred to as the Fuel Tech, Inc. 2014 Long-Term Incentive Plan (Incentive Plan), awards may be granted to participants in the form of Non-Qualified Stock Options, Incentive Stock Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units ("RSUs"), Performance Awards, Bonuses or other forms of share-based or non-share-based awards or combinations thereof. Participants in the Incentive Plan may be our directors, officers, employees, consultants or advisors (except consultants or advisors in capital-raising transactions) as the directors determine are key to the success of our business. There are a maximum of 4,400,676 shares that may be issued or reserved for awards to participants under the Incentive Plan. At December 31, 2015, we had approximately 1,190,426 equity awards available for issuance under the Incentive Plan.

Stock-based compensation is included in selling, general and administrative costs in our consolidated statements of operations.

The components of stock-based compensation for the years ended December 31, 2015, 2014 and 2013 were as follows:

	For the Year Ended December 31,		
	2015	2014	2013
Stock options	$194	$236	$(245)
Restricted stock units	1,615	2,086	2,043
Deferred directors fees	—	—	—
Total stock-based compensation expense	1,809	2,322	1,798
Tax benefit of stock-based compensation expense	(696)	(892)	(671)
After-tax effect of stock based compensation	$1,113	$1,430	$1,127

As of December 31, 2015, there was $2,432 of total unrecognized compensation cost related to all non-vested share-based compensation arrangements granted under the Incentive Plan. That cost is expected to be recognized over the remaining requisite service period of 1.7 years.

Stock Options

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

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

Tech's Common Stock for a period equal to the expected life of the option; and (3) expected life of the option – an estimate based on historical experience including the effect of employee terminations.

Table of Contents

Based on the results of the model, the weighted-average fair value of the stock options granted during the 12-month periods ended December 31, 2015, 2014 and 2013, respectively, were $1.54, $2.20 and $1.79 per share using the following weighted average assumptions:

	2015	2014	2013
Expected dividend yield	— %	— %	— %
Risk-free interest rate	2.21 %	1.55 %	1.01 %
Expected volatility	51.6 %	47.4 %	55.2 %
Expected life of option	8.8 years	4.9 years	4.7 years

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

	2015 Number of Options	2015 Weighted-Average Exercise Price	2014 Number of Options	2014 Weighted-Average Exercise Price	2013 Number of Options	2013 Weighted-Average Exercise Price
Outstanding at beginning of year	1,546,500	$ 11.62	1,688,500	$ 11.88	1,914,000	$ 11.38
Granted	126,000	2.44	94,500	5.22	80,000	3.85
Exercised	—	—	(60,000)	4.96	(195,000)	4.16
Expired or forfeited	(481,375)	12.04	(176,500)	13.01	(110,500)	10.93
Outstanding at end of year	1,191,125	$ 10.48	1,546,500	$ 11.62	1,688,500	$ 11.88
Exercisable at end of year	1,191,125	$ 10.48	1,546,500	$ 11.62	1,678,500	$ 11.92
Weighted-average fair value of options granted during the year		$ 1.54		$ 2.20		$ 1.79

The following table provides additional information regarding our stock option activity for the 12 months ended December 31, 2015:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding on January 1, 2015	1,546,500	$11.62		
Granted	126,000	2.44		
Exercised	—	—		
Expired or forfeited	(481,375)	12.04		
Outstanding on December 31, 2015	1,191,125	$10.48	4.3 years	$—
Exercisable on December 31, 2015	1,191,125	$10.48	4.3 years	$—

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on our closing stock price of $1.89 as of December 31, 2015, which would have been received by the option holders had those options holders exercised their stock options as of that date.

Table of Contents

The following table summarizes information about stock options outstanding at December 31, 2015:

Options Outstanding				Options Exercisable	
Range of Exercise Prices	Number of Options	Weighted-Average Remaining Contractual Life	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
$ 2.44 - $ 2.75	126,000	9.4 years	$2.44	126,000	$2.44
$ 2.76 - $ 5.50	294,500	6.7 years	4.56	294,500	4.56
$ 5.51 - $ 8.26	100,000	4.8 years	7.33	100,000	7.33
$ 8.27 - $11.02	368,750	3.0 years	10.04	368,750	10.04
$11.03 - $13.77	10,000	0.2 years	11.40	10,000	11.40
$13.78 - $16.53	71,000	1.1 years	15.79	71,000	15.79
$16.54 - $19.29	41,250	1.1 years	17.82	41,250	17.82
$19.30 - $22.05	—	—	—	—	—
$22.06 - $24.80	76,625	1.7 years	22.89	76,625	22.89
$24.81 - $27.57	103,000	1.1 years	25.88	103,000	25.88
$ 2.44 - $27.57	1,191,125	4.3 years	$10.48	1,191,125	$10.48

Non-vested stock option activity for the 12 months ended December 31, 2015 was as follows:

	Non-Vested Stock Options Outstanding	Weighted-Average Grant Date Fair Value
Outstanding on January 1, 2015	—	$ —
Granted	126,000	1.54
Vested	(126,000)	1.54
Forfeited	—	—
Outstanding on December 31, 2015	—	—

As of December 31, 2015, there was $0 of total unrecognized compensation cost related to non-vested stock options granted under the Incentive Plan. Fuel Tech received proceeds from the exercise of stock options of $0, $297 and $811 in the years ended December 31, 2015, 2014 and 2013, respectively. The intrinsic value of options exercised in the years ended December 31, 2015, 2014 and 2013 was $0, $103 and $520, respectively. It is our policy to issue new shares upon option exercises, loan conversions, and vesting of restricted stock units. We have not used cash and do not anticipate any future use of cash to settle equity instruments granted under share-based payment arrangements.

Restricted Stock Units

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

In addition to the time vested RSUs described above, performance-based RSU agreements (the Agreements) are issued annually to our Executive Chairman; President/Chief Executive Officer; Senior Vice President, Fuel Conversion Marketing; Senior Vice President, Treasurer/Chief Financial Officer; and Senior Vice President, General Counsel and Corporate Secretary. The Agreements provide each participating executive the opportunity to earn three types of awards with each award type specifying a targeted number of RSUs that may be granted to each executive based on either the individual performance of the executive or our relative performance compared to a peer group, as determined by the award type. The Compensation Committee of our Board of Directors (the Committee) determines the extent to which, if any, RSUs will be granted based on the achievement of the applicable performance criteria specified in the Agreement. This determination will be made following the completion of the applicable performance period (each a Determination Date). Such performance based awards include the following:

The first type of award is based on individual performance during the respective calendar year as determined by the Committee based on performance criteria specified in the Agreement. These awards will vest over a three-year period beginning on the Determination Date. We estimated the fair value of these performance-based RSU awards on the date of the Agreement using the trading price of the Company's stock and our estimate of the probability that the specified

Table of Contents

performance criteria will be met. The fair value measurement and probability estimate will be re-measured each reporting date until the Determination Date, at which time the final award amount will be known. For these job performance-based awards, we amortize compensation costs over the requisite service period, adjusted for estimated forfeitures, for each separately vesting tranche of the award.

- The second type of RSU award contains a targeted number of RSUs to be granted based on our revenue growth relative to a specified peer group during a period of two calendar years. These awards vest 67% on the second anniversary of the Agreement date and 33% on the third anniversary of the Agreement date. We estimated the fair value of these performance-based RSU awards on the Agreement date using the trading price of the Company's stock and our estimate of the probability that the specified performance criteria will be met. For these revenue growth performance-based awards, we amortize compensation costs over the requisite service period, adjusted for estimated forfeitures, for each separately vesting tranche of the award.

- The third type of RSU award contains a targeted number of RSUs to be granted based on the total shareholder return (TSR) of our Common Shares relative to a specified peer group during a period of two calendar years. These awards vest 67% on the second anniversary of the Agreement date and 33% on the third anniversary of the Agreement date. We estimated the fair value of these market-based RSU awards on the Agreement date using a Monte Carlo valuation methodology and amortize the fair value over the requisite service period for each separately vesting tranche of the award. The principal variable assumptions utilized in valuing these RSUs under this valuation methodology include the risk-free interest rate, stock volatility and correlations between our stock price and the stock prices of the peer group of companies.

We recorded expense of approximately $1,615, $2,086 and $2,043 associated with our restricted stock unit awards in 2015, 2014 and 2013, respectively. At December 31, 2015 there was $2,432 of unrecognized compensation costs related to restricted stock unit awards to be recognized over a weighted average period of 1.7 years. During the years ended December 31, 2015 and 2014, there were 351,938 and 266,091 restricted stock units that vested with a fair value of $1,821 and $1,553, respectively.

A summary of restricted stock unit activity for the years ended December 31, 2015, 2014 and 2013 is as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested restricted units at January 1, 2013	752,024	6.21
Granted	485,000	4.62
Forfeited	(70,070)	5.58
Vested	(394,938)	2.94
Unvested restricted stock units at December 31, 2013	772,016	5.35
Granted	484,450	5.63
Forfeited	(13,306)	5.27
Vested	(266,091)	5.84
Unvested restricted stock units at December 31, 2014	977,069	5.36
Granted	789,500	3.33
Forfeited	(209,748)	4.62
Vested	(351,938)	5.17
Unvested restricted stock units at December 31, 2015	1,204,883	4.21

Deferred Directors Fees

In addition to the Incentive Plan, Fuel Tech has a Deferred Compensation Plan for Directors (Deferred Plan). Under the terms of the Deferred Plan, Directors can elect to defer Directors' fees for shares of Fuel Tech Common Stock that are issuable at a future date as defined in the agreement. In accordance with ASC 718, Fuel Tech accounts for these

awards as equity awards as opposed to liability awards. In 2015, 2014 and 2013, we recorded $0, $0 and $0 respectively, of stock-based compensation expense under the Deferred Plan.

Table of Contents

9. COMMITMENTS AND CONTINGENCIES

Operating Leases

We lease office space, automobiles and certain equipment under agreements expiring on various dates through 2020. Future minimum lease payments under non-cancellable operating leases that have initial or remaining lease terms in excess of one year as of December 31, 2015 are as follows:

Year of Payment	Amount
2016	$972
2017	700
2018	382
2019	366
2020	73
Total	$2,493

For the years ended December 31, 2015, 2014 and 2013, rent expense, net of related party sub-lease income, approximated $1,166, $1,041, and $1,010, respectively.

We are party to a sublease agreement with American Bailey Corporation (ABC) that obligates ABC to reimburse us for its share of lease and lease-related expenses under our February 1, 2010 lease of executive offices in Stamford, Connecticut. Please refer to Note 11 to the consolidated financial statements for a discussion of our relationship with ABC. The future minimum lease income under this non-cancellable sublease as of December 31, 2015 is as follows:

Year of Payment	Amount
2016	$155
2017	155
2018	155
2019	155
2020	—
Total	$620

The terms of the Company’s eight primary lease arrangements are as follows:

- The Stamford, Connecticut building lease, for approximately 6,440 square feet, runs from February 1, 2010 to December 31, 2019. The facility houses certain administrative functions such as Investor Relations and certain APC sales functions.
- The Beijing, China building lease, for approximately 8,000 square feet, runs from September 1, 2014 to August 31, 2017. This facility serves as the operating headquarters for our Beijing Fuel Tech operation.
- The Durham, North Carolina building lease, for approximately 16,000 square feet, runs from May 1, 2014 to April 30, 2017. This facility houses engineering operations. The landlord has exercised an option to terminate the lease effective June 30, 2016.
- The Gallarate, Italy building lease, for approximately 1,300 square feet, runs from May 1, 2013 to April 30, 2019. This facility serves as the operating headquarters for our European operations.
- The Westlake, Ohio building lease, for approximately 5,000 square feet, runs from May 1, 2014 to April 30, 2017. This facility houses engineering operations.
- The Aurora, IL warehouse lease, for approximately 11,000 square feet, runs from September 1, 2013 to December 31, 2020. This facility serves as an outside warehouse facility.
- The Overland Park, KS lease, for approximately 600 square feet, runs from October 16, 2015 to October 15, 2018. This facility serves primarily as a sales office.
- The Aberdeen Corners, GA lease, for an office suite, runs from June 1, 2015 to May 31, 2017. This facility primarily serves as a sales office.

Table of Contents

Performance Guarantees

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

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

As of December 31, 2015, we had outstanding bank performance guarantees and letters of credit in the amount of $7,860 and performance surety bonds in the amount of $12,389 in support of equipment construction contracts that have not completed their final acceptance test or that are still operating under a warranty period. The performance guarantees expire in dates ranging from January 2015 through September 2016. The expiration dates may be extended if the project completion dates are extended. Our management believes it is probable that these projects will be successfully completed and that there will not be a material adverse impact on our operations from these bank performance guarantees and letters of credit. As a result, no liability has been recorded for these performance guarantees.

Product Warranties

We issue a standard product warranty with the sale of our products to customers. Our recognition of warranty liability is based primarily on analyses of warranty claims experience in the preceding years as the nature of our historical product sales for which we offer a warranty are substantially unchanged. This approach provides an aggregate warranty accrual that is historically aligned with actual warranty claims experienced. Changes in the warranty liability in 2015, 2014 and 2013 are summarized below:

	2015	2014	2013
Aggregate product warranty liability at beginning of year	$268	$596	$776
Net aggregate expense (income) related to product warranties	8	(311)	(68)
Aggregate reductions for payments	(8)	(17)	(112)
Aggregate product warranty liability at end of year	$268	$268	$596

10. DEBT FINANCING

On June 30, 2015, we amended our existing revolving credit facility (the Facility) with JPMorgan Chase Bank, N.A (JPM Chase) to extend the maturity date through June 30, 2017, and we again amended the facility on December 31, 2015 to modify certain covenants. The total borrowing base of the facility is $15,000 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 300 basis points, and has the Company's Italian subsidiary, Fuel Tech S.r.l., as a guarantor. We are allowed to use this Facility for cash advances and standby letters of credit. As of December 31, 2015 and 2014, there was 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. The Facility requires a minimum trailing-twelve month EBITDA of $500 for quarters ending March 31, 2016 and June 30, 2016; Beginning with the fiscal quarter ending September 30, 2016, the Facility requires a minimum EBITDA for the trailing twelve-month period then ended of not less than $1,000. EBITDA includes after tax earnings with add backs for interest expense, income taxes, depreciation and amortization, stock-based compensation expense, and other non-cash items. This covenant was waived by our bank through the period ending December 31, 2015. In addition, the Facility requires a minimum working capital requirement of $35,000, starting as of December 31, 2015. Finally, the Facility has an annual capital expenditure limit of $5,000. At December 31, 2015 we were in compliance with all active financial covenants specified by the Facility.

At December 31, 2015 and 2014, we had outstanding standby letters of credit and bank guarantees totaling approximately $7,803 and $8,284, respectively, on our domestic credit facility in connection with contracts in process. We are committed to reimbursing the issuing bank for any payments made by the bank under these instruments. At December 31, 2015 and 2014, there were no cash borrowings under the domestic revolving credit facility and approximately $7,197 and $6,716, respectively, was available for future borrowings. We pay a commitment fee of 0.25% per year on the unused portion of the revolving credit facility.

On June 26, 2015, our wholly-owned subsidiary, Beijing Fuel Tech Environmental Technologies Company, Ltd. (Beijing Fuel Tech) entered into a new revolving credit facility (the China Facility) agreement with JPM Chase for RMB 35 million (approximately $5,392), which expires on June 24, 2016. This new credit facility replaced the previous RMB 35 million facility that expired on

Table of Contents

June 26, 2015. 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, 2015, Beijing Fuel Tech had no cash borrowings under the China Facility, and as of December 31, 2014 had borrowings outstanding in the amount of $1,625. These borrowings were subject to interest rates of approximately 6.8% at December 31, 2015 and 7.0% at December 31, 2014.

At December 31, 2015 and 2014, we had outstanding standby letters of credit and bank guarantees totaling approximately $57 and $336, respectively, on its Beijing Fuel Tech revolving credit facility in connection with contracts in process. At December 31, 2015 and 2014, approximately $5,335 and $3,727 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 we 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 our cash position to deteriorate or, if cash on hand were insufficient to satisfy the payment due, may require us to obtain alternate financing to satisfy the accelerated payment.

11. RELATED PARTY TRANSACTIONS

Persons now or formerly associated with American Bailey Corporation (ABC), including our Chairman, currently own approximately 29% of our outstanding Common Shares. On January 1, 2004, we entered into an agreement whereby ABC reimburses us for services that certain employees provide to ABC. In addition, ABC is a sub-lessee under our February 1, 2010 lease of its offices in Stamford, Connecticut, which runs through December 31, 2019. ABC reimburses us for its share of lease and lease-related expenses under the sublease agreement. The Stamford facility houses certain administrative functions. The amounts earned from ABC related to the subleases for the years ended December 31, 2015, 2014 and 2013, were $155, $144 and $147, respectively. The amount due from ABC related to the sublease agreement was $14, $13 and $13 at December 31, 2015, 2014 and 2013 respectively.

12. DEFINED CONTRIBUTION PLAN

We have a retirement savings plan available for all our U.S. employees who have met minimum length-of-service requirements. Our contributions are determined based upon amounts contributed by the employees with additional contributions made at the discretion of the Board of Directors. Costs related to this plan were $433, $464 and $728 in 2015, 2014 and 2013, respectively.

13. BUSINESS SEGMENT, GEOGRAPHIC AND QUARTERLY FINANCIAL DATA

Business Segment Financial Data

We segregate our financial results into three reportable segments representing three broad technology segments 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. Our ASCR systems include 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 more basic, 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.

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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.

The Fuel Conversion segment represents a new business initiative we commenced in 2014. As described in Note 1, we acquired intellectual property rights and know-how related to the CARBONITE® fuel conversion process and technology. This process can convert coals of various grades into value-added products that are high in energy content, carbon-rich and less pollutive. This technology has a number of potential applications including certain coal replacement, electric arc furnace (EAF) reductant, ferro-alloy feedstock, absorbent and Hg reduced carbon stock. During 2015, we have been testing and developing the engineered carbon products for specific markets. We are in the process of evaluating the commercialization of these product offerings with prospective customers and

Table of Contents

considering alternatives. We have earned no significant revenue other than for test products from perspective customers for the years ended December 31, 2015, 2014 and 2013.

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

We evaluate performance and allocate resources based on gross margin by reportable segment. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies. We do not review assets by reportable segment, but rather, in aggregate for the company as a whole.

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

For the year ended December 31, 2015	Air Pollution Control Segment	FUEL CHEM Segment	Fuel Conversion Segment	Other	Total
Revenues from external customers	$43,485	$30,179	$—	$—	$73,664
Cost of sales	(30,612)	(14,495)	—	—	(45,107)
Gross margin	12,873	15,684	—	—	28,557
Selling, general and administrative	—	—	—	(31,116)	(31,116)
Research and development	—	—	(2,826)	(1,447)	(4,273)
Intangible assets impairment	(1,425)	—	—	—	(1,425)
Operating (loss) income	$11,448	$15,684	$(2,826)	$(32,563)	$(8,257)

For the year ended December 31, 2014	Air Pollution Control Segment	FUEL CHEM Segment	Fuel Conversion Segment	Other	Total
Revenues from external customers	$42,031	$36,986	$—	$—	$79,017
Cost of sales	(26,586)	(17,303)	—	—	(43,889)
Gross margin	15,445	19,683	—	—	35,128
Selling, general and administrative	—	—	—	(35,432)	(35,432)
Research and development	—	—	(277)	(1,182)	(1,459)
Goodwill impairment	(23,400)	—	—	—	(23,400)
Operating (loss) income	$(7,955)	$19,683	$(277)	$(36,614)	$(25,163)

For the year ended December 31, 2013	Air Pollution Control Segment	FUEL CHEM Segment	Other	Total
Revenues from external customers	$72,552	$36,786	$—	$109,338
Cost of sales	(45,138)	(17,383)	—	(62,521)
Gross margin	27,414	19,403	—	46,817
Selling, general and administrative	—	—	(36,375)	(36,375)
Research and development	—	—	(2,442)	(2,442)
Operating income	$27,414	$19,403	$(38,817)	$8,000

Geographic Segment Financial Data

Information concerning our operations by geographic area is provided below. Revenues are attributed to countries based on the location of the customer. Assets are those directly associated with operations of the geographic area.

For the years ended December 31,	2015	2014	2013
Revenues:			
United States	$51,485	$50,901	$63,275
Foreign	22,179	28,116	46,063
	$73,664	$79,017	$109,338

50

Table of Contents

As of December 31,	2015	2014
Assets:		
United States	$47,437	$64,324
Foreign	28,574	27,147
	$76,011	$91,471

Unaudited Quarterly Financial Data

Set forth below are the unaudited quarterly financial data for the fiscal years ended December 31, 2015 and 2014.

For the quarters ended	March 31	June 30	September 30	December 31
2015				
Revenues	$15,103	$18,683	$21,677	$18,201
Cost of sales	8,437	11,547	13,829	11,294
Net (loss) income	(1,654)	(1,371)	(289)	(9,066)
Net (loss) income per common share:				
Basic	$(0.07)	$(0.06)	$(0.01)	$(0.39)
Diluted	$(0.07)	$(0.06)	$(0.01)	$(0.39)
2014				
Revenues	$18,661	$20,190	$21,482	$18,684
Cost of sales	10,810	11,677	11,582	9,820
Net (loss) income	(1,086)	(720)	1,192	(17,111)
Net (loss) income per common share:				
Basic	$(0.05)	$(0.03)	$0.05	$(0.75)
Diluted	$(0.05)	$(0.03)	$0.05	$(0.75)

14. FAIR VALUE MEASUREMENTS

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

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

The fair value of our marketable securities was $19 and $36 at December 31, 2015 and 2014, respectively, and was determined using quoted prices in active markets for identical assets (level 1 fair value measurements). Transfers between levels of the fair value hierarchy are recognized based on the actual date of the event or change in circumstances that caused the transfer. We had no assets or liabilities that were valued using level 2 or level 3 inputs and therefore there were no transfers between levels of the fair value hierarchy during the periods ended December 31, 2015 and 2014.

51

Table of Contents

The carrying amount of our short-term debt and revolving line of credit approximates fair value due to its short-term nature and because the amounts outstanding accrue interest at variable market-based rates.

Table of Contents

The following table summarizes the Company's assets measured at fair value on a non-recurring basis relating to an intangible assets impairment charge recognized during 2015 primarily related to the customer lists acquired in the 2009 acquisition of Advanced Combustion Technology and the 2014 acquisition of PECO in the APC technology segment, as more fully described in Note 1.

	Level 1	Level 2	Level 3	Impairment Losses	Fair Value at December 31, 2015
Other intangible assets, net	$—	$—	$8,569	$(1,425)	$7,144
	$—	$—	$8,569	$(1,425)	$7,144

The following table summarizes the Company's assets measured at fair value on a non-recurring basis relating to a goodwill impairment charge recognized during 2014 for the full carrying value of goodwill in the APC technology segment, as more fully described in Note 1.

	Level 1	Level 2	Level 3	Impairment Losses	Fair Value at December 31, 2014
Goodwill	$—	$—	$23,400	$(23,400)	$—
	$—	$—	$23,400	$(23,400)	$—

ITEM 9 - CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None

ITEM 9A - CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

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

Change in Internal Controls

There were no changes in Fuel Tech's internal control over financial reporting during the year to which this report relates that have materially affected, or are reasonably likely to materially affect Fuel Tech's internal control over financial reporting.

Management’s Report on Internal Control Over Financial Reporting

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

Our system of internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are

subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on its assessment, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2015, based on criteria in “Internal Control - Integrated Framework” issued by the COSO in 2013.

RSM US LLP, our independent registered public accounting firm, who audited and reported on the consolidated financial statements included in this Annual Report on Form 10-K, has issued an attestation report on the effectiveness of our internal control over financial reporting. This attestation report is included in Item 8 to this Annual Report on Form 10-K.

ITEM 9B - OTHER INFORMATION

None

Table of Contents

PART III

ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this Item will be set forth under the captions “Election of Directors,” “Directors and Executive Officers of Fuel Tech,” “Compensation Committee,” “Audit Committee,” and “Financial Experts” in our definitive Proxy Statement related to the 2016 Annual Meeting of Stockholders (the “Proxy Statement”) and is incorporated by reference.

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

Other information concerning our directors and executive officers and relating to corporate governance will be set forth under the captions “Election of Directors,” “Audit Committee,” “Compensation and Nominating Committee,” “Financial Experts,” “Corporate Governance” and “General” in our Proxy Statement related to the 2016 Annual Meeting of Stockholders and is incorporated by reference.

ITEM 11 - EXECUTIVE COMPENSATION

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

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

The following table provides information for all equity compensation plans as of the fiscal year ended December 31, 2015, under which our securities were authorized for issuance:

Plan Category	Number of Securities to be issued upon exercise of outstanding options and vesting of restricted stock units	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plan excluding securities listed in column (a)
	(a)	(b)	(c)
Equity compensation plans approved by security holders (1)	2,396,008	$ 10.48	1,190,426

(1) Includes Common Shares of Fuel Tech, Inc. authorized for awards under Fuel Tech’s 2014 Long-Term Incentive Plan adopted in May of 2014.

In addition to the plans listed above, we have a Deferred Compensation Plan for directors under which 100,000 Common Shares have been reserved for issuance as deferred compensation with respect to director's fees.

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

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

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

ITEM 14 - PRINCIPAL ACCOUNTANT FEES AND SERVICES

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

Table of Contents

PART IV

ITEM 15 - EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) Financial Statements

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

Management's Report on Internal Control Over Financial Reporting
Report of Independent Registered Public Accounting Firm
Consolidated Balance Sheets as of December 31, 2015 and 2014
Consolidated Statements of Operations for Years Ended December 31, 2015, 2014 and 2013
Consolidated Statements of Comprehensive (Loss) Income for Years Ended December 31, 2015, 2014 and 2013
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2015, 2014 and 2013
Consolidated Statements of Cash Flows for the Years Ended December 31, 2015, 2014 and 2013
Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

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

55

Table of Contents

(3) Exhibits

Exhibit	Description	Filed Herewith	Incorporated by Reference			
			Form	Period ending	Exhibit	Filing date
3.1	Certificate of Incorporation of Fuel Tech, Inc.		8-K		3.2	10/5/2006
3.2	Certificate of Conversion of Fuel Tech, Inc.		8-K		3.1	10/5/2006
3.3	Amended and Restated By-Laws of Fuel Tech, Inc. dated as of May 28, 2015		8-K		3.1	6/1/2015
4.1	Instrument Constituting US $19,200,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated December 21, 1989		10-Q	9/30/2009	4.1	11/4/2009
4.2	First Supplemental Instrument Constituting US $3,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated July 10, 1990		10-Q	9/30/2009	4.2	11/4/2009
4.3	Instrument Constituting US $6,000 Nil Coupon Non-Redeemable Convertible Unsecured Loan Notes of Fuel-Tech N.V., dated March 12, 1993		10-Q	9/30/2009	4.3	11/4/2009
4.4*	Fuel Tech, Inc. Incentive Plan as amended through June 3, 2004		S-8		4.1	10/2/2006
4.5*	Fuel Tech, Inc. 2014 Long-Term Incentive Plan		S-8		4.1	3/31/2014
4.6*	Fuel Tech, Inc. Form of Non-Executive Director Stock Option Agreement		10-K	12/31/2006	4.6	3/6/2007
4.7	Fuel Tech, Inc. Form of 2014 Long-Term Incentive Plan Non-Employee Director's Stock Option Agreement		10-Q	6/30/2014	4.2	8/11/2014
4.8*	Fuel Tech, Inc. Form of Non-Qualified Stock Option Agreement		10-K	12/31/2006	4.7	3/6/2007
4.9*	Fuel Tech, Inc. Form of Incentive Stock Option Agreement		10-K	12/31/2006	4.8	3/6/2007
4.10*	Fuel Tech, Inc. Form of Revised Restricted Stock Unit Agreement		10-K	12/31/2011	4.9	3/5/2012
4.11*	Fuel Tech, Inc. Form of Restricted Stock Unit Agreement (2014 Long-Term Incentive Plan)		10-Q	6/30/2014	4.1	8/11/2014
4.12*	Fuel Tech, Inc. Form of 2011 Executive Performance RSU Award Agreement		8-K		10.1	3/28/2011
4.13*	Fuel Tech, Inc. Form of 2012 Executive Performance RSU Award Agreement		8-K		4.2	5/7/2013
4.14*	Fuel Tech, Inc. Form of 2013 Executive Performance RSU Award Agreement		8-K		4.3	5/7/2013
4.15*	Fuel Tech, Inc. Form of 2015 Executive Performance RSU Award Agreement		10-Q	3/31/2015	10.3	5/11/2015
4.16*	Fuel Tech, Inc. Form of 2014 Long-Term Incentive Plan Stock Option Agreement		10-Q	3/31/2015	10.2	5/11/2015
4.17*	Fuel Tech, Inc. Form of 2016 Executive Performance RSU Award Agreement	X				
10.1**	License Agreement dated November 18, 1998 between The Gas Technology Institute and Fuel Tech, Inc. relating		10-K	12/31/1999	3.3	3/30/2000

	to the FLGR Process.				
10.2**	Amendment No. 1, dated February 28, 2000, to License Agreement dated November 18, 1998 between The Gas Technology Institute and Fuel Tech, Inc. relating to the FLGR Process.	10-K	12/31/1999	3.3	3/30/2000

Table of Contents

10.3	Form of Indemnity Agreement between Fuel Tech, Inc. and its Directors and Officers.		8-K		99.1	2/7/2007
10.4**	Restated Supply Agreement, dated March 4, 2009, between Fuel Tech, Inc. and Martin Marietta Magnesia Specialties, LLC.		10-K	12/31/2008	10.7	3/5/2009
10.5	Amendment No. 1 to Restated Supply Agreement, dated October 31, 2013, between Fuel Tech, Inc. and Martin Marietta Magnesia Specialties, Inc.		10-Q	9/30/2013	10.1	11/7/2013
10.6	Stock Purchase Agreement, dated April 28, 2014, between Lawrence Ekey and Fuel Tech, Inc.		10-Q	3/31/2014	10.1	5/12/2014
10.7	Credit Agreement, dated as of June 30, 2009, between JPMorgan Chase Bank, N.A. and Fuel Tech, Inc.		10-Q	9/30/2009	10.5	11/4/2009
10.8	First Amendment to Credit Agreement, dated as of October 5, 2009, between JPMorgan Chase Bank, N.A. and Fuel Tech, Inc.		10-Q	9/30/2009	10.6	11/4/2009
10.9	Second Amendment to Credit Agreement, dated as of November 4, 2009, between JPMorgan Chase Bank, N.A. and Fuel Tech, Inc.		10-Q	9/30/2009	10.7	11/4/2009
10.10	Third Amendment to Credit Agreement, dated as of June 30, 2011, between JPMorgan Chase Bank, N.A. and Fuel Tech, Inc.		10-Q	6/30/2011	4.1	8/8/2011
10.11	Fourth Amendment to Credit Agreement, dated as of June 30, 2013, between JPMorgan Chase Bank, N.A. and Fuel Tech, Inc.		10-Q	6/30/2013	4.1	8/7/2013
10.12	Fifth Amendment to Credit Agreement, dated as of June 16th, 2015, between Fuel Tech, Inc. and JP Morgan Chase Bank, N.A.	X				
10.13	Sixth Amendment to Credit Agreement, dated as of June 30, 2015, between Fuel Tech, Inc. and JP Morgan Chase Bank, N.A.		10-Q	6/30/2015	10.2	8/10/2015
10.14	Seventh Amendment to Credit Agreement, dated as of December 31, 2015, between Fuel Tech, Inc. and JP Morgan Chase Bank, N.A.	X				
10.15	Sublease Agreement, dated December 9, 2009, between Fuel Tech, Inc. and American Bailey Corporation		10-K	12/31/2009	10.14	3/4/2010
10.16*	2014 Executive Officer Incentive Plan of Fuel Tech, Inc.		10-K	12/31/2013	10.16	3/10/2014
10.17*	2015 Executive Officer Incentive Plan of Fuel Tech, Inc.		10-Q	3/31/2015	10.1	5/11/2015
10.18*	2016 Executive Officer Plan of Fuel Tech, Inc.	X				
10.19*	2016 Corporate Incentive Plan of Fuel Tech, Inc.	X				
10.20*	Employment Agreement, dated August 2, 2010, between David S. Collins and Fuel Tech, Inc.		10-Q	6/30/2010	10.1	8/9/2010
10.21*	Employment Agreement, dated April 1, 2010, between Douglas G. Bailey and Fuel Tech, Inc.		10-K	12/31/2010	10.19	3/9/2011
10.22*	Employment Agreement, dated August 31, 2009, between Robert E. Puissant and Fuel Tech, Inc.		10-K	12/31/2010	10.20	3/9/2011
10.23*	Employment Agreement, dated September 20, 2010 between Vincent J. Arnone and Fuel Tech, Inc.		10-K	12/31/2011	10.21	3/5/2012
10.24*	Employment Agreement, dated July 13, 2003, between Albert G. Grigonis and Fuel Tech, Inc.		10-K	12/31/2013	10.21	3/10/2014

57

Table of Contents

23.1	Consent of Independent Registered Public Accounting Firm.	X
31.1	Certifications of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X
31.2	Certifications of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.	X
32	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.	X

101.1 INS XBRL Instance Document.

101.2 SCH XBRL Taxonomy Extension Schema Document.

101.3 CAL XBRL Taxonomy Extension Calculation Linkbase Document.

101.4 DEF XBRL Taxonomy Extension Definition Linkbase Document.

101.5 LAB XBRL Taxonomy Extension Label Linkbase Document.

101.6 PRE XBRL Taxonomy Extension Presentation Linkbase Document.

* Indicates a management contract or compensatory plan or arrangement.

** Portions of this document have been omitted pursuant to a request for confidential treatment and the omitted information has been filed separately with the Securities and Exchange Commission.

Table of Contents

SIGNATURES AND CERTIFICATIONS

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

FUEL TECH, INC.

Date: March 23, 2016

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

Date: March 23, 2016

By: /s/ David S. Collins
David S. Collins
Senior Vice President and Chief Financial Officer
(Principal Financial Officer)

Table of Contents

Pursuant to the requirements of the Securities and Exchange Act of 1934, this report has been duly signed below by the following persons on behalf of Fuel Tech, Inc. and in the capacities and on the date indicated.
Date: March 23, 2016

Signature	Title
/s/ Vincent J. Arnone Vincent J. Arnone	President and Chief Executive Officer (Principal Executive Officer)
/s/ Douglas G. Bailey Douglas G. Bailey	Executive Chairman
/s/ Miguel Espinosa Miguel Espinosa	Director
/s/ W. Grant Gregory W. Grant Gregory	Director
/s/ Thomas S. Shaw, Jr. Thomas S. Shaw, Jr.	Director
/s/ Delbert L. Williamson Delbert L. Williamson	Director
/s/ Dennis L. Zeitler Dennis L. Zeitler	Director
/s/ David S. Collins David S. Collins	Sr. Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)