

FUELCELL ENERGY INC  
Form 10-K  
January 08, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES  
EXCHANGE ACT OF 1934  
For the fiscal year ended October 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: 1-14204  
FUELCELL ENERGY, INC.  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

06-0853042  
(I.R.S. Employer  
Identification No.)

3 Great Pasture Road  
Danbury, Connecticut  
(Address of principal executive offices)

06810  
(Zip Code)

Registrant's telephone number, including area code: (203) 825-6000  
Securities registered pursuant to Section 12(b) of the Act:

Title of each class  
Common Stock, \$.0001 par value per share

Name of each exchange on which registered  
The Nasdaq Stock Market LLC (Nasdaq Global  
Market)

Securities registered pursuant to Section 12(g) of the Act: None  
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes  No   
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the  
Exchange Act. Yes  No

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of 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 <input type="checkbox"/>	Accelerated filer <input checked="" type="checkbox"/>	Non-accelerated filer <input type="checkbox"/>	Smaller reporting company <input type="checkbox"/>
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(Do not check if a smaller reporting company)

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

At April 30, 2015, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was \$306,115,542 based on the closing sale price of \$14.76 as reported on the NASDAQ Global Market.

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding at December 31, 2015
Common Stock, \$.0001 par value per share	26,593,128 shares

DOCUMENT INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Proxy Statement for the Annual Meeting of Shareholders to be held April 7, 2016 (Proxy Statement)	Part III

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FUELCELL ENERGY, INC.

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PART I

Item 1. BUSINESS

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Forward-Looking Statement Disclaimer

When used in this report, the words “expects”, “anticipates”, “estimates”, “should”, “will”, “could”, “would”, “may”, “forecast” similar expressions are intended to identify forward-looking statements. Such statements relate to, among other things, the following:

- the development and commercialization by FuelCell Energy, Inc. and its subsidiaries (“FuelCell Energy”, “Company”, “we”, “us” and “our”) of fuel cell technology and products and the market for such products,
- expected operating results such as revenue growth and earnings,
- our belief that we have sufficient liquidity to fund our business operations for the next 12 months,
- future funding under government research and development contracts,
- future financing for projects including publicly issued bonds, equity and debt investments by investors and commercial bank financing,
- the expected cost competitiveness of our technology, and
- our ability to achieve our sales plans and cost reduction targets.

The forward-looking statements contained in this report are subject to risks and uncertainties, known and unknown, that could cause actual results to differ materially from those forward-looking statements, including, without limitation, the risks contained under Item 1A - Risk Factors of this report and the following:

- general risks associated with product development and manufacturing,
- general economic conditions,
- changes in the utility regulatory environment,
- changes in the utility industry and the markets for distributed generation, distributed hydrogen, and carbon capture configured fuel cell power plants for coal and gas-fired central generation,
- potential volatility of energy prices,
- availability of government subsidies and economic incentives for alternative energy technologies,
- rapid technological change,
- competition,
- market acceptance of our products,
- changes in accounting policies or practices adopted voluntarily or as required by accounting principles generally accepted in the United States,
- factors affecting our liquidity position and financial condition,
- government appropriations,
- the ability of the government to terminate its development contracts at any time,
- the ability of the government to exercise “march-in” rights with respect to certain of our patents,
- POSCO’s ability to develop the market in Asia, deploy DFC power plants and successfully operate its Asian manufacturing facility,
- our ability to implement our strategy,
- our ability to reduce our levelized cost of energy,
- the risk that commercial field trials of our products will not occur when anticipated,
- our ability to increase the output and longevity of our power plants, and
- our ability to expand our customer base and maintain relationships with our largest customers.

We cannot assure you that:

- we will be able to meet any of our development or commercialization schedules,
- the government will appropriate the funds anticipated by us under our government contracts,
- the government will not exercise its right to terminate any or all of our government contracts,
- any of our new products or technology, once developed, will be commercially successful,

our existing DFC power plants will remain commercially successful, or  
we will be able to achieve any other result anticipated in any other forward-looking statement contained herein.



The forward-looking statements contained herein speak only as of the date of this report. Except for ongoing obligations to disclose material information under the federal securities laws, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any such statement to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based.

#### Background

Information contained in this report concerning the utility industry and the distributed generation market, our general expectations concerning this industry and this market, and our position within this industry are based on market research, industry publications, other publicly available information and on assumptions made by us based on this information and our knowledge of this industry and this market, which we believe to be reasonable. Although we believe that the market research, industry publications and other publicly available information are reliable, including the sources that we cite in this report, they have not been independently verified by us and, accordingly, we cannot assure you that such information is accurate in all material respects. Our estimates, particularly as they relate to our general expectations concerning the electric power supply industry and the distributed generation market, involve risks and uncertainties and are subject to change based on various factors, including those discussed under Item 1A - Risk Factors of this report.

As used in this report, all degrees refer to Fahrenheit (“F”); kilowatt (“kW”) and megawatt (“MW”) numbers designate nominal or rated capacity of the referenced power plant; “efficiency” or “electrical efficiency” means the ratio of the electrical energy generated in the conversion of a fuel to the total energy contained in the fuel (lower heating value, the standard for power plant generation, assumes the water in the product is in vapor form; as opposed to higher heating value, which assumes the water in the product is in liquid form, net of parasitic load); “overall energy efficiency” refers to efficiency based on the electrical output plus useful heat output of the power plant; kW means 1,000 watts; MW means 1,000,000 watts; “kilowatt hour” (“kWh”) is equal to 1kW of power supplied to or taken from an electric circuit steadily for one hour; and one British Thermal Unit (“Btu”) is equal to the amount of heat necessary to raise one pound of pure water from 59°F to 60°F at a specified constant pressure.

All dollar amounts are in U.S. dollars unless otherwise noted.

#### Additional Technical Terms and Definitions

**Availability** - A measure of the amount of time a system is available to operate, as a fraction of total calendar time. For power generation equipment, an industry standard (IEEE (The Institute of Electrical and Electronics Engineers) 762, “Definitions for Use in Reporting Electric Generating Unit Reliability, Availability and Productivity”) is used to compute availability. “Availability percentage” is calculated as total period hours since commercial acceptance date (mutually agreed upon time period when our Direct FuelCell power plants have operated at a specific output level for a specified period of time) less hours not producing electricity due to planned and unplanned maintenance divided by total period hours. Grid disturbances, force majeure events and site specific issues such as a lack of available fuel supply or customer infrastructure repair do not penalize the calculation of availability according to this standard.

**Baseload** - Consistent power generation that is available to meet electricity demands around-the-clock. This differs from peak or peaking power generation that is designed to be turned on or off quickly to meet sudden changes in electricity demand, or intermittent power generation such as solar or wind.

**Carbonate Fuel Cell (CFC)** - Carbonate fuel cells, such as the fuel cell power plants produced and sold by FuelCell Energy, are high-temperature fuel cells that use an electrolyte composed of a molten carbonate salt mixture suspended in a porous, chemically inert ceramic-based matrix. CFC's operate at high temperatures, enabling the use of a nickel-based catalyst, a lower cost alternative to precious metal catalysts used in some other fuel cell technologies.

**Combined Heat & Power (CHP)** - A power plant configuration or mode of operation featuring simultaneous on-site generation from the same unit of fuel of both electricity and heat with the byproduct heat used to produce steam, hot water or heated air for both heating and cooling applications.

**Direct FuelCell® (DFC®)** - Trademarked product name of FuelCell Energy commercial carbonate fuel cell plants that references the internal reforming process within the fuel cell of a hydrogen-rich fuel source such as natural gas.

**Distributed Generation (DG)** - Electric power that is generated where it is needed (distributed throughout the power grid) rather than from a central location. Centrally generated power requires extensive transmission networks that

require maintenance and experience efficiency losses during transmission while distributed generation does not. Distributed generation is small to mid-

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size power plants, typically 75 megawatts or less. Central generation is large power plants generating hundreds or even thousands of megawatts.

Micro-grid - Micro-grids are localized electric grids that can disconnect from the traditional electric grid to operate autonomously and strengthen grid resiliency. Micro grids can be composed only of DFC plants due to their continual power output or combine a variety of different types of power generation such as fuel cells and solar arrays.

Nitrogen Oxides (NO<sub>x</sub>) - Generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the NO<sub>x</sub> are colorless and odorless; however they are a major precursor to smog production and acid rain. However, one common pollutant, Nitrogen Dioxide, along with particles in the air, can often be seen as a reddish-brown layer over many urban areas. NO<sub>x</sub> form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NO<sub>x</sub> are motor vehicles, electric utilities, and other industrial, commercial and residential sources that burn fuels.

Particulate Matter - Solid or liquid particles emitted into the air that is generally caused by the combustion of materials or dust generating activities. Particulate matter caused by combustion can be harmful to humans as the fine particles of chemicals, acids and metals may get lodged in lung tissue.

Power Purchase Agreement (PPA) - A Power Purchase Agreement is a financing structure that enables a power user to purchase energy under a long-term contract where they agree to pay a predetermined rate for the kilowatt-hours delivered from a power generating asset while avoiding the need to own the equipment and pay the upfront capital cost. The length of the contract varies, typically ranging from 10 to 20 years. The PPA rate is typically fixed (with an escalation clause tied to consumer price index or similar index), or pegged to a floating index that is on par with or below the current electricity rate being charged by the local utility company.

Reforming - Catalytic conversion of hydrocarbon fuel (such as natural gas or renewable biogas) to hydrogen-rich gas. The hydrogen-rich gas serves as a fuel for the electrochemical fuel cell power generation reaction.

Renewable Biogas - Renewable biogas is fuel produced by biological breakdown of organic material. Biogas is commonly produced in biomass digesters employing bacteria in a heated and controlled oxygen environment. These digesters are typically used at wastewater treatment facilities or food processors to breakdown solid waste and the biogas is produced as a byproduct of the waste digestion. Biomass may be generated in digesters from agricultural waste, or it can be produced in less controlled fashion by breakdown of waste in landfills. These biogas fuels can be used as a renewable fuel source for Direct FuelCells located on site where the biogas is produced with minimal gas cleanup, or they can be processed further to meet pipeline fuel standards and injected into a gas pipeline network, which is termed Directed Biogas.

Solid Oxide Fuel Cell (SOFC) - Solid oxide fuel cells use a hard, non-porous ceramic compound as the electrolyte. Solid oxide fuel cells operate at very high temperatures eliminating the need for costly precious-metal catalysts, thereby reducing cost. The high temperature enables internal reforming of the hydrogen rich fuel source.

Sulfur Oxide (SO<sub>x</sub>) - Sulfur oxide refers to any one of the following: sulfur monoxide, sulfur dioxide (SO<sub>2</sub>) and sulfur trioxide. SO<sub>2</sub> is a byproduct of various industrial processes. Coal and petroleum contain sulfur compounds, and generate SO<sub>2</sub> when burned. Sox compounds are particulate and acid rain precursors.

## Overview

We are an integrated fuel cell company with an expanding global presence on three continents. We design, manufacture, sell, install, operate and service ultra-clean, highly efficient stationary fuel cell power plants for distributed power generation. Our power plants provide megawatt-class scalable on-site power and utility grid support, helping customers solve their energy, environmental and business challenges. Our plants are operating in more than 50 locations on three continents and have generated more than four billion kilowatt hours (kWh) of electricity, which is equivalent to powering more than 391,000 average size U.S. homes for one year. Our growing installed base and backlog exceeds 300 megawatts (MW).

We provide comprehensive turn-key power generation solutions to our customers, including power plant installations as well as power plant operation and maintenance under multi-year service agreements. We both develop projects and sell direct to the end-user of the power and utilities, either the full turn-key solution or the fuel cell equipment only. For projects that we develop, the end-user of the power enters into a PPA and based on the project and credit profile,

we either identify a project investor to purchase the power plant, selling the power and heat under the PPA. We target large-scale power users with our megawatt-class installations. To provide a frame-of-reference, one megawatt is adequate to power approximately 1,000 average sized U.S. homes. Our customer base includes utility companies, municipalities, universities, government entities and a variety of industrial and commercial

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enterprises. Our leading geographic markets are South Korea and the United States and we are pursuing expanding opportunities in Asia, Europe, and Canada.

Our value proposition provides highly efficient and environmentally friendly power generation with easy-to-site stationary fuel cell power plants. The power plants are located in populated areas as they are virtually pollutant free, operate quietly and without vibrations, and have only modest space requirements. Locating power generation near the point of use reduces reliance on the transmission grid, leading to enhanced energy security and power reliability.

Utilities can minimize or even avoid the cost and permitting of transmission by adopting distributed generation. Our power plants provide electricity priced competitively to grid-delivered electricity in certain high cost regions and our strategy is to continue to reduce costs, which is expected to lead to wider adoption.

Utilizing our core DFC plants, we are commercializing both a tri-generation distributed hydrogen configuration that generates electricity, heat and hydrogen for industrial or transportation uses, and carbon capture for coal or gas-fired power plants. We also are developing and commercializing SOFC for adjacent sub-megawatt applications to the markets for our megawatt-class DFC power plants as well as energy storage applications. The market potential for these products is sizeable and these applications are complementary to our core products, as they leverage our existing customer base, project development, sales and service expertise.

FuelCell Energy was founded in Connecticut in 1969 as an applied research organization, providing contract research and development. The Company went public in 1992, raising capital to develop and commercialize fuel cells, and reincorporated in Delaware in 1999. We began selling stationary fuel cell power plants commercially in 2003. Today we develop turn-key distributed power generation solutions and provide comprehensive service for the life of the asset.

#### Markets

##### Vertical Markets

Access to clean, affordable, continuous and reliable power defines modern lifestyles. The ability to provide power cleanly and efficiently is taking on greater importance and urgency in many regions of the world. Central generation and its associated transmission and distribution grid is difficult to site, costly, and generally takes many years to permit and build. Some types of power generation that were widely adopted in the past, such as nuclear power or coal-fired power plants, are no longer welcome in certain regions. The cost and impact to public health and the environment of pollutants and greenhouse gas emissions impacts the siting of new power generation. The attributes of DFC power plants address these challenges by providing virtually emission-free power and heat at the point of use in a highly efficient process that is affordable to rate-payers.

We have two primary markets for our products. The first is Ultra-Clean Power consisting of our products operating on clean natural gas or directed biogas across seven distinct and diversified vertical markets. The second primary market is Renewable Power with our products operating on renewable biogas across four distinct and diversified vertical markets. These are summarized as follows:

##### Ultra-Clean Power markets:

- 1) Utilities and Independent Power Producers (IPP)
- 2) Education and Healthcare
- 3) Gas Transmission
- 4) Industrial and Data Centers
- 5) Commercial and Hospitality
- 6) Oil Production and Refining
- 7) Government

##### Renewable Power markets:

- 1) Wastewater
- 2) Food and Beverage
- 3) Agriculture
- 4) Landfill Gas

The utilities and Independent Power Producers segment is our largest vertical market with customers that include utilities on both the East and West coast of the USA such as Dominion (NYSE: D), one of the largest utilities in the

USA, Avangrid Holdings (NYSE: AGR), and NRG Energy (NYSE: NRG), the largest IPP in the USA. In Europe, utility customers include EON Connecting Energies (DAX: EOAN), one of the largest utilities in the world, and Switzerland based ewz. The greatest number of installed DFC plants is in South Korea primarily supplying that nation's electric grid, with the fuel cells' heat typically used in district heating systems to heat and cool nearby facilities. Our partner in South Korea is POSCO Energy Co., LTD. (POSCO Energy), a subsidiary of South Korean-based POSCO (NYSE: PKX), one of the world's largest steel manufacturers.

Our DFC power plants are producing power for a variety of industrial, commercial, municipal and government customers including manufacturing, food processing plants, universities, healthcare facilities and wastewater treatment facilities. These institutions

desire efficient, ultra-clean baseload power to reduce operating expenses, reduce greenhouse gas emissions to meet their sustainability goals, and achieve secure and reliable on-site power. Our products can utilize either renewable biogas generated by the customer on-site or directed biogas, generated at a distant location and transported via the existing gas network.

Wastewater treatment facilities, food and beverage processors, and agricultural operations produce biogas as a byproduct of their operations. Disposing of this greenhouse gas can be harmful to the environment if released into the atmosphere or flared. Our DFC power plants convert this biogas into electricity and heat efficiently and economically. By doing so, DFC plants transform waste disposal challenges into clean energy solutions. The wastewater vertical market is the largest biogas market for DFC power plants. Since our fuel cells operate on the renewable biogas produced by the wastewater treatment process and their heat is used to support daily operations at the wastewater treatment facility, the overall thermal efficiency of these installations is very attractive, supporting economics and sustainability. A 2.8 MW DFC3000 power plant operating on renewable biogas at a waste water treatment facility in California is the world's largest fuel cell plant utilizing on-site renewable biogas.

We estimate that the distributed generation market and geographies in which we compete is approximately an \$18 billion opportunity, composed of \$7 billion of power plant sales and \$11 billion of associated service agreements. We estimate that the market for distributed hydrogen in the geographies where we compete is approximately a \$7 billion opportunity, oriented towards industrial applications at this point in time with transportation application opportunities expanding in the future. We estimate that the market for carbon capture configured fuel cell power plants for coal and gas-fired central generation is approximately \$25 billion assuming only a 1% penetration rate and only 5% carbon capture within the geographies where we do business.

As renewable technologies such as wind and solar power are deployed more widely, the need for a clean, continuous power generation that complements and balances these intermittent sources becomes greater to maintain grid stability. Our installed base includes a number of locations where our customers use DFC plants for meeting power needs that complements their intermittent wind and/or solar power generation.

#### Geographic Markets

We target geographic markets with high urban density that value clean distributed generation. We are pursuing a density strategy, targeting markets with the potential for recurring order flow that justify investment in local service infrastructure. Our target markets currently have regulatory and legislative policy support such as clean air requirements and economic incentives to support the adoption of clean and renewable distributed power generation. Renewable Portfolio Standards (RPS) is a mechanism designed to promote the adoption of renewable power generation and is one market enabler for demand of our power generation solutions. Fuel cells can play a role in meeting RPS clean power mandates by generating highly efficient, clean electricity continuously and near the point of use.

United States: We have active business development activities in the Northeast and on the West Coast where high population density, higher energy costs, the need for distributed generation solutions with a small footprint, and public policy value our product offerings. Most of our installed base in the USA is located in California and Connecticut, both of which have enacted RPS programs. As states look to meet their RPS requirements and utilities further deploy distributed generation to meet consumer demand and improve the resiliency of their service network, we see significant opportunities to grow our U.S. footprint. Trends away from central generation to a distributed generation model are supportive of demand and our initiatives to continue to improve affordability are expected to lead to increased adoption. Both our standard DFC plants and the carbon capture configuration can support the Environmental Protection Agency Clean Power Plan, announced in mid-2015.

South Korea and the Broader Asia Market: High efficiency fuel cells are well-suited for South Korea due to the need to import fuel for power generation, ease of siting in populated areas, and high urban density that makes siting transmission more difficult. Intermittent renewable technologies such as solar and wind are not as well suited due to the geography (high urban densities limit available land for power generation) and climate/topography. The South Korean government has made clean distributed generation power sources a priority to support its growing power needs while minimizing additional investment and congestion of the transmission grid. Fuel cells address these needs and have been designated a key economic driver for the country due to their ultra-clean emissions, high efficiency and reliable distributed generation capabilities that are helping South Korea achieve its RPS and electricity generation goals.

The RPS in South Korea requires an increase of new and renewable power generation to 10% by 2024 from 2% in 2012. The program mandates the addition of 0.5% of renewable power generation per year through 2016, which equates to approximately 350 megawatts, increasing to 1% per year through 2022 or approximately 700 megawatts per year. Fuel cells operating on natural gas and biogas qualify under the mandates of the program.



Select Asian markets with high urban densities, lack of domestic fuel sources, movement away from nuclear power, and a need for cleaner power to reduce smog represent market opportunities. Highly efficient fuel cells maximize power output from high cost imported fuel, and do so without the need to add costly transmission.

Europe: The European power generation market values distributed generation, efficiency and low emissions and represents opportunity for stationary fuel cell power plants, particularly Germany, as it transitions away from nuclear power generation and struggles to integrate a significant amount of intermittent power generation capacity; the United Kingdom, as it works to achieve aggressive carbon reduction goals; Italy with growing adoption of distributed generation; and other West European countries. FuelCell Energy Solutions, GmbH (FCES), with its German manufacturing base, is the sales, manufacturing and service business for the European Served Area for FuelCell Energy, Inc. FCES is a joint venture that is 89% owned by FuelCell Energy and 11% owned by German-based Fraunhofer Institute for Ceramic Technologies and Systems IKTS (Fraunhofer IKTS). Fraunhofer IKTS focuses on the development of new energy supply systems using ceramic system components, including fuel cells. As discussed in greater detail in the following section, Fraunhofer IKTS has expertise in fuel cell technology and is assisting with the development of the European market for our products.

### Strategic Alliances

We leverage our core capabilities by forging strategic alliances with carefully selected business partners that bring power generation experience, financial resources, and market access. Our partners typically have extensive experience in developing and selling power generation products. We believe our strength in the development of fuel cell products; coupled with our partners' understanding of broad range of markets and customers, products and services, enhances the sales and development of our products, as well as providing endorsement of our power generation solutions. Our global business partners include:

NRG Energy: In 2013, we entered into a teaming and co-marketing agreement with NRG Energy (NYSE: NRG), encompassing both direct sales to NRG Energy customers in North America as well as sales to NRG Energy, who will own the fuel cell power plants and sell the power and heat to the end user under power purchase agreements. NRG owns approximately 1.4 million shares of our common stock or approximately 5% of our outstanding shares, extends a \$40 million revolving construction and term financing facility to FuelCell Finance, our wholly-owned subsidiary, and a senior NRG executive is a member of the FuelCell Energy Board of Directors. NRG is the largest IPP in the U.S. with approximately 50,000 megawatts of generation capacity and almost three million retail and commercial customers. We are actively marketing with NRG Energy to their existing customer base.

POSCO Energy: We partner with POSCO Energy, an IPP with 2014 annual revenues of approximately \$2.2 billion and a subsidiary of South Korean-based POSCO, one of the world's largest steel manufacturers (NYSE: PKX), with 2014 annual revenue of approximately \$60 billion. POSCO Energy owns 2.6 million of our common shares or approximately 10% of our outstanding shares. POSCO Energy has extensive experience in power plant project development, owning and operating power plants in multiple countries and is the largest independent power producer in South Korea.

Our relationship with POSCO Energy has expanded to support growing market demand for clean distributed generation. The relationship began in 2003 with the sale of a sub-megawatt demonstration plant and South Korea is now our largest market, including a 59 megawatt facility, the world's largest fuel cell park consisting of 21 DFC3000 power plants. POSCO Energy is a licensed manufacturer for Asia of our products and collaborates with the Company on many market and product development initiatives.

Fraunhofer IKTS: The Fraunhofer Institute for Ceramic Technologies and Systems IKTS is the minority shareholder in FCES. Fraunhofer IKTS, with its staff of approximately 600 engineers, scientists and technicians, is a world leading

institute in the field of advanced ceramics for high tech applications, including fuel cells. The parent organization, Fraunhofer, was founded in 1949 and is Europe's largest application-oriented research organization with an annual research budget of €2 billion (approximately \$2.4 billion) and approximately 24,000 staff, primarily scientists and engineers. Fraunhofer maintains 66 research centers and representative offices in Europe, USA, Asia and the Middle East.

Fraunhofer IKTS contributed proprietary carbonate fuel cell technology and patents to FCES. In addition, Fraunhofer IKTS is contributing their expertise and extensive research and development capabilities with fuel cells and materials science as well as sharing their industry and government relationships.

E.ON Connecting Energies GmbH : During fiscal year 2015, we executed a Project Development Agreement with E.ON Connecting Energies GmbH to offer decentralized CHP solutions with megawatt and multi-megawatt fuel cell power plants to EON's existing and prospective customer base, via a power purchase agreement financing or leasing structure. The first sale announced under this agreement was a CHP configured fuel cell plant installation at a German manufacturing company. E.ON

will own the power plant and FuelCell Energy Solutions will install, operate and maintain the plant under a long-term service agreement. With approximately 59,000 megawatts of power generation assets, a presence in more than 14 countries, and more than 58,000 employees, E.ON is one of the world's largest utilities.

### Business Strategy

Our business model consists of growing and expanding diverse revenue streams, selectively utilizing strategic partnerships for market development and cost reductions, protecting and leveraging intellectual property to generate value, and identifying and developing new markets for our core technology. Revenue streams include power plant and component sales, engineering, procurement and construction (EPC) revenue, royalty and license revenue, service revenue including long term service agreements and the sale of power under PPA's, and revenue from public and private industry research contracts under Advanced Technologies.

Our Company vision is to provide ultra-clean, highly efficient, reliable distributed power generation at a cost per kilowatt hour that is less than the cost of grid-delivered electricity in our target markets. We have a clear path to attaining this vision through increased market adoption and continued reduction in the Levelized Cost of Energy (LCOE) for our fuel cell projects. We believe our vision can be achieved more broadly and without incentives, at a global production volume of approximately 210 megawatts annually.

### Market adoption

We target vertical markets and geographic regions that value clean distributed generation, are located where there is a premium to the cost of grid-delivered electricity, and are aligned with regulatory frameworks that harmonize energy, economic and environmental policies. Our business model addresses all three of these policy areas with highly efficient and affordable distributed generation that offers local job creation potential and delivers de-centralized power in a low-carbon, virtually pollutant-free manner. Geographic markets that meet these criteria and where we are already well established include South Korea, the Northeast USA and California. We have also installed and are operating plants in the United Kingdom, Germany, and Switzerland and are pursuing further opportunities in Western Europe and certain other states in the USA. We selectively partner with some of the leading power generation companies in our target markets to facilitate demand and deploy our projects.

While the Company has made significant progress with reducing costs and creating markets since the commercialization of our products in 2003, we face two primary challenges in growing the adoption of our distributed power generation solutions, which are (1) the need to further reduce the total cost of ownership, and (2) the continued education and acknowledgment of the value that our solutions can provide. The business model for the generation and delivery of electricity for over a century has been central generation, which is large scale power generation in distant locations away from urban areas with transmission and distribution to the end users. While distributed generation has the potential to disrupt existing utility models, it is being embraced in an increasing number of markets to improve grid operations. We work with utilities and IPPs to demonstrate how our solutions complement central generation by incrementally adding clean power generation when and where needed. It takes time to build awareness with prospective customers and develop an operating history. We believe that we have a strong business model and strategy, demonstrated project development execution and plant operating performance and committed partners which will enable the Company to overcome these challenges and grow into a sustainable business.

### Levelized Cost of Energy

Our fuel cell projects are delivering power at a rate comparable to pricing from the grid in our targeted markets. Federal and state level programs that help to support adoption of clean distributed power generation lead to below-grid pricing. We measure power costs by calculating the Levelized Cost of Energy (LCOE) over the life of the project. In order to broaden the appeal of our products, we need to further reduce our LCOE to be below the grid without

incentives.

The Company is integrated across substantially the entire value chain for our projects. We design and own our proprietary fuel cell technology, we sell direct and through partners, we develop and execute comprehensive fuel cell turn-key projects, and manufacture, install, operate and service our plants. Given this level of integration, there are multiple areas and opportunities for cost reductions. There are four primary elements to LCOE for our fuel cell projects, including 1) Capital Cost, 2) Operations and Maintenance, 3) Fuel, and 4) Cost of Capital. We are actively managing and reducing costs in all four areas as follows:

Capital Cost - Capital costs of our projects include cost to manufacture, install, interconnect, and to provide any on-site application requirements such as configuring for a micro-grid and/or heating and cooling applications. We have reduced the product cost of our megawatt-class power plants by more than 60% from the first commercial installation in 2003 through our ongoing product cost reduction program, which involves every aspect of our business including engineering, procurement and manufacturing. Further cost reductions will be primarily obtained from reducing the per-unit cost of materials purchasing from higher volumes, supported by continued actions with engineering and manufacturing cost reductions. We recently

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integrated a global supply chain with our Asian partner, POSCO Energy so as Asian production leads to increased levels of purchasing from the integrated global supply chain, both FuelCell Energy and POSCO Energy will benefit with reductions in LCOE by obtaining lower pricing tiers from suppliers from the greater combined purchasing volume. On-site, our experienced Engineering, Procurement and Construction (“EPC”) team has substantial experience in working with contractors and local utilities to safely and efficiently execute our projects and we expect continued cost reduction in this area with experience and continued transition to multi-MW fuel cell parks. In addition to these cost reduction efforts, our technology roadmap includes plans to increase the output of our power plants which will add further value for our customers and reduce LCOE.

**Operations and Maintenance** - We provide services to remotely monitor, operate, and maintain customer power plants to meet specified performance levels. Operations and maintenance (O&M) is a key driver for power plants to deliver on projected electrical output and revenues for our customers. Many of our service agreements include guarantees for system performance levels including electrical output. While the electrical and mechanical balance of plant (BOP) in our DFC power plants is designed to last over 25 years, the fuel cell modules are currently scheduled for replacement every five years, the price of which is included in our service agreements. Customers benefit from predictable savings and financial returns over the life of the contract and minimal risk. Our goal is to optimize our customers’ power plants to meet expected operating parameters throughout the plant’s operational life. We expect to continually drive down the cost of O&M with an expanding fleet which will leverage our investments in this area. Additionally, we are actively developing fuel cells that have a longer life which will reduce O&M costs by increasing our scheduled module replacement period to seven years.

**Fuel** - Our fuel cells directly convert chemical energy (fuel) into electricity, heat, water and in certain configurations, other value streams such as high purity hydrogen. Because fuel cells generate power electrochemically rather than by combusting (burning) fuels, they are more efficient in extracting energy from fuels and produce less carbon dioxide (CO<sub>2</sub>) and only trace levels of pollutants compared to combustion-type power generation. Our power plants operate on a variety of existing and readily available fuels including natural gas, renewable biogas, directed biogas and propane. Our core DFC power plants deliver electrical efficiencies of 47% and hybrid applications and advanced configurations are capable of delivering electrical efficiencies of 60% or greater. In a CHP configuration, our plants can deliver up to 90% total system efficiency, depending on the application. Increasing electrical efficiency and reducing fuel costs is a key element of our operating cost reduction efforts.

**Cost of Capital** - Most of our MW scale projects are financed either by the off-taker that owns the asset or a project investor that owns the asset and sells energy to the off-taker. Other ownership models include utility ownership where the fuel cell project is added to the utility rate-base, direct ownership by the end-user of the power, or we hold a project that we developed, retaining the revenue and associated margins from the sale of power and heat. We are witnessing greater interest in the pay-as-you-go approach by end users that prefer to avoid the up-front investment in power generation assets. Our ability to provide the end-user with financing options or to retain projects that we develop helps to accelerate order flow. Our projects create predictable recurring revenue that is not dependent on weather or time of the day, investment tax credits, accelerated tax depreciation or other incentives. Credit risk is mitigated by contracting with customers with strong credit. In addition, we offer meaningful system-level output performance guarantees over the life of our projects. As a result, cost of capital for our projects has declined over time given our operating experience. With continued execution, we expect our ability to attract bank credit, financial and project performance credibility to continue to improve which we expect will lead to further decreases in financing costs.

Today, on an unsubsidized basis, our LCOE is approximately \$0.12/kWh with natural gas at \$4.50MMBtu or \$0.11/kWh at \$2.50/MMBtu; each \$2/MMBtu change equates to about \$0.01/kWh. When combined with incentives, this price is competitive in our target markets and creates an attractive value proposition for our customers. The LCOE is approximately 1/3 fuel costs, 1/3 for both cost of capital and capital costs, and 1/3 for operations and maintenance.

As a result of our cost reduction and growth strategies, we are working to reduce our LCOE without incentives to \$0.09-\$0.11/kWh when the combined global production volume reaches 210 MW annually, assuming natural gas prices of \$4.00 to \$6.00 per million Btu. We expect LCOE reductions to be similar on a percentage basis in Europe and Asia. A LCOE in the range of \$0.09-\$0.11/kWh will enable pricing below the electric grid without incentives, which we expect will accelerate adoption and broaden potential target markets.

Our core fuel cell platform is versatile and part of our strategy is finding new applications for our power generation solution. Advanced Technology Programs, discussed in a following section, identifies and obtains private and government funding sources to commercialize new applications of the power plants, such as distributed hydrogen and carbon capture. Energy storage applications are also being pursued utilizing both carbonate and solid oxide fuel cell technology.

## Products

Our core fuel cell products (Direct FuelCell® or DFC® power plants) offer ultra-clean, highly efficient power generation for customers including the 2.8 MW DFC3000®, the 1.4 MW DFC1500® and the 300 kW DFC300® plus derivations of this core DFC product for specific applications. The plants are scalable for multi-megawatt utility scale applications or on-site CHP generation for a broad range of applications. We can provide a comprehensive and complete turn-key fuel cell project that includes project development, engineering procurement and construction (EPC) services, O&M and project finance.

Our proprietary DFC technology generates electricity directly from a fuel, such as natural gas or renewable biogas, by reforming the fuel inside the fuel cell to produce hydrogen, which is why it is called a Direct FuelCell. This “one-step” reforming process results in a simpler, more efficient, and cost-effective energy conversion system compared with external reforming fuel cells. Additionally, natural gas has an established infrastructure and is readily available in our existing and target markets. The Direct FuelCell operates at approximately 1,200° Fahrenheit. An advantage of high temperature fuel cells is that they do not require the use of precious metal electrodes required by lower temperature fuel cells, such as proton exchange membrane (PEM) and phosphoric acid. As a result, we are able to use less expensive and readily available industrial metals as catalysts for our fuel cell components. In addition, our DFC fuel cell produces high quality byproduct heat (700°F) that can be utilized for CHP applications using hot water, steam or chiller water for facility heating and cooling.

The DFC product line is a global platform based on carbonate fuel cell technology. Utilizing a standard design globally enables volume-based cost reduction and optimal resource utilization. Our power plants utilize a variety of available fuels to produce electricity electrochemically, in a process that is highly efficient, quiet, and due to the avoidance of combustion, produces virtually no pollutants. Thus, our plants generate more power and fewer emissions for a given unit of fuel than combustion-based power generation of a similar size, making them economical and environmentally responsible power generation solutions. In addition to electricity, our standard configuration produces high quality heat, suitable for making steam or hot water for facility use as well as absorption cooling. System efficiencies can reach up to 90%, depending on the application, when configured for CHP.

We market different configurations of the DFC plants to meet specific market needs, including:

**On-Site Power (Behind the Meter):** Customers benefit from improved power reliability and energy security from on-site power that reduces reliance on the electric grid. Utilization of the high quality heat produced by the fuel cell in a CHP configuration supports economics and sustainability goals by lessening or even avoiding the need for combustion-based boilers for heat and their associated cost, pollutants and carbon emissions. On-site CHP power projects generally range in size from a single 1.4 MW DFC1500 to combining multiple 2.8 MW DFC3000 power plants for projects up to about 14 MW in size.

**Utility Grid Support:** The DFC power plants are scalable, which enables siting multiple fuel cell power plants together in a fuel cell park. Fuel cell parks enable utilities to add clean and continuous power generation when and where needed and enhance the resiliency of the electric grid by reducing reliance on large central generation plants and the associated transmission grid. Consolidating certain steps for multiple plants, such as fuel processing, reduces the cost per megawatt hour for fuel cell parks compared to individual fuel cell power plants. Fuel cell park examples include a five plant, 14.9 MW fuel cell park in Bridgeport, Connecticut that is supplying the electric grid, and multiple fuel cell parks in South Korea in excess of 10 megawatts each that supply power to the electric grid and high quality heat to district heating systems, such as a 59 MW installation which is consisting of 21 power plants, the world’s largest. By producing power near the point of use, our fuel cells help to ease congestion of the electric grid and can also enable the smart grid via distributed generation combined with the continuous monitoring and operation by our service organization. Thus, our solutions can avoid or reduce investment in new central generation and transmission

infrastructure which is costly, difficult to site and expensive to maintain. Deploying our DFC power plants throughout a utility service territory can also help utilities comply with government-mandated clean energy regulations and meet air quality standards. A 10 MW fuel cell park only requires about one acre of land whereas an equivalent size solar array requires up to ten times as much land, illustrating how fuel cell parks are easy to site in high density areas with constrained land resources, and adjacent to the demand source thereby avoiding costly transmission construction. Our products can be part of a total on-site power generation solution with our high efficiency products providing continuous power, and can be combined with intermittent power generation, such as solar or wind, or less efficient combustion-based equipment that provides peaking or load following power. The DFC plants can also be configured as a micro-grid, either independently or with other forms of power generation. We possess the capabilities to model, design and operate the micro grid and have multiple examples of our DFC plants operating within micro-grids, some individually and some with other forms of power generation.

**Higher Electrical Efficiency - Multi-megawatt applications:** The HEFC™ (High Efficiency Fuel Cell) system is configured with a series of three fuel cell modules that operate in sequence, yielding a higher electrical efficiency than the standard DFC3000 configuration of two fuel cell modules operating in parallel. The heat energy and unused hydrogen from two fuel cell modules is supplied to the third module, along with some natural gas to generate additional electricity. The HEFC



configuration is designed to extract more electrical power from each unit of fuel with electrical efficiency of approximately 60%. The HEFC system is targeted at applications with large load requirements and limited waste heat utilization such as utility/grid support or data centers.

**Gas Pipeline Applications:** DFC-ERG® (Direct FuelCell Energy Recovery Generation™) (DFC-ERG) power plants are used in natural gas pipeline applications, harnessing energy that is otherwise lost during the station's natural gas pressure-reduction ("letdown") process. Also, thermal energy produced as a byproduct of the fuel cell's operation supports the letdown process, improving the station's carbon footprint and enhancing the project's economics. Depending on the specific gas flows and application, the DFC-ERG configuration is capable of achieving electrical efficiencies up to 70%. A 3.4 megawatt DFC-ERG system is being installed in Connecticut, purchased by UIL Holdings.

**Carbon Capture:** The DFC carbon capture system separates CO<sub>2</sub> from the flue gases of natural gas or coal-fired power plants or industrial facilities while producing ultra-clean power. Exhaust flue gas from the coal/gas plant is supplied to the cathode side of the fuel cell, instead of ambient air. The CO<sub>2</sub> in the exhaust is transferred to the anode side of the fuel cell, where it is much more concentrated and easy to separate. The CO<sub>2</sub> from the anode exhaust stream is liquefied using common chilling equipment. The purified CO<sub>2</sub> is then available for enhanced oil recovery, industrial applications or sequestration. Carbon concentration and capture within the carbonate fuel cell is a side reaction of the natural gas-fueled power generation process. Carbon capture systems can be implemented in increments, starting with as little as 5% capture with no appreciable change in the cost of power and with minimum capital outlay. Our solution generates a return on capital resulting from the fuel cell's production of electricity rather than increase in operating expense required by other carbon capture technologies, and can extend the life of existing coal-fired power plants, enabling low carbon utilization of domestic coal and gas resources. We are currently evaluating sites with coal plant operators for the first installation of a carbon capture configured DFC3000 power plant, which will be partially funded by the US Department of Energy under an award received in September of this year.

**Distributed Hydrogen:** The DFC fuel cells internally reform the fuel source (i.e. natural gas or biogas) to obtain hydrogen. DFC plants can be configured for tri-generation, supplying power, heat and high purity hydrogen. Power output is modestly reduced to support hydrogen generation that can then be used for industrial applications such as metal or glass processing, material handling applications or petrochemicals, or transportation applications. Siting the tri-generation fuel cell plant at a source of biogas such as wastewater treatment facilities, results in renewable hydrogen for transportation, an attractive proposition to regulatory and legislative officials and car companies. After operating two sub-megawatt systems - one for renewable vehicle fueling and one producing industrial hydrogen for our Torrington facility - we are now evaluating a variety of possible sites for the first commercial MW-scale application of the technology.

We are offering a dispatchability option for utility-scale applications where some degree of power production cycling is valued on a pre-determined schedule to accommodate periods of lower power demand. Our power plants can also provide reactive power avoiding the need for separate static or dynamic VAR (volt-ampere reactive) compensation systems.

In summary, our solutions offer many advantages:

**Distributed generation:** Generating power near the point of use improves power reliability and energy security and lessens the need for costly and difficult-to-site generation and transmission infrastructure, enhancing the resiliency of the grid.

**Ultra-clean:** Our DFC power plants produce electricity electrochemically – without combustion – directly from readily available fuels such as natural gas and renewable biogas in a highly efficient process. The virtual absence of pollutants facilitates siting the power plants in regions with clean air permitting regulations and is an important public health benefit.

**High efficiency:** Fuel cells are the most efficient power generation option in their size class, providing the most power from a given unit of fuel, reducing fuel costs. This high electrical efficiency also reduces carbon emissions compared

to less efficient combustion-based power generation.

**Combined heat and power:** Our power plants provide both electricity and usable high quality heat/steam from the same unit of fuel. The heat can be used for facility heating and cooling or further enhancing the electrical efficiency of the power plant in a combined cycle configuration. When used in CHP configurations, system efficiencies can reach up to 90%, depending on the application.

**Reliability / continuous operation:** Our DFC power plants improve power reliability and energy security by lessening reliance on transmission and distribution infrastructure of the electric grid. Unlike solar and wind power, fuel cells are able to operate continuously regardless of weather or time of day.

**Fuel flexibility:** Our DFC power plants operate on a variety of existing and readily available fuels including natural gas, renewable biogas, directed biogas and propane.

- **Scalability:** Our DFC power plants are scalable, providing a cost-effective solution to adding power incrementally as demand grows, such as multi-megawatt fuel cell parks supporting the electric grid.

**Quiet operation:** Because they produce power without combustion and contain very few moving parts, our DFC power plants operate quietly and without vibrations.

**Easy to site:** Our DFC power plants are relatively easy to site by virtue of their ultra-clean emissions profile, modest space requirements and quiet operation. Space requirements are about one tenth of the land required for a solar array offering a

similar rated output. These characteristics facilitate the installation of the power plants in urban locations with scarce and expensive land.

#### DFC Emissions Profile

Fuel cells are devices that directly convert chemical energy (fuel) into electricity, heat and water. Because fuel cells generate power electrochemically rather than by combusting (burning) fuels, they are more efficient in extracting energy from fuels and produce less carbon dioxide (CO<sub>2</sub>) and only trace levels of pollutants compared to combustion-type power generation. The following table illustrates the favorable emission profile of our DFC and high efficiency power plants:

	Emissions (Lbs. Per MWh)				
	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>	CO <sub>2</sub>	CO <sub>2</sub> with CHP
Average U.S. Fossil Fuel Plant	5.06	11.6	0.27	2,031	NA
Microturbine (60 kW)	0.44	0.008	0.09	1,596	520 - 680
Small Gas Turbine	1.15	0.008	0.08	1,494	520 - 680
DFC <sup>®</sup> Power Plant	0.01	0.0001	0.00002	940	520 - 680
HEFC <sup>™</sup> High Efficiency Fuel Cell Plant	0.01	0.0001	0.00002	740	520 - 680

For power plants operating on natural gas, higher fuel efficiency results in lower CO<sub>2</sub>, and also results in less fuel needed per kWh of electricity generated and Btu of heat produced. The high efficiency of our products results in significantly less CO<sub>2</sub> per unit of power production compared to the average U.S. fossil fuel power plant, and the carbon emissions are reduced even further when configured for combined heat and power. When operating on renewable biogas, government agencies and regulatory bodies generally classify our power plants as carbon neutral due to the renewable nature of the fuel source.

High electrical efficiency reduces customers' exposure to volatile fuel costs, minimizes operating costs, and provides maximum electrical output from a finite fuel source. Our power plants achieve electrical efficiencies of 47% to 60% or higher depending on configuration, location, and application, and up to 90% total efficiency in a CHP configuration, depending on the application. The electric grid in the United States is only approximately 36% electrically efficient and does not support CHP configurations.

#### Manufacturing

We design and manufacture the core DFC fuel cell components that are stacked on top of each other to build a fuel cell stack. For MW size power plants, four fuel cell stacks are combined to build a fuel cell module. To complete the power plant, the fuel cell module or modules are combined with the BOP. The mechanical BOP processes the incoming fuel such as natural gas or renewable biogas and includes various fuel handling and processing equipment such as pipes and blowers. The electrical BOP processes the power generated for use by the customer and includes electrical interface equipment such as an inverter. The BOP components are either purchased directly from suppliers or the manufacturing is outsourced based on our designs and specifications. This strategy allows us to leverage our manufacturing capacity, focusing on the critical aspects of the power plant where we have specialized knowledge and expertise. BOP components are shipped directly to a customer's site and are assembled with the fuel cell module into a complete power plant.

#### Cell Manufacturing and Capacity

Our strategy is to produce power for prices that are below typical grid prices. Without incentives, annual global production of approximately 210 MW will provide the needed cost reductions to support these price targets. Higher purchasing volume reduces the per unit cost of raw materials and componentry. As explained below, the North

American production facility has an annual capacity of 100 MW with an expansion underway, and the Asian manufacturing, owned and operated by our partner, POSCO Energy, has 100 MW of annual capacity in a building that is sized for 200 MW annually. Our global cell manufacturing capabilities are described below:

North America: We operate a 65,000 square-foot manufacturing facility in Torrington, Connecticut where we produce the DFC cell packages and assemble the fuel cell modules. The completed modules are then conditioned at our facility in Danbury, Connecticut for the final step in the manufacturing process and shipped to customer sites. Our overall DFC manufacturing process in North America (module manufacturing, final assembly, testing and conditioning) has a production capacity of 100 MW per year, with full utilization under its current configuration.

We are undertaking a multi-year project to reduce costs and position ourselves for future growth in two phases. The first phase is underway to add a 102,000 square foot addition of our North American manufacturing facility. The building expansion will

allow for consolidation of warehousing and service facilities enabling manufacturing efficiencies by providing the needed space to re-configure production. The fuel cell module conditioning process will be moved to Torrington from Danbury, for example. As demand supports, the second phase will involve the addition of manufacturing equipment to increase annual capacity to at least 200 megawatts. The State of Connecticut is extending two low interest long term loans to us for each of the two phases and up to \$10 million of tax credits. Each loan is \$10 million, with an interest rate of 2.0% and a term of 15 years. Up to 50% of the principal is forgivable if certain job creation and retention targets are met.

The Torrington production facility, the Danbury corporate headquarters and research and development, and Field Service are ISO 9001:2008 certified, reinforcing the tenets of the FuelCell Energy Quality Management System and our core values of continual improvement and commitment to quality.

South Korea: Given the strong demand in Asia, POSCO Energy built a cell manufacturing facility in Pohang, Korea and the facility became operational in late 2015. Annual production capacity is 100 MW and the building is sized to accommodate up to 200 MW of annual production to support future growth in the Asian market.

Additionally, under a multi-year order that began in 2012 and concludes at the end of 2016, DFC components are manufactured in the USA and then shipped to South Korea for assembly of modules and conditioning.

Europe: We have a 20,000 square-foot manufacturing facility in Taufkirchen, Germany that has the capability to perform final module assembly for up to 20 MW per year of sub-megawatt fuel cell power plants for the European market.

#### Raw Materials and Supplier Relationships

We use various commercially available raw materials and components to construct a fuel cell module, including nickel and stainless steel, which are key inputs to our manufacturing process. Our fuel cell stack raw materials are sourced from multiple vendors and are not considered precious metals. We have a global integrated supply chain that serves North American, European, and Asian production facilities. In addition to manufacturing the fuel cell module in our Torrington facility, the electrical and mechanical BOP are assembled by and procured from several suppliers. All of our suppliers must undergo a qualification process. We continually evaluate new suppliers and are currently qualifying several new suppliers. We purchase mechanical and electrical balance of plant componentry from third party vendors, based on our own proprietary designs.

#### Product Cost Reduction

Our overall cost reduction strategy is based on the assumption that continued increases in production will result in further economies of scale, reducing the per-unit cost of the raw materials and componentry we purchase. In addition, our cost reduction strategy relies on implementation of further advancements in our manufacturing process, global competitive sourcing integrated with POSCO sourcing volumes, engineering design and technology improvements (including modules with longer life and increased module power output). We have a broad range of initiatives to reduce costs and improve our overall project affordability.

Improvements in affordability, driven by product cost reductions, are critical for us to accelerate market adoption of our fuel cell products and attain company profitability. Cost reductions will also reduce or eliminate the need for incentive funding programs which currently allow us to price our products to compete with grid-delivered power and other distributed generation technologies.

We have reduced the product cost of our megawatt-class power plants by more than 60% from the first commercial installation in 2003 through engineering redesign, sourcing, and improved power output and module life. Growing purchasing volume has reduced costs and strengthened the supply chain by enabling direct purchasing rather than through distributors and the ability to access stronger national and international suppliers rather than small local or

regional fabricators. Once POSCO's Asian manufacturing facility is operational, we expect that increased levels of purchasing from the integrated global supply chain, whether by POSCO Energy or the Company, will benefit both parties by obtaining lower pricing tiers from suppliers from the greater combined purchasing volume.

#### Engineering, Procurement and Construction

We provide customers with complete turn-key solutions including the development, engineering, procurement, construction, operations and interconnection for our fuel cell projects. From an Engineering, Procurement and Construction (EPC) standpoint, FCE has an extensive history of safe and timely delivery of turnkey projects. We have developed relationships with many design firms and licensed general contractors and have a repeatable, safe, and efficient execution philosophy that has been successfully demonstrated multiple times in many different U.S. states and some European countries with an exemplary safety record. The ability to rapidly and safely execute installations minimizes high cost construction period financing and can assist customers in certain situations when the commercial operating date is time sensitive.

## Services and Warranty Agreements

We offer a comprehensive portfolio of services including: engineering, project management and installation, long-term operating and maintenance programs, including trained technicians that remotely monitor and operate the plants around the world 24 hours a day and 365 days a year. We employ field technicians to service the power plants and maintain service centers near our customers to ensure high availability of our plants. Virtually all of our customers purchase service agreements ranging up to 20 years. Pricing for service contracts is based upon the markets in which we compete and includes all future maintenance and fuel cell module exchanges. While the electrical and mechanical BOP in our DFC power plants is designed to last about 25 years, the current fuel cell modules must be replaced approximately every five years.

Under the typical provisions of the service agreements, we provide services to monitor, operate and maintain customer power plants to meet specified performance levels. Operations and maintenance is a key driver for power plants to deliver their projected revenue and cash flows. Many of our service agreements include guarantees for system performance, including electrical output and heat rate. Should the power plant not meet the minimum performance levels, we may be required to replace the fuel cell module with a new or used replacement and/or pay performance penalties. The service aspects of our business model provide a recurring and predictable revenue stream for the Company. We have committed future production for scheduled fuel cell module exchanges under service agreements through the year 2036. The pricing structure of the service agreements incorporates these scheduled fuel cell module exchanges and the committed nature of this production facilitates our production planning. Our goal is to optimize our customers' power plants to meet expected operating parameters throughout their contracted project term.

In addition to our service agreements, we provide for a warranty for our products for a specific period of time against manufacturing or performance defects. Our warranty is limited to a term generally 15 months after shipment or 12 months after acceptance of our products, except for fuel cell kits. We warranty fuel cell kits and components for 21 months from the date of shipment due to the additional shipping and customer manufacture time required. We accrue for estimated future warranty costs based on historical experience.

## License Agreements and Royalty Income

We receive license fees and royalty income from POSCO Energy related to manufacturing and technology transfer agreements entered into in 2007, 2009 and 2012. The Cell Technology Transfer Agreement ("CTTA"), executed in October 2012, provides POSCO Energy with the technology to manufacture Direct FuelCell power plants in South Korea and the market access to sell power plants throughout Asia for an initial term of 15 years with two renewal options of five years each. In conjunction with the CTTA, the Company receives a 3.0% royalty on POSCO Energy net product sales as well as a royalty on each scheduled fuel cell module replacement under service agreements for modules that were built by POSCO Energy and installed at any plant in Asia under terms of the Master Service Agreement between the Company and POSCO Energy.

We expect royalties to be a growing revenue and margin stream for the Company as POSCO Energy continues to develop the market in Asia and deploy DFC power plants. As we expand into other vertical or geographic markets, we may pursue additional licensing and royalty opportunities.

## Advanced Technology Programs (Third Party Funded Research and Development)

We undertake both public and privately-funded research and development to expand the markets for our DFC power plants, reduce costs, and expand our technology portfolio in complementary high-temperature fuel cell systems. This research builds on the versatility of our fuel cell power plants and contributes to the development of potentially new end markets. Our power plants provide various value streams including clean electricity, high quality usable heat, hydrogen suitable for vehicle fueling or industrial purposes as well as use of DFC power plants to concentrate carbon dioxide from coal and natural gas fired power plants. Our Advanced Technology Programs are focused on three strategic areas for commercialization within a reasonable timeframe: (1) Distributed hydrogen production,

compression, and recovery, (2) Carbon capture for emissions reduction and power generation and (3) Solid oxide fuel cells (SOFC) for stationary power generation and energy storage. The revenue and associated costs from government and third party sponsored research and development is classified as “Advanced technologies contract revenues” and “Cost of advanced technologies contract revenues”, respectively, in our consolidated financial statements.

We have worked on technology development with various U.S. government departments and agencies, including the Department of Energy (DOE), the Department of Defense (DOD), the Environmental Protection Agency (EPA), the Defense Advanced Research Projects Agency (DARPA), Office of Naval Research (ONR), and the National Aeronautics and Space Administration (NASA). Government funding, principally from the DOE, provided 6%, 6%, and 5% of our revenue for the fiscal years ended 2015, 2014, and 2013, respectively.



Significant commercialization programs on which we are currently working include:

Distributed Hydrogen production, compression, and recovery - On-site or distributed hydrogen generation represents an attractive market for the DFC technology. Our high temperature DFC power plant generates electricity directly from a fuel by reforming the fuel inside the fuel cell to supply hydrogen for the electrical generation process. Gas separation technology can be added to capture hydrogen that is not used by the electrical generation process, and we term this configuration DFC-H<sub>2</sub>. This value-added proposition may be compelling for industrial users of hydrogen and transportation applications, further summarized as follows:

**Industrial Applications:** We are currently operating a tri-generation DFC300-H<sub>2</sub> power plant at our Torrington manufacturing facility, utilizing natural gas to supply 1) electricity for the facility, 2) heat for the building, and 3) hydrogen for the manufacturing process, replacing hydrogen that was delivered by diesel truck. The installation is a showcase for industrial users of hydrogen to visit. The project is supported by the DOE and the State of Connecticut.

**Vehicle fueling Applications:** A tri-generation DFC300-H<sub>2</sub> power plant completed a three year demonstration at the Orange County Wastewater Treatment Facility in Irvine, California, utilizing renewable biogas to supply hydrogen for use in fuel cell vehicle fueling and clean renewable electricity. The demonstration was performed under sub-contract to Air Products (NYSE: APD) with funding provided by the DOE, California Air Resources Board, South Coast Air Quality Management District, the Orange County Sanitation District, and Southern California Gas Company.

**Carbon Capture -** Coal and natural gas are abundant, low cost, domestic resources that are widely used to generate electricity, but with a significant carbon footprint. Cost effective and efficient carbon capture from coal-fired and gas-fired power plants potentially represents a large global market because it could enable clean use of these domestic fuels. Our carbonate fuel cell technology separates and concentrates carbon dioxide (CO<sub>2</sub>) as a side reaction during the power generation process. DFC carbon capture research conducted by us has demonstrated that this is a viable technology for the efficient separation of CO<sub>2</sub> from coal or natural gas power plant exhaust streams. Capturing CO<sub>2</sub> as a side reaction while generating additional valuable power is an approach that could be more cost effective than other systems which are being considered for carbon capture. We recently received an award from the US Department of Energy to design and build the first MW-scale carbon capture system, after having proven the technology in cell and sub-megawatt stack tests. The project will be installed at an operating coal fired power plant, and we are currently in discussions with a number of possible utility site hosts. Following the DOE-supported project - which will be based on one DFC3000 plant modified for carbon capture - a second phase is planned which will involve the installation of up to eleven additional fuel cell power plants, for 25 megawatts of fuel cell power plants in total.

**SOFC development and commercialization:** We are working towards commercialization of solid oxide fuel cell technology to target sub-megawatt commercial applications including smaller wastewater treatment facilities that do not have enough gas production to support a multi-megawatt solution and storage applications utilizing hydrogen. The potential market opportunity for sub-megawatt applications is for customers that need on-site power generation in either combined heat and power or electric-only configurations. SOFC technology is complementary to our carbonate technology based MW scale DFC product line and affords us the opportunity to leverage our field operating history, existing expertise in power plant design, fuel processing and high volume manufacturing and will leverage our existing installation and service infrastructure.

We have been a prime contractor in the DOE's Solid State Energy Conversion Alliance (SECA) since 2003 and are currently finishing an award that commenced in September 2014 to demonstrate a sub-megawatt solid oxide fuel cell power plant connected to the electric grid at our Danbury, Connecticut facility. We have also recently received additional awards from DOE to design a 200 kilowatt system and to build three power plants, two of which will go to a customer site. SOFC research is also undertaken at our facility in Calgary, Canada.

We see significant market opportunities for Distributed Hydrogen Production, Carbon Capture, Solid Oxide Fuel Cells solutions and energy storage. The demonstration projects described above are steps on the commercialization road map as we prudently leverage third-party resources and funding to accelerate the commercialization and realize the market potential for each of these solutions.

Research and Development (Company Funded Research and Development)

In addition to research and development performed under research contracts, we also fund our own research and development projects including extending module life, increasing the power output of our modules and reducing the cost of our products. Initiatives include increasing the net power output of the fuel cell stacks to 375 kW from 350 kW currently, and extending the stack life to seven years from five years currently. Greater power output and improved longevity will lead to improved gross margin profitability on a per unit basis for each power plant sold and improved profitability of service contracts, which will support expanding gross margins for the Company.

In addition to output and life enhancements, we also invest in cost reduction and improving the performance, quality and serviceability of our plants. We are also developing designs for lower cost multi-megawatt fuel cell parks. These efforts continually improve our value proposition and affordability.

Company-funded research and development is included in Research and development expenses (operating expenses) in our consolidated financial statements. The total research and development expenditures in the consolidated statement of operations, including third party and Company-funded, are as follows:

	Years Ended October 31,		
	2015	2014	2013
Cost of advanced technologies contract revenues	\$13,470	\$16,664	\$13,864
Research and development expenses	17,442	18,240	15,717
Total research and development	\$30,912	\$34,904	\$29,581

### Competition

The electric generation market is competitive with continually evolving participants. Our DFC power plants compete in the marketplace for stationary distributed generation. In addition to different types of stationary fuel cells, some other technologies that compete in this marketplace include micro-turbines and reciprocating gas engines.

Fuel cell technologies are classified according to the electrolyte used by each fuel cell type. Our DFC technology utilizes a carbonate electrolyte. Carbonate-based fuel cells offer a number of advantages over other types of fuel cells designed for megawatt-class commercial applications. These advantages include carbonate fuel cells' ability to generate electricity directly from readily available fuels such as natural gas or renewable biogas, lower raw material costs as the high temperature of the fuel cell enables the use of commodity metals rather than precious metals, and high-quality heat suitable for CHP applications. We are also actively developing SOFC technology, as discussed in the prior Advanced Technology section. Other fuel cell types that may be used for commercial applications include phosphoric acid (PAFC) and proton exchange membrane (PEM).

The following table illustrates industry estimates of the electrical efficiency, expected capacity range and byproduct heat use of the four principal types of fuel cells as well as highlights of typical market applications:

	MW - Class	Sub-MW-Class		Micro CHP	Mobile
Technology	Carbonate (CFC)	Phosphoric Acid (PAFC)	Solid Oxide (SOFC)	PEM/ SOFC	Polymer Electrolyte Membrane (PEM)
Plant size	300kW - 2.8 MW or higher	400kW	up to 240 kW	< 10 kW	5 - 100 kW
Typical Application	Utilities, universities, industrial - baseload	Commercial buildings - baseload	Commercial buildings - baseload	Residential and small commercial	Transportation
Fuel	Natural gas, Biogas, others	Natural gas	Natural gas	Natural gas	Hydrogen
Advantages	Efficiency, lowest cost, fuel flexible & CHP	CHP	Efficiency	Load following & CHP	Load Following
Electrical efficiency	43% - 47% (or higher w/ hybrid or	40% - 42%	50% - 60%	25% - 35%	25% - 35%

	HEFC configuration)				
	Steam, hot water,				
CHP	chilling & hybrid	Hot water,	Depends on	Suitable for	n/a
	electrical	chilling	technology used	facility heating	
	applications				

Several companies in the U.S. are engaged in fuel cell development, although we believe we are the only domestic company engaged in significant manufacturing and commercialization of stationary carbonate fuel cells. Emerging fuel cell technologies (and the companies developing them) include stationary PEM fuel cells (Ballard Power Systems), portable PEM fuel cells (Ballard Power Systems, Plug Power, and increasing activity by numerous automotive companies including Toyota, Hyundai, Honda and GM), stationary phosphoric acid fuel cells (Doosan), stationary solid oxide fuel cells (LG/Rolls Royce partnership, General Electric,

Bloom Energy), and small residential solid oxide fuel cells (Parker Hannifin, Toyota/Kyocera and Ceramic Fuel Cells Ltd.). Each of these competitors with stationary fuel cell applications has the potential to capture market share in our target markets.

There are other potential fuel cell competitors internationally. In Japan, Fuji Electric has been involved with both PEM and phosphoric acid fuel cells and Panasonic is involved with PEM fuel cells for micro-CHP applications. In the United Kingdom, AFC Energy is engaged in alkaline fuel cell development and Intelligent Energy Holdings is engaged in PEM development for consumer products and transportation.

Other than fuel cell developers, we also compete with companies such as Caterpillar, Cummins, Wartsilla, MTU Friedrichshafen GmbH (MTU), Mitsubishi Heavy Industries and Detroit Diesel, which manufacture more mature combustion-based distributed power generation equipment, including various engines and turbines, and have well-established manufacturing and distribution operations along with product operating and cost features. Competition on larger MW projects may also come from gas turbine companies like General Electric, Caterpillar Solar Turbines and Kawasaki.

We also compete against the electric grid, which is readily available to prospective customers. The electric grid is supplied by traditional centralized power plants including coal, gas and nuclear, with transmission lines used to transport the electricity to the point of use.

Our stationary fuel cell power plants generally do not directly compete against solar and wind, but can complement their intermittency with the continuous power output of the fuel cells. Solar and wind require specific geographies and weather profiles, as well as up to ten times the land requirements of our DFC plants, making them difficult to site in urban areas, unlike fuel cell power plants.

We believe that only carbonate fuel cells are suitable for fuel cell carbon capture applications, so our fuel cell carbon capture solution does not compete against fuel cells from manufacturers utilizing other fuel cell technologies.

Our distributed hydrogen solution competes against traditional centralized hydrogen generation as well as electrolyzers used for distributed applications. Hydrogen is typically generated at a central location in large quantities by combustion-based steam reforming and then distributed to end users by diesel truck. Besides utilizing tri-generation DFC plants for distributed hydrogen, electrolyzers can be used that are in essence, reverse fuel cells. Electrolyzers take electricity and convert it to hydrogen. The hydrogen can be used as it is generated, compressed and stored, or injected into the natural gas pipeline. Companies using fuel cell-based electrolyzer technology for transportation applications include Proton Onsite and H2 Logic. Hydrogenics is pursuing both transportation and utility-scale electrolyzer applications.

#### Incentive Programs

We are continuing to transition the business towards operating in sustainable markets that do not require specific government subsidies or support programs to compete against more traditional forms of power generation. Support programs for fuel cells, depending on the jurisdiction, include renewable portfolio standards, feed in tariffs and self-generation incentive programs, net energy metering programs and tax incentives. These incentives help to accelerate the adoption of clean, efficient and renewable power generation.

In the United States, the federal government provides an uncapped investment tax credit (ITC) that allows a taxpayer to claim a credit of 30% of qualified expenditures (up to a tax credit limit of \$3,000/kW) for eligible power generation technologies, including fuel cell power plants, that are placed in service on or before December 31, 2016. In December 2015, the United States Congress extended the ITC for 5 years, beginning on January 1, 2017, and phased

down to 26% in 2020 and 22% in 2021. The intention, as publicly stated by Congressional leaders, was to extend the ITC to all eligible technologies; however, the actual approved language only extended the ITC for solar energy technologies. Senior Congressional leadership, as stated in the Congressional Record on December 18, 2015 and in the media, acknowledged a drafting issue with the legislation and their commitment to correct this oversight in early 2016. The expectation is that a bill will be introduced for vote to include all eligible technologies in the ITC extension, including fuel cells. The ITC is a primary economic driver of fuel cell projects in the USA. The ITC expiration at the end of 2016 (unless extended) underscores the need for the LCOE on our projects to continue to decline to grid parity and below. While the expiration of the 30% ITC poses some potential uncertainty in the USA, we believe that our LCOE reduction plans can off-set the potential impact, if for some reason Congress does not follow through with including all eligible technologies in the ITC extension. The federal government also provides accelerated depreciation for eligible fuel cell projects.

The majority of states in the U.S. have enacted legislation adopting Renewable Portfolio Standards (RPS) mechanisms. Under an RPS, regulated utilities and other load serving entities are required to procure a specified percentage of their total electricity sales to end-user customers from eligible renewable resources, by a specified date. RPS legislation and implementing regulations vary significantly from state to state, particularly with respect to the percentage of renewable energy required to achieve the state's RPS, the definition of eligible renewable energy resources, and the extent to which renewable energy credits (certificates representing the generation of renewable energy) qualify for RPS compliance. Fuel cells using biogas qualify as renewable power generation technology in all of the RPS states in the U.S., and eight states specify that fuel cells operating on natural gas are also eligible for these initiatives in recognition of the high efficiency of fuel cells and near-zero pollutants.

In addition to RPS programs, states and municipalities in the USA have also adopted programs for which our products qualify. Most notably there are strong programs in California supporting self-generation, clean air power generation and carbon reduction. In the Northeast, Connecticut, New York and New Jersey all have programs supporting on-site power production, combined heat and power applications, carbon reduction, grid resiliency / micro-grids and utility ownership of fuel cell projects.

Internationally, South Korea has adopted an RPS to promote clean energy, reduce carbon emissions, and develop a local green-industry to accelerate economic growth. The RPS is designed to increase renewable power generation to ten percent of total power generation by 2022 from two percent in 2012 by requiring an additional one half of one percent of new & renewable power added annually from 2012 to 2016, increasing to one percent per annum through 2022. This equates to an estimated 350 MW annually through 2016, increasing to about 700 MW annually thereafter. Electric utilities and independent power producers that have in excess of 500 MW of power generation capacity are required to comply with the RPS. In addition, a Renewable Heat Obligation program creation is in process to accelerate the adoption of CHP installations with targeted implementation in 2016. The South Korean government initiated a cap-and-trade system in 2015, targeting about 60 percent of greenhouse gas emissions from industrial operations that produce more than 25,000 tons of CO<sub>2</sub> per year. The South Korean government has pledged to reduce greenhouse gas emissions 30 percent by 2020 from projected levels. The cap-and-trade legislation is designed to link internationally with emissions trading systems in other countries.

In Europe, there are a number of renewable energy programs and several feed-in tariffs which contribute to growth in our markets. In addition, there are a variety of research and development funding programs for fuel cells and hydrogen at the European Union-level as well as state-level within specific countries. In Germany, there are several financial incentives for stationary fuel cell power plants operating on either natural gas or renewable biogas. CHP configurations receive additional incentives as the German government is targeting 25% of electricity generation to include CHP by 2020, up from the current level of 22%. Germany uses a power production bonus as the foundational incentive program driving adoption of CHP, and the National Organization Hydrogen and Fuel Cell Technology (NOW) program as the tool to differentiate fuel cells versus combustion-based technology.

#### Government Regulation

Our Company and its products are subject to various federal, provincial, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of pollutants into the atmosphere. Negligible emissions of SO<sub>x</sub> and NO<sub>x</sub> from our power plants are substantially lower than conventional combustion-based generating stations, and are far below existing and proposed regulatory limits. The primary emissions from our power plants, assuming no cogeneration application, are humid flue gas that is discharged at temperatures of 700-800°F, water that is discharged at temperatures of 10-20°F above ambient air temperatures, and CO<sub>2</sub> in per kW hour amounts that are much less than conventional fossil fuel central generation power plants due to the high efficiency of fuel cells. Due to the high temperature of the flue gas emissions, we are required to site or configure our power plants in a manner that allows the flue gas to be vented at acceptable and safe distances. The discharge of water from our power plants requires permits

that depend on whether the water is to be discharged into a storm drain or into the local wastewater system.

We are also subject to federal, state, provincial or local regulation with respect to, among other things, emissions and siting. In addition, utility companies and several states in the USA have created and adopted or are in the process of creating interconnection regulations covering both technical and financial requirements for interconnection of fuel cell power plants to utility grids. Our power plants are designed to meet all applicable laws, regulations and industry standards for use in their international markets.

We are committed to providing a safe and healthy environment for our employees. All of our employees are required to obey all applicable health, safety and environmental laws and regulations and must observe the proper safety rules and environmental practices in work situations. We are dedicated to seeing that safety and health hazards are adequately addressed through appropriate work practices, training and procedures.



### Proprietary Rights and Licensed Technology

Our intellectual property consists of patents, trade secrets and institutional knowledge that we feel is a competitive advantage and represents a significant barrier to entry for potential competitors. Our Company was founded in 1969 as an applied research company and began focusing on carbonate fuel cells in the 1980s with our first fully commercialized Direct FuelCell (DFC) power plant sold in 2003. Over this period of time, we have gained extensive experience in designing, manufacturing, operating and maintaining fuel cell power plants. This experience can't be easily or quickly replicated and combined with our trade secrets, proprietary processes and patents, safeguard our intellectual property rights.

As of October 31, 2015, the Company, excluding its subsidiaries, has 93 patents in the U.S. and 94 patent in other jurisdictions covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions), with patents directed to various aspects of our Direct FuelCell technology, SOFC technology, PEM fuel cell technology, and applications thereof. We also have 10 patent applications pending in the U.S. and 56 pending in other jurisdictions. Our U.S. patents will expire between 2016 and 2033, and the current average remaining life of our U.S. patents is approximately 10.2 years.

Our subsidiary, Versa Power Systems, Inc., has 30 current U.S. patents and 73 international patents covering their SOFC technology (in certain cases covering the same technology in multiple jurisdictions), with an average remaining U.S. patent life of approximately 8.7 years. Versa Power Systems, Inc. also has 3 pending U.S. patent applications and 9 patent applications pending in other jurisdictions. In addition, our subsidiary FuelCell Energy Solutions, GmbH has license rights to use FuelCell Energy's carbonate fuel cell technology as well as 9 U.S. and 49 patents outside the U.S. for carbonate fuel cell technology licensed from its co-owner, Fraunhofer IKTS.

No patents have expired that would have any material impact on our current or anticipated operations. As has historically been the case, we are continually innovating, and have a significant number of invention disclosures that we are reviewing that may result in additional patent applications.

Many of our U.S. patents are the result of government-funded research and development programs, including our Department of Energy (DOE) programs. U.S. patents we own that resulted from government-funded research are subject to the government exercising "march-in" rights. We believe that the likelihood of the U.S. government exercising these rights is remote and would only occur if we ceased our commercialization efforts and there was a compelling national need to use the patents.

### Significant Customers and Information about Geographic Areas

We contract with a concentrated number of customers for the sale of our products and for research and development contracts. For the fiscal years ended October 31, 2015, 2014 and 2013, our top customers, POSCO Energy (which is a related party and owns approximately 10% of the outstanding common shares of the Company), The United Illuminating Company, Dominion Bridgeport Fuel Cell, LLC, Department of Energy, Pepperidge Farms and NRG Energy (which is a related party and owns approximately 5% of the outstanding common shares of the Company), accounted for an aggregate of 94%, 88% and 88%, respectively, of our total annual consolidated revenue. Revenue percentage by major customer for the last three fiscal years is as follows:

	Years Ended October 31,			
	2015	2014	2013	
POSCO Energy	67	% 69	% 54	%
The United Illuminating Company	14	% 9	% —	%
Dominion Bridgeport Fuel Cell, LLC	3	% 3	% 29	%
Department of Energy	5	% 4	% 5	%
Pepperidge Farms	3	% —	% —	%

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NRG Energy	2	% 3	% —	%
Total	94	% 88	% 88	%

See Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 8 - Consolidated Financial Statements and Supplementary Data for further information regarding our revenue and revenue recognition policies.

We have marketing and manufacturing operations both within and outside the United States. We source raw materials and balance of plant components from a diverse global supply chain. In 2015, the foreign country with the greatest concentration risk was South Korea, accounting for 67% of our consolidated net sales. As part of our Strategic Plan, we are in the process of diversifying our sales mix from both a customer specific and geographic perspective. See Item 1A: "Risk Factors - We are substantially

dependent on a concentrated number of customers and the loss of any one of these customers could adversely affect our business, financial condition and results of operations" and "Risk Factors - We depend on relationships with strategic partners, and the terms and enforceability of many of these relationships are not certain."

The international nature of our operations subjects us to a number of risks, including fluctuations in exchange rates, adverse changes in foreign laws or regulatory requirements and tariffs, taxes, and other trade restrictions. See Item 1A: "Risk Factors - We are subject to risks inherent in international operations". See also Note 13 "Segment and Geographical Information," to the consolidated financial statements in Part II, Item 8, "Consolidated Financial Statements And Supplementary Data" of the Form 10-K Report for information about our net sales by geographic region for the years ended October 31, 2015, 2014, and 2013. See also Item 7: "Management's Discussion and Analysis of Financial Condition and Results of Operations," for other information about our operations and activities in various geographic regions.

#### Sustainability

FuelCell Energy's ultra-clean, efficient and reliable fuel cell power plants help our customers achieve their sustainability goals. These highly efficient and environmentally friendly products support the "Triple Bottom Line" concept of sustainability, consisting of Environmental, Social and Economic considerations.

We value sustainability just as seriously as our customers. We continue to incorporate sustainability best practices into our corporate culture and into the design, manufacture, installation and servicing of our stationary fuel cell power plants. For example, at the end-of-life for our power plants, we refurbish and re-use certain parts of the power plant and we are able to recycle most of what we cannot re-use, supporting the sustainability concept of 'cradle-to-cradle'. Some of the parts in the fuel cell module can be re-furbished, such as end plates, while the individual fuel cell components are sent to a smelter for recycling. The balance of plant has an operating life of twenty to twenty-five years, at which time metals such as steel and copper are reclaimed for scrap value. By weight, approximately 93% of the entire power plant is either re-used or recycled.

We have a designated Sustainability Officer who promotes sustainable business practices in our manufacturing and administrative functions. For example, on the production floor, we reuse scrap from the manufacturing process, minimizing production waste. We have a tri-generation fuel cell power plant at our North American manufacturing plant, efficiently and cleanly generating power and heat for the facility and hydrogen for the manufacturing process. From a sustainability standpoint, on-site tri-generation avoids the use of a combustion-based boiler for heat and its associated emissions and reduces pollutants from the diesel truck needed for hydrogen delivery, reducing our carbon footprint and benefiting the surrounding community. Other examples include routing excess heat from production processes throughout the facility to reduce both heating costs and associated emissions, installation of high efficiency lighting, partially powering the corporate offices with power generated by the various fuel cell configurations undergoing development in the research area, and utilizing cross-functional teams to evaluate additional areas for improvement.

While we continue to enhance and adopt sustainable business practices, we recognize this is an ongoing effort with more to be accomplished; such as further reducing the direct and indirect aspects of our carbon footprint. Our manufacturing process has a very low carbon footprint, utilizing an assembly oriented production strategy and obtaining low carbon power and heat from DFC power plants located at both the North American manufacturing plant operated by the Company and the Asian manufacturing plant operated by POSCO Energy.

Sustainability also incorporates social risks and human rights and we will not knowingly support or do business with suppliers that treat workers improperly or unlawfully, including, without limitation, those that engage in human trafficking, child labor, slavery or other unlawful or morally reprehensible employment practices. We have begun and are continuing to implement comprehensive monitoring of our global supply chain to eliminate social risks and ensure

respect for human rights. We contractually ensure that all qualified suppliers in our supply chain comply with the Fair Labor Standards Act (FLSA) of 1938, as amended. Our employees with supply chain responsibilities are trained on sustainability, social risks and human rights and utilize this knowledge to evaluate existing suppliers and new potential suppliers on social and sustainable metrics to ensure compliance with our requirements and congruence with our company values.

#### Associates

At October 31, 2015, we had 596 full-time associates, of whom 279 were located at the Torrington, Connecticut manufacturing plant, 273 were located at the Danbury, Connecticut facility or various field offices, and 44 were located at our foreign locations. In addition, at October 31, 2015, the Company had 23 temporary workers. None of our associates is represented by a labor union or covered by a collective bargaining agreement. We believe our relations with our associates are good.

Available Information

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports will be made available free of charge through the Investor Relations section of the Company's Internet website (<http://www.fuelcellenergy.com>) as soon as practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). Material contained on our website is not incorporated by reference in this report. Our executive offices are located at 3 Great Pasture Road, Danbury, CT 06810. The public may also read and copy any materials that we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports and other information regarding issuers that file electronically with the SEC located at <http://www.sec.gov> .

Executive Officers of the Registrant

NAME	AGE	PRINCIPAL OCCUPATION
<p>Arthur A. Bottone President and Chief Executive Officer</p>	55	<p>Mr. Bottone joined FuelCell Energy in February 2010 as Senior Vice President and Chief Commercial Officer and was promoted to President and Chief Executive Officer in February 2011. Mr. Bottone's focus is to accelerate and diversify global revenue growth to achieve profitability by capitalizing on heightened global demand for clean and renewable energy. Mr. Bottone has broad experience in the power generation field including traditional central generation and alternative energy. Prior to joining FuelCell Energy, Mr. Bottone spent 25 years at Ingersoll Rand, a diversified global industrial company, including as President of the Energy Systems business. Mr. Bottone's qualifications include extensive global business development, technology commercialization, power generation project development as well as acquisition and integration experience.</p> <p>Mr. Bottone received an undergraduate degree in Mechanical Engineering from Georgia Institute of Technology in 1983, and received a Certificate of Professional Development from The Wharton School, University of Pennsylvania in 2004.</p>
<p>Michael Bishop Senior Vice President, Chief Financial Officer, Treasurer and Corporate Secretary</p>	47	<p>Mr. Bishop was appointed Vice President, Chief Financial Officer, Corporate Secretary, and Treasurer in June 2011. He has more than 20 years of experience in financial operations and management with public high growth technology companies with a focus on capital raising, project finance, debt/treasury management, acquisition integration, strategic planning, internal controls, and organizational development. Since joining the Company in 2003, Mr. Bishop has held a succession of financial leadership roles including Assistant Controller, Corporate Controller and Vice President and Controller. Prior to joining FuelCell Energy, Mr. Bishop held finance and accounting positions at TranSwitch Corporation, Cyberian Outpost, Inc. and United Technologies, Inc. He is a certified public accountant and began his professional career at McGladrey and Pullen, LLP. Mr. Bishop also served four years in the United States Marine Corps. Mr. Bishop received a Bachelor of Science in Accounting from Boston University in 1993 and a MBA from the University of Connecticut in 1999.</p>

Anthony F. Rauseo  
Senior Vice President, 56  
Chief Operating Officer

Mr. Rauseo was appointed Chief Operating Officer in July 2010. In this position, Mr. Rauseo has responsibility for closely integrating the manufacturing operations with the supply chain, product development and quality initiatives. Mr. Rauseo is an organizational leader with a strong record of achievement in product development, business development, manufacturing, operations, and customer support. Mr. Rauseo joined the Company in 2005 as Vice President of Engineering and Chief Engineer. Prior to joining Fuel Cell Energy, Mr. Rauseo held a variety of key management positions in manufacturing, quality and engineering including five years with CiDRA Corporation. Prior to joining CiDRA, Mr. Rauseo was with Pratt and Whitney for 17 years where he held various leadership positions in product development, production and customer support of aircraft turbines. Mr. Rauseo received a Bachelor of Science in Mechanical Engineering from Rutgers University in 1983 and received a Masters of Science in Mechanical Engineering from Rensselaer Polytechnic Institute in 1987.

Item 1A. RISK FACTORS

You should carefully consider the following risk factors before making an investment decision. If any of the following risks actually occur, our business, financial condition, or results of operations could be materially and adversely affected. In such cases, the trading price of our common stock could decline, and you may lose all or part of your investment.

We have incurred losses and anticipate continued losses and negative cash flow.

We have transitioned from a research and development company to a commercial products manufacturer, and services provider and developer. We have not been profitable since our fiscal year ended October 31, 1997. We expect to continue to incur net losses and generate negative cash flows until we can produce sufficient revenues to cover our costs. We may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. For the reasons discussed in more detail below, there are substantial uncertainties associated with our achieving and sustaining profitability. We have, from time to time, sought financing in the public markets in order to fund operations. Our future ability to obtain such financing, if required, could be impaired by a variety of factors, including, but not limited to, the price of our common stock and general market conditions.

Our cost reduction strategy may not succeed or may be significantly delayed, which may result in our inability to deliver improved margins.

Our cost reduction strategy is based on the assumption that continued increases in production will result in economies of scale. In addition, our cost reduction strategy relies on advancements in our manufacturing process, global competitive sourcing, engineering design, reducing the cost of capital and technology improvements (including stack life and projected power output). Failure to achieve our cost reduction targets could have a material adverse effect on our results of operations and financial condition.

Our products compete with products using other energy sources, and if the prices of the alternative sources are lower than energy sources used by our products, sales of our products will be adversely affected. Volatility of electricity and fuel prices may impact sales of our products and services in the markets in which we compete.

Our products can operate using a variety of fuels, including primarily natural gas and biogas and also methanol, diesel, coal gas, coal mine methane, and propane. If these fuels are not readily available or if their prices increase such that electricity produced by our products costs more than electricity provided by other generation sources, our products would be less economically attractive to potential customers. In addition, we have no control over the prices of several types of competitive energy sources such as oil, gas or coal as well as local utility electricity costs. Significant decreases (or short term increases) in the price of these fuels or grid delivered prices for electricity could also have a material adverse effect on our business because other generation sources could be more economically attractive to consumers than our products.

The reduction or elimination of government subsidies and economic incentives for alternative energy technologies, including our fuel cell power plants, could reduce demand for our products and services, lead to a reduction in our revenues and adversely impact our operating results.

We believe that the near-term growth of alternative energy technologies, including our fuel cells, relies on the availability and size of government and economic incentives (including, but not limited to, the U.S. Federal investment tax credit (ITC), the incentive programs in South Korea and state renewable portfolio standard programs). The U.S. ITC allows a taxpayer to claim a credit of 30% of qualified expenditures (up to a tax credit limit of \$3,000/kW) for eligible power generation technologies, including fuel cell power plants, which are placed in service on or before December 31, 2016. In December 2015, the United States Congress extended the ITC for 5 years, beginning on January 1, 2017, and phased down to 26% in 2020 and 22% in 2021. The intention, as publicly stated by Congressional leaders, was to extend the ITC to all eligible technologies; however, the actual approved language only extended the ITC for solar energy technologies. Senior Congressional leadership, as stated in the Congressional Record on December 18, 2015 and in the media, acknowledged a drafting issue with the legislation and their commitment to correct this oversight in early 2016. The expectation is that a bill will be introduced for vote to include all eligible technologies in the ITC extension, including fuel cells. There can be no assurance regarding the timing of



and ultimate passage of a bill to extend the ITC. Other government incentives expire, phase out over time, exhaust the allocated funding, or require renewal by the applicable authority. In addition, these incentive programs could be challenged by utility companies, or be found to be unconstitutional, and/or could be reduced or discontinued for other reasons. The reduction, elimination, or expiration of government subsidies and economic incentives may result in the diminished economic competitiveness of our power plants to our customers and could materially and adversely affect the growth of alternative energy technologies, including our fuel cells, as well as our future operating results.

Financial markets worldwide have experienced heightened volatility and instability which may have a material adverse impact on our Company, our customers and our suppliers.

Financial market volatility can affect both the debt, equity and project finance markets. This may impact the amount of financing available to all companies, including companies with substantially greater resources, better credit ratings and more successful operating histories than ours. It is impossible to predict future financial market volatility and instability and the impact on our Company and it may have a materially adverse effect on us for a number of reasons, such as:

The long term nature of our sales cycle can require long lead times between application design, order booking and product fulfillment. For this, we often require substantial cash down payments in advance of delivery. Our growth strategy assumes that financing will be available for the Company to finance working capital or for our customers to provide down payments and to pay for our products. Financial market issues may delay, cancel or restrict the construction budgets and funds available to the Company or our customers for the deployment of our products and services.

Projects using our products are, in part, financed by equity investors interested in tax benefits as well as by the commercial and governmental debt markets. The significant volatility in the U.S. and international stock markets cause significant uncertainty and may result in an increase in the return required by investors in relation to the risk of such projects.

If we, our customers and suppliers cannot obtain financing under favorable terms, our business may be negatively impacted.

Our contracted products may not convert to revenue, and our project pipeline may not convert to contracts, which may have a material adverse effect on our revenue and cash flow.

Some of the orders we accept from customers require certain conditions or contingencies (such as permitting, interconnection or financing) to be satisfied, some of which are outside of our control. The time periods from receipt of a contract to installation may vary widely and are determined by a number of factors, including the terms of the customer contract and the customer's site requirements. This could have an adverse impact on our revenue and cash flow.

We have signed product sales contracts, engineering, procurement and construction contracts (EPC), power purchase agreements and long-term service agreements with customers subject to contractual, technology and operating risks as well as market conditions that may affect our operating results.

The Company applies the percentage of completion revenue recognition method to certain product sales contracts which are subject to estimates. On a quarterly basis, the Company performs a review process to help ensure that total estimated contract costs include estimates of costs to complete that are based on the most recent available information. The percentage of completion for the customer contracts based on this cost analysis is then applied to the total customer contract values to determine the total revenue to be recognized to date.

In certain instances, we have executed power purchase agreements (PPA) with the end-user of the power and site host of the fuel cell power plant. We may then sell the PPA to project investor or retain the project and collect revenue from the sale of power over the term of the PPA, recognizing electricity revenue as power is generated and sold.

We have contracted under long-term service agreements with certain customers to provide service on our products over terms up to 20 years. Under the provisions of these contracts, we provide services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Pricing for service contracts is based upon estimates of future costs including future stack replacements. While we have conducted tests to determine the overall life of our products, we have not run our products over their projected useful life prior to large-scale commercialization. As a result, we cannot be sure that our products will last to their expected useful life, which could result in warranty claims, performance penalties, maintenance and stack replacement costs in excess of our estimates and losses on service contracts.

We extend product warranties, which could affect our operating results.

We provide for a warranty of our products for a specific period of time against manufacturing or performance defects. We accrue for warranty costs based on historical warranty claim experience, however actual future warranty expenses may be greater than we've assumed in our estimates. As a result, operating results could be negatively impacted should there be product manufacturing or performance defects in excess of our estimates.

Our products are complex and could contain defects and may not operate at expected performance levels which could impact sales and market adoption of our products or result in claims against us.

We develop complex and evolving products. Our initial installations were demonstration power plants intended to test the technology in real-world applications. We learned extensively from these demonstration installations, enhancing the technology

and improving the operation of the power plants. Our first commercial Direct FuelCell power plant installation in 2003 had a rated power output of 250 kW and a three year stack life. These demonstration installations were terminated at contract conclusion or earlier as the costs were too high to justify continuation and the customer's power needs did not support a sub-megawatt-class power plant. Certain of these early product designs did not meet our expectations resulting in mixed performance history, impacting the adoption rate of our products. Costs are lower for our newer megawatt-class plants compared to sub-megawatt plants due to scale. With the growing expertise gained from an expanding installed base, we continue to advance the capabilities of the fuel cell stacks and are now producing stacks with a net rated power output of 350 kW and an expected five year life.

We are still gaining field operating experience on our products, and despite experience gained from our growing installed base and testing performed by us, our customers and our suppliers, issues may be found in existing or new products. This could result in a delay in recognition or loss of revenues, loss of market share or failure to achieve broad market acceptance. The occurrence of defects could also cause us to incur significant warranty, support and repair costs, could divert the attention of our engineering personnel from our product development efforts, and could harm our relationships with our customers. The occurrence of these problems could result in the delay or loss of market acceptance of our products and would likely harm our business. Defects or performance problems with our products could result in financial or other damages to our customers. From time to time, we have been involved in disputes regarding product warranty issues. Although we seek to limit our liability, a product liability claim brought against us, even if unsuccessful, would likely be time consuming and could be costly to defend. Our customers could also seek and obtain damages from us for their losses. We have accrued liabilities for potential damages related to performance problems, however actual results may be different than the assumptions used in our accrual calculations. We currently face and will continue to face significant competition.

We compete on the basis of our products' reliability, efficiency, environmental considerations and cost. Technological advances in alternative energy products or improvements in the electric grid or other sources of power generation, or other fuel cell technologies may negatively affect the development or sale of some or all of our products or make our products non-competitive or obsolete prior to commercialization or afterwards. Other companies, some of which have substantially greater resources than ours, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, our products and technologies.

Several companies are involved in fuel cell development, although we believe we are the only domestic company engaged in significant manufacturing and commercialization of carbonate fuel cells. Emerging fuel cell technologies (and companies developing them) include PEM stationary fuel cells (Ballard Power Systems, Inc. and Plug Power), phosphoric acid fuel cells (Doosan Fuel Cells America, formerly ClearEdge Power) and solid oxide fuel cells (LG/Rolls Royce partnership, GE and Bloom Energy). Each of these competitors has the potential to capture market share in our target markets. There are also other potential fuel cell competitors internationally that could capture market share.

Other than fuel cell developers, we must also compete with companies that manufacture more mature combustion-based equipment, including various engines and turbines, and have well-established manufacturing, distribution, and operating and cost features. Electrical efficiency of these products can be competitive with our DFC Power Plants in certain applications. Significant competition may also come from gas turbine companies.

We have two large and influential stockholders, which may make it difficult for a third party to acquire our common stock.

POSCO Energy currently owns approximately 10% of our outstanding common stock and NRG Energy owns approximately 5% of our outstanding common stock, which could make it difficult for a third party to acquire our common stock. POSCO Energy is also a licensee of our technology and purchaser of our products and NRG is a purchaser of our products. Therefore, it may be in their interest to exert their substantial influence over matters concerning our overall strategy and technological and commercial development.

Unanticipated increases or decreases in business growth may result in adverse financial consequences for us.

If our business grows more quickly than we anticipate, our existing and planned manufacturing facilities may become inadequate and we may need to seek out new or additional space, at considerable cost to us. If our business does not grow as quickly as we expect, our existing and planned manufacturing facilities would, in part, represent excess

capacity for which we may not recover the cost; in that circumstance, our revenues may be inadequate to support our committed costs and our planned growth, and our gross margins, and business strategy would be adversely affected.

Our plans are dependent on market acceptance of our products.

Our plans are dependent upon market acceptance of, as well as enhancements to, our products. Fuel cell systems represent an emerging market, and we cannot be sure that potential customers will accept fuel cells as a replacement for traditional power

sources. As is typical in a rapidly evolving industry, demand and market acceptance for recently introduced products and services are subject to a high level of uncertainty and risk. Since the distributed generation market is still evolving, it is difficult to predict with certainty the size of the market and its growth rate. The development of a market for our products may be affected by many factors that are out of our control, including:

- the cost competitiveness of our fuel cell products including availability and output expectations and total cost of ownership;
- the future costs of natural gas and other fuels used by our fuel cell products;
- customer reluctance to try a new product;
- the market for distributed generation;
- local permitting and environmental requirements; and
- the emergence of newer, more competitive technologies and products.

If a sufficient market fails to develop or develops more slowly than we anticipate, we may be unable to recover the losses we will have incurred in the development of our products and may never achieve profitability.

As we continue to expand markets for our products, we intend to continue offering power production guarantees and other terms and conditions relating to our products that will be acceptable to the marketplace, and continue to develop a service organization that will aid in servicing our products and obtain self-regulatory certifications, if available, with respect to our products. Failure to achieve any of these objectives may also slow the development of a sufficient market for our products and, therefore, have a material adverse effect on our results of operations and financial condition.

We are substantially dependent on a concentrated number of customers and the loss of any one of these customers could adversely affect our business, financial condition and results of operations.

We contract with a concentrated number of customers for the sale of products and for research and development contracts. This includes POSCO Energy, which is a related party and owns approximately 10% of the outstanding common shares of the Company. POSCO Energy accounted for 67% of the Company's total revenues in fiscal year 2015.

There can be no assurance that we will continue to achieve the current level of sales of our products to our largest customers. Even though our customer base is expected to increase and our revenue streams to diversify, a substantial portion of net revenues could continue to depend on sales to a limited number of customers. Our agreements with these customers may be canceled if we fail to meet certain product specifications or materially breach the agreements, and our customers may seek to renegotiate the terms of current agreements or renewals. The loss of, or a reduction in sales to, one or more of our larger customers could have a material adverse effect on our business, financial condition and results of operations.

If our goodwill and other intangible assets, long-lived assets, inventory or project assets become impaired, we may be required to record a significant charge to earnings.

We may be required to record a significant charge to earnings in our financial statements should we determine that our goodwill, other intangible assets (i.e., in process research and development (“IPR&D”)), long-lived assets (i.e. property, plant and equipment), inventory, or project assets are impaired. Such a charge might have a significant impact on our financial position and results of operations.

As required by accounting rules, we review our goodwill for impairment at least annually as of July 31 or more frequently if facts and circumstances indicate that it is more likely than not that the fair value of a reporting unit that has goodwill is less than its carrying value. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill might not be recoverable include a significant decline in projections of future cash flows and lower future growth rates in our industry. We review IPR&D for impairment on an annual basis. If the technology has been determined to be abandoned or not recoverable, we would be required to impair the asset. We review inventory and project assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. We consider a project commercially viable and recoverable

if it is anticipated to be sellable for a profit once it is either fully developed or fully constructed. If our projects are not considered commercially viable, we would be required to impair the respective project assets.

Our Advanced Technologies contracts are subject to the risk of termination by the contracting party and we may not realize the full amounts allocated under the contracts due to the lack of Congressional appropriations.

A portion of our fuel cell revenues have been derived from long-term cooperative agreements and other contracts with the U.S. Department of Energy, the U.S. Department of Defense, the U.S. Navy, and other U.S. Government agencies. These agreements are important to the continued development of our technology and our products. We also contract and partner with private sector companies under certain Advanced Technology contracts to develop strategically important and complementary offerings.

Generally, our government research and development contracts are subject to the risk of termination at the convenience of the contracting agency. Furthermore, these contracts, irrespective of the amounts allocated by the contracting agency, are subject to annual Congressional appropriations and the results of government or agency sponsored reviews and audits of our cost reduction projections and efforts. We can only receive funds under these contracts ultimately made available to us annually by Congress as a result of the appropriations process. Accordingly, we cannot be sure whether we will receive the full amounts awarded under our government research and development or other contracts. Failure to receive the full amounts under any of our government research and development contracts could materially and adversely affect our business prospects, results of operations and financial condition.

A negative government audit could result in an adverse adjustment of our revenue and costs and could result in civil and criminal penalties.

Government agencies, such as the Defense Contract Audit Agency, routinely audit and investigate government contractors. These agencies review a contractor's performance under its contracts, cost structure, and compliance with applicable laws, regulations, and standards. If the agencies determine through these audits or reviews that we improperly allocated costs to specific contracts, they will not reimburse us for these costs. Therefore, an audit could result in adjustments to our revenue and costs.

Further, although we have internal controls in place to oversee our government contracts, no assurance can be given that these controls are sufficient to prevent isolated violations of applicable laws, regulations and standards. If the agencies determine that we or one of our subcontractors engaged in improper conduct, we may be subject to civil or criminal penalties and administrative sanctions, payments, fines, and suspension or prohibition from doing business with the government, any of which could materially affect our results of operations and financial condition.

The U.S. government has certain rights relating to our intellectual property, including restricting or taking title to certain patents.

Many of our U.S. patents relating to our fuel cell technology are the result of government-funded research and development programs. We own all patents resulting from research funded by our DOE contracts awarded to date. Under current regulations, patents resulting from research funded by government agencies other than the DOE are owned by us.

Eight U.S. patents that we own have resulted from government-funded research and are subject to the risk of exercise of "march-in" rights by the government. March-in rights refer to the right of the U.S. government or a government agency to exercise its non-exclusive, royalty-free, irrevocable worldwide license to any technology developed under contracts funded by the government if the contractor fails to continue to develop the technology. These "march-in" rights permit the U.S. government to take title to these patents and license the patented technology to third parties if the contractor fails to utilize the patents. In addition, one of our DOE-funded research and development agreements also required us to agree that we will not provide to a foreign entity any fuel cell technology subject to that agreement unless the fuel cell technology will be substantially manufactured in the U.S.

We are classified for Government contracting as a "Large Business", which could adversely affect our rights to own future patents under DOE-funded contracts.

We are classified as a "large business" under DOE contracts. This allows us to own the patents that we develop under new DOE contracts if we obtain a waiver from DOE. A "large business" under applicable government regulations generally consists of more than 500 employees averaged over a one year period. We will not own future patents we



develop under new contracts, grants or cooperative agreements funded by the DOE, unless we obtain a patent waiver from the DOE. Should we not obtain a patent waiver and outright ownership, we would nevertheless retain exclusive rights to any such patents, so long as we continue to commercialize the technology covered by the patents.

Our future success and growth is dependent on our market strategy.

We cannot assure you that we will enter into partnerships that are consistent with, or sufficient to support, our commercialization plans, and our growth strategy or that these relationships will be on terms favorable to us. Even if we enter into these types of relationships, we cannot assure you that the partners with which we form relationships will focus adequate resources on selling our products or will be successful in selling them. Some of these arrangements have or will require that we grant exclusive rights to companies in defined territories. These exclusive arrangements could result in our being unable to enter into other arrangements at a time when the partner with which we form a relationship is not successful in selling our products or has reduced its commitment to marketing our products. In addition, future arrangements may also include the issuance of equity and warrants to purchase our equity, which may have an adverse effect on our stock price. To the extent we enter into partnerships or relationships, the failure of these partners to assist us with the deployment of our products may adversely affect our results of operations and financial condition.

We depend on third party suppliers for the development and supply of key raw materials and components for our products.

We use various raw materials and components to construct a fuel cell module, including nickel and stainless steel which are critical to our manufacturing process. We also rely on third-party suppliers for the balance-of-plant components in our products. Suppliers must undergo a qualification process, which takes four to twelve months. We continually evaluate new suppliers and we are currently qualifying several new suppliers. There are a limited number of suppliers for some of the key components of products. A supplier's failure to develop and supply components in a timely manner, supply components that meet our quality, quantity or cost requirements, technical specifications, or our inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us could harm our ability to manufacture our Direct FuelCell products. In addition, to the extent the processes that our suppliers use to manufacture components are proprietary; we may be unable to obtain comparable components from alternative suppliers.

We do not know whether we will be able to maintain long-term supply relationships with our critical suppliers, or secure new long-term supply relationships, or whether such relationships will be on terms that will allow us to achieve our objectives. Our business prospects, results of operations and financial condition could be harmed if we fail to secure long-term relationships with entities that will supply the required components for our Direct FuelCell products. We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success.

Failure to protect our existing intellectual property rights may result in the loss of our exclusivity or the right to use our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement or misappropriation, or be enjoined from using such intellectual property. We rely on patent, trade secret, trademark and copyright law to protect our intellectual property. In addition, we have licensed our carbonate fuel cell manufacturing intellectual property to POSCO Energy, and we depend on POSCO Energy to also protect our intellectual property rights as licensed. At October 31, 2015, the Company, excluding its subsidiaries, had 93 current U.S. patents and 94 international patents covering our fuel cell technology. The U.S. patents have an average remaining life of approximately 10.2 years. Our subsidiary, Versa, has 30 current U.S. patents and 73 international patents covering their SOFC technology, with an average remaining U.S. patent life of approximately 8.7 years. In addition, our subsidiary, FuelCell Energy Solutions, GmbH, has 9 current U.S. patents and 49 international patents for carbonate fuel cell technology licensed from its co-owner, Fraunhofer IKTS.

Some of our intellectual property is not covered by any patent or patent application and includes trade secrets and other know-how that is not able to be patented, particularly as it relates to our manufacturing processes and engineering design. In addition, some of our intellectual property includes technologies and processes that may be similar to the patented technologies and processes of third parties. If we are found to be infringing third-party patents, we do not know whether we will be able to obtain licenses to use such patents on acceptable terms, if at all. Our patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope, and

enforceability of a particular patent.

We cannot assure you that any of the U.S. or international patents owned by us or other patents that third parties license to us will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others, or any of our pending or future patent applications will be issued with the breadth of claim coverage sought by us, if issued at all. In addition, effective patent, trademark, copyright and trade secret protection may be unavailable, limited or not applied for in certain foreign countries.

We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or able to be patented, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our subcontractors, vendors, suppliers, consultants, strategic partners and employees. We cannot assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships. Certain of our intellectual property have been licensed to us on a non-exclusive basis from third

parties that may also license such intellectual property to others, including our competitors. If our licensors are found to be infringing third-party patents, we do not know whether we will be able to obtain licenses to use the intellectual property licensed to us on acceptable terms, if at all.

If necessary or desirable, we may seek extensions of existing licenses or further licenses under the patents or other intellectual property rights of others. However, we can give no assurances that we will obtain such extensions or further licenses or that the terms of any offered licenses will be acceptable to us. The failure to obtain a license from a third party for intellectual property that we use at present could cause us to incur substantial liabilities, and to suspend the manufacture or shipment of products or our use of processes requiring the use of that intellectual property.

While we are not currently engaged in any intellectual property litigation, we could become subject to lawsuits in which it is alleged that we have infringed the intellectual property rights of others or commence lawsuits against others who we believe are infringing upon our rights. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not that litigation is resolved in our favor.

Our future success will depend on our ability to attract and retain qualified management and technical personnel. Our future success is substantially dependent on the continued services and on the performance of our executive officers and other key management, engineering, scientific, manufacturing and operating personnel, particularly Arthur Bottone, our Chief Executive Officer. The loss of the services of any executive officer, including Mr. Bottone, or other key management, engineering, scientific, manufacturing and operating personnel, could materially adversely affect our business. Our ability to achieve our commercialization plans will also depend on our ability to attract and retain additional qualified management and technical personnel. Recruiting personnel for the fuel cell industry is competitive. We do not know whether we will be able to attract or retain additional qualified management and technical personnel. Our inability to attract and retain additional qualified management and technical personnel, or the departure of key employees, could materially and adversely affect our development and commercialization plans and, therefore, our business prospects, results of operations and financial condition.

Our management may be unable to manage rapid growth effectively.

We may rapidly expand our facilities and manufacturing capabilities, accelerate the commercialization of our products and enter a period of rapid growth, which will place a significant strain on our senior management team and our financial and other resources. Any expansion may expose us to increased competition, greater overhead, marketing and support costs and other risks associated with the commercialization of a new product. We would need to obtain sufficient backlog in order to maintain the use of the expanded capacity. Our ability to manage rapid growth effectively will require us to continue to secure adequate sources of capital and financing, improve our operations, to improve our financial and management information systems and to train, motivate and manage our employees. Difficulties in effectively managing issues presented by such a rapid expansion could harm our business prospects, results of operations and financial condition.

We may be affected by environmental and other governmental regulation.

We are subject to various federal, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of pollutants into the atmosphere. In addition, it is possible that industry-specific laws and regulations will be adopted covering matters such as transmission scheduling, distribution, and the characteristics and quality of our products, including installation and servicing. These regulations could limit the growth in the use of carbonate fuel cell products, decrease the acceptance of fuel cells as a commercial product and increase our costs and, therefore, the price of our products. Accordingly, compliance with existing or future laws and regulations could have a material adverse effect on our business prospects, results of operations and financial condition.

Utility companies may resist the adoption of distributed generation and could impose customer fees or interconnection requirements on our customers that could make our products less desirable.

Investor-owned utilities may resist adoption of distributed generation fuel cell plants as the power plants are disruptive to the utility business model that primarily utilizes large central generation power plants and associated transmission

and distribution. On-site distributed generation that is on the customer-side of the electric meter competes with the utility. Distributed generation on the utility-side of the meter generally has power output that is significantly less than central generation power plants and may be perceived by the utility as too small to materially impact their business, limiting their interest. Additionally, perceived technology risk may limit utility interest in stationary fuel cell power plants.

Utility companies commonly charge fees to larger, industrial customers for disconnecting from the electric grid or for having the capacity to use power from the electric grid for back up purposes. These fees could increase the cost to our customers of using our Direct FuelCell products and could make our products less desirable, thereby harming our business prospects, results of operations and financial condition.

Several U.S. states have created and adopted, or are in the process of creating, their own interconnection regulations covering both technical and financial requirements for interconnection to utility grids. Depending on the complexities of the requirements, installation of our systems may become burdened with additional costs that might have a negative impact on our ability to sell systems. The Institute of Electrical and Electronics Engineers has been working to create an interconnection standard addressing the technical requirements for distributed generation to interconnect to utility grids. Many parties are hopeful that this standard will be adopted nationally to help reduce the barriers to deployment of distributed generation such as fuel cells; however this standard may not be adopted nationally thereby limiting the commercial prospects and profitability of our fuel cell systems.

We could be liable for environmental damages resulting from our research, development or manufacturing operations. Our business exposes us to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. Our business is subject to numerous federal, state, and local laws and regulations that govern environmental protection and human health and safety. We believe that our businesses are operating in compliance in all material respects with applicable environmental laws, however these laws and regulations have changed frequently in the past and it is reasonable to expect additional and more stringent changes in the future.

Our operations may not comply with future laws and regulations and we may be required to make significant unanticipated capital and operating expenditures. If we fail to comply with applicable environmental laws and regulations, governmental authorities may seek to impose fines and penalties on us or to revoke or deny the issuance or renewal of operating permits and private parties may seek damages from us. Under those circumstances, we might be required to curtail or cease operations, conduct site remediation or other corrective action, or pay substantial damage claims.

Our products use inherently dangerous, flammable fuels, operate at high temperatures and use corrosive carbonate material, each of which could subject our business to product liability claims.

Our business exposes us to potential product liability claims that are inherent in products that use hydrogen. Our products utilize fuels such as natural gas and convert these fuels internally to hydrogen that is used by our products to generate electricity. The fuels we use are combustible and may be toxic. In addition, our Direct FuelCell products operate at high temperatures and use corrosive carbonate material, which could expose us to potential liability claims. Although we have incorporated a robust design and redundant safety features in our power plants and have established comprehensive safety, maintenance, and training programs in place, follow third-party certification protocols, codes and standards, and do not store natural gas or hydrogen at our power plants, we cannot guarantee that there will not be accidents. Any accidents involving our products or other hydrogen-using products could materially impede widespread market acceptance and demand for our products. In addition, we might be held responsible for damages beyond the scope of our insurance coverage. We also cannot predict whether we will be able to maintain adequate insurance coverage on acceptable terms.

We are subject to risks inherent in international operations.

Since we market our products both inside and outside the U.S., our success depends in part on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets. Sales to customers located outside the U.S. accounts for a significant portion of our consolidated revenue. Sales to customers in South Korea represent the majority of our international sales. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international

expansion, including unexpected changes in regulatory requirements, potential conflicts or disputes that countries may have to deal with, fluctuations in currency exchange rates, longer accounts receivable requirements and collections, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of earnings and the burdens of complying with a wide variety of international laws. Any of these factors could adversely affect our results of operations and financial condition.

Although our reporting currency is the U.S. dollar, we conduct our business and incur costs in the local currency of most countries in which we operate. As a result, we are subject to currency translation and transaction risk. Joint ventures or other business arrangements with strategic partners outside of the United States have and are expected in the future to involve investments denominated in the local currency. Changes in exchange rates between foreign currencies and the U.S. dollar could affect our net

sales and cost of sales and could result in exchange gains or losses. We cannot accurately predict the impact of future exchange rate fluctuations on our results of operations.

We could also expand our business into new and emerging markets, many of which have an uncertain regulatory environment relating to currency policy. Conducting business in such markets could cause our exposure to changes in exchange rates to increase, due to the relatively high volatility associated with emerging market currencies and potentially longer payment terms for our proceeds. Our ability to hedge foreign currency exposure is dependent on our credit profile with financial institutions that are willing and able to do business with us. Deterioration in our credit position or a significant tightening of the credit market conditions could limit our ability to hedge our foreign currency exposure; and therefore, result in exchange gains or losses.

We depend on relationships with strategic partners, and the terms and enforceability of many of these relationships are not certain.

We have entered into relationships with strategic partners for design, product development, sale and service of our existing products, and products under development, some of which may not have been documented by a definitive agreement. The terms and conditions of many of these agreements allow for termination by the partners. Termination of any of these agreements could adversely affect our ability to design, develop and distribute these products to the marketplace. We cannot assure you that we will be able to successfully negotiate and execute definitive agreements with any of these partners, and failure to do so may effectively terminate the relevant relationship.

If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud, which could harm our brand and operating results.

Effective internal controls are necessary for us to provide reliable and accurate financial reports and effectively prevent fraud. We have devoted significant resources and time to comply with the internal control over financial reporting requirements of the Sarbanes-Oxley Act of 2002. In addition, Section 404 under the Sarbanes-Oxley Act of 2002 requires that we assess, and that our auditors attest to, the design and operating effectiveness of our controls over financial reporting. Our compliance with the annual internal control report requirement for each fiscal year will depend on the effectiveness of our financial reporting and data systems and controls. Inferior internal controls could cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our stock and our access to capital.

Our results of operations could vary as a result of methods, estimates and judgments we use in applying our accounting policies.

The methods, estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations (see “Critical Accounting Policies and Estimates” in Item 7). Such methods, estimates and judgments are, by their nature, subject to substantial risks, uncertainties and assumptions, and factors may arise over time that could lead us to reevaluate our methods, estimates and judgments.

As we gain experience in future periods, management will continue to reevaluate its estimates for contract margins, service agreements, loss accruals, warranty, performance guarantees, liquidated damages and inventory valuation allowances. Changes in those estimates and judgments could significantly affect our results of operations and financial condition. We may also adopt changes required by the Financial Accounting Standards Board and the Securities and Exchange Commission.

Our stock price has been and could remain volatile.

The market price for our common stock has been and may continue to be volatile and subject to extreme price and volume fluctuations in response to market and other factors, including the following, some of which are beyond our control:

failure to meet commercialization milestones;

variations in our quarterly operating results from the expectations of securities analysts or investors;



downward revisions in securities analysts' estimates or changes in general market conditions;

changes in the securities analysts' that cover us or failure to regularly publish reports;  
announcements of technological innovations or new products or services by us or our  
competitors;

announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

additions or departures of key personnel;

investor perception of our industry or our prospects;

insider selling or buying;

demand for our common stock; and

general technological or economic trends.

In the past, following periods of volatility in the market price of their stock, many companies have been the subject of securities class action litigation. If we became involved in securities class action litigation in the future, it could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business prospects, results of operations and financial condition.

The recent reverse stock split of our shares of common stock may decrease the market trading liquidity of the shares due to the reduced number of shares outstanding or otherwise adversely affect the value of our shares.

On December 3, 2015, we effected a one-for-twelve reverse stock split of our shares of common stock in order to make our common stock more attractive to a broader range of institutional and other investors, as we have been advised that the pre-reverse stock split market price of our common stock potentially affected its acceptability to certain institutional investors, professional investors and other members of the investing public, and to increase the bid price to more than \$1.00 per share to maintain compliance the listing requirements for our common stock on the NASDAQ Capital Market.

While the reverse stock split has resulted in an increase in the market price of our common stock, the total future market capitalization of our common stock following the reverse stock split may not exceed or remain higher than the market price prior to the reverse stock split. The ongoing effect of the reverse stock split upon the market price of our common stock cannot be predicted with any certainty, and the history of similar reverse stock splits for companies in similar circumstances to ours is varied. The market price of our common stock is dependent on many factors, including our business and financial performance, general market conditions, prospects for future success and other factors detailed from time to time in the reports we file with the SEC. If the market price of our common stock declines, the percentage decline as an absolute number and as a percentage of our overall market capitalization may be greater than would occur in the absence of the reverse stock split. The reverse stock split has also resulted in some shareholders owning "odd lots" (fewer than 100 shares) that may be more difficult to sell or require greater transaction costs per share to sell. While we believe that a higher stock price may help generate investor interest, there can be no assurance that the reverse stock split will result in a per share price that will attract institutional investors or investment funds or that such share price will satisfy the investing guidelines of institutional investors or investment funds. As a result, the trading liquidity of our common stock may not improve.

Provisions of Delaware and Connecticut law and of our charter and by-laws and our outstanding securities may make a takeover more difficult.

Provisions in our certificate of incorporation and by-laws and in Delaware and Connecticut corporate law may make it difficult and expensive for a third-party to pursue a tender offer, change in control or takeover attempt that is opposed by our management and board of directors. In addition, certain provisions of our Series 1 Preferred Shares and our Series B preferred stock could make it more difficult or more expensive for a third party to acquire us. Public stockholders who might desire to participate in such a transaction may not have an opportunity to do so. These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change in

control or change in our management and board of directors.

Future sales of substantial amounts of our common stock could affect the market price of our common stock.

Future sales of substantial amounts of our common stock, or securities convertible or exchangeable into shares of our common stock, into the public market, including shares of our common stock issued upon exercise of options, or perceptions that those sales could occur, could adversely affect the prevailing market price of our common stock and our ability to raise capital in the future.

The rights of the Series 1 preferred shares and Series B preferred stock could negatively impact our cash flows and could dilute the ownership interest of our stockholders.

The terms of the Series 1 preferred shares issued by FCE FuelCell Energy, Ltd. (“FCE Ltd.”), our wholly-owned, indirect subsidiary, provide rights to the holder, Enbridge Inc. (“Enbridge”), which could negatively impact us. The provisions of the Series 1 Preferred Shares require that FCE Ltd. make annual payments totaling Cdn. \$1,250,000, including (i) annual dividend payments of Cdn. \$500,000 and (ii) annual return of capital payments of Cdn. \$750,000. These payments will end on December 31, 2020. Additional dividends accrue on cumulative unpaid dividends at a 1.25% quarterly rate, compounded quarterly, until payment thereof. On December 31, 2020 the amount of all accrued and unpaid dividends on the Series 1 Preferred Shares of Cdn. \$21.1 million and the balance of the principal redemption price of Cdn. \$4.4 million shall be paid to the holders of the Series 1 Preferred Shares. FCE Ltd. has the option of making dividend payments in the form of common stock or cash under the Series 1 Preferred Shares provisions.

We are also required to issue common stock to the holder of the Series 1 preferred shares if and when the holder exercises its conversion rights. The number of shares of common stock that we may issue upon conversion could be significant and dilutive to our existing stockholders. For example, giving effect to the December 3, 2015 reverse stock split, assuming the holder of the Series 1 preferred shares exercises its conversion rights after July 31, 2020 and assuming our common stock price is \$10.614 (our common stock closing price on October 31, 2015), and an exchange rate of U.S. \$1.00 to Cdn. \$1.31 at the time of conversion, we would be required to issue approximately 337,200 shares of our common stock.

The terms of the Series B preferred stock also provide rights to their holders that could negatively impact us. Holders of the Series B preferred stock are entitled to receive cumulative dividends at the rate of \$50 per share per year, payable either in cash or in shares of our common stock. To the extent the dividend is paid in shares, additional issuances could be dilutive to our existing stockholders and the sale of those shares could have a negative impact on the price of our common stock. A share of our Series B preferred stock, after giving effect to the December 3, 2015 reverse stock split may be converted at any time, at the option of the holder, into 7.0922 shares of our common stock (which is equivalent to an initial conversion price of \$141 per share), plus cash in lieu of fractional shares. Furthermore, the conversion rate applicable to the Series B preferred stock is subject to additional adjustment upon the occurrence of certain events.

Exports of certain of our products are subject to various export control regulations and may require a license or permission from the U.S. Department of State, the U.S. Department of Energy or other agencies.

As an exporter, we must comply with various laws and regulations relating to the export of products, services and technology from the U.S. and other countries having jurisdiction over our operations. We are subject to export control laws and regulations, including the International Traffic in Arms Regulation “ITAR”, the Export Administration Regulation “EAR”, and the Specially Designated Nationals and Blocked Persons List, which generally prohibit U.S. companies and their intermediaries from exporting certain products, importing materials or supplies, or otherwise doing business with restricted countries, businesses or individuals, and require companies to maintain certain policies and procedures to ensure compliance. We are also subject to the Foreign Corrupt Practices Act which prohibits improper payments to foreign governments and their officials by U.S. and other business entities. Under these laws and regulations, U.S. companies may be held liable for their actions and actions taken by their strategic or local partners or representatives. If we, or our intermediaries, fail to comply with the requirements of these laws and regulations, or similar laws of other countries, governmental authorities in the United States or elsewhere, as applicable, could seek to impose civil and/or criminal penalties, which could damage our reputation and have a material adverse effect on our business, financial condition and results of operations.

We are also subject to registration under the U.S. State Department’s Directorate of Defense Trade Controls (“DDTC”). Due to the nature of certain of our products and technology, we must obtain licenses or authorizations from various U.S. Government agencies such as DDTC or DOE, before we are permitted to sell such products or license such technology outside of the U.S. We can give no assurance that we will continue to be successful in obtaining the

necessary licenses or authorizations or that certain sales will not be prevented or delayed. Any significant impairment of our ability to sell products or license technology outside of the U.S. could negatively impact our results of operations, financial condition or liquidity.

Item 1B. UNRESOLVED STAFF COMMENTS

None

Item 2. PROPERTIES

The following is a summary of our offices and locations:

Location	Business Use	Square Footage	Lease Expiration Dates
Danbury, Connecticut	Corporate Headquarters, Research and Development, Sales, Marketing, Service, Purchasing and Administration	72,000	Company owned
Torrington, Connecticut	Manufacturing and Administrative	65,000 <sup>(1)</sup>	December-2020
Danbury, Connecticut	Manufacturing and Operations	38,000	October-2019
Taufkirchen, Germany	Manufacturing and Administrative	20,000	June-2017
Dresden, Germany	Central European Office, Sales, Marketing, Purchasing and Administrative	420	February-2016
Calgary, Canada	Research and Development	32,220	January-2017
Littleton, Colorado	Research and Development	18,464	August-2018 <sup>(2)</sup>

<sup>(1)</sup> The Company plans to expand the Torrington facility by adding an additional 102,000 square feet. See Note 20 of the Notes to Consolidated Financial Statements for additional information.

<sup>(2)</sup> The Littleton, Colorado lease was terminated on December 31, 2015.

Item 3. LEGAL PROCEEDINGS

None

## PART II

## Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

## FuelCell Common Stock

Our common stock has been publicly traded since June 25, 1992. Our common stock trades under the symbol "FCEL" on the Nasdaq Global Market. The following table sets forth the high and low sale prices for our common stock for the fiscal periods indicated as reported by the Nasdaq Global Market during the indicated quarters.

On December 3, 2015, we effected a 1-for-12 reverse stock split, reducing the number of our common shares outstanding from 314.5 million shares to approximately 26.2 million shares. Concurrently with the reverse stock split, the number of authorized shares of our common stock was reduced proportionately, from 475 million shares to 39.6 million shares. Additionally, the conversion price of our Series B Preferred Stock, and the exchange price of our Series 1 Preferred Shares, the exercise price of all outstanding options and warrants, and the number of shares reserved for future issuance pursuant to our equity compensation plans were all adjusted proportionately to the reverse stock split.

The following table has been retroactively adjusted to give effect to the reverse stock split.

	Common Stock	
	Price	
	High	Low
First quarter 2016 (through December 31, 2015)	\$12.24	\$4.90
Year Ended October 31, 2015		
First Quarter	\$27.60	\$12.60
Second Quarter	\$17.40	\$13.68
Third Quarter	\$15.36	\$9.72
Fourth Quarter	\$12.00	\$7.68
Year Ended October 31, 2014		
First Quarter	\$23.40	\$15.36
Second Quarter	\$56.88	\$16.44
Third Quarter	\$31.80	\$22.32
Fourth Quarter	\$34.08	\$18.60

On December 31, 2015, the closing price of our common stock on the Nasdaq Global Market was \$4.96 per share. At December 31, 2015, there were 489 holders of record of our common stock. This does not include the number of persons whose stock is in nominee or "street" name accounts through brokers.

We have never paid a cash dividend on our common stock and do not anticipate paying any cash dividends on common stock in the foreseeable future. In addition, the terms of our Series B preferred shares prohibit the payment of dividends on our common stock unless all dividends on the Series B preferred stock have been paid in full.

## Performance Graph

The following graph compares the annual change in the Company's cumulative total stockholder return on its Common Stock for the five fiscal years ended October 31, 2015 with the cumulative stockholder total return on the Russell 2000 Index and a peer group consisting of Standard Industry Classification ("SIC") Group Code 369 companies listed on The American Stock Exchange, Nasdaq Global Market and New York Stock Exchange for that period ("Peer Index") and a customized 17 company peer group. It assumes \$100 invested on November 1, 2010 with dividends reinvested. Fiscal year ending October 31.





#### Series 1 Preferred Shares

We have 1,000,000 Series 1 Preferred Shares issued and outstanding. The Series 1 Preferred Shares were issued by FCE Ltd., one of our wholly-owned subsidiaries. We have guaranteed the obligations of FCE Ltd. under the Series 1 Preferred Shares.

On March 31, 2011, the Company entered into an agreement with Enbridge to modify the provisions of the Series 1 Preferred Shares of FCE Ltd. Enbridge is the sole holder of the Series 1 Preferred Shares. Consistent with the previous Series 1 preferred share agreement, FuelCell Energy continues to guarantee the return of principal and dividend obligations of FCE Ltd. to the Series 1 preferred shareholders under the modified agreement.

The terms of the Series 1 Preferred Shares require (i) annual dividend payments of Cdn. \$500,000 and (ii) annual return of capital payments of Cdn. \$750,000. These payments commenced on March 31, 2011 and will end on December 31, 2020. Dividends accrue at a 1.25% quarterly rate on the unpaid principal balance, and additional dividends will accrue on the cumulative unpaid dividends (inclusive of the Cdn. \$12.5 million unpaid dividend balance as of the modification date) at a rate of 1.25% per quarter, compounded quarterly. On December 31, 2020 the amount of all accrued and unpaid dividends on the Series 1 Preferred Shares of Cdn. \$21.1 million and the balance of the principal redemption price of Cdn. \$4.4 million shall be paid to the holders of the Series 1 Preferred Shares. FCE Ltd. has the option of making dividend payments in the form of common stock or cash under the Series 1 Preferred Shares provisions.

In addition to the above, the significant terms of the Series 1 Preferred Shares include the following:

• **Voting Rights** — The holders of the Series 1 Preferred Shares are not entitled to any voting rights.

• **Dividends** — Dividend payments can be made in cash or common stock of the Company, at the option of FCE Ltd., and if common stock is issued it may be unregistered. If FCE Ltd. elects to make such payments by issuing common stock of the Company, the number of common shares is determined by dividing the cash dividend obligation by 95% of the volume average price in US dollars at which board lots of the common shares have been traded on NASDAQ during the 20 consecutive trading days preceding the end of the calendar quarter for which such dividend in common shares is to be paid converted into Canadian dollars using the Bank of Canada's noon rate of exchange on the day of determination.

**Redemption** — The Series 1 Preferred Shares are redeemable by FCE Ltd. for Cdn. \$25 per share less any amounts paid as a return of capital in respect of such share plus all unpaid dividends and accrued interest. Holders of the Series 1 Preferred Shares do not have any mandatory or conditional redemption rights.

**Liquidation or Dissolution** — In the event of the liquidation or dissolution of FCE Ltd., the holders of Series 1 Preferred Shares will be entitled to receive Cdn. \$25 per share less any amounts paid as a return of capital in respect of such share plus all unpaid dividends and accrued interest. The Company has guaranteed any liquidation obligations of FCE Ltd.

**Exchange Rights** — A holder of Series 1 Preferred Shares has the right to exchange such shares for fully paid and non-assessable common stock of the Company at the following exchange prices (after giving effect to the December 3, 2015 reverse stock split):

Cdn. \$1,664.52 per share of our common stock after July 31, 2015 until July 31, 2020 (after giving effect to the December 3, 2014 reverse stock split); and

at any time after July 31, 2020, at a price equal to 95% of the then current market price (in Cdn.\$) of shares of our common stock at the time of conversion.

For example, assuming the holder of the Series 1 preferred shares exercises its conversion rights after July 31, 2020 and assuming our common stock price is \$10.614 (our common stock closing price on October 31, 2015) and an exchange rate of U.S. \$1.00 to Cdn.\$1.31 (exchange rate on October 31, 2015) at the time of conversion, we would be required to issue approximately 337,200 shares of our common stock.

#### Series B Preferred Stock

We have 250,000 shares of our 5% Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000) (“Series B Preferred Stock”) authorized for issuance. At October 31, 2015 and 2014, there were 64,020 shares of Series B Preferred Stock issued and outstanding. The shares of our Series B Preferred Stock and the shares of our common stock issuable upon conversion of the shares of our Series B Preferred Stock are covered by a registration rights agreement. The following is a summary of certain provisions of our Series B Preferred Stock.

#### Ranking

Shares of Series B Preferred Stock rank with respect to dividend rights and rights upon our liquidation, winding up or dissolution:

senior to shares of our common stock;

junior to our debt obligations; and

- effectively junior to our subsidiaries’ (i) existing and future liabilities and (ii) capital stock held by others.

#### Dividends

The Series B Preferred Stock pays cumulative annual dividends of \$50 per share which are payable quarterly in arrears on February 15, May 15, August 15 and November 15. Unpaid accumulated dividends do not bear interest. The dividend rate is subject to upward adjustment as set forth in the Certificate of Designation if we fail to pay, or to set apart funds to pay, any quarterly dividend. The dividend rate is also subject to upward adjustment as set forth in the Registration Rights Agreement entered into with the Initial Purchasers if we fail to satisfy our registration obligations with respect to the Series B Preferred Stock (or the underlying common shares) under the Registration Rights Agreement.

No dividends or other distributions may be paid or set apart for payment on our common shares (other than a dividend payable solely in shares of a like or junior ranking) unless all accumulated and unpaid Series B Preferred Stock dividends have been paid or funds or shares of common stock have been set aside for payment of accumulated and unpaid Series B Preferred Stock dividends.

The dividend on the Series B Preferred Stock may be paid in cash; or at the option of the Company, in shares of our common stock, which will be registered pursuant to a registration statement to allow for the immediate sale of these common shares in the public market. Dividends of \$3.2 million were paid in each of the years ended October 31, 2015, 2014 and 2013. There were no cumulative unpaid dividends at October 31, 2015 and 2014.

#### Liquidation

The Series B Preferred Stock stockholders are entitled to receive, in the event that we are liquidated, dissolved or wound up, whether voluntary or involuntary, \$1,000 per share plus all accumulated and unpaid dividends to the date of that liquidation, dissolution, or winding up (“Liquidation Preference”). Until the holders of Series B Preferred Stock receive their Liquidation Preference in full, no payment will be made on any junior shares, including shares of our common stock. After the Liquidation

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Preference is paid in full, holders of the Series B Preferred Stock will not be entitled to receive any further distribution of our assets. At October 31, 2015 and 2014, the Series B Preferred Stock had a Liquidation Preference of \$64.0 million.

#### Conversion Rights

Each Series B Preferred Stock share may be converted at any time, at the option of the holder, into 7.0922 shares of our common stock, which is equivalent to an initial conversion price of \$141.00 per share plus cash in lieu of fractional shares (after giving effect to the December 3, 2015 reverse stock split). The conversion rate is subject to adjustment upon the occurrence of certain events as described in the Certificate of Designation. The conversion rate is not adjusted for accumulated and unpaid dividends. If converted, holders of Series B Preferred Stock do not receive a cash payment for all accumulated and unpaid dividends; rather, all accumulated and unpaid dividends are canceled. We may, at our option, cause shares of Series B Preferred Stock to be automatically converted into that number of shares of our common stock that are issuable at the then prevailing conversion rate. We may exercise our conversion right only if the closing price of our common stock exceeds 150% of the then prevailing conversion price (\$141 at October 31, 2015) for 20 trading days during any consecutive 30 trading day period, as described in the Certificate of Designation.

#### Redemption

We do not have the option to redeem the shares of Series B Preferred Stock. However, holders of the Series B Preferred Stock can require us to redeem all or part of their shares at a redemption price equal to the Liquidation Preference of the shares to be redeemed in the case of a “fundamental change” (as described in the Certificate of Designation).

We may, at our option, elect to pay the redemption price in cash or, in shares of our common stock valued at a discount of 5% from the market price of shares of our common stock, or any combination thereof. Notwithstanding the foregoing, we may only pay such redemption price in shares of our common stock that are registered under the Securities Act of 1933 and eligible for immediate sale in the public market by non-affiliates of the Company.

#### Voting Rights

Holders of Series B Preferred Stock currently have no voting rights; however, holders may receive certain voting rights, as described in the Certificate of Designation, if (1) dividends on any shares of Series B Preferred Stock, or any other class or series of stock ranking on a parity with the Series B Preferred Stock with respect to the payment of dividends, shall be in arrears for dividend periods, whether or not consecutive, for six calendar quarters or (2) we fail to pay the redemption price, plus accrued and unpaid dividends, if any, on the redemption date for shares of Series B Preferred Stock following a fundamental change.

So long as any shares of Series B Preferred Stock remain outstanding, we will not, without the consent of the holders of at least two-thirds of the shares of Series B Preferred Stock outstanding at the time (voting separately as a class with all other series of preferred stock, if any, on parity with our Series B Preferred Stock upon which like voting rights have been conferred and are exercisable) issue or increase the authorized amount of any class or series of shares ranking senior to the outstanding shares of the Series B Preferred Stock as to dividends or upon liquidation. In addition, we will not, subject to certain conditions, amend, alter or repeal provisions of our certificate of incorporation, including the Certificate of Designation relating to the Series B Preferred Stock, whether by merger, consolidation or otherwise, so as to adversely amend, alter or affect any power, preference or special right of the outstanding shares of Series B Preferred Stock or the holders thereof without the affirmative vote of not less than two-thirds of the issued and outstanding Series B Preferred Stock shares.

#### Equity Compensation Plan Information

See Part III, Item 12 for information regarding securities authorized for issuance under our equity compensation plans.

## Item 6. SELECTED FINANCIAL DATA

The selected consolidated financial data presented below as of the end of each of the years in the five-year period ended October 31, 2015 have been derived from our audited consolidated financial statements together with the notes thereto included elsewhere in this annual report on Form 10-K. The data set forth below is qualified by reference to, and should be read in conjunction with our consolidated financial statements and their notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this annual report on Form 10-K.

## Consolidated Statement of Operations Data:

(Amounts presented in thousands, except for per share amounts)

	2015	2014	2013	2012	2011
<b>Revenues:</b>					
Product sales	\$ 128,595	\$ 136,842	\$ 145,071	\$ 94,950	\$ 103,007
Service agreements and license revenues	21,012	25,956	28,141	18,183	12,097
Advanced technology contracts	13,470	17,495	14,446	7,470	7,466
Total revenues	163,077	180,293	187,658	120,603	122,570
<b>Costs and expenses:</b>					
Cost of product sales	118,530	126,866	136,989	93,876	96,525
Cost of service agreement and license revenues	18,301	23,037	29,683	19,045	30,825
Cost of advanced technology contracts	13,470	16,664	13,864	7,237	7,830
Total cost of revenues	150,301	166,567	180,536	120,158	135,180
Gross profit (loss)	12,776	13,726	7,122	445	(12,610 )
<b>Operating expenses:</b>					
Administrative and selling expenses	24,226	22,797	21,218	18,220	16,299
Research and development costs	17,442	18,240	15,717	14,354	16,768
Total costs and expenses	41,668	41,037	36,935	32,574	33,067
Loss from operations	(28,892 )	(27,311 )	(29,813 )	(32,129 )	(45,677 )
Interest expense	(2,960 )	(3,561 )	(3,973 )	(2,304 )	(2,578 )
Income (loss) from equity investments	—	—	46	(645 )	58
Impairment of equity investment	—	—	—	(3,602 )	—
License fee and royalty income	—	—	—	1,599	1,718
Other income (expense), net	2,442	(7,523 )	(1,208 )	1,244	1,047
Redeemable minority interest	—	—	—	—	(525 )
Provision for income tax	(274 )	(488 )	(371 )	(69 )	(17 )
Net loss	(29,684 )	(38,883 )	(35,319 )	(35,906 )	(45,974 )
Net loss attributable to noncontrolling interest	325	758	961	411	261
Net loss attributable to FuelCell Energy, Inc.	(29,359 )	(38,125 )	(34,358 )	(35,495 )	(45,713 )
Adjustment for modification of redeemable preferred stock of subsidiary	—	—	—	—	(8,987 )
Preferred stock dividends	(3,200 )	(3,200 )	(3,200 )	(3,201 )	(3,200 )
Net loss to common shareholders	\$(32,559 )	\$(41,325 )	\$(37,558 )	\$(38,696 )	\$(57,900 )
Net loss to common shareholders					
Basic	\$(1.33 )	\$(2.02 )	\$(2.42 )	\$(2.81 )	\$(5.58 )
Diluted	\$(1.33 )	\$(2.02 )	\$(2.42 )	\$(2.81 )	\$(5.58 )

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Weighted average shares outstanding

Basic	24,514	20,474	15,544	13,789	10,375
Diluted	24,514	20,474	15,544	13,789	10,375

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## Consolidated Balance Sheet Data:

(Amounts presented in thousands, except for per share amounts)

	2015	2014	2013	2012	2011
Cash and cash equivalents (1)	\$85,740	\$108,833	\$77,699	\$57,514	\$51,415
Short-term investments (U.S. treasury securities)	—	—	—	—	12,016
Working capital	129,010	141,970	83,066	55,729	18,783
Total current assets	203,898	217,031	189,329	140,626	132,948
Total assets	277,231	280,636	237,636	191,485	183,630
Total current liabilities	74,888	75,061	106,263	84,897	114,165
Total non-current liabilities	47,732	47,269	84,708	32,603	23,983
Redeemable preferred stock	59,857	59,857	59,857	59,857	59,857
Total equity (deficit)	94,754	98,449	(13,192 )	14,128	(14,375 )
Book value per share (2)	\$3.65	\$4.11	\$(0.81 )	\$0.91	\$(1.25 )

(1) Includes short-term and long-term restricted cash and cash equivalents.

(2) Calculated as total equity (deficit) divided by common shares issued and outstanding as of the balance sheet date (after giving effect to the December 3, 2015 1-for-12 reverse stock split).

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with information included in Item 8 of this report. Unless otherwise indicated, the terms "Company", "FuelCell Energy", "we", "us", and "our" refer to FuelCell Energy, Inc. and its subsidiaries. All tabular dollar amounts are in thousands.

In addition to historical information, this discussion and analysis contains forward-looking statements. All forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Factors that could cause such a difference include, without limitation, the risk that commercial field trials of our products will not occur when anticipated, general risks associated with product development and manufacturing, changes in the utility regulatory environment, potential volatility of energy prices, rapid technological change, competition, market acceptance of our products and our ability to achieve our sales plans and cost reduction targets, as well as other risks set forth in our filings with the Securities and Exchange Commission including those set forth under Item 1A — Risk Factors in this report.

On December 3, 2015, we effected a 1-for-12 reverse stock split, reducing the number of our common shares outstanding on that date from 314.5 million shares to approximately 26.2 million shares. Concurrently with the reverse stock split, the number of authorized shares of our common stock was reduced proportionately, from 475 million shares to 39.6 million shares. Additionally, the conversion price of our Series B Preferred Stock, and the exchange price of our Series 1 Preferred Shares, the exercise price of all outstanding options and warrants, and the number of shares reserved for future issuance pursuant to our equity compensation plans were all adjusted proportionately to the reverse stock split. All such amounts presented herein have been adjusted retroactively to reflect these changes.

Overview

We are an integrated fuel cell company with an expanding global presence on three continents. We design, manufacture, sell, install, operate and service ultra-clean, highly efficient stationary fuel cell power plants for distributed power generation. Our power plants provide megawatt-class scalable on-site power and utility grid support, helping customers solve their energy, environmental and business challenges. Our plants are operating in more than 50 locations on three continents and have generated more than four billion kilowatt hours (kWh) of electricity, which is equivalent to powering more than 391,000 average size U.S. homes for one year. Our growing installed base and backlog exceeds 300 megawatts (MW).

We provide comprehensive turn-key power generation solutions to our customers including installation of the power plants as well as operating and maintaining the plants under multi-year service agreements. We target large-scale power users with our megawatt-class installations. As reference, one megawatt is adequate to power approximately 1,000 average sized US homes. Our customer base includes utility companies, municipalities, universities, government entities and businesses in a variety of Industrial and commercial enterprises. Our leading geographic markets are South Korea and the United States and we are pursuing expanding opportunities in Asia and Europe.

Our value proposition provides highly efficient and environmentally friendly power generation with easy-to-site stationary fuel cell power plants. The power plants are located in populated areas as they are virtually pollutant free, operate quietly and without vibrations, and have only modest space requirements. Locating the power generation near the point of use provides many advantages including less reliance on or even avoidance of the transmission grid leading to enhanced energy security and power reliability. Our power plants provide electricity priced competitively to grid-delivered electricity in certain high cost regions and our strategy is to continue to reduce costs, which is expected to lead to wider adoption.

We are developing Advanced Technologies which leverage our commercial platform and expertise. Our Direct FuelCell® (DFC®) power plants utilize carbonate fuel cell technology, which is a very versatile type of fuel cell technology. Utilizing our core DFC plants, we have developed and are commercializing both a tri-generation distributed hydrogen configuration that generates electricity, heat and hydrogen for industrial or transportation uses,



and a carbon capture application for coal or gas-fired power plants. We also are developing and working to commercialize solid oxide fuel cells (SOFC) for adjacent sub-megawatt applications to the markets for our megawatt-class DFC power plants as well as energy storage applications. These applications are complementary to our core products, leverage our existing customer base, project development, sales and service expertise, and are potentially large markets.

FuelCell Energy was founded in Connecticut in 1969 as an applied research organization, providing contract research and development. The Company went public in 1992, raising capital to develop and commercialize fuel cells and reincorporated in

Delaware in 1999. We began selling stationary fuel cell power plants commercially in 2003. Today we develop turn-key distributed generation combined heat and power solutions for our customers and provide comprehensive service for the life of the project.

#### Recent Developments

##### Expansion of Torrington Facility and Related Low-Cost Financing

Subsequent to year-end, we commenced the first phase of our project to expand the existing 65,000 square foot manufacturing facility in Torrington, Connecticut by approximately 102,000 square feet for a total size of 167,000 square feet. Initially, this additional space will be used to enhance and streamline logistics functions through consolidation of satellite warehouse locations and will provide the space needed to reconfigure the existing production process to improve manufacturing efficiencies and realize cost savings.

On November 9, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase of the expansion project. In conjunction with this financing, the Company entered into a \$10 million Promissory Note and related security agreements securing the loan with equipment liens and a mortgage on its Danbury, Connecticut location. Pursuant to the terms of the loan, payment of principal is deferred for the first four years. Interest at a fixed rate of 2.0% is payable beginning December 2015. The financing is payable over 15 years, and is predicated on certain terms and conditions, including the forgiveness of up to half of the loan principal if certain job retention and job creation targets are reached. In addition, the Company will receive up to \$10 million of tax credits earned during the first phase of the expansion.

The second phase of our manufacturing expansion, for which we will be eligible to receive an additional \$10 million in low-cost financing from the State of Connecticut, will commence as demand supports. This includes adding manufacturing equipment to increase annual capacity from the current 100 megawatts to at least 200 megawatts. Plans for this phase also include the installation of a megawatt scale tri-generation fuel cell plant to power and heat the facility as well as provide hydrogen for the manufacturing process of the fuel cell components, and the creation of an Advanced Technology Center for technology testing and prototype manufacturing. In addition, the final stage of the fuel cell module manufacturing will be relocated to the Torrington facility from its current location at the Danbury, Connecticut headquarters, which will reduce logistics costs.

The first phase of the expansion is expected to result in expenditures of up to \$23 million that will be partially off-set by the \$10 million of first phase funding received from the State of Connecticut. The total investment for both phases of the expansion could be up to \$65 million over a five year period, of which \$20 million will be funded by low cost financing from the State of Connecticut.

##### Sale Leaseback Tax Equity Financing Facility

In December 2015 the Company entered into a sale leaseback tax equity facility with PNC Energy Capital, LLC. (“PNC”) Under this facility, the Company’s project finance subsidiaries may enter into up to \$30 million of lease agreements for projects currently under development. The first project to close under the facility on December 23, 2015 was a sale leaseback of the UCI Fuel Cell, LLC power plant which entered into commercial operations in December 2015. Proceeds from PNC totaled approximately \$8.8 million and were partially used to settle outstanding construction period debt to NRG referenced under Note 8 to the financial statements. The Company and its project finance subsidiaries will establish reserves for up to \$10.0 million to support obligations of the power purchase and service agreements. Such reserves will be classified as restricted cash on the Consolidated Financial Statements and released over time based on project performance. Under the terms of the terms of the sale lease back transactions we make fixed monthly payments to PNC for a period of 10 years and have the option of repurchasing the plants at the end of the term. While we receive financing for the full value of the power plant asset, we do not expect to recognize

revenue on the sale leaseback transaction. Instead, revenue is recognized through the sale of electricity and energy credits which are generated as energy is produced.

## Results of Operations

Management evaluates the results of operations and cash flows using a variety of key performance indicators including revenues compared to prior periods and internal forecasts, costs of our products and results of our cost reduction initiatives, and operating cash use. These are discussed throughout the 'Results of Operations' and 'Liquidity and Capital Resources' sections. Results of Operations are presented in accordance with accounting principles generally accepted in the United States ("GAAP").

Comparison of the Years Ended October 31, 2015 and 2014

## Revenues and Costs of revenues

Our revenues and cost of revenues for the years ended October 31, 2015 and 2014 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2015	2014	\$	%
Total revenues	\$ 163,077	\$ 180,293	\$ (17,216 )	(10 )
Total costs of revenues	\$ 150,301	\$ 166,567	\$ (16,266 )	(10 )
Gross profit	\$ 12,776	\$ 13,726	\$ (950 )	(7 )
Gross margin	7.8	% 7.6		%

Total revenues for the year ended October 31, 2015 decreased \$17.2 million, or 10%, to \$163.1 million from \$180.3 million during the same period last year. Total cost of revenues for the year ended October 31, 2015 decreased by \$16.3 million, or 10%, to \$150.3 million from \$166.6 million during the same period last year. The Company generated a 7.8% gross margin percentage in fiscal year 2015, which is improved from the prior year margin of 7.6% despite lower revenue. A discussion of the changes in product sales, service agreement and license revenues, and advanced technologies contract revenues follows. Refer to Critical Accounting Policies and Estimates for more information on revenue and cost of revenue classifications.

## Product sales

Our product sales, cost of product sales and gross profit for the years ended October 31, 2015 and 2014 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2015	2014	\$	%
Product sales	\$ 128,595	\$ 136,842	\$ (8,247 )	(6 )
Cost of product sales	118,530	126,866	(8,336 )	(7 )
Gross profit from product sales	\$ 10,065	\$ 9,976	\$ 89	1
Product sales gross margin	7.8	% 7.3		%

Product sales for the year ended October 31, 2015 included \$19.6 million of power plant revenue, \$84.5 million from sales of fuel cell kits and modules and \$24.5 million of revenue primarily related to power plant component sales and engineering, procurement and construction services (EPC services). This is compared to product sales for the year ended October 31, 2014 which included \$22.2 million of power plant revenue, \$95.7 million fuel cell kits and module revenue and \$18.9 million of revenue primarily from power plant component sales and EPC services. Product sales decreased \$8.2 million, or 6%, for the year ended October 31, 2015 to \$128.6 million from \$136.8 million for the prior year period. The decline in revenue during the period is due to decreased sales of fuel cell kits to POSCO and power plant revenue partly offset by an increase engineering and construction services.

Cost of product sales decreased \$8.3 million for the year ended October 31, 2015, to \$118.5 million compared to \$126.9 million in the same prior year period. Gross profit increased slightly despite the lower sales volume primarily due to lower warranty and quality expenses. Cost of product sales includes costs to design, engineer, manufacture and ship our power plants and power plant components to customers, site engineering and construction costs where we are responsible for power plant system installation, costs for assembly and conditioning equipment sold to POSCO Energy, warranty expense and inventory excess and obsolescence charges.

At October 31, 2015, product sales backlog totaled approximately \$90.7 million compared to \$113.1 million at October 31, 2014.

#### Service Agreements and License Revenues and Cost of Revenues

Our service agreements and license revenues and associated cost of revenues for the years ended October 31, 2015 and 2014 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2015	2014	\$	%
Service agreements and license revenues	\$ 21,012	\$ 25,956	\$(4,944 )	(19 )
Cost of service agreements and license revenues	18,301	23,037	(4,736 )	(21 )
Gross profit from service agreements and license revenues	\$ 2,711	\$ 2,919	\$(208 )	7
Service agreement and license revenues gross margin	12.9	% 11.2	%	

Revenues for the year ended October 31, 2015 from service agreements and license fee and royalty agreements totaled \$21.0 million, compared to \$26.0 million for the prior year. The decrease was due to the timing of module exchanges during the year ended October 31, 2015 compared to the prior year period. Revenue for license fee and royalty agreements totaled \$4.7 million and \$4.3 million for the years ended October 31, 2015 and 2014, respectively. Service agreements and license cost of revenues decreased to \$18.3 million for fiscal year 2015 from \$23.0 million for the prior year, resulting in an increase in gross margin to 12.9% from 11.2% during the year-ago period. The increase in gross margin reflects higher margins recognized on new service agreements related to the growing fleet. As profitable megawatt-class service agreements are executed and as early generation sub-megawatt products are retired or become a smaller overall percentage of the installed fleet, we expect the margins on service agreements to continue to increase.

At October 31, 2015, service backlog totaled approximately \$254.1 million compared to \$196.8 million at October 31, 2014. Service backlog does not include future royalties, license or electricity revenues.

#### Advanced technologies contracts

Advanced technologies contracts revenue and related costs for the years ended October 31, 2015 and 2014 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2015	2014	\$	%
Advanced technologies contracts	\$ 13,470	\$ 17,495	\$(4,025 )	(23 )
Cost of advanced technologies contracts	13,470	16,664	(3,194 )	(19 )
Gross profit	\$ —	\$ 831	\$(831 )	(100 )
Advanced technologies contracts gross margin	—	% 4.7	%	

Advanced technologies contracts revenue for the year ended October 31, 2015 was \$13.5 million, representing a decrease of \$4.0 million when compared to \$17.5 million of revenue for the year ended October 31, 2014. The decrease is primarily attributable to the completion of a data center fuel cell power plant research project. Cost of advanced technologies contracts decreased \$3.2



million to \$13.5 million for the year ended October 31, 2015, compared to \$16.7 million for the prior year. Gross profit from advanced technologies contracts for the year ended October 31, 2015 was breakeven compared to \$0.8 million for the year ended October 31, 2014, and gross margin was breakeven compared to 4.7% during the prior year period. The decrease in gross margin is related to the mix of contracts currently being performed which include cost share obligations.

At October 31, 2015, advanced technology contract backlog totaled approximately \$36.5 million compared to \$24.0 million at October 31, 2014.

#### Administrative and selling expenses

Administrative and selling expenses were \$24.2 million for the year ended October 31, 2015 compared to \$22.8 million for the year ended October 31, 2014. The increase results primarily from increased marketing activity and project proposal expenses for multiple power plant installations and advanced technology contracts.

#### Research and development expenses

Research and development expenses decreased \$0.8 million to \$17.4 million for the year ended October 31, 2015, compared to \$18.2 million during the year ended October 31, 2014. The decrease in research and development expenses resulted from completion of prior year initiatives in enhancing the cost profile of multi-megawatt installations. Decreases were partially offset by increased investment in product development of the high efficiency fuel cell. The Company's internal research and development is focused on initiatives that have near term product introduction potential and product cost reduction opportunities, all of which are expected to expand market opportunities.

#### Loss from operations

Loss from operations for the year ended October 31, 2015 was \$28.9 million compared to a loss of \$27.3 million in for the year ended October 31, 2014.

#### Interest expense

Interest expense for the years ended October 31, 2015 and 2014 was \$3.0 million and \$3.6 million, respectively. Interest expense for fiscal 2014 includes interest of \$0.4 million associated with 8.0% Unsecured Convertible Notes (see Note 9 of the Notes to Consolidated Financial Statements) which were converted to common stock during fiscal year 2014. Interest expense for both periods includes interest for the amortization of the redeemable preferred stock of a subsidiary fair value discount of \$1.8 million and \$2.0 million, respectively.

#### Other income (expense), net

Other income (expense), net, was net income of \$2.4 million for the year ended October 31, 2015 compared to net expense of \$7.5 million for the year ended October 31, 2014. The 2015 income includes unrealized foreign exchange gains of \$1.7 million which primarily related to the preferred stock obligation of our Canadian subsidiary, FCE Ltd for which the functional currency is U.S. dollars, which is payable in Canadian dollars and refundable research and development tax credits of \$0.6 million. The 2014 expense includes a charge of \$8.4 million related to the make-whole payment upon conversion of the \$38.0 million of principal of the 8.0% Convertible Notes. The Company primarily used common stock to settle this make-whole obligation.

#### Provision for income taxes

We have not paid federal or state income taxes in several years due to our history of net operating losses (NOLs), although we have paid income taxes in South Korea. For the year ended October 31, 2015, our provision for income taxes was \$0.3 million. We are manufacturing products that are gross margin profitable on a per unit basis; however, we cannot estimate when production volumes will be sufficient to generate taxable domestic income. Accordingly, no tax benefit has been recognized for these net operating losses or other deferred tax assets as significant uncertainty exists surrounding the recoverability of these deferred tax assets.

At October 31, 2015, we had \$721 million of federal NOL carryforwards that expire in the years 2020 through 2035 and \$406 million in state NOL carryforwards that expire in the years 2015 through 2035. Additionally, we had \$11 million of state tax credits available, of which \$1.0 million expires in 2018. The remaining credits do not expire.





Net loss attributable to noncontrolling interest

The net loss attributed to the noncontrolling interest for the years ended October 31, 2015 and 2014 was \$0.3 million and \$0.8 million, respectively.

Preferred Stock dividends

Dividends recorded and paid on the Series B Preferred Stock were \$3.2 million in each of the years ended October 31, 2015 and 2014.

Net loss attributable to common shareholders and loss per common share

Net loss attributable to common shareholders represents the net loss for the period, less the net loss attributable to noncontrolling interest and less the preferred stock dividends on the Series B Preferred Stock. For the years ended October 31, 2015 and 2014, net loss attributable to common shareholders was \$32.6 million and \$41.3 million, respectively, and basic and diluted loss per common share was \$1.33 and \$2.02, respectively.

Comparison of the Years Ended October 31, 2014 and 2013

Revenues and Costs of Revenues

Our revenues and cost of revenues for the years ended October 31, 2014 and 2013 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2014	2013	\$	%
Total revenues	\$ 180,293	\$ 187,658	\$ (7,365 )	(4 )
Total costs of revenues	\$ 166,567	\$ 180,536	\$ (13,969 )	(8 )
Gross profit	\$ 13,726	\$ 7,122	\$ 6,604	93
Gross margin	7.6	% 3.8		%

Total revenues for the year ended October 31, 2014 decreased \$7.4 million, or 4%, to \$180.3 million from \$187.7 million during the same period last year as a result of a change in product mix with less revenue from multi-megawatt installations and associated EPC services. Total cost of revenues for the year ended October 31, 2014 decreased by \$14.0 million, or 8%, to \$166.6 million from \$180.5 million during the same period last year. The Company generated a 7.6 % gross margin percentage in fiscal year 2014 which is approximately double the prior year.

### Product sales

Our product sales, cost of product sales and gross profit for the years ended October 31, 2014 and 2013 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2014	2013	\$	%
Product sales	\$ 136,842	\$ 145,071	\$(8,229 )	(6 )
Cost of product sales	126,866	136,989	(10,123 )	(7 )
Gross profit from product sales	\$ 9,976	\$ 8,082	\$1,894	23
Product sales gross margin	7.3	% 5.6	%	

Product sales decreased \$8.2 million, or 6%, for the year ended October 31, 2014 to \$136.8 million from \$145.1 million for the prior year period. The factory production level in fiscal year 2014 totaled 70 MW versus 63 MW in the prior year. While production was up, the decrease in revenue is primarily due to lower turn-key projects including EPC services compared to the prior year. Product sales for the year ended October 31, 2014 included \$118.0 million of power plant revenue and fuel cell kits and modules and \$18.9 million of revenue primarily related to power plant component sales and EPC services. This is compared to product sales for the year ended October 31, 2013 which included \$117.1 million of power plant revenue and fuel cell kits revenue and \$28.0 million of revenue primarily from power plant component sales and EPC services.

Cost of product sales decreased \$10.1 million for the year ended October 31, 2014 to \$126.9 million, compared to \$137.0 million in the same prior year period on less EPC activity. Gross profit increased \$1.9 million to a gross profit of \$10.0 million for the year ended October 31, 2014 compared to a gross profit of \$8.1 million for the year ended October 31, 2013. The increase was due to improved overhead absorption from higher production levels and lower overall product costs and a sales mix that included module sales partially offset by lower margins as a result of less EPC activity. Cost of product sales includes costs to design, engineer, manufacture and ship our power plants and power plant components to customers, site engineering and construction costs where we are responsible for power plant system installation, costs for assembly and conditioning equipment sold to POSCO Energy, warranty expense, liquidated damages and inventory excess and obsolescence charges.

### Service Agreements and License Revenues and Cost of Revenues

Our service agreements and license revenues and associated cost of revenues for the years ended October 31, 2014 and 2013 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2014	2013	\$	%
Service agreements and license revenues	\$ 25,956	\$ 28,141	\$(2,185 )	(8 )
Cost of service agreements and license revenues	23,037	29,683	(6,646 )	(22 )
Gross profit (loss) from service agreements and license revenues	\$ 2,919	\$ (1,542 )	\$4,461	289
Service agreement and license revenues gross margin	11.2	% (5.5 )%		

Revenues for the year ended October 31, 2014 from service agreements and license fee and royalty agreements totaled \$26.0 million, compared to \$28.1 million for the prior year. Service agreement revenue decreased year over year due to the prior year recognition of service revenue related to the Master Service Agreement with POSCO Energy entered into during the fourth quarter of 2013 which resulted in approximately \$10.1 million of revenue associated with costs primarily related to the provision of fuel cell stacks to POSCO Energy upon execution of the agreement. This decrease was partially off-set by new plants entering the



service agreement fleet leading to incremental increases in revenue and margins. License and royalty revenues totaled \$4.3 million and \$4.1 million for the years ended October 31, 2014 and 2013, respectively.

Service agreements and license cost of revenues decreased to \$23.0 million from \$29.7 million for the prior year primarily as a result of costs recorded relating to the Master Service Agreement with POSCO Energy not having occurred in the current year. The gross profit on service agreements and license agreements was \$2.9 million for the year ended October 31, 2014, compared to a gross loss of \$1.5 million for the year ended October 31, 2013. The historical loss on service agreements has been due to high maintenance, module exchange and other costs on older and sub-MW product designs and the investment the Company has made in service infrastructure to support a growing installed fleet. As profitable megawatt-class service agreements are executed and as early generation sub-megawatt products are retired or become a smaller overall percentage of the installed fleet, we expect the margins on service agreements to continue to increase.

Total costs incurred under the Master Service Agreement during the fourth quarter of fiscal year 2013 of \$10.1 million resulted in associated revenue recognized of \$10.2 million. Such costs primarily related to the provision of fuel cell stacks to POSCO Energy upon execution of the agreement to service the power plant installations under the ongoing service contract. Excluding the revenue recognized from the Master Service Agreement, revenue increased from the prior year due to a higher level of scheduled module exchanges in the current year compared to the prior year as well as the growing installed base of power plants. Service revenue associated with scheduled module exchanges is recognized at the time of the module exchange activity whereas the remaining portion of service revenue from service agreements is recognized ratably over the life of the service contract such that a consistent margin is recognized throughout the term of the contract. Cost of service agreements include maintenance and scheduled module exchanges costs and operating costs for our units under PPAs, performance guarantees and service agreement loss accrual charges.

#### Advanced technologies contracts

Advanced technologies contracts revenue and related costs for the years ended October 31, 2014 and 2013 were as follows:

(dollars in thousands)	Years Ended October 31,		Change	
	2014	2013	\$	%
Advanced technologies contracts	\$ 17,495	\$ 14,446	\$ 3,049	21
Cost of advanced technologies contracts	16,664	13,864	2,800	20
Gross profit	\$ 831	\$ 582	\$ 249	43
Advanced technologies contracts gross margin	4.7	% 4.0	%	

Advanced technologies contracts revenue for the year ended October 31, 2014 was \$17.5 million, which increased \$3.0 million when compared to \$14.4 million of revenue for the year ended October 31, 2013. The increase is primarily attributable to revenue recognized on a data center fuel cell power plant research project and increased activity on solid oxide fuel cell development under the U.S. Department of Energy Solid State Energy Conversion Alliance (SECA) program, and accelerating commercialization of carbon capture solutions with activity under both a DOE contract and a contract from private industry. Cost of advanced technologies contracts increased \$2.8 million to \$16.7 million for the year ended October 31, 2014, compared to \$13.9 million for the prior year. Gross profit from advanced technologies contracts for the year ended October 31, 2014 was \$0.8 million compared to \$0.6 million for the year ended October 31, 2013.

#### Administrative and selling expenses

Administrative and selling expenses were \$22.8 million for the year ended October 31, 2014 compared to \$21.2 million during the year ended October 31, 2013. Administrative and selling expenses increased primarily due to increased business development activity and project proposal expenses for multi-megawatt fuel cell park projects.

#### Research and development expenses

Research and development expenses increased \$2.5 million to \$18.2 million during the year ended October 31, 2014, compared to \$15.7 million during the year ended October 31, 2013. Our internal research and development continues to be focused on initiatives that have near term product implementation potential and product cost reduction

opportunities. The increase in research and development expenses resulted from continued product development initiatives to consolidate select componentry and

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processes for the balance of plant functions as part of ongoing cost reduction programs, product enhancements to further enhance the customer value proposition such as high-efficiency solutions for targeted applications, and a program to support European market development.

#### Loss from operations

Loss from operations for the year ended October 31, 2014 was \$27.3 million compared to a loss of \$29.8 million in fiscal year 2013. The decrease was a result of favorable gross profit from product sales and service agreements and license revenue, partially offset by higher operating expenses.

#### Interest expense

Interest expense for the years ended October 31, 2014 and 2013 was \$3.6 million and \$4.0 million, respectively. Interest expense includes the interest associated with the 8.0% Unsecured Convertible Debt issued in June 2013. Interest expense for both periods also includes interest for the amortization of the redeemable preferred stock of a subsidiary fair value discount of \$2.0 million.

#### Income/(loss) from equity investments

Income of \$0.05 million from equity investments recorded in the year ended October 31, 2013 represents our share of Versa's income through the acquisition date in December 2012.

#### Other income (expense), net

Other income (expense), net, was expense of \$7.5 million for the year ended October 31, 2014 compared to net expense of \$1.2 million for the same period in fiscal year 2013. The current period expense includes a charge of \$8.4 million related to the make-whole payment upon conversion of the \$38.0 million of principal of the 8.0% Convertible Notes. The Company primarily used common stock to settle this make-whole obligation. The prior year period expense was primarily associated with the non-cash fair value adjustment of certain embedded derivatives.

#### Provision for income taxes

We have not paid federal or state income taxes in several years due to our history of net operating losses (NOL), although we have paid income taxes in South Korea. For the year ended October 31, 2014, our provision for income taxes was \$0.5 million. We are manufacturing products that are gross margin profitable on a per unit basis; however, we cannot estimate when production volumes will be sufficient to generate taxable domestic income. Accordingly, no tax benefit has been recognized for these net operating losses or other deferred tax assets as significant uncertainty exists surrounding the recoverability of these deferred tax assets.

At October 31, 2014, we had \$655.0 million of federal NOL carryforwards that expire in the years 2020 through 2034 and \$396.0 million in state NOL carryforwards that expire in the years 2014 through 2034. Additionally, we had \$10.4 million of state tax credits available, of which \$1.0 million expires in 2018. The remaining credits do not expire.

#### Net loss attributable to noncontrolling interest

The net loss attributed to the noncontrolling interest for the years ended October 31, 2014 and 2013 was \$0.8 million and \$1.0 million, respectively.

#### Preferred Stock dividends

Dividends recorded and paid on the Series B Preferred Stock were \$3.2 million in each of the years ended October 31, 2014 and 2013.

#### Net loss attributable to common shareholders and loss per common share

Net loss attributable to common shareholders represents the net loss for the period, less the net loss attributable to noncontrolling interest and less the preferred stock dividends on the Series B Preferred Stock. For the years ended October 31, 2014 and 2013, net loss attributable to common shareholders was \$41.3 million and \$37.6 million, respectively, and basic and diluted loss per common share was \$2.02 and \$2.42, respectively.

#### Customer Concentrations

We contract with a concentrated number of customers for the sale of our products and for research and development contracts. Refer to Note 1 of notes to consolidated financial statements for more information on customer concentrations. There can be no assurance that we will continue to achieve historical levels of sales of our products to our largest customers. Even though our customer base is expected to expand, diversifying our revenue streams, a substantial portion of net revenues could continue to depend on sales to a concentrated number of customers. Our agreements with these customers may be canceled if we fail to meet certain product specifications or materially breach the agreements, and our customers may seek to renegotiate the terms of current agreements or renewals. The loss of or reduction in sales to one or more of our larger customers could have a material adverse effect on our business, financial condition and results of operations.

#### LIQUIDITY AND CAPITAL RESOURCES

At October 31, 2015, we believe that our cash, cash equivalents on hand, cash flows from operating activities, availability under our loan and revolving credit facilities and access to the capital markets will be sufficient to meet our working capital and capital expenditure needs for at least the next 12 months.

Cash and cash equivalents including restricted cash totaled \$85.7 million at October 31, 2015 compared to \$108.8 million at October 31, 2014. In addition, the Company has \$36.2 million of availability under its project finance loan agreement with NRG Energy through its subsidiary, FuelCell Energy Finance, LLC, which can be used for project asset development. Subsequent to October 31, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase of its planned expansion of the Torrington manufacturing facility. Additionally, we have an effective shelf registration statement on file with the SEC for issuance of debt or equity securities.

The Company's future liquidity will be dependent on obtaining the order volumes and cost reductions necessary to achieve profitable operations. Increasing annual order volume and reduced product costs are expected to further increase revenues and margins and improve operating cash flows.

The Company has a contract backlog totaling approximately \$381.4 million at October 31, 2015. This backlog includes approximately \$254.1 million of service agreements, with an average term in excess of 10 years and utility service contracts up to 20 years in duration, providing a committed source of revenue to the year 2036. The Company also has a strong sales and service pipeline of potential projects in various stages of development in both North America and Europe. This pipeline includes projects for on-site 'behind-the-meter' applications and for grid support multi-megawatt fuel cell parks. Behind-the-meter applications provide end users with predictable long-term economics, on-site power including micro-grid capabilities and reduced carbon emissions. On-site projects being developed are for project sizes ranging from 1.4MW - 14.0 MW for end users such as pharmaceuticals companies, hospitals, and universities. In addition, a number of multi-megawatt utility grid support projects are being developed for utilities and independent power producers to support the grid where power is needed. Utility scale projects in our pipeline range in size from 5.6 MW up to 63 MW. These projects help both utilities and states meet their renewable portfolio standards.

The Company produced approximately 65 MW during fiscal year 2015 at its production facility in Torrington, Connecticut, which is a reduction from the 70 MW production rate resulting from weather and timing of customer requirements. The production facility has an annual manufacturing capacity of 100 MW under its current configuration. At October 31, 2015 backlog included approximately 30 MW of fuel cell kits to be delivered to POSCO Energy in 2016, as well as approximately 15 MW of orders for the U.S. and European markets and scheduled module exchanges under service agreements. The Company is targeting converting approximately 30 to 40 MW of our sales pipeline into incremental backlog in 2016 in order to utilize our available capacity. Factors that may impact our liquidity in 2016 and beyond include;

Our expanding development of large scale turn-key projects in the United States requires liquidity and is expected to continue to have liquidity requirements in the future. Our business model includes the development of turn-key projects and we may commence construction upon the execution of a multi-year power purchase agreement with an end-user that has a strong credit profile. We may choose to substantially complete the construction of a project before it is sold to a project investor. Alternatively, we may choose to retain ownership of one or more of these projects after they become operational if we determine it would be of economic and strategic benefit to do so. If, for example, we cannot sell a project at economics that are attractive to us, we may instead elect to own and operate such projects, generally until such time that we can sell a project on economically attractive terms. In markets where there is a compelling value proposition, we may also build one or more power plants on an uncontracted "merchant" basis in advance of securing long-term power contracts. Delays in construction progress or in completing the sale of our projects which we are self-financing may impact our liquidity. At October 31, 2015, we had \$40.0



million of committed project financing, of which \$36.2 million was available, to enable this strategy though we may seek to use our cash balances or other forms of financing as necessary. Subsequent to fiscal year end 2015, we executed a \$30 million project finance facility with PNC New Energy Capital that is structured as a sale/leaseback facility for projects where we entered into a PPA with end-user of power and site host. This financing facility enables us to generate cash from operating power plants that we choose to retain, effectively monetizing our investment in the power plant.

As project sizes evolve, project cycle times may increase. We may need to make significant up-front investments of resources in advance of the receipt of any cash from the sale of our projects. These amounts include development costs, interconnection costs, posting of letters of credit or other forms of security, and incurring engineering, permitting, legal, and other expenses.

The amount of accounts receivable at October 31, 2015 and 2014 was \$60.8 million and \$64.4 million, respectively. Included in accounts receivable at October 31, 2015 and 2014 was \$41.0 million and \$53.0 million, respectively, of unbilled accounts receivable. Unbilled accounts receivable represents revenue that has been recognized in advance of billing the customer under the terms of the underlying contracts. Such costs have been funded with working capital and the unbilled amounts are expected to be billed and collected from customers once we meet the billing criteria under the contracts. At this time, we bill our customers according to the contract terms. Our accounts receivable balances may fluctuate as of any balance sheet date depending on the timing of individual contract milestones and progress on completion of our projects.

The amount of total inventory at October 31, 2015 and 2014 was \$65.8 million and \$55.9 million, respectively, which includes work in process inventory totaling \$36.7 million and \$30.4 million, respectively. As we continue to execute on our business plan we must produce fuel cell modules and procure balance of plant components in required volumes to support our planned construction schedules and potential customer contractual requirements. As a result, we may manufacture modules or acquire balance of plant in advance of receiving payment for such activities. This may result in fluctuations of inventory and use of cash as of any balance sheet date.

Cash and cash equivalents at October 31, 2015 included \$9.6 million of cash advanced by POSCO Energy for raw material purchases made on its behalf by FuelCell Energy. Under an inventory procurement agreement that ensures coordinated purchasing from the global supply chain, FuelCell Energy provides procurement services for POSCO Energy and receives compensation for services rendered. While POSCO Energy makes payments to us in advance of supplier requirements, quarterly receipts may not match disbursements.

The amount of total project assets including current and long-term at October 31, 2015 and October 31, 2014 was \$12.2 million and \$0.8 million, respectively. Project assets consist primarily of capitalized costs for fuel cell projects in various stages of development, whereby we have entered into power purchase agreements prior to entering into a definitive sales or long-term financing agreement for the project. The current portion of project assets of \$5.3 million is actively being marketed and intended to be sold although we may choose to retain such projects during initial stages of operations. This balance will fluctuate based on timing of construction and sale of the projects to third parties. The long-term portion of project assets of \$6.9 million represents a fuel cell project which will be sold under a sales leaseback transaction during the first quarter of fiscal year 2016.

Under the terms of certain contracts, the Company will provide performance security for future contractual obligations. At October 31, 2015 we have pledged approximately \$26.9 million of our cash and cash equivalents as collateral as performance security and for letters of credit for certain banking requirements and contracts. This balance may increase with a growing backlog and installed fleet.

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For fiscal year 2016, we forecast capital expenditures in the range of \$16 to \$18 million compared to \$6.9 million in fiscal year 2015. We have commenced the first phase of our project to expand the existing 65,000 square foot manufacturing facility in Torrington, Connecticut by approximately 102,000 square feet for a total size of 167,000 square feet. Initially, this additional space will be used to enhance and streamline logistics functions through consolidation of satellite warehouse locations and will provide the space needed to reconfigure the existing production process to improve manufacturing efficiencies and realize cost savings. On November 9, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase. Pursuant to the terms of the loan, payment of principal is deferred for the first four years of this 15 year loan. Interest at a fixed rate of 2% is payable beginning December 2015. Up to 50 percent of the principal balance is forgivable if certain job creation and retention targets are met.

In addition to cash flows from operations, we may also pursue raising capital through a combination of: (i) sales of equity to public markets or strategic investors, (ii) debt financing (with improving operating results as the business grows, the Company expects to have increased access to the debt markets to finance working capital and capital expenditures), (iii) project level debt and equity financing and (iv) potential local or state Government loans or grants in return for manufacturing job creation and retention. The

timing and size of any financing will depend on multiple factors including market conditions, future order flow and the need to adjust production capacity. If we are unable to raise additional capital, our growth potential may be adversely affected and we may have to modify our plans.

#### Cash Flows

Cash and cash equivalents and restricted cash and cash equivalents totaled \$85.7 million at October 31, 2015 compared to \$108.8 million at October 31, 2014. At October 31, 2015, restricted cash and cash equivalents was \$26.9 million, of which \$6.3 million was classified as current and \$20.6 million was classified as non-current, compared to \$25.1 million total restricted cash and cash equivalents at October 31, 2014, of which \$5.5 million was classified as current and \$19.6 million was classified as non-current.

The following table summarizes our consolidated cash flows:

	2015	2014	2013
Consolidated Cash Flow Data:			
Net cash used in operating activities	\$(44,274 )	\$(57,468 )	\$(16,658 )
Net cash used in by investing activities	(6,930 )	(7,079 )	(6,194 )
Net cash provided by financing activities	26,454	80,821	43,634
Effects on cash from changes in foreign currency rates	(108 )	(260 )	35
Net increase in cash and cash equivalents	\$(24,858 )	\$16,014	\$20,817

The key components of our cash inflows and outflows were as follows:

**Operating Activities** - Cash used in operating activities was \$44.3 million during fiscal year 2015 compared to \$57.5 million used in operating activities during fiscal year 2014. Net cash used in operating activities during fiscal year 2015 is primarily a result of increases in current project assets and inventory of \$11.4 million and \$10.1 million, respectively, due to an increase in power purchase agreements in backlog and projects under development versus direct sales in the comparable prior year period. As we continue to execute on our business plan we must produce fuel cell modules and procure balance of plant components in required volumes to support our planned construction schedules and potential customer contractual requirements. Decreases in accounts payable and deferred revenue of \$7.2 million and \$3.9 million, respectively, also contributed to cash used in operating activities. These changes were partially offset by a decrease in accounts receivable of \$3.2 million and an increase in accrued liabilities of \$6.4 million. Net cash used in operating activities during fiscal year 2014 is a result of a an increase in accounts receivable of \$15.4 million due to revenue recognized on multiple projects, a decrease in deferred revenue of \$12.3 million due to the timing of revenue recognition, a decrease in accrued liabilities of \$11.1 million which is partially comprised of three replacement modules that were provided to POSCO Energy to satisfy the previously accrued obligation to provide such modules, a decrease in accounts payable of \$1.6 million resulting from the timing of installation activities in the prior year and vendor payments and an increase in project assets for projects under development. These were partially offset by a decrease in other assets of \$3.4 million due to the reduction in debt issuance costs relating to the 8% convertible Note conversions during fiscal year 2014.

**Investing Activities** - Cash used in investing activities was \$6.9 million during fiscal year 2015 compared to net cash used in investing activities was \$7.1 million during fiscal year 2014. Net cash used during fiscal year 2015 pertains to capital expenditures including expenditures for upgrades to existing machinery, equipment and investments in automation equipment that we believe will improve the efficiency and cost profile of our operations and facilitate our Torrington facility expansion. Net cash used during fiscal year 2014 related to capital expenditures of \$6.3 million and \$0.8 million which was invested in long-term project assets. Project assets consist primarily of costs relating to our fuel cell projects in various stages of development, generally under power purchase agreements that we capitalize prior to entering into a definitive sales or long-term financing agreement for the project.

**Financing Activities** - Net cash provided by financing activities was \$26.5 million during fiscal year 2015 compared to \$80.8 million in the prior year period. Net cash provided by financing activities during the year ended October 31, 2015 includes proceeds from open market sales of common stock of \$27.1 million and net debt proceeds of \$5.2 million, partially offset by the payment of preferred dividends and return of capital payments of \$4.2 million. Net cash provided by financing activities during fiscal year 2014 related to the Securities Purchase Agreement entered into with NRG wherein 14.6 million shares were issued for net proceeds of \$35.0 million, a public offering of 25.3 million

shares of common stock for net proceeds of \$29.5 million and proceeds from open market sales of common stock of \$41.3 million partially offset by an increase in restricted cash of \$15.1 million for the placement of funds in a Grantor's Trust account to secure the Company's obligations under a 15-year service

agreement for the Bridgeport Fuel Cell Park Project, the net paydown of the J. P. Morgan Chase revolving credit facility of \$5.7 million and the payment of preferred dividends and return of capital of \$4.3 million.

#### Commitments and Significant Contractual Obligations

A summary of our significant future commitments and contractual obligations at October 31, 2015 and the related payments by fiscal year is summarized as follows:

(dollars in thousands)

	Total	Payments Due by Period			
		Less than 1 year	1 - 3 years	3 - 5 years	More Than 5 years
Contractual Obligations					
Purchase commitments <sup>(1)</sup>	\$57,108	\$56,460	\$613	\$35	\$—
Series 1 Preferred obligation <sup>(2)</sup>	8,176	956	1,911	1,911	3,398
Term loans (principal and interest)	15,619	4,435	3,414	612	7,158
Capital and operating lease commitments <sup>(3)</sup>	5,939	2,193	2,555	1,129	62
Revolving credit facility <sup>(4)</sup>	2,945	2,945	—	—	—
Series B Preferred dividends payable <sup>(5)</sup>	—	—	—	—	—
Total	\$89,787	\$66,989	\$8,493	\$3,687	\$10,618

(1) Purchase commitments with suppliers for materials, supplies and services incurred in the normal course of business.

The terms of the Class A Cumulative Redeemable Exchangeable Preferred Share Agreement (the “Series 1 Preferred Share Agreement”) require payments of (i) an annual amount of Cdn. \$500,000 for dividends and (ii) an amount of Cdn. \$750,000 as return of capital payments payable in cash. These payments will end on December 31, 2020. Dividends accrue at a 1.25% quarterly rate on the unpaid principal balance, and additional dividends will accrue on the cumulative unpaid dividends at a rate of 1.25% per quarter, compounded quarterly. On December 31,

(2) 2020 the amount of all accrued and unpaid dividends on the Class A Preferred Shares of Cdn. \$21.1 million and the balance of the principal redemption price of Cdn. \$4.4 million will be due to the holders of the Series 1 preferred shares. The Company has the option of making dividend payments in the form of common stock or cash under terms outlined in the preferred share agreement. For purposes of preparing the above table, the final balance of accrued and unpaid dividends due December 31, 2020 of Cdn. \$21.1 million is assumed to be paid in the form of common stock and not included in this table.

(3) Future minimum lease payments on capital and operating leases.

The amount represents the amount outstanding at October 31, 2015 on the \$4.0 million revolving credit facility with JPMorgan Chase Bank, N.A. and the Export-Import Bank of the United States. The outstanding principal balance of the facility bears interest, at the option of the Company, of either the one-month LIBOR plus 1.5% or the prime rate of JP Morgan Chase. The facility is secured by certain working capital assets and general

(4) intangibles, up to the amount of the outstanding facility balance. The credit facility expired on November 28, 2015 in conjunction with the Export-Import Bank charter expiration and the outstanding balance was paid back subsequent to year-end on November 24, 2015. The Export-Import Bank Charter has been renewed and the Company is working with JPMorgan on reinstating the facility.

We pay \$3.2 million in annual dividends on our Series B Preferred Stock. The \$3.2 million annual dividend payment has not been included in this table as we cannot reasonably determine the period when or if we will be

(5) able to convert the Series B Preferred Stock into shares of our common stock. We may, at our option, convert these shares into the number of shares of our common stock that are issuable at the then prevailing conversion rate if the closing price of our common stock exceeds 150% of the then prevailing conversion price (\$141) for 20 trading days during any consecutive 30 trading day period.

On November 9, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase of the expansion of our Torrington, Connecticut manufacturing facility. In conjunction with this financing, the Company entered into a \$10 million Promissory Note

and related security agreements securing the loan with equipment liens and a mortgage on its Danbury, Connecticut location. Pursuant to the terms of the loan, payment of principal is deferred for the first four years. Interest at a fixed rate of 2% is payable beginning December 2015. The financing is payable over 15 years, and is predicated on certain terms and conditions, including the forgiveness of up to 50% of the loan principal if certain job retention and job creation targets are reached. In addition, the Company will receive up to \$10 million of tax credits earned during the first phase of the expansion.

The second phase of our manufacturing expansion, for which we will be eligible to receive an additional \$10 million in low-cost financing from the State of Connecticut, will commence as demand supports. This includes adding manufacturing equipment to increase annual capacity from the current 100 megawatts to at least 200 megawatts. Plans for this phase also include the installation

of a megawatt scale tri-generation fuel cell plant to power and heat the facility as well as provide hydrogen for the manufacturing process of the fuel cell components, and the creation of an Advanced Technology Center for technology testing and prototype manufacturing. In addition, the final stage of the fuel cell module manufacturing will be relocated to the Torrington facility from its current location at the Danbury, Connecticut headquarters, which will reduce logistics costs. The total cost of both phases of the expansion could be up to \$65.0 million over a five year period.

On July 30, 2014, the Company's subsidiary, FuelCell Energy Finance LLC ("FuelCell Finance") entered into a Loan Agreement with NRG. Pursuant to the Loan Agreement, NRG has extended a \$40.0 million revolving construction and term financing facility to FuelCell Finance for the purpose of accelerating project development by the Company and its subsidiaries. FuelCell Finance and its subsidiaries may draw on the facility to finance the construction of projects through the commercial operating date of the power plants. FuelCell Finance has the option to continue the financing term for each project after the commercial operating date for a maximum term of five years per project. The interest rate is 8.5% per annum for construction-period financing and 8.0 % thereafter. At October 31, 2015, drawdowns on the facility aggregated \$3.8 million.

On March 5, 2013 the Company closed on a long-term loan agreement with the Connecticut Clean Energy and Finance Investment Authority (CEFIA, now known as the CT Green Bank) totaling \$5.9 million in support of the Bridgeport Fuel Cell Project. The loan agreement carries an interest rate of 5.0% and principal repayments will commence on the eighth anniversary of the project's provisional acceptance date in December 2021. Outstanding amounts are secured by future cash flows from the Bridgeport contracts. The outstanding balance on the CEFIA Note at October 31, 2015 was \$6.1 million.

In April 2008, we entered into a 10-year loan agreement with the Connecticut Development Authority allowing for a maximum amount borrowed of \$4.0 million. At October 31, 2015, we had an outstanding balance of \$2.8 million on this loan. The interest rate is 5%. Interest only payments commenced in January 2014 and the loan is collateralized by the assets procured under this loan as well as \$4.0 million of additional machinery and equipment. Repayment terms require interest and principal payments through May, 2018.

We have pledged approximately \$26.9 million of our cash and cash equivalents as performance security and for letters of credit for certain banking requirements and contracts. At October 31, 2015, outstanding letters of credit totaled \$8.7 million. These expire on various dates through April 2019. Under the terms of certain contracts, the Company will provide performance security for future contractual obligations. The restricted cash balance at October 31, 2015 includes \$15.0 million which has been placed in a Grantor's Trust account to secure certain FCE obligations under the 15-year service agreement for the Bridgeport Fuel Cell Park Project and has been reflected as long-term restricted cash. The restrictions on the \$15.0 million will be removed upon completion of the final module exchange at the Bridgeport Fuel Cell Park Project under the terms of the services agreement.

At October 31, 2015, we have uncertain tax positions aggregating \$15.7 million and have reduced our net operating loss carryforwards by this amount. Because of the level of net operating losses and valuation allowances, unrecognized tax benefits, even if not resolved in our favor, would not result in any cash payment or obligation and therefore have not been included in the contractual obligation table above.

In addition to the commitments listed in the table above, we have the following outstanding obligations:

Service and warranty agreements

We warranty our products for a specific period of time against manufacturing or performance defects. Our standard warranty period is generally 15 months after shipment or 12 months after acceptance of the product. We have agreed to warranty kits and components for 21 months from the date of shipment due to the additional shipping and customer manufacture time required. In addition to the standard product warranty, we have contracted with certain customers to provide services to ensure the power plants meet minimum operating levels for terms ranging from up to 20 years. Pricing for service contracts is based upon estimates of future costs, which could be materially different from actual expenses. Also see Critical Accounting Policies and Estimates for additional details.

Advanced technologies contracts (Research and development contracts)

We have contracted with various government agencies and certain companies from private industry to conduct research and development as either a prime contractor or sub-contractor under multi-year, cost-reimbursement and/or cost-share type contracts or cooperative agreements. Cost-share terms require that participating contractors share the total cost of the project based on an agreed upon ratio. In many cases, we are reimbursed only a portion of the costs incurred or to be incurred on the contract. While government research and development contracts may extend for many years, funding is often provided incrementally on a year-by-year basis if contract terms are met and Congress authorizes the funds. At October 31, 2015, Advanced technologies contracts



backlog totaled \$36.5 million, of which \$33.4 million is funded. Should funding be delayed or if business initiatives change, we may choose to devote resources to other activities, including internally funded research and development.

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### Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates. Estimates are used in accounting for, among other things, revenue recognition, contract loss accruals, excess, slow-moving and obsolete inventories, product warranty costs, loss accruals on service agreements, share-based compensation expense, allowance for doubtful accounts, depreciation and amortization, impairment of goodwill and in-process research and development intangible assets, impairment of long-lived assets, income taxes and contingencies. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary.

Our critical accounting policies are those that are both most important to our financial condition and results of operations and require the most difficult, subjective or complex judgments on the part of management in their application, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Our accounting policies are set forth below.

### Goodwill and Intangible Assets

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a purchase business combination and is reviewed for impairment at least annually.

Accounting Standards Codification Topic 350, "Intangibles - Goodwill and Other," (ASC 350) permits the assessment of qualitative factors to determine whether events and circumstances lead to the conclusion that it is necessary to perform the two-step goodwill impairment test required under ASC 350.

The Company completed its annual impairment analysis at July 31 of goodwill and intangible assets with indefinite lives during the third quarter of fiscal year 2015. The analysis was performed at the reporting unit level. The goodwill and intangible assets all relate to the Company's Versa power Systems, Inc. (Versa) reporting unit, since Versa has a segment manager that regularly reviews the results of that operation. Goodwill and other indefinite lived intangible assets are also reviewed for possible impairment whenever changes in conditions indicate that the fair value of a reporting unit is more likely than not below its carrying value. No impairment charges were recorded during any of the years presented.

### Impairment of Long Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. If events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable, we compare the carrying amount of an asset group to future undiscounted net cash flows, excluding interest costs, expected to be generated by the asset group and their ultimate disposition. If the sum of the undiscounted cash flows is less than the carrying value, the impairment to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less costs to sell. No impairment charges were recorded during any of the years presented.

### Revenue Recognition

We earn revenue from (i) the sale and installation of fuel cell power plants (ii) the sale of component part kits, modules and spare parts to customers, (iii) site engineering and construction services, (iv) providing services under service agreements, (v) the sale of electricity under PPAs, (vi) license fees and royalty income from manufacturing and technology transfer agreements, and (vii) customer-sponsored advanced technology projects.

The Company periodically enters into arrangements with customers that involve multiple elements of the above items. We assess such contracts to evaluate whether there are multiple deliverables, and whether the consideration under the arrangement is being appropriately allocated to each of the deliverables.

Our revenue is primarily generated from customers located throughout the U.S., Europe and Asia and from agencies of the U.S. Government. Revenue from the sale and installation of fuel cell power plants; the sale of component part

kits, modules and spare parts; site engineering and construction services is recorded as product sales in the consolidated statements of operations. Revenue from service agreements, PPAs, license and royalty revenue and engineering services revenue is recorded as service and license revenues. Revenue from customer-sponsored advanced technology research and development projects is recorded as advanced technologies contract revenues in the consolidated statements of operations.

For customer contracts for complete DFC Power Plants, with which the Company has adequate cost history and estimating experience, and that management believes it can reasonably estimate total contract costs, revenue is recognized under the percentage of completion method of accounting. The use of percentage of completion accounting requires significant judgment relative to

estimating total contract costs, including assumptions relative to the length of time to complete the contract, the nature and complexity of the work to be performed, anticipated increases in wages and prices for subcontractor services and materials, and the availability of subcontractor services and materials. Our estimates are based upon the professional knowledge and experience of our engineers, project managers and other personnel, who review each long-term contract on a quarterly basis to assess the contract's schedule, performance, technical matters and estimated cost at completion. When changes in estimated contract costs are identified, such revisions may result in current period adjustments to operations applicable to performance in prior periods. Revenues are recognized based on the percentage of the contract value that incurred costs to date bear to estimated total contract costs, after giving effect to estimates of costs to complete based on most recent information. For customer contracts for new or significantly customized products, where management does not believe it has the ability to reasonably estimate total contract costs, revenue is recognized using the completed contract method and therefore all revenue and costs for the contract are deferred and not recognized until installation and acceptance of the power plant is complete. We recognize anticipated contract losses as soon as they become known and estimable. Actual results could vary from initial estimates and estimates will be updated as conditions change.

Revenue from fuel cell kits, modules and spare parts sales is recognized upon shipment or title transfer under the terms of the customer contract. Terms for certain contracts provide for a transfer of title and risk of loss to our customers at our factory locations upon completion of our contractual requirement to produce products and prepare the products for shipment. A shipment in place may occur in the event that the customer is not ready to take delivery of the products on the contractually specified delivery dates.

Site engineering and construction services revenue is recognized on a percentage of completion basis as costs are incurred.

Revenue from service agreements is generally recorded ratably over the term of the service agreement, as our performance of routine monitoring and maintenance under these service agreements is generally expected to be incurred on a straight-line basis. For service agreements where we expect to have a module exchange at some point during the term (generally service agreements in excess of five years), the costs of performance are not expected to be incurred on a straight-line basis, and therefore, a portion of the initial contract value related to the module exchange is deferred and is recognized upon such module replacement event.

The Company receives license fees and royalty income from POSCO Energy as a result of manufacturing and technology transfer agreements entered into in 2007, 2009 and 2012. The Cell Technology Transfer Agreement we entered into on October 31, 2012 provides POSCO Energy with the technology to manufacture Direct FuelCell power plants in South Korea and the exclusive market access to sell power plants throughout Asia. In conjunction with this agreement we amended the 2010 manufacturing and distribution agreement with POSCO Energy and the 2009 License Agreement. The 2012 agreement and the previously referenced amendments contain multiple elements, including the license of technology and market access rights, fuel cell module kit product deliverables, as well as professional service deliverables. We identified these three items as deliverables under the multiple-element arrangement guidance and evaluated the estimated selling prices to allocate the relative fair value to these deliverables, as vendor-specific objective evidence and third-party evidence was not available. The Company's determination of estimated selling prices involved the consideration of several factors based on the specific facts and circumstances of each arrangement. Specifically, the Company considered the cost to produce the tangible product and cost of professional service deliverables, the anticipated margin on those deliverables, prices charged when those deliverables are sold on a stand-alone basis in limited sales, and the Company's ongoing pricing strategy and practices used to negotiate and price overall bundled product, service and license arrangements. We are recognizing the consideration allocated to the license of technology and market access rights as revenue over the 15 year license term on a straight-line basis, and will recognize the amounts allocated to the module kit deliverables and professional service deliverables when such items are delivered to POSCO Energy. We also determined that based on the utility to the customer of the fully developed technology that was licensed in the Cell Technology Transfer Agreement, there is stand-alone value for this deliverable.

Under PPAs, revenue from the sale of electricity is recognized as electricity is provided to the customer. These revenues are classified as a component of service and license revenues.

Revenue from funded advanced technology contracts is recognized as direct costs are incurred plus allowable overhead less cost share requirements, if any. Revenue from customer funded advanced technology programs are generally multi-year, cost-reimbursement and/or cost-shared type contracts or cooperative agreements. We are reimbursed for reasonable and allocable costs up to the reimbursement limits set by the contract or cooperative agreement, and on certain contracts we are reimbursed only a portion of the costs incurred. While advanced technology contracts may extend for many years, funding is often provided incrementally on a year-by-year basis if contract terms are met and funds are authorized.

#### Inventories and Advance Payments to Vendors

Inventories consist principally of raw materials and work-in-process. In certain circumstances, we will make advance payments to vendors for future inventory deliveries. These advance payments are recorded as other current assets on the consolidated balance sheets.

Inventories are reviewed to determine if valuation adjustments are required for obsolescence (excess, obsolete, and slow-moving inventory). This review includes analyzing inventory levels of individual parts considering the current design of our products and production requirements as well as the expected inventory needs for maintenance on installed power plants.

#### Warranty and Service Expense Recognition

We warranty our products for a specific period of time against manufacturing or performance defects. Our warranty is limited to a term generally 15 months after shipment or 12 months after acceptance of our products, except for fuel cell kits. We have agreed to warranty fuel cell kits and components for 21 months from the date of shipment due to the additional shipping and customer manufacture time required. We accrue for estimated future warranty costs based on historical experience. We also provide for a specific accrual if there is a known issue requiring repair during the warranty period. Estimates used to record warranty accruals are updated as we gain further operating experience. At October 31, 2015 and October 31, 2014, the warranty accrual, which is classified in accrued liabilities on the consolidated balance sheet, totaled \$1.0 million and \$1.2 million, respectively.

In addition to the standard product warranty, we have entered into service agreements with certain customers to provide monitoring, maintenance and repair services for fuel cell power plants. Under the terms of these service agreements, the power plant must meet a minimum operating output during the term. If minimum output falls below the contract requirement, we may be subject to performance penalties or may be required to repair and/or replace the customer's fuel cell module. The Company has accrued for performance guarantees of \$2.6 million and \$0.8 million at October 31, 2015 and October 31, 2014, respectively. The increase relates to additional accruals recorded for lower than expected output at certain fuel cell power plants.

The Company provides for loss accruals on all service agreements when the estimated cost of future module exchanges and maintenance and monitoring activities exceed the remaining contract value. Estimates for future costs on service agreements are determined by a number of factors including the estimated remaining life of the module, used replacement modules available, our limit of liability on service agreements and future operating plans for the power plant. Our estimates are performed on a contract by contract basis and include cost assumptions based on what we anticipate the service requirements will be to fulfill obligations for each contract. At October 31, 2015 and October 31, 2014, our accruals on service agreement contracts totaled \$0.8 million and \$3.0 million, respectively.

At the end of our service agreements, customers are expected to either renew the service agreement or, based on the Company's rights to title for the module, the module will be returned to the Company as the plant is no longer being monitored or having routine service performed. At October 31, 2015, the asset related to the residual value of replacement modules in power plants under service agreements was \$2.5 million compared to \$2.7 million as of October 31, 2014.

#### ACCOUNTING GUIDANCE UPDATE

##### Recent Accounting Guidance Not Yet Effective

In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2015-03, Interest – Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. This ASU simplifies the presentation of debt issuance costs by requiring that such costs be presented in the balance sheet as a direct deduction from the carrying value of the associated debt instrument, consistent with debt discounts. The amendments in this ASU are effective for fiscal years beginning after December 15, 2015 and for interim periods therein. Adoption of this ASU is not expected to have a material impact on the Company's consolidated financial position.

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." This topic provides for five principles which should

be followed to determine the appropriate amount and timing of revenue recognition for the transfer of goods and services to customers. The principles in this ASU should be applied to all contracts with customers regardless of industry. The amendments in this ASU are effective for fiscal years, and interim periods within those years beginning after December 15, 2016, with two transition methods of adoption allowed. Early adoption for reporting periods prior to December 15, 2016 is not permitted. In March 2015, the FASB voted to defer the effective date by one year, but allow adoption as of the original adoption date. We are evaluating the financial statement impacts of the guidance in this ASU and determining which transition method we will utilize.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Exposure

We typically invest in U.S. treasury securities with maturities ranging from less than three months to one year or more. We typically hold these investments until maturity and accordingly, these investments are carried at cost and not subject to mark-to-market accounting. At October 31, 2015, we had no U.S. treasury investments. Cash is invested overnight with high credit quality financial institutions and therefore we are not exposed to market risk on our cash holdings from changing interest rates. Based on our overall interest rate exposure at October 31, 2015, including all interest rate sensitive instruments, a change in interest rates of 1% would not have a material impact on our results of operations.

Foreign Currency Exchange Risk

At October 31, 2015, approximately 4% of our total cash, cash equivalents and investments were in currencies other than U.S. dollars (primarily the Euro, Canadian dollars and South Korean Won) and we have no plans of repatriation. We make purchases from certain vendors in currencies other than U.S. dollars. Although we have not experienced significant foreign exchange rate losses to date, we may in the future, especially to the extent that we do not engage in currency hedging activities. The economic impact of currency exchange rate movements on our operating results is complex because such changes are often linked to variability in real growth, inflation, interest rates, governmental actions and other factors. These changes, if material, may cause us to adjust our financing and operating strategies.

Derivative Fair Value Exposure

Series 1 Preferred Stock

The conversion feature and the variable dividend obligation of our Series 1 Preferred shares are embedded derivatives that require bifurcation from the host contract. The aggregate fair value of these derivatives included within long-term debt and other liabilities at October 31, 2015 and 2014 was \$0.7 million. The fair value was based on valuation models using various assumptions including historical stock price volatility, risk-free interest rate and a credit spread based on the yield indexes of technology high yield bonds, foreign exchange volatility as the Series 1 Preferred security is denominated in Canadian dollars, and the closing price of our common stock. Changes in any of these assumptions would change the underlying fair value with a corresponding charge or credit to operations. However, any changes to these assumptions would not have a material impact on our results of operations.



Item 8. CONSOLIDATED FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders  
FuelCell Energy, Inc.:

We have audited the accompanying consolidated balance sheets of FuelCell Energy, Inc. and subsidiaries as of October 31, 2015 and 2014, and the related consolidated statements of operations and comprehensive income (loss), changes in equity (deficit), and cash flows for each of the years in the three year period ended October 31, 2015. We also have audited FuelCell Energy, Inc.'s internal control over financial reporting as of October 31, 2015, based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). FuelCell Energy, Inc.'s management is responsible for these consolidated 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 report on internal controls over financial reporting. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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 FuelCell Energy, Inc. and subsidiaries as of October 31, 2015 and 2014, and the results of its operations and its cash flows for each of the years in the three year period ended October 31, 2015, in conformity with U.S. generally accepted accounting principles. Also in our opinion, FuelCell Energy, Inc. maintained, in all material respects, effective internal control over financial reporting as of October 31, 2015, based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

/s/ KPMG LLP

Hartford, Connecticut  
January 8, 2016

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## FUELCELL ENERGY, INC.

## Consolidated Balance Sheets

October 31, 2015 and 2014

(Amounts in thousands, except share and per share amounts)

	2015	2014
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$58,852	\$83,710
Restricted cash and cash equivalents - short-term	6,288	5,523
Accounts receivable, net of allowance for doubtful accounts of \$544 and \$132 at October 31, 2015 and 2014, respectively	60,790	64,375
Inventories	65,754	55,895
Project assets current	5,260	—
Other current assets	6,954	7,528
Total current assets	203,898	217,031
Restricted cash and cash equivalents - long-term	20,600	19,600
Project assets noncurrent	6,922	784
Property, plant and equipment, net	29,002	25,825
Goodwill	4,075	4,075
Intangible assets	9,592	9,592
Other assets, net	3,142	3,729
Total assets	\$277,231	\$280,636
<b>LIABILITIES AND EQUITY</b>		
Current liabilities:		
Current portion of long-term debt	\$7,358	\$1,439
Accounts payable	15,745	22,969
Accrued liabilities	19,175	12,066
Deferred revenue	31,787	37,626
Preferred stock obligation of subsidiary	823	961
Total current liabilities	74,888	75,061
Long-term deferred revenue	22,646	20,705
Long-term preferred stock obligation of subsidiary	12,088	13,197
Long-term debt and other liabilities	12,998	13,367
Total liabilities	122,620	122,330
Redeemable preferred stock (liquidation preference of \$64,020 at October 31, 2015 and October 31, 2014)	59,857	59,857
Total equity:		
Shareholders' equity		
Common stock (\$.0001 par value; 39,583,333 and 33,333,333 shares authorized at October 31, 2015 and 2014, respectively; 25,964,710 and 23,930,000 shares issued and outstanding at October 31, 2015 and 2014, respectively)	3	2
Additional paid-in capital	934,488	909,458
Accumulated deficit	(838,673)	(809,314)
Accumulated other comprehensive loss	(509)	(159)
Treasury stock, Common, at cost (5,845 and 3,796 shares at October 31, 2015 and 2014, respectively)	(78)	(95)
Deferred compensation	78	95
Total shareholders' equity	95,309	99,987
Noncontrolling interest in subsidiaries	(555)	(1,538)

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Total equity	94,754	98,449
Total liabilities and equity	\$277,231	\$280,636

All shares and per share data presented in these consolidated financial statements and accompanying footnotes have been retroactively adjusted to reflect the 1-for-12 reverse stock split.

See accompanying notes to consolidated financial statements.

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## FUELCELL ENERGY, INC.

## Consolidated Statements of Operations and Comprehensive Income (Loss)

For the Years Ended October 31, 2015, 2014, and 2013

(Amounts in thousands, except share and per share amounts)

	2015	2014	2013
Revenues:			
Product sales (including \$100.5 million, \$115.0 million and \$81.6 million of related party revenue)	\$ 128,595	\$ 136,842	\$ 145,071
Service agreements and license revenues (including \$11.4 million, \$14.9 million and \$20.1 million of related party revenue)	21,012	25,956	28,141
Advanced technologies contract revenues (including \$0.6 million, \$0.4 million and \$0.3 million of related party revenue)	13,470	17,495	14,446
Total revenues	163,077	180,293	187,658
Costs of revenues:			
Cost of product sales	118,530	126,866	136,989
Cost of service agreements and license revenues	18,301	23,037	29,683
Cost of advanced technologies contract revenues	13,470	16,664	13,864
Total cost of revenues	150,301	166,567	180,536
Gross profit	12,776	13,726	7,122
Operating expenses:			
Administrative and selling expenses	24,226	22,797	21,218
Research and development expenses	17,442	18,240	15,717
Total operating expenses	41,668	41,037	36,935
Loss from operations	(28,892)	(27,311)	(29,813)
Interest expense	(2,960)	(3,561)	(3,973)
Income from equity investments	—	—	46
Other income (expense), net	2,442	(7,523)	(1,208)
Loss before provision for income taxes	(29,410)	(38,395)	(34,948)
Provision for income taxes	(274)	(488)	(371)
Net loss	(29,684)	(38,883)	(35,319)
Net loss attributable to noncontrolling interest	325	758	961
Net loss attributable to FuelCell Energy, Inc.	(29,359)	(38,125)	(34,358)
Preferred stock dividends	(3,200)	(3,200)	(3,200)
Net loss to common shareholders	\$(32,559)	\$(41,325)	\$(37,558)
Net loss to common shareholders per share			
Basic	\$(1.33)	\$(2.02)	\$(2.42)
Diluted	\$(1.33)	\$(2.02)	\$(2.42)
Weighted average shares outstanding			
Basic	24,513,731	20,473,915	15,543,750
Diluted	24,513,731	20,473,915	15,543,750
	2015	2014	2013
Net loss	(29,684)	(38,883)	(35,319)
Other comprehensive income (loss):			
Foreign currency translation adjustments	(350)	(260)	35
Comprehensive loss	\$(30,034)	\$(39,143)	\$(35,284)

All shares and per share data presented in these consolidated financial statements and accompanying footnotes have been retroactively adjusted to reflect the 1-for-12 reverse stock split.

See accompanying notes to consolidated financial statements.

## FUELCELL ENERGY, INC.

## Consolidated Statements of Changes in Equity (Deficit)

For the Years Ended October 31, 2015, 2014, and 2013

(Amounts in thousands, except share and per share amounts)

	Common Stock								
	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Deferred Compensation	Noncontrolling Interest in Subsidiaries	Total Equity (Deficit)
Balance, October 31, 2012	15,488,010	\$ 2	\$ 751,272	\$ (736,831 )	\$ 66	\$ (53 )	\$ 53	\$ (381 )	\$ 14,128
Sale of common stock	357,983	—	5,548	—	—	—	—	—	5,548
Common stock issued for acquisition	293,897	—	3,563	—	—	—	—	—	3,563
Share based compensation	—	—	2,226	—	—	—	—	—	2,226
Taxes paid upon vesting of restricted stock awards, net of stock issued under benefit plans	219,310	—	(173 )	—	—	—	—	—	(173 )
Reclass of noncontrolling interest due to liquidation of subsidiaries	—	—	(562 )	—	—	—	—	562	—
Preferred dividends — Series B	—	—	(3,200 )	—	—	—	—	—	(3,200 )
Noncontrolling interest in subsidiaries	—	—	—	—	—	—	—	(961 )	(961 )
Effect of foreign currency translation	—	—	—	—	35	—	—	—	35
Net loss attributable to FuelCell Energy, Inc.	—	—	—	(34,358 )	—	—	—	—	(34,358 )
Balance, October 31, 2013	16,359,200	\$ 2	\$ 758,674	\$ (771,189 )	\$ 101	\$ (53 )	\$ 53	\$ (780 )	\$ (13,192)
Sale of common stock	4,973,604	—	105,966	—	—	—	—	—	105,966
Common stock issued for convertible note	2,063,896	—	33,306	—	—	—	—	—	33,306



conversions including interest									
Common stock issued to settle make-whole obligation	459,523	—	12,883	—	—	—	—	—	12,883
Share based compensation	—	—	2,908	—	—	—	—	—	2,908
Taxes paid upon vesting of restricted stock awards, net of stock issued under benefit plans	76,136		(1,079 )	—	—	—	—	—	(1,079 )
Noncontrolling interest in subsidiaries	—	—	—	—	—	—	—	(758 )	(758 )
Preferred dividends — Series B	—	—	(3,200 )	—	—	—	—	—	(3,200 )
Adjustment for deferred compensation	(2,359 )	—	—	—	—	(42 )	42	—	—
Effect of foreign currency translation	—	—	—	—	(260 )	—	—	—	(260 )
Net loss attributable to FuelCell Energy, Inc.	—	—	—	(38,125 )	—	—	—	—	(38,125 )
Balance, October 31, 2014	23,930,000	\$ 2	\$ 909,458	\$ (809,314 )	\$ (159 )	\$ (95 )	\$ 95	\$ (1,538 )	\$ 98,449
Sale of common stock	1,845,166	1	\$ 26,920	—	—	—	—	—	26,921
Share based compensation	—	—	3,157	—	—	—	—	—	3,157
Taxes paid upon vesting of restricted stock awards, net of stock issued under benefit plans	191,593	—	(539 )	—	—	—	—	—	(539 )
Reclassification of noncontrolling interest due to liquidation of subsidiary	—	—	(1,308 )	—	—	—	—	1,308	—
Noncontrolling interest in subsidiaries	—	—	—	—	—	—	—	(325 )	(325 )
Preferred dividends - Series	—	—	(3,200 )	—	—	—	—	—	(3,200 )

B									
Adjustment for deferred compensation	(2,049 )	—	—	—	—	17	(17 )	—	—
Effect of foreign currency translation	—	—	—	—	(350 )	—	—	—	(350 )
Net loss attributable to FuelCell Energy, Inc.	—	—	—	(29,359 )	—	—	—	—	(29,359 )
Balance, October 31, 2015	25,964,710	\$ 3	\$ 934,488	\$ (838,673 )	\$ (509 )	\$ (78 )	\$ 78	\$ (555 )	\$ 94,754

All shares and per share data presented in these consolidated financial statements and accompanying footnotes have been retroactively adjusted to reflect the 1-for-12 reverse stock split.  
See accompanying notes to consolidated financial statements.

## FUELCELL ENERGY, INC.

## Consolidated Statements of Cash Flows

For the Years Ended October 31, 2015, 2014 and 2013

(Amounts in thousands, except share and per share amounts)

	2015	2014	2013
Cash flows from operating activities:			
Net loss	\$(29,684 )	\$(38,883 )	\$(35,319 )
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	3,157	2,908	2,226
Income in equity investments	—	—	(46 )
(Gain) loss from change in fair value of embedded derivatives	(23 )	(126 )	1,359
Make whole derivative expense	—	8,347	—
Depreciation	4,099	4,384	4,097
Amortization of convertible note discount and non-cash interest expense	1,830	2,140	2,480
Foreign currency transaction gains	(2,075 )	(571 )	(443 )
Other non-cash transactions	412	146	61
Decrease (increase) in operating assets:			
Accounts receivable	3,173	(15,378 )	(12,000 )
Inventories	(10,100 )	1,059	(5,901 )
Project assets	(11,398 )	—	—
Other assets	1,022	3,417	6,076
(Decrease) increase in operating liabilities:			
Accounts payable	(7,224 )	(1,566 )	11,776
Accrued liabilities	6,435	(11,056 )	(172 )
Deferred revenue	(3,898 )	(12,289 )	9,148
Net cash used in operating activities	(44,274 )	(57,468 )	(16,658 )
Cash flows from investing activities:			
Capital expenditures	(6,930 )	(6,295 )	(6,551 )
Expenditures for long-term project assets	—	(784 )	—
Cash acquired from acquisition	—	—	357
Net cash used in investing activities	(6,930 )	(7,079 )	(6,194 )
Cash flows from financing activities:			
Repayment of debt	(1,535 )	(5,971 )	(374 )
Proceeds from debt	6,763	250	45,250
Financing costs for convertible debt securities	—	—	(2,472 )
(Increase) decrease in restricted cash and cash equivalents	(1,765 )	(15,120 )	632
Proceeds from sale of common stock, net of registration fees	27,060	105,844	5,040
Payment of preferred dividends and return of capital	(4,202 )	(4,343 )	(4,442 )
Common stock issued for stock plans and related expenses	133	161	—
Net cash provided by financing activities	26,454	80,821	43,634
Effects on cash from changes in foreign currency rates	(108 )	(260 )	35
Net increase in cash and cash equivalents	(24,858 )	16,014	20,817
Cash and cash equivalents-beginning of year	83,710	67,696	46,879
Cash and cash equivalents-end of year	\$58,852	\$83,710	\$67,696

See accompanying notes to the consolidated financial statements.



Note 1. Nature of Business, Basis of Presentation and Significant Accounting Policies

Nature of Business and Basis of Presentation

FuelCell Energy, Inc. and its subsidiaries (the “Company”, “FuelCell Energy”, “we”, “us”, or “our”) is a leading integrated fuel cell company with a growing global presence. We design, manufacture, install, operate and service ultra-clean, efficient and reliable stationary fuel cell power plants. Our Direct FuelCell power plants continuously produce base load electricity and usable high quality heat around the clock for commercial, industrial, government and utility customers. We have commercialized our stationary carbonate fuel cells and are also pursuing the complementary development of planar solid oxide fuel cells and other fuel cell technologies. Our operations are funded primarily through sales of equity instruments to strategic investors or in public markets, debt financing and local or state government loans or grants. In order to produce positive cash flow from operations, we need to be successful at increasing annual order volume and production and in our cost reduction efforts.

The consolidated financial statements include our accounts and those of our wholly-owned subsidiaries, including FCE FuelCell Energy Ltd. (“FCE Ltd.”), our Canadian subsidiary; Waterbury Renewable Energy, LLC (“WRE”); FuelCell Energy Finance, LLC, which was formed for the purpose of financing projects within the U.S.; Eastern Connecticut Fuel Cell Properties, LLC, Killingly Fuel Cell Park, LLC and DFC ERG CT, LLC, which were formed for the purpose of developing projects within Connecticut; UCI Fuel Cell, LLC, Riverside Fuel Cell, LLC and SRJFC, LLC, which were formed for the purpose of developing projects within California; Setauket Fuel Cell Park, LLC, Cedar Creek Fuel Cell, LLC, EPCAL Fuel Cell Park, LLC, Yaphank Fuel Cell Park, LLC and Farmingdale Fuel Cell, LLC which were formed for the purpose of developing projects within New York; FCE Korea Ltd., which was formed to facilitate our business operations in South Korea; and Versa Power Systems, Inc. (“Versa”), a domestic entity, which includes its Canadian subsidiary Versa Power Systems Ltd., a sub-contractor for the Department of Energy (“DOE”) large-scale hybrid project to develop a coal-based, multi-megawatt solid oxide fuel cell (“SOFC”) based hybrid system. FuelCell Energy Solutions GmbH (“FCES GmbH”), a joint venture with Fraunhofer IKTS (Fraunhofer), facilitates business development in Europe. We have an 89% interest in FCES GmbH and accordingly, the financial results are consolidated with our financial results. All intercompany accounts and transactions have been eliminated. On December 3, 2015, we effected a 1-for-12 reverse stock split, reducing the number of our common shares outstanding on that date from 314.5 million shares to approximately 26.2 million shares. Concurrently with the reverse stock split the number of authorized shares of our common stock was reduced proportionately from 475 million shares to 39.6 million shares. Additionally, the conversion price of our Series B Preferred Stock, and the exchange price of our Series 1 Preferred Shares, the exercise price of all outstanding options and warrants, and the number of shares reserved for future issuance pursuant to our equity compensation plans were all adjusted proportionately to the reverse stock split. All such amounts presented herein have been adjusted retroactively to reflect these changes.

Certain reclassifications have been made to the prior year amounts to conform to the current year presentation. Prior year project assets have been reclassified on the Consolidated Balance Sheets from Property, plant and equipment, net to Project assets noncurrent, Expenditures for long-term project assets for the year ended October 31, 2014 has been reclassified on the Consolidated Statement of Cash Flows from Capital expenditures and foreign currency transactions gains for the years ended October 31, 2014 and 2013 have been reclassified on the Consolidated Statement of Cash Flows from Other non-cash transactions to Foreign currency transaction gains.

Significant Accounting Policies

Cash and Cash Equivalents and Restricted Cash

All cash equivalents consist of investments in money market funds with original maturities of three months or less at date of acquisition. We place our temporary cash investments with high credit quality financial institutions. At October 31, 2015, \$26.9 million of cash and cash equivalents was pledged as collateral for letters of credit and for certain banking requirements and contractual commitments, compared to \$25.1 million pledged at October 31, 2014. The restricted cash balance includes \$15.0 million which has been placed in a Grantor's Trust account to secure certain FCE obligations under a 15-year service agreement for the Bridgeport Fuel Cell Park project and has been classified as Restricted cash and cash equivalents - long-term. At October 31, 2015 and 2014, we had outstanding letters of credit of \$8.7 million and \$7.4 million, respectively, which expire on various dates through April 2019. Cash and cash equivalents at October 31, 2015 also included \$9.6 million of cash advanced by POSCO Energy for raw material

purchases made on its behalf by FuelCell Energy. Under an inventory procurement agreement that ensures coordinated purchasing from the global supply chain, FuelCell Energy provides procurement services for POSCO Energy and receives compensation for services rendered. While POSCO Energy makes payments to us in advance of supplier requirements, quarterly receipts may not match disbursements.

#### Inventories and Advance Payments to Vendors

Inventories consist principally of raw materials and work-in-process. Cost is determined using the first-in, first-out cost method. In certain circumstances, we will make advance payments to vendors for future inventory deliveries. These advance payments are recorded as other current assets on the consolidated balance sheets.

Inventories are reviewed to determine if valuation allowances are required for obsolescence (excess, obsolete, and slow-moving inventory). This review includes analyzing inventory levels of individual parts considering the current design of our products and production requirements as well as the expected inventory requirements for maintenance on installed power plants.

#### Project Assets

Project assets consist primarily of capitalized costs for fuel cell projects in various stages of development whereby the Company has entered into power purchase agreements prior to entering into a definitive sales or long-term financing agreement for the project. These projects are actively being marketed and intended to be sold, although we may choose to retain ownership of one or more of these projects after they become operational if we determine it would be of economic and strategic benefit. Project asset costs include costs for developing and constructing a complete turn-key fuel cell project. Development costs can include legal, consulting, permitting, interconnect, and other similar costs. Once we enter into a definitive sales agreement we expense project assets to cost of sales after the respective project asset is sold to a customer and all revenue recognition criteria have been met. We classify project assets as current if the expected commercial operation date is less than twelve months and long-term if it is greater than twelve months from the balance sheet date. The current portion of project assets are currently held for sale, however, should the Company elect to retain a project asset, it will be classified as long-term upon such election. We review project assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

#### Property, Plant and Equipment

Property, plant and equipment are stated at cost, less accumulated depreciation provided on the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are amortized on the straight-line method over the shorter of the estimated useful lives of the assets or the term of the lease. When property is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in operations for the period.

#### Intellectual Property

Intellectual property, including internally generated patents and know-how, is carried at no value.

#### Goodwill and Intangible Assets

Goodwill represents the excess of the aggregate purchase price over the fair value of the net assets acquired in a purchase business combination and is reviewed for impairment at least annually.

Accounting Standards Codification Topic 350, "Intangibles - Goodwill and Other", (ASC 350) permits the assessment of qualitative factors to determine whether events and circumstances lead to the conclusion that it is necessary to perform the two-step goodwill impairment test required under ASC 350.

The Company completed its annual impairment analysis of goodwill and intangible assets with indefinite lives at July 31, 2015. The goodwill and intangible assets all relate to the Company's Versa reporting unit. Goodwill and other indefinite lived intangible assets are also reviewed for possible impairment whenever changes in conditions indicate that the fair value of a reporting unit is more likely than not below its carrying value. No impairment charges were recorded during any of the years presented.

#### Impairment of Long Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. If events or changes in circumstances indicate that the carrying amount of the asset group may not be recoverable, we compare the carrying amount of an asset group to future

undiscounted net cash flows, excluding interest costs, expected to be generated by the asset group and their ultimate disposition. If the sum of the undiscounted cash flows is less than the carrying value, the impairment to be recognized is measured by the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less costs to sell. No impairment charges were recorded during any of the years presented.



### Revenue Recognition

We earn revenue from (i) the sale and installation of fuel cell power plants (ii) the sale of fuel cell modules, component part kits and spare parts to customers, (iii) site engineering and construction services, (iv) providing services under service agreements, (v) the sale of electricity under a power purchase agreement ("PPA"), (vi) license fees and royalty income from manufacturing and technology transfer agreements, and (vii) customer-sponsored advanced technology projects.

The Company periodically enters into arrangements with customers that involve multiple elements of the above items. We assess such contracts to evaluate whether there are multiple deliverables, and whether the consideration under the arrangement is being appropriately allocated to each of the deliverables.

Our revenue is primarily generated from customers located throughout the U.S. and Asia and from agencies of the U.S. Government. Revenue from power plant construction, module and module kit sales, construction services and component part revenue is recorded as product sales in the consolidated statements of operations. Construction services includes engineering, procurement and construction (EPC) services of the overall fuel cell project. The installation of a power plant at a customer site includes significant site preparation which is included in the EPC component and is required to be completed before integration of the fuel cell power plant. Revenue from service agreements, PPAs and license and royalty revenue is recorded as service and license revenues. Revenue from customer-sponsored advanced technology research and development projects is recorded as advanced technologies contract revenues in the consolidated statements of operations.

For customer contracts for complete DFC Power Plants which the Company has adequate cost history and estimating experience, and that management believes it can reasonably estimate total contract costs, revenue is recognized under the percentage of completion method of accounting. The use of percentage of completion accounting requires significant judgment relative to estimating total contract costs, including assumptions relative to the length of time to complete the contract, the nature and complexity of the work to be performed, anticipated increases in wages and prices for subcontractor services and materials, and the availability of subcontractor services and materials. Our estimates are based upon the professional knowledge and experience of our engineers, project managers and other personnel, who review each long-term contract on a quarterly basis to assess the contract's schedule, performance, technical matters and estimated cost at completion. When changes in estimated contract costs are identified, such revisions may result in current period adjustments to revenue. Revenues are recognized based on the proportion of costs incurred to date relative to total estimated costs at completion as compared to the contract value. For customer contracts for new or significantly customized products, where management does not believe it has the ability to reasonably estimate total contract costs, revenue is recognized using the completed contract method and therefore all revenue and costs for the contract are deferred and not recognized until installation and acceptance of the power plant is complete. For all types of contracts, we recognize anticipated contract losses as soon as they become known and estimable. We have recorded an estimated contract loss accrual of \$0.03 million at October 31, 2014. There was no contract loss accrual recorded at October 31, 2015. Actual results could vary from initial estimates and reserve estimates will be updated as conditions change.

Revenue from the sale of fuel cell modules, component part kits and spare parts is recognized upon shipment or title transfer under the terms of the customer contract. Terms for certain contracts provide for a transfer of title and risk of loss to our customers at our factory locations upon completion of our contractual requirement to produce products and prepare the products for shipment. A shipment in place may occur in the event that the customer is not ready to take delivery of the products on the contractually specified delivery dates.

Site engineering and construction services revenue is recognized on a percentage of completion basis as costs are incurred.

Revenue from service agreements is generally recorded ratably over the term of the service agreement, as our performance of routine monitoring and maintenance under these service agreements are generally expected to be incurred on a straight-line basis. For service agreements where we expect to have a module exchange at some point during the term (generally service agreements in excess of five years), the costs of performance are not expected to be incurred on a straight-line basis, and therefore, a portion of the initial contract value related to the module exchange is

deferred and is recognized upon such module replacement event.

Revenue from funded advanced technology contracts is recognized as direct costs are incurred plus allowable overhead less cost share requirements, if any. Revenue from customer funded advanced technology programs are generally multi-year, cost-reimbursement and/or cost-shared type contracts or cooperative agreements. We are reimbursed for reasonable and allocable costs up to the reimbursement limits set by the contract or cooperative agreement, and on certain contracts we are reimbursed only a portion of the costs incurred. While advanced technology contracts may extend for many years, funding is often provided incrementally on a year-by-year basis if contract terms are met and funds are authorized.

#### Warranty and Service Expense Recognition

We warranty our products for a specific period of time against manufacturing or performance defects. Our warranty is limited to a term generally 15 months after shipment or 12 months after acceptance of our products, except for fuel cell kits. We have agreed to warranty fuel cell kits and components for 21 months from the date of shipment due to the additional shipping and customer manufacture time required. We accrue for estimated future warranty costs based on historical experience. We also provide for a specific accrual if there is a known issue requiring repair during the warranty period. Estimates used to record warranty accruals are updated as we gain further operating experience. At October 31, 2015 and October 31, 2014, the warranty accrual, which is classified in accrued liabilities on the consolidated balance sheet, totaled \$1.0 million and \$1.2 million, respectively.

In addition to the standard product warranty, we have entered into service agreements with certain customers to provide monitoring, maintenance and repair services for fuel cell power plants. Under the terms of these service agreements, the power plant must meet a minimum operating output during the term. If minimum output falls below the contract requirement, we may be subject to performance penalties or may be required to repair and/or replace the customer's fuel cell module. The Company has accrued for performance guarantees of \$2.6 million and \$0.8 million at October 31, 2015 and 2014, respectively.

The Company provides for loss accruals for all service agreements when the estimated cost of future module exchanges and maintenance and monitoring activities exceeds the remaining contract value. Estimates for future costs on service agreements are determined by a number of factors including the estimated remaining life of the module, used replacement modules available, our limit of liability on service agreements and future operating plans for the power plant. Our estimates are performed on a contract by contract basis and include cost assumptions based on what we anticipate the service requirements will be to fulfill obligations for each contract. At October 31, 2015, our loss accruals on service agreements totaled \$0.8 million compared to \$3.0 million at October 31, 2014.

At the end of our service agreements, customers are expected to either renew the service agreement or, based on the Company's rights to title of the module, the module will be returned to the Company as the plant is no longer being monitored or having routine service performed. At October 31, 2015, the asset related to the residual value of replacement modules in power plants under service agreements was \$2.5 million compared to \$2.7 million at October 31, 2014.

#### License Agreements and Royalty Income

We generally recognize license fees and other revenue over the term of the associated agreement. License fees and royalty income have been included within revenues on the consolidated statement of operations.

The Company receives license fees and royalty income from POSCO Energy as a result of manufacturing and technology transfer agreements entered into in 2007, 2009 and 2012. The Cell Technology Transfer Agreement ("CTTA") we entered into on October 31, 2012 provides POSCO Energy with the technology to manufacture Direct FuelCell power plants in South Korea and the exclusive market access to sell power plants throughout Asia. In conjunction with this agreement we amended the 2010 manufacturing and distribution agreement with POSCO Energy and the 2009 License Agreement. The 2012 agreement and the previously referenced amendments contain multiple elements, including the license of technology and market access rights, fuel cell module kit product deliverables, as well as professional service deliverables. We identified these three items as deliverables under the multiple-element arrangement guidance and evaluated the estimated selling prices to allocate the relative fair value to these deliverables, as vendor-specific objective evidence and third-party evidence was not available. The Company's determination of estimated selling prices involves the consideration of several factors based on the specific facts and circumstances of each arrangement. Specifically, the Company considers the cost to produce the tangible product and cost of professional service deliverables, the anticipated margin on those deliverables, prices charged when those deliverables are sold on a stand-alone basis in limited sales, and the Company's ongoing pricing strategy and practices used to negotiate and price overall bundled product, service and license arrangements. We are recognizing the consideration allocated to the license of technology and market access rights as revenue over the 15 year license term on a straight-line basis, and will recognize the amounts allocated to the module kit deliverables and professional service deliverables when such items are delivered to POSCO Energy. We have also determined that based on the utility to the customer of the fully developed technology that was licensed in the Cell Technology Transfer

Agreement, there is stand-alone value for this deliverable.

In conjunction with the CTTA, a \$10.0 million fee was paid to the Company on November 1, 2012. Future fees totaling \$8.0 million are payable on a milestone basis between 2014 and 2016. In conjunction with the CTTA, the Company also amended the royalty provisions in the 2007 Technology Transfer, Distribution and Licensing Agreement ("TTA") and the 2009 Stack Technology Transfer and License Agreement ("STTA") revising the royalty from 4.1% to 3.0% of POSCO Energy net sales. The reduction in the royalty rate resulted in a net fee of \$6.7 million paid to the Company in January 2013.

Under the terms of the 2007 TTA, POSCO Energy manufactures balance of plant (“BOP”) in South Korea using its design, procurement and manufacturing expertise. The 2009 STTA allows POSCO Energy to produce fuel cell modules which will be combined with BOP manufactured in South Korea to complete electricity-producing fuel cell power plants for sale in South Korea. Under the STTA and prior to the CTTA, we were receiving 4.1% of the revenues generated from sales of fuel cell modules manufactured and sourced by POSCO Energy. The STTA also provided for an upfront license fee of \$10.0 million. License fee income was recognized ratably over the 10-year term of the STTA through October 31, 2012. As a result of the CTTA, the remaining license fee income of \$7.0 million is being recognized ratably over an additional 15 years beginning November 1, 2012.

In September 2013, the Company entered into a revised Master Service Agreement with POSCO Energy, whereby POSCO Energy assumed more responsibility for servicing installations in Asia that utilize power plants manufactured by POSCO Energy. The Company will perform engineering and support services for each unit in the installed fleet and receive quarterly fees as well as a 3.0% royalty on each fuel cell module replacement under service agreements that were built by POSCO Energy and installed at any plant in Asia.

In April 2014, the Company entered into an Integrated Global Supply Chain Plan Agreement (“IGSCP”) with POSCO Energy. FuelCell Energy provides procurement services for POSCO Energy and receives compensation as recognized revenue for services rendered.

The Company recorded license and royalty income of \$3.9 million, \$4.3 million and \$4.1 million for the years ended October 31, 2015, 2014 and 2013, respectively, relating to the above agreements. Future license and royalty income will consist of amortization of the license payments discussed above as well as a 3.0% royalty on POSCO Energy net product sales related to FCE's technology and each scheduled fuel cell module replacement under terms of our Master Service Agreement.

#### Deferred Revenue and Customer Deposits

We receive payments from customers upon the acceptance of a purchase order and when contractual milestones are reached. These payments may be deferred based on the nature of the payment and status of the specific project. Deferred revenue is recognized as revenue in accordance with our revenue recognition policies summarized above.

#### Research and Development Costs

We perform both customer-sponsored research and development projects based on contractual agreement with customers and company-sponsored research and development projects. Costs incurred for customer-sponsored projects include manufacturing and engineering labor, applicable overhead expenses, materials to build and test prototype units and other costs associated with customer-sponsored research and development contracts. These costs are recorded as Advanced Technologies contract revenues in the consolidated statements of operations.

Costs incurred for company-sponsored research and development projects consist primarily of labor, overhead, materials to build and test prototype units and consulting fees. These costs are recorded as research and development expenses in the consolidated statements of operations.

#### Concentrations

We contract with a concentrated number of customers for the sale of our products, for service agreement contracts and for advanced technologies contracts. For the years ended October 31, 2015, 2014 and 2013, our top customers accounted for 94%, 88% and 88%, respectively, of our total annual consolidated revenue.

The percent of consolidated revenues from each customer for the years ended October 31, 2015, 2014 and 2013, respectively are presented below.

	2015	2014	2013	
POSCO Energy	67	% 69	% 54	%
The United Illuminating Company	14	% 9	% —	%
Bridgeport Dominion Fuel Cell, LLC	3	% 3	% 29	%
Department of Energy	5	% 4	% 5	%
Pepperidge Farms	3	% —	% —	%
NRG Energy	2	% 3	% —	%
Total	94	% 88	% 88	%



POSCO Energy is a related party and owns approximately 10% of the outstanding common shares of the Company and NRG Energy is a related party and owns approximately 5% of the outstanding common shares of the Company.

#### Derivatives

We do not use derivatives for speculative purposes and through fiscal year end 2015, have not used derivatives for hedging or trading purposes. Our derivative instruments consist of embedded derivatives in our Series 1 Preferred Shares. We account for these derivatives using the fair-value method with changes in fair value recorded to operations. Refer to Note 12 for additional information.

#### Use of Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the U.S. requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates. Estimates are used in accounting for, among other things, revenue recognition, excess, slow-moving and obsolete inventories, product warranty costs, service agreement loss accruals, allowance for uncollectable receivables, depreciation and amortization, impairment of goodwill, intangible and long-lived assets, income taxes, and contingencies. Estimates and assumptions are reviewed periodically, and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary.

#### Foreign Currency Translation

The translation of FuelCell Korea Ltd's and FCES GmbH's financial statements results in translation gains or losses, which are recorded in accumulated other comprehensive income (loss) within stockholders' equity (deficit). Our Canadian subsidiary, FCE Ltd., is financially and operationally integrated and the functional currency is U.S. dollars. We are subject to foreign currency transaction gains and losses as certain transactions are denominated in foreign currencies. We recognized gains of \$1.7 million, \$0.6 million and \$0.4 million for the years ended October 31, 2015, 2014 and 2013, respectively. These amounts have been classified as other income (expense), net in the consolidated statements of operations.

#### Recent Accounting Guidance Not Yet Effective

In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2015-03, Interest – Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs. This ASU simplifies the presentation of debt issuance costs by requiring that such costs be presented in the balance sheet as a direct deduction from the carrying value of the associated debt instrument, consistent with debt discounts. The amendments in this ASU are effective for fiscal years beginning after December 15, 2015 and for interim periods therein. Adoption of this ASU is not expected to have a material impact on the Company's consolidated financial position.

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2014-09, "Revenue from Contracts with Customers (Topic 606)." This topic provides for five principles which should be followed to determine the appropriate amount and timing of revenue recognition for the transfer of goods and services to customers. The principles in this ASU should be applied to all contracts with customers regardless of industry. The amendments in this ASU are effective for fiscal years, and interim periods within those years beginning after December 15, 2016, with two transition methods of adoption allowed. Early adoption for reporting periods prior to December 15, 2016 is not permitted. In March 2015, the FASB voted to defer the effective date by one year, but allow adoption as of the original adoption date. We are evaluating the financial statement impacts of the guidance in this ASU and determining which transition method we will utilize.

## Note 2. Accounts Receivable

Accounts receivable at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Advanced Technology (including U.S. Government <sup>(1)</sup> ):		
Amount billed	\$433	\$2,517
Unbilled recoverable costs	3,077	2,886
	3,510	5,403
Commercial customers:		
Amount billed	19,331	8,871
Unbilled recoverable costs	37,949	50,101
	57,280	58,972
	\$60,790	\$64,375

(1) Total U.S. Government accounts receivable outstanding at October 31, 2015 and 2014 is \$2.6 million and \$1.7 million, respectively.

We bill customers for power plant and module kit sales based on certain contractual milestones being reached. We bill service agreements based on the contract price and billing terms of the contracts. Generally, our advanced technology contracts are billed based on actual recoverable costs incurred, typically in the month subsequent to incurring costs. Some advanced technology contracts are billed based on contractual milestones or costs incurred. Unbilled recoverable costs relate to revenue recognized on customer contracts that have not been billed. Accounts receivable are presented net of an allowance for doubtful accounts of \$0.5 million and \$0.1 million at October 31, 2015 and 2014, respectively.

Commercial customers accounts receivable (including unbilled recoverable costs) include amounts due from POSCO Energy of \$34.4 million and \$29.9 million, and amounts due from NRG of \$0.02 million and \$5.5 million at October 31, 2015 and 2014, respectively.

## Note 3. Inventories

Inventories at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Raw materials	\$29,103	\$25,460
Work-in-process <sup>(1)</sup>	36,651	30,435
Inventories	\$65,754	\$55,895

(1) Work-in-process includes the standard components of inventory used to build the typical modules or module components that are intended to be used in future power plant orders or to service our service agreements. Included in Work-in-process at October 31, 2015 and 2014 is \$13.3 million and \$19.2 million, respectively, of completed standard components.

Raw materials consist mainly of various nickel powders and steels, various other components used in producing cell stacks and purchased components for balance of plant. Work-in-process inventory is comprised of material, labor, and overhead costs incurred to build fuel cell stacks and modules, which are subcomponents of a power plant.

Raw materials and work in process are net of reserves of approximately \$0.2 million and \$1.4 million at October 31, 2015 and 2014, respectively.



## Note 4. Project Assets

Project assets at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Current project assets	5,260	—
Long-term project assets	6,922	784
Project assets	12,182	784

Current project assets include projects that are currently under construction by the Company under a PPA. The current portion of project assets of \$5.3 million includes two projects that are under construction by the Company. This balance will fluctuate based on timing of construction and sale of the projects to third parties. The long-term portion of project assets of \$6.9 million represents a fuel cell project which was sold under a sales leaseback transaction in December 2015 (see Note 20). The Consolidated Statement of Cash Flows for 2015 reflects all expenditures for project assets within operating activities consistent with the current Balance Sheet classification at the time such expenditures were incurred during the year.

## Note 5. Property, Plant and Equipment

Property, plant and equipment at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014	Estimated Useful Life
Land	\$524	\$524	—
Building and improvements	9,263	9,117	10-26 years
Machinery, equipment and software	83,578	75,084	3-8 years
Furniture and fixtures	3,137	2,955	10 years
Power plants for use under PPAs	—	996	3-10 years
Construction in progress	9,948	10,534	—
	106,450	99,210	
Accumulated depreciation	(77,448 )	(73,385 )	
Property, plant and equipment, net	\$29,002	\$25,825	

Depreciation expense was \$4.1 million, \$4.4 million and \$4.1 million for the years ended October 31, 2015, 2014 and 2013, respectively.

## Note 6. Goodwill and Intangible Assets

At October 31, 2015 and 2014, the Company had goodwill of \$4.1 million and intangible assets of \$9.6 million associated with the 2012 Versa acquisition. The intangible asset represents indefinite lived in-process research and development.

The Company has completed a qualitative assessment at July 31, 2015 and determined that the goodwill and indefinite-lived intangible asset are not impaired.

## Note 7. Other Current Assets

Other current assets at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Advance payments to vendors <sup>(1)</sup>	\$2,281	\$2,372
Deferred finance costs <sup>(2)</sup>	198	129
Notes receivable	585	529
Prepaid expenses and other <sup>(3)</sup>	3,890	4,498
	\$6,954	\$7,528

(1) Advance payments to vendors relate to inventory purchases.

(2) Primarily represents the current portion of direct deferred finance costs relating to securing a \$40.0 million loan agreement (see Note 10) and will be amortized over the five-year life of the facility.

(3) Primarily relates to other prepaid vendor expenses including insurance, rent and lease payments.

Note 8. Other Assets, net

Other assets, net at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Long-term stack residual value <sup>(1)</sup>	\$2,509	\$2,725
Deferred finance costs <sup>(2)</sup>	\$354	\$483
Other	279	521
Other assets, net	\$3,142	\$3,729

Relates to expected residual value for module exchanges performed under the Company's service agreements where the useful life extends beyond the contractual term of the service agreement and the Company obtains title (1) for the module from the customer upon expiration or non-renewal of the service agreement. If the Company does not obtain rights to title from the customer, the full cost of the module is expensed at the time of the module exchange.

(2) Represents the long-term portion of direct deferred finance costs relating to securing a \$40.0 million loan facility (see Note 10) and will be amortized over the five-year life of the facility.

Note 9. Accrued Liabilities

Accrued liabilities at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Accrued payroll and employee benefits	\$3,914	\$4,432
Accrued contract and operating costs	—	34
Accrued product warranty costs <sup>(1)</sup>	964	1,156
Accrued service agreement costs	3,437	3,882
Accrued taxes, legal, professional and other	3,292	2,562
Accrued material purchases <sup>(2)</sup>	7,568	—
	\$19,175	\$12,066

Activity in the accrued product warranty costs during the year ended October 31, 2015 and 2014 included additions (1) for estimates of potential future warranty obligations of \$0.6 million and \$2.4 million, respectively, on contracts in the warranty period and reductions related to actual warranty spend of \$0.8 million and \$1.2 million, respectively, as contracts progress through the warranty period or are beyond the warranty period.

The Company acts as a procurement agent for POSCO under the Integrated Global Supply Chain Plan ("IGSCP") (2) whereby the Company procures materials on POSCO's behalf for its production facility. The liability represents amounts received for the purchase of materials on behalf of POSCO. Amounts due to vendors is recorded as Accounts Payable.

Note 10. Debt

Debt at October 31, 2015 and 2014 consisted of the following (in thousands):

	2015	2014
Revolving credit facility	\$2,945	\$945
Connecticut Development Authority Note	2,817	3,033
Connecticut Clean Energy and Finance Investment Authority Note	6,052	6,052
NRG loan agreement	3,763	—
Capitalized lease obligations	726	721
Total debt	\$16,303	\$10,751
Current portion of long-term debt	(7,358	) (1,439
Long-term debt	\$8,945	\$9,312



Aggregate annual principal payments under our loan agreements (excluding payments relating to the revolving credit facility) and capital lease obligations for the years subsequent to October 31, 2015 are as follows (in thousands):

Year 1	\$4,412
Year 2	482
Year 3	2,411
Year 4	—
Year 5	—
Thereafter	6,053
	\$13,358

On August 1, 2014, the Company entered into a revolving credit facility with JPMorgan Chase Bank, N.A. (the "Bank") which has a total borrowing capacity of \$4.0 million. This credit facility replaces the Company's previous credit facility with the Bank. The credit facility is used for working capital to finance the manufacture and production and subsequent export sale of the Company's products or services. The outstanding principal balance of the facility will bear interest, at the option of the Company, of either the one-month LIBOR plus 1.5% or the prime rate of JP Morgan Chase. The facility is secured by certain working capital assets and general intangibles, up to the amount of the outstanding facility balance. The credit facility expired on November 28, 2015 in conjunction with the Export-Import Bank charter expiration and the outstanding balance was paid back subsequent to year-end on November 24, 2015. The Export-Import Bank Charter was subsequently renewed and the Company is working with JPMorgan on reinstating the facility.

On July 30, 2014, FuelCell Finance entered into a Loan Agreement for a revolving credit facility with NRG (the "Loan Agreement"). Pursuant to the Loan Agreement, NRG has extended a \$40.0 million revolving construction and term financing facility to FuelCell Finance for the purpose of accelerating project development by the Company and its subsidiaries. FuelCell Finance and its subsidiaries may draw on the facility to finance the construction of projects through the commercial operating date of the power plants. FuelCell Finance has the option to continue the financing term for each project after the commercial operating date for a maximum term of five years per project. The interest rate is 8.5% per annum for construction-period financing and 8.0% thereafter. Fees that were paid by FuelCell Finance to NRG for making the loan facility available and related legal fees incurred were capitalized and will be amortized straight-line over the life of the related loan agreement, which is five years. During fiscal year 2015, our project finance subsidiary, UCI Fuel Cell LLC, borrowed \$3.8 million which is secured by project assets of this subsidiary. The term of this loan is up to five years but the intent is to repay within one year in anticipation of the project being sold or refinanced at the option of the Company.

On June 25, 2013, the Company sold \$38.0 million in aggregate principal amount of 8.0% Senior Unsecured Convertible Notes ("Notes"). During the year ended October 31, 2014, the total \$38.0 million of outstanding principal was converted by Note holders and the Company issued 2.04 million shares of common stock. In connection with the conversion of the Notes, the Company recorded an increase in common stock and additional paid in capital based on the carrying value of the converted Notes which included the converted Notes principal, a proportional amount of unamortized debt discount, and a proportional amount of unamortized debt issuance costs. The change of control put redemption and interest make-whole payment upon conversion features embedded in the Notes required bifurcation from the host debt contract. As a result of the conversion of all the outstanding Notes, there is no remaining derivative balance at October 31, 2014.

As a result of the Note conversions, 0.5 million shares were issued and a payment of \$0.3 million was made to settle the make-whole payment. The total fair value of the shares issued for the make-whole payment was \$12.9 million which resulted in a charge of \$8.7 million. The make-whole charge is included in Other income (expense), net on the consolidated statements of operations.

In April 2008, we entered into a 10-year loan agreement with the Connecticut Development Authority to finance equipment purchases associated with manufacturing capacity expansion allowing for a maximum amount borrowed of \$4.0 million. The interest rate is 5.0% and the loan is collateralized by the assets procured under this loan as well as

\$4.0 million of additional machinery and equipment. Repayment terms require interest and principal payments through May 2018.

On March 5, 2013 the Company closed on a long-term loan agreement with the Connecticut Clean Energy and Finance Investment Authority (CEFIA, now known as the CT Green Bank) totaling \$5.9 million in support of the Bridgeport Fuel Cell Park project. The loan agreement carries an interest rate of 5.0%. Interest only payments commenced in January 2014 and principal payments will commence on the eighth anniversary of the project's provisional acceptance date, which is December 20, 2021, payable in forty eight equal monthly installments. Outstanding amounts are secured by future cash flows from the Bridgeport Fuel Cell Park service agreement.

We lease computer equipment under master lease agreements. Lease payment terms are generally thirty-six months from the date of acceptance for leased equipment.

Subsequent to October 31, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received \$10 million of low-cost financing, to be used for the first phase of our expansion of the Torrington facility. See Note 20.

#### Note 11. Shareholders' Equity

##### Common Stock and Warrant Issuances

During the year ended October 31, 2014, investors elected to convert the total outstanding \$38.0 million in aggregate principal of the 8.0% Senior Unsecured Convertible Notes. As a result of these conversions, the Company issued 2.04 million shares of common stock related to the conversions, 0.5 million shares to settle the make-whole obligation and 0.03 million shares for accrued interest.

On July 30, 2014, the Company entered into a Securities Purchase Agreement with NRG and issued 1.2 million shares of common stock to NRG at a per share price of \$28.68 for a total purchase price of \$35.0 million. The per share price was equal to the per share closing NASDAQ market price on July 29, 2014. In conjunction with the sale of common stock to NRG, the Company also issued a warrant to NRG to purchase up to 0.2 million shares of the Company's common stock at an exercise price of \$40.2 per share, expiring July 30, 2017. The warrants qualify for permanent equity accounting treatment.

On January 23, 2014, the Company completed a public offering of 1.9 million shares of common stock, including 0.3 million shares sold pursuant to the full exercise of an over-allotment option granted to the underwriters. All shares were offered by the Company at a price of \$18.00 per share. Total net proceeds to the Company were approximately \$32.0 million.

The Company may sell common stock on the open market from time to time. The proceeds of these sales may be used for general corporate purposes or to pay obligations related to the Company's outstanding Series I and Series B preferred shares. During fiscal year 2015 and 2014, the Company sold 1.9 million and 1.6 million shares, respectively of the Company's common stock at prevailing market prices through periodic trades on the open market and raised approximately \$26.9 million and \$41.3 million, respectively, net of fees.

#### Note 12. Redeemable Preferred Stock

##### Redeemable Series B Preferred Stock

We have 250,000 shares of our 5% Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000) ("Series B Preferred Stock") authorized for issuance. At October 31, 2015 and 2014, there were 64,020 shares of Series B Preferred Stock issued and outstanding, with a carrying value of \$59.9 million. The following is a summary of certain provisions of our Series B Preferred Stock.

**Ranking** — Shares of Series B Preferred Stock rank with respect to dividend rights and rights upon our liquidation, winding up or dissolution:

• senior to shares of our common stock;

• junior to our debt obligations; and

• effectively junior to our subsidiaries' (i) existing and future liabilities and (ii) capital stock held by others.

**Dividends** - The Series B Preferred Stock pays cumulative annual dividends of \$50 per share which are payable quarterly in arrears on February 15, May 15, August 15 and November 15, and if declared by the board of directors. Dividends accumulate and are cumulative from the date of original issuance. Accumulated dividends on the Series B Preferred Stock do not bear interest.

The dividend rate is subject to upward adjustment as set forth in the Certificate of Designation if we fail to pay, or to set apart funds to pay, any quarterly dividend. The dividend rate is also subject to upward adjustment as set forth in the Registration Rights Agreement entered into with the Initial Purchasers if we fail to satisfy our registration obligations with respect to the Series B Preferred Stock (or the underlying common shares) under the Registration Rights Agreement.

The dividend on the Series B Preferred Stock may be paid in cash; or at the option of the Company, in shares of our common stock, which will be registered pursuant to a registration statement to allow for the immediate sale of these common shares

in the public market. Dividends of \$3.2 million were paid in cash in each of the years ended October 31, 2015, 2014 and 2013. There were no cumulative unpaid dividends at October 31, 2015 and 2014.

**Liquidation** - The Series B Preferred Stock stockholders are entitled to receive, in the event that we are liquidated, dissolved or wound up, whether voluntary or involuntary, \$1,000 per share plus all accumulated and unpaid dividends to the date of that liquidation, dissolution, or winding up (“Liquidation Preference”). Until the holders of Series B Preferred Stock receive their Liquidation Preference in full, no payment will be made on any junior shares, including shares of our common stock. After the Liquidation Preference is paid in full, holders of the Series B Preferred Stock will not be entitled to receive any further distribution of our assets. At October 31, 2015 and 2014, the Series B Preferred Stock had a Liquidation Preference of \$64.0 million.

**Conversion Rights** - Each Series B Preferred Stock share may be converted at any time, at the option of the holder, into 7.0922 shares of our common stock (which is equivalent to an initial conversion price of \$141 per share) plus cash in lieu of fractional shares. The conversion rate is subject to adjustment upon the occurrence of certain events, as described below, but will not be adjusted for accumulated and unpaid dividends. If converted, holders of Series B Preferred Stock do not receive a cash payment for all accumulated and unpaid dividends; rather, all accumulated and unpaid dividends are canceled.

We may, at our option, cause shares of Series B Preferred Stock to be automatically converted into that number of shares of our common stock that are issuable at the then prevailing conversion rate. We may exercise our conversion right only if the closing price of our common stock exceeds 150% of the then prevailing conversion price (\$141 at October 31, 2015) for 20 trading days during any consecutive 30 trading day period, as described in the Certificate of Designation.

If holders of Series B Preferred Stock elect to convert their shares in connection with certain fundamental changes, as defined, we will in certain circumstances increase the conversion rate by a number of additional shares of common stock upon conversion or, in lieu thereof, we may in certain circumstances elect to adjust the conversion rate and related conversion obligation so that shares of our Series B Preferred Stock are converted into shares of the acquiring or surviving company, in each case as described in the Certificate of Designation.

The adjustment of the conversion price is to prevent dilution of the interests of the holders of the Series B Preferred Stock from certain dilutive transactions with holders of common stock.

**Redemption** — We do not have the option to redeem the shares of Series B Preferred Stock. However, holders of the Series B Preferred Stock can require us to redeem all or part of their shares at a redemption price equal to the Liquidation Preference of the shares to be redeemed in the case of a fundamental change, as defined.

We may, at our option, elect to pay the redemption price in cash or in shares of our common stock, valued at a discount of 5% from the market price of shares of our common stock, or any combination thereof. Notwithstanding the foregoing, we may only pay such redemption price in shares of our common stock that are registered under the Securities Act of 1933 and eligible for immediate sale in the public market by non-affiliates of the Company.

**Voting Rights** - Holders of Series B Preferred Stock currently have no voting rights.

#### Series 1 Preferred Shares

In connection with our acquisition of Global Thermolectric Inc. (“Global”) in November 2003, we acquired the obligations of Global pursuant to its outstanding 1,000,000 Series 2 Preferred Shares (“Series 2 Preferred Shares”) which continued to be held by Enbridge, Inc. (“Enbridge”), the sole holder of the Series 1 Preferred Shares. With the sale of Global in May of 2004, the Series 2 Preferred Shares were canceled, and replaced with substantially equivalent Series 1 Preferred Shares (“Series 1 Preferred Shares”) issued by FuelCell Energy Ltd. (“FCE Ltd”).

On March 31, 2011, the Company entered into an agreement with Enbridge to modify the Class A Cumulative Redeemable Exchangeable Preferred Shares agreement (the “Series 1 preferred share agreement”) between FCE Ltd, a wholly-owned subsidiary of FuelCell, and Enbridge, the sole holder of the Series 1 preferred shares. Consistent with



the previous Series 1 preferred share agreement, FuelCell continues to guarantee the return of principal and dividend obligations of FCE Ltd. to the Series 1 preferred shareholders under the modified agreement.

The modified terms of the Series 1 Preferred Shares provides for payments of (i) annual dividend payments of Cdn. \$500,000 and (ii) annual return of capital payments of Cdn. \$750,000. These payments commenced on March 31, 2011 and will end on December 31, 2020. On December 31, 2020 the amount of all accrued and unpaid dividends on the Series 1 Preferred Shares of Cdn. \$21.1 million and the balance of the principal redemption price of Cdn. \$4.4 million shall be paid to the holders of the Series 1

Preferred Shares. FCE Ltd. has the option of making dividend payments in the form of common stock or cash under the Series 1 Preferred Shares provisions.

The Company assessed the accounting guidance related to the classification of the preferred shares after the modification on March 31, 2011 and concluded that the preferred shares should be classified as a mandatorily redeemable financial instrument, and presented as a liability on the consolidated balance sheet.

The Company made its scheduled payments of Cdn. \$1.3 million during each of fiscal years 2015, 2014 and 2013, under the terms of the modified agreement, including the recording of interest expense, which reflects the amortization of the fair value discount, of approximately Cdn. \$2.3 million, Cdn. \$2.1 million and Cdn. \$2.0 million, respectively. At October 31, 2015 and 2014, the carrying value of the Series 1 Preferred shares was Cdn. \$16.9 million (\$12.9 million) and Cdn. 15.8 million (\$14.2 million), respectively and is classified as preferred stock obligation of subsidiary on the consolidated balance sheets.

In addition to the above, the significant terms of the Series 1 Preferred Shares include the following:

• **Voting Rights** — The holders of the Series 1 Preferred Shares are not entitled to any voting rights.

• **Dividends** — Dividend payments can be made in cash or common stock of the Company, at the option of FCE Ltd., and if common stock is issued it may be unregistered. If FCE Ltd. elects to make such payments by issuing common stock of the Company, the number of common shares is determined by dividing the cash dividend obligation by 95% of the volume weighted average price in US dollars at which board lots of the common shares have been traded on NASDAQ during the 20 consecutive trading days preceding the end of the calendar quarter for which such dividend in common shares is to be paid converted into Canadian dollars using the Bank of Canada's noon rate of exchange on the day of determination.

• **Redemption** — The Series 1 Preferred Shares are redeemable by FCE Ltd. for Cdn. \$25 per share less any amounts paid as a return of capital in respect of such share plus all unpaid dividends and accrued interest. Holders of the Series 1 Preferred Shares do not have any mandatory or conditional redemption rights.

• **Liquidation or Dissolution** — In the event of the liquidation or dissolution of FCE Ltd., the holders of Series 1 Preferred Shares will be entitled to receive Cdn. \$25 per share less any amounts paid as a return of capital in respect of such share plus all unpaid dividends and accrued interest. The Company has guaranteed any liquidation obligations of FCE Ltd.

• **Exchange Rights** — A holder of Series 1 Preferred Shares has the right to exchange such shares for fully paid and non-assessable common stock of the Company at the following exchange prices:

• Cdn. \$1,664.52 per share of common stock after July 31, 2015 until July 31, 2020; and  
• at any time after July 31, 2020, at a price equal to 95% of the then current market price (in Cdn. \$) of the Company's common stock at the time of conversion.

The exchange rates set forth above shall be adjusted if the Company: (i) subdivides or consolidates the common stock; (ii) pays a stock dividend; (iii) issues rights, options or other convertible securities to the Company's common stockholders enabling them to acquire common stock at a price less than 95% of the then-current price; or (iv) fixes a record date to distribute to the Company's common stockholders shares of any other class of securities, indebtedness or assets.

**Derivative liability related to Series 1 Preferred Shares**

The conversion feature and variable dividend contained in the terms of the Series 1 Preferred Shares are not clearly and closely related to the characteristics of the Series 1 Preferred Shares. Accordingly, these features qualify as embedded derivative instruments and are required to be bifurcated and recorded as derivative financial instruments at fair value.

The conversion feature is valued using a lattice model. Based on the pay-off profiles of the Series 1 Preferred Shares, it is assumed that we will exercise the call option to force conversion in 2020. Conversion after 2020 delivers a fixed pay-off to the investor, and is modeled as a fixed payment in 2020. The cumulative dividend is modeled as a quarterly cash dividend component (to satisfy minimum dividend payment requirement), and a one-time cumulative dividend payment in 2020.

The variable dividend is valued using a Monte Carlo simulation model.

The assumptions used in these valuation models include historical stock price volatility, risk-free interest rate and a credit spread based on the yield indexes of technology high yield bonds, foreign exchange volatility as the security is denominated in Canadian dollars, and the closing price of our common stock. The aggregate fair value of these derivatives included within long-term debt and other liabilities on the consolidated balance sheets at October 31, 2015 and 2014 was \$0.7 million.

## Note 13. Segment Information

We are engaged in the development, design, production, construction and servicing of high temperature fuel cells for clean electric power generation. Critical to the success of our business is, among other things, our research and development efforts, both through customer-sponsored projects and Company-sponsored projects. The research and development activities are viewed as another product line that contributes to the development, design, production and sale of fuel cell products, however, it is not considered a separate operating segment. Due to the nature of the internal financial and operational reports reviewed by the chief operating decision maker, who does not review and assess financial information at a discrete enough level to be able to assess performance of research and development activities as if it operated as a standalone business segment, we have identified one business segment: fuel cell power plant production and research.

Revenues, by geographic location (based on the customer's ordering location) for the years ended October 31, 2015, 2014 and 2013 were as follows (in thousands):

	2015	2014	2013
United States	\$52,109	\$52,765	\$80,199
South Korea	109,953	124,669	101,928
England	142	119	2,036
Germany	764	869	1,503
Canada	—	820	1,912
Spain	109	1,051	80
Total	\$163,077	\$180,293	\$187,658

Service agreement revenue which is included within Service agreements and license revenues on the consolidated statement of operations was \$16.3 million, \$21.7 million and \$24.0 million, for the years ended October 31, 2015, 2014 and 2013, respectively.

Long-lived assets located outside of the United States at October 31, 2015 and 2014 are not significant individually or in the aggregate.

## Note 14. Benefit Plans

We have shareholder approved equity incentive plans, a shareholder approved Section 423 Stock Purchase Plan (the "ESPP") and an employee tax-deferred savings plan, which are described in more detail below.

## Equity Incentive Plans

The Board adopted the 2006 and 2010 Equity Incentive Plans (collectively, the "Equity Plans"). Pursuant to the Equity Plans, 2 million shares of common stock were reserved for issuance. The Board is authorized to grant incentive stock options, nonstatutory stock options, stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance units, performance shares, dividend equivalent rights and other stock based awards to our officers, key employees and non-employee directors. Stock options, RSAs and SARs have restrictions as to transferability. Stock option exercise prices are fixed by the Board but shall not be less than the fair market value of our common stock on the date of the grant. SARs may be granted in conjunction with stock options. Stock options generally vest ratably over 4 years and expire 10 years from the date of grant. The Company also has an international award program to provide RSUs for the benefit of certain employees outside the United States. At October 31, 2015, there were 0.4 million shares available for grant. At October 31, 2015 equity awards outstanding consisted of incentive stock options, nonstatutory stock options, RSAs and RSUs. The 1998 Equity Incentive Plan remains in effect only to the extent of awards outstanding under the plan at October 31, 2015.

Share-based compensation was reflected in the consolidated statements of operations as follows (in thousands):

	2015	2014	2013
Cost of revenues	\$769	\$751	\$584
General and administrative expense	1,990	1,718	1,325
Research and development expense	360	436	308

\$3,119

\$2,905

\$2,217

### Stock Options

We account for stock options awarded to employees and non-employee directors under the fair value method. The fair value of stock options is estimated on the grant date using the Black-Scholes option valuation model and the following weighted-average assumptions:

	2015	2014	2013	
Expected life (in years)	7.0	7.0	7.0	
Risk free interest rate	1.7	% 2.3	% 1.2	%
Volatility	80.3	% 81.1	% 76.5	%
Dividends yield	—	% —	% —	%

The expected life is the period over which our employees are expected to hold the options and is based on historical data for similar grants. The risk free interest rate is based on the expected U.S. Treasury rate over the expected life. Expected volatility is based on the historical volatility of our stock. Dividend yield is based on our expected dividend payments over the expected life.

The following table summarizes our stock option activity for the year ended October 31, 2015:

Options	Shares	Weighted-Average Option Price
Outstanding at October 31, 2014	252,340	\$77.04
Granted	31,106	\$13.24
Canceled	(25,677 )	\$102.22
Outstanding at October 31, 2015	257,769	\$57.89

The weighted average grant-date fair value per share for options granted during the years ended October 31, 2015, 2014 and 2013 was \$13.24, \$21.48 and \$7.92, respectively. There were no options exercised in fiscal year 2015, 2014 or 2013.

The following table summarizes information about stock options outstanding and exercisable at October 31, 2015:

Range of Exercise Prices	Options Outstanding		Options Exercisable		
	Number outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number exercisable	Weighted Average Exercise Price
\$3.24 — \$61.20	144,495	6.7	\$20.64	128,392	\$21.72
\$61.21 — \$119.04	81,546	1.8	\$96.85	81,546	\$96.85
\$119.05 — \$176.88	31,728	0.6	\$127.42	31,728	\$127.42
	257,769	4.4	\$57.89	241,666	\$60.95

There was no intrinsic value for options outstanding and exercisable at October 31, 2015.

### Restricted Stock Awards and Units

The following table summarizes our RSA and RSU activity for the year ended October 31, 2015:

Restricted Stock Awards and Units	Shares	Weighted-Average Price
Outstanding at October 31, 2014	393,673	17.88
Granted	253,902	15.26
Vested	(148,920 )	17.51
Forfeited	(15,085 )	17.31
Outstanding at October 31, 2015	483,570	16.67



RSA and RSU expense is based on the fair value of the award at the date of grant and is amortized over the vesting period, which is generally four years. At October 31, 2015, the 0.5 million outstanding RSAs and RSUs had an average remaining life of 1.8 years and an aggregate intrinsic value of \$4.7 million.

At October 31, 2015, total unrecognized compensation cost related to nonvested stock options and RSAs including RSUs was \$0.1 million and \$6.3 million, respectively, which is expected to be recognized over the next 1.0 and 1.7 years, respectively, on a weighted-average basis.

#### Stock Awards

During the years ended October 31, 2015, 2014 and 2013, we awarded 2,399, 979 and 2,482 shares, respectively, of fully vested, unrestricted common stock to the independent members of our board of directors as a component of board of director compensation which resulted in recognizing \$0.1 million or less of expense for each of the respective years.

#### Employee Stock Purchase Plan

Under the ESPP, eligible employees have the right to purchase shares of common stock at the lesser of (i) 85% of the last reported sale price of our common stock on the first business day of the offering period, or (ii) 85% of the last reported sale price of the common stock on the last business day of the offering period, in either case rounded up to avoid impermissible trading fractions. Shares issued pursuant to the ESPP contain a legend restricting the transfer or sale of such common stock for a period of six months after the date of purchase. At October 31, 2015, there were 4,708 shares of common stock available for issuance under the ESPP.

ESPP activity for the year ended October 31, 2015 was as follows:

	Number of Shares
ESPP	
Balance at October 31, 2014	23,517
Issued at \$20.64 per share	(8,182 )
Issued at \$12.60 per share	(10,627 )
Available for issuance at October 31, 2015	4,708

The fair value of shares under the ESPP was determined at the grant date using the Black-Scholes option-pricing model with the following weighted average assumptions:

	2015	2014	2013	
Expected life (in years)	0.5	0.5	0.5	
Risk free interest rate	0.07	% 0.08	% 0.15	%
Volatility	72.0	% 75.0	% 75.0	%
Dividends yield	—	% —	% —	%

The weighted-average fair value of shares issued under the ESPP during fiscal year 2015 was \$16.08 per share.

#### Employee Tax-Deferred Savings Plans

We offer a 401(k) plan (the "Plan") to all full time employees that provides for tax-deferred salary deductions for eligible employees (beginning the first month following an employee's hire date). Employees may choose to make voluntary contributions of their annual compensation to the Plan, limited to an annual maximum amount as set periodically by the Internal Revenue Service. Employee contributions are fully vested when made. Under the Plan, there is no option available to the employee to receive or purchase our common stock. Matching contributions of 2% under the Plan aggregated \$0.4 million, \$0.3 million and \$0.3 million for the years ended October 31, 2015, 2014, and 2013, respectively.



## Note 15. Income Taxes

The components of loss from continuing operations before income taxes for the years ended October 31, 2015, 2014, and 2013 were as follows (in thousands):

	2015	2014	2013
U.S.	\$(26,459 )	\$(35,167 )	\$(31,044 )
Foreign	(2,951 )	(3,228 )	(3,904 )
Loss before income taxes	\$(29,410 )	\$(38,395 )	\$(34,948 )

There was current income tax expense of \$0.3 million, \$0.5 million and \$0.4 million related to foreign withholding taxes and income taxes in South Korea and no deferred federal income tax expense (benefit) for the years ended October 31, 2015, 2014 and 2013. Franchise tax expense, which is included in administrative and selling expenses, was \$0.2 million for each of the years ended October 31, 2015, 2014 and 2013.

The reconciliation of the federal statutory income tax rate to our effective income tax rate for the years ended October 31, 2015, 2014 and 2013 was as follows:

	2015	2014	2013
Statutory federal income tax rate	(34.0 )%	(34.0 )%	(34.0 )%
Increase (decrease) in income taxes resulting from:			
State taxes, net of Federal benefits	(0.1 )%	(1.8 )%	(1.7 )%
Foreign withholding tax	0.9 %	1.0 %	0.9 %
Net operating loss adjustment and true-ups	4.7 %	(25.4 )%	0.1 %
Nondeductible expenditures	0.1 %	14.5 %	0.8 %
Change in state tax rate	1.6 %	(0.8 )%	10.5 %
Other, net	0.4 %	0.4 %	4.1 %
Valuation allowance	27.3 %	47.1 %	20.3 %
Effective income tax rate	0.9 %	1.0 %	1.0 %

Our deferred tax assets and liabilities consisted of the following at October 31, 2015 and 2014 (in thousands):

	2015	2014
Deferred tax assets:		
Compensation and benefit accruals	\$8,389	\$7,591
Bad debt and other allowances	1,109	1,859
Capital loss and tax credit carry-forwards	12,998	13,486
Net operating losses (domestic and foreign)	257,373	247,170
Deferred license revenue	9,313	8,894
Inventory valuation allowances	77	521
Investment in partnerships	—	404
Accumulated depreciation	535	590
Gross deferred tax assets:	289,794	280,515
Valuation allowance	(289,794 )	(280,515 )
Deferred tax assets after valuation allowance	—	—
Deferred tax liability:		
In process research and development	(3,377 )	(3,377 )
Net deferred tax liability	\$(3,377 )	\$(3,377 )

We continually evaluate our deferred tax assets as to whether it is “more likely than not” that the deferred tax assets will be realized. In assessing the realizability of our deferred tax assets, management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies. Based on the projections for future taxable income over the periods in which the deferred tax assets are realizable, management believes that significant uncertainty exists surrounding the recoverability of the deferred tax assets. As a result, we recorded a full valuation allowance against our deferred tax assets. Approximately \$4.6 million of the valuation allowance will reduce additional paid in capital upon subsequent recognition of any related tax benefits.



In connection with our 2012 acquisition of Versa we recorded a deferred tax liability for IPR&D, which has an indefinite life. Accordingly, we do not consider it to be a source of taxable income in evaluating the recoverability of our deferred tax assets.

At October 31, 2015, we had federal and state NOL carryforwards of \$721.0 million and \$406.0 million, respectively, for which a portion of the NOL has not been recognized in connection with share-based compensation. The Federal NOL carryforwards expire in varying amounts from 2020 through 2035 while state NOL carryforwards expire in varying amounts from fiscal year 2015 through 2035. Additionally, we had \$11 million of state tax credits available, of which \$1.0 million expires in fiscal year 2018. The remaining credits do not expire.

Certain transactions involving the Company's beneficial ownership occurred in fiscal year 2014 and prior years, which could have resulted in a stock ownership change for purposes of Section 382 of the Internal Revenue Code of 1986, as amended. We have completed a detailed Section 382 study in fiscal year 2015 to determine if any of our NOL and credit carryovers will be subject to limitation. Based on that study we have determined that there was no ownership change as of the end of our fiscal year 2015 under Section 382. The acquisition of VERSA in fiscal year 2013 triggered a Section 382 ownership change which will limit the future usage of some of the Federal and state NOLs. The Federal and state NOLs that are non 382-limited are included in the NOL deferred tax assets as disclosed.

As discussed in Note 1, the Company's financial statements reflect expected future tax consequences of uncertain tax positions that the Company has taken or expects to take on a tax return (including a decision whether to file or not file a return in a particular jurisdiction) presuming the taxing authorities' full knowledge of the position and all relevant facts.

The liability for unrecognized tax benefits at October 31, 2015 and 2014 was \$15.7 million. This amount is directly associated with a tax position taken in a year in which federal and state NOL carryforwards were generated.

Accordingly, the amount of unrecognized tax benefit has been presented as a reduction in the reported amounts of our federal and state NOL carryforwards. It is our policy to record interest and penalties on unrecognized tax benefits as income taxes; however, because of our significant NOLs, no provision for interest or penalties has been recorded.

We file income tax returns in the U.S. and various states, primarily Connecticut and California, as well as income tax returns required internationally for South Korea and Germany. We are open to examination by the Internal Revenue Service and various states in which we file for fiscal years 1999 to the present. We are currently not under any income tax examinations.

#### Note 16. Earnings Per Share

Basic earnings (loss) per common share ("EPS") are generally calculated as income (loss) available to common shareholders divided by the weighted average number of common shares outstanding. Diluted EPS is generally calculated as income (loss) available to common shareholders divided by the weighted average number of common shares outstanding plus the dilutive effect of common share equivalents.

The calculation of basic and diluted EPS for the years ended October 31, 2015, 2014 and 2013 was as follows:

	2015	2014	2013
Numerator			
Net loss	\$(29,684 )	\$(38,883 )	\$(35,319 )
Net loss attributable to noncontrolling interest	325	758	961
Preferred stock dividend	(3,200 )	(3,200 )	(3,200 )
Net loss attributable to common shareholders	\$(32,559 )	\$(41,325 )	\$(37,558 )
Denominator			
Weighted average basic common shares	24,513,731	20,473,915	15,543,750
Effect of dilutive securities <sup>(1)</sup>	—	—	—
Weighted average diluted common shares	24,513,731	20,473,915	15,543,750
Basic loss per share	(1.33 )	(2.02 )	(2.42 )
Diluted loss per share <sup>(1)</sup>	(1.33 )	(2.02 )	(2.42 )

(1) Due to the net loss to common shareholders in each of the years presented above, diluted earnings per share was computed without consideration to potentially dilutive instruments as their inclusion would have been antidilutive. Potentially dilutive instruments include stock options, warrants, unvested RSAs and RSUs and convertible

preferred stock. At October 31, 2015, 2014 and 2013, there were options to purchase 0.3 million shares of common stock. At October 31, 2015, 2014 and 2013, respectively, there were warrants to purchase 0.2 million, 0.5 million and 0.4 million shares of common stock, which were not included in the calculation of diluted earnings per share as they would be antidiilutive.

## Note 17. Commitments and Contingencies

## Lease agreements

At October 31, 2015 and 2014, we had capital lease obligations of \$0.7 million. Lease payment terms are thirty-six months from the date of lease.

We also lease certain computer and office equipment and manufacturing facilities in Torrington and Danbury, Connecticut under operating leases expiring on various dates through 2019. Rent expense was \$1.7 million, \$1.7 million and \$1.6 million for the years ended October 2015, 2014 and 2013, respectively.

Non-cancelable minimum payments applicable to operating and capital leases at October 31, 2015 were as follows (in thousands):

	Operating Leases	Capital Leases
2016	\$1,771	\$422
2017	1,360	243
2018	891	61
2019	755	—
2020	374	—
Thereafter	62	—
Total	\$5,213	\$726

## Service and Warranty Agreements

Under the provisions of our service agreements, we provide services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Under the terms of our service agreements, the power plant must meet a minimum operating output during the term. If minimum output falls below the contract requirement, we may be subject to performance penalties and/or may be required to repair or replace the customer's fuel cell module. An estimate is not recorded for a potential performance guarantee liability until a performance issue has occurred on a particular power plant. At that point, the actual power plant's output is compared against the minimum output guarantee and an accrual is recorded. The review of power plant performance is updated for each reporting period to incorporate the most recent performance of the power plant and minimum output guarantee payments made to customers, if any. The Company has provided for an accrual for performance guarantees, based on actual historical fleet performance, which totaled \$2.6 million and \$0.8 million at October 31, 2015 and 2014, respectively, and is recorded in Accrued Liabilities.

Our loss accrual on service agreements, excluding the accrual for performance guarantees, totaled \$0.8 million and \$3.0 million at October 31, 2015 and 2014, respectively and is recorded in Accrued Liabilities. Our accrual estimates are performed on a contract by contract basis and include cost assumptions based on what we anticipate the service requirements will be to fulfill obligations for each contract.

## Power Purchase Agreements

Under the terms of our PPAs, customers agree to purchase power from our fuel cell power plants at negotiated rates. Electricity rates are generally a function of the customers' current and future electricity pricing available from the grid. As owner of the power plants, we are responsible for all operating costs necessary to maintain, monitor and repair the power plants. Under certain agreements, we are also responsible for procuring fuel, generally natural gas, to run the power plants. We are typically not required to produce minimum amounts of power under our PPA agreements and we typically have the right to terminate PPA agreements by giving written notice to the customer, subject to certain exit costs.

## Plant Expansion

Subsequent to year-end, we commenced the first phase of our project to expand the existing 65,000 square foot manufacturing facility in Torrington, Connecticut by approximately 102,000 square feet for a total size of 167,000 square feet. On November 9, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase of the expansion project. See Note 20 for additional information.



## Other

At October 31, 2015, the Company has unconditional purchase commitments aggregating \$57.1 million, for materials, supplies and services in the normal course of business.

We are involved in legal proceedings, claims and litigation arising out of the ordinary conduct of our business.

Although we cannot assure the outcome, management presently believes that the result of such legal proceedings, either individually, or in the aggregate, will not have a material adverse effect on our consolidated financial statements, and no material amounts have been accrued in our consolidated financial statements with respect to these matters.

## Note 18. Supplemental Cash Flow Information

The following represents supplemental cash flow information (dollars in thousands):

	Year Ended October 31,		
	2015	2014	2013
Cash interest paid	\$677	\$1,892	\$280
Income taxes paid	\$8	\$35	\$17
Noncash financing and investing activity:			
Common stock issued for convertible note conversions and make-whole settlements	\$—	\$46,186	\$—
Common stock issued for Employee Stock Purchase Plan in settlement of prior year accrued employee contributions	\$169	\$106	\$85
Common stock issued for acquisition of Versa	\$—	\$—	\$3,563
Accrued sale of common stock, cash received in a subsequent period	\$494	\$633	\$509

## Note 18. Quarterly Information (Unaudited)

Selected unaudited financial data for each quarter of fiscal year 2015 and 2014 is presented below (in thousands). We believe that the information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented.

(in thousands)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Full Year
Year ended October 31, 2015					
Revenues	\$41,670	\$28,600	\$41,356	\$51,451	\$163,077
Gross profit	4,014	2,023	3,595	3,144	12,776
Loss on operations	(5,130 )	(8,793 )	(7,103 )	(7,866 )	(28,892 )
Net loss	(4,154 )	(9,997 )	(6,628 )	(8,905 )	(29,684 )
Preferred stock dividends	(800 )	(800 )	(800 )	(800 )	(3,200 )
Net loss to common shareholders	(4,866 )	(10,694 )	(7,339 )	(9,660 )	(32,559 )
Net loss to common shareholders per basic and diluted common share <sup>(1)</sup>	\$(0.20 )	\$(0.44 )	\$(0.29 )	\$(0.38 )	\$(1.33 )
Year ended October 31, 2014					
Revenues	\$44,434	\$38,274	\$43,176	\$54,409	\$180,293
Gross profit	2,199	1,611	3,961	5,955	13,726
Loss on operations	(7,570 )	(8,773 )	(6,000 )	(4,968 )	(27,311 )
Net loss	(10,815 )	(16,039 )	(7,139 )	(4,890 )	(38,883 )
Preferred stock dividends	(800 )	(800 )	(800 )	(800 )	(3,200 )
Net loss to common shareholders	(11,404 )	(16,643 )	(7,778 )	(5,500 )	(41,325 )
Net loss to common shareholders per basic and diluted common share <sup>(1)</sup>	\$(0.68 )	\$(0.82 )	\$(0.36 )	\$(0.26 )	(2.02 )





(1) The full year net loss to common shareholders basic and diluted share may not equal the sum of the quarters due to weighting of outstanding shares.

#### Note 20. Subsequent Events

##### Expansion of Torrington Facility and Related Low-Cost Financing

Subsequent to year-end, we commenced the first phase of our project to expand the existing 65,000 square foot manufacturing facility in Torrington, Connecticut by approximately 102,000 square feet for a total size of 167,000 square feet. Initially, this additional space will be used to enhance and streamline logistics functions through consolidation of satellite warehouse locations and will provide the space needed to reconfigure the existing production process to improve manufacturing efficiencies and realize cost savings.

On November 9, 2015, the Company closed on a definitive Assistance Agreement with the State of Connecticut and received a disbursement of \$10 million to be used for the first phase of the expansion project. In conjunction with this financing, the Company entered into a \$10 million Promissory Note and related security agreements securing the loan with equipment liens and a mortgage on its Danbury, Connecticut location. Pursuant to the terms of the loan, payment of principal is deferred for the first four years. Interest at a fixed rate of 2.0% is payable beginning December 2015. The financing is payable over 15 years, and is predicated on certain terms and conditions, including the forgiveness of up to half of the loan principal if certain job retention and job creation targets are reached. In addition, the Company will receive up to \$10 million of tax credits earned during the first phase of the expansion.

The second phase of our manufacturing expansion, for which we will be eligible to receive an additional \$10 million in low-cost financing from the State of Connecticut, will commence as demand supports. This includes adding manufacturing equipment to increase annual capacity from the current 100 megawatts to at least 200 megawatts. Plans for this phase also include the installation of a megawatt scale tri-generation fuel cell plant to power and heat the facility as well as provide hydrogen for the manufacturing process of the fuel cell components, and the creation of an Advanced Technology Center for technology testing and prototype manufacturing. In addition, the final stage of the fuel cell module manufacturing will be relocated to the Torrington facility from its current location at the Danbury, Connecticut headquarters, which will reduce logistics costs.

The first phase of the expansion is expected to result in expenditures of up to \$23 million that will be partially off-set by the \$10 million of first phase funding received from the State of Connecticut. The total investment for both phases of the expansion could be up to \$65 million over a five year period, of which \$20 million will be funded by low cost financing from the State of Connecticut.

##### Revolving Credit Facility

The Company's revolving credit facility with JPMorgan referenced in Note 10 expired on November 28, 2015 in conjunction with the Export-Import Bank charter expiration. The outstanding balance was paid back subsequent to year-end on November 24, 2015. The Export-Import Bank Charter has subsequently been renewed by the U.S. Government and the Company is working with JPMorgan on reinstating the facility during fiscal 2016.

##### Sale Leaseback Tax Equity Facility

In December 2015 the Company entered into a sale leaseback tax equity facility with PNC Energy Capital, LLC. ("PNC") Under this facility, the Company's project finance subsidiaries may enter into up to \$30 million of lease agreements for projects currently under development. The first project to close under the facility on December 23, 2015 was a sale leaseback of the UCI Fuel Cell, LLC power plant which entered into commercial operations in December 2015. Proceeds from PNC totaled approximately \$8.8 million and were partially used to settle outstanding construction period debt to NRG referenced under Note 8 to the financial statements. The Company and its project

finance subsidiaries will establish reserves for up to \$10.0 million to support obligations of the power purchase and service agreements. Such reserves will be classified as restricted cash on the Consolidated Financial Statements and released over time based on project performance. Under the terms of the terms of the sale lease back transactions we make fixed monthly payments to PNC for a period of 10 years and have the option of repurchasing the plants at the end of the term. While we receive financing for the full value of the power plant asset, we do not expect to recognize revenue on the sale leaseback transaction. Instead, revenue is recognized through the sale of electricity and energy credits which are generated as energy is produced.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

The Company maintains disclosure controls and procedures, which are designed to provide reasonable assurance that information required to be disclosed in the Company's periodic SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

We carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the Company's periodic SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control Over Financial Reporting.

We, as members of management of FuelCell Energy, Inc., and its subsidiaries (the "Company"), are responsible for establishing and maintaining adequate internal control over financial reporting. The 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 in the United States of America. Internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;

- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles of the United States of America, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and

- 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.

Under the supervision and with the participation of management, including our principal executive and financial officers, we assessed the Company's internal control over financial reporting as of October 31, 2015, based on criteria for effective internal control over financial reporting established in the Internal Control — Integrated Framework (1992), issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, we have concluded that the Company maintained effective internal control over financial reporting as of October 31, 2015 based on the specified criteria.

Changes in Internal Control Over Financial Reporting.

Our management has evaluated, with the participation of our principal executive and principal financial officers, whether any changes in our internal control over financial reporting that occurred during our last fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on the evaluation we conducted, our management has concluded that no such changes have occurred.

We completed the implementation of the first phase of an enterprise resource planning ("ERP") system at November 1, 2015. This includes the manufacturing facility in Torrington, CT and the headquarters in Danbury, CT. The ERP is expected to improve the efficiency of our supply chain and financial transaction processes. The global implementation is expected to occur in phases over the next several years. As with any new information technology application we implement, this application, along with the internal

controls over financial reporting included in this process, were tested for effectiveness. We concluded, as part of our evaluation described in the above paragraph, that the implementation of an ERP system has not materially affected, and is not reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item 10, with respect to our executive officers, is included in Part I of the Annual Report on Form 10-K. The other information required by this Item 10 is incorporated by reference to the Company's 2015 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 11. EXECUTIVE COMPENSATION

Information required under this Item is incorporated by reference to the Company's 2015 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required under this Item is incorporated by reference to the Company's 2015 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required under this Item is incorporated by reference to the Company's 2015 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information required under this Item is incorporated by reference to the Company's 2015 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

- 1 Financial Statements — See Index to Consolidated Financial Statements at Item 8 of the Annual Report on Form 10-K.
- 2 Financial Statement Schedules — Supplemental schedules are not provided because of the absence of conditions under which they are required or because the required information is given in the financial statements or notes thereto
- 3 Exhibits — The following exhibits are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K.

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EXHIBITS TO THE 10-K

Exhibit No.	Description
3.1	Certificate of Incorporation of the Registrant, as amended, July 12, 1999 (incorporated by reference to exhibit of the same number contained in the Company's Form 8-K dated September 21, 1999).
3.2	Certificate of Amendment of the Certificate of Incorporation of the Registrant, dated October 31, 2003 (incorporated by reference to exhibit of the same number contained in the Company's Form 8-K dated November 4, 2003).
3.3	Certificate of Amendment of the Certification of Incorporate of the Registrant, dated November 21, 2000 (incorporated by reference to the Company's Proxy Statement filed on Schedule 14A filed October 12, 2000).
3.4	Certificate of Amendment of the Certificate of Incorporation of the Registrant, dated March 14, 2005 (incorporated by reference to the Company's Registration Statement on Form S-1 filed March 14, 2005).
3.5	Certificate of Amendment of the Certificate of Incorporation of the Registrant, dated April 3, 2011 (incorporated by reference to the Company's Proxy Statement filed on Schedule 14A filed February 22, 2011).
3.6	Certificate of Amendment of the Certificate of Incorporation of the Registrant, dated April 9, 2012 (incorporated by reference to the Company's Proxy Statement filed on Schedule 14A filed December 2, 2012).
3.7	Certificate of Amendment of the Certificate of Incorporation of the Registrant (incorporated by reference to exhibit 3.1 contained in the Company's Form 8-K dated December 3, 2015).
3.8	Amended and Restated By-Laws of the Registrant, dated December 15 , 2011 (incorporated by reference to exhibit 3.1.1 of the same number contained in the Company's Form 8-K dated December 21, 2011).
4	Specimen of Common Share Certificate (incorporated by reference to exhibit of the same number contained in the Company's Annual Report on Form 10K/A for fiscal year ended October 31, 1999).
4.2	Schedule A to Articles of Amendment of FuelCell Energy, Ltd., setting forth the rights, privileges, restrictions and conditions of Class A Cumulative Redeemable Exchangeable Preferred Shares (incorporated by reference to exhibit of the same number contained in the Company's Form 10-Q for the period ended January 31, 2009).
4.3	Certificate of Designation for the 5% Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000) (incorporated by reference to Exhibit 3.1 contained in the Company's Form 8-K, dated November 22, 2004).
10.1	** Alliance Agreement between FuelCell Energy, Inc. and POSCO Energy, dated as of February 7, 2007 (incorporated by reference to exhibit of the same number contained in the Company's Form 10-Q/A for the period ended January 31, 2009).

10.2 \*\* Technology Transfer, License and Distribution Agreement between FuelCell Energy, Inc. and POSCO Energy, dated as of February 7, 2007 (incorporated by reference to exhibit of the same number contained in the Company's Form 10-Q/A for the period ended January 31, 2009).

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Exhibit No.	Description
10.3	Loan agreement, dated April 29, 2008, between the Company and the Connecticut Development Authority (incorporated by reference to exhibit of the same number contained in the Company's Form 10-Q for the period ended January 31, 2009).
10.4	**Stack Technology Transfer and License Agreement dated as of October 27, 2009, by and between FuelCell Energy, Inc. and POSCO Energy (incorporated by reference to exhibit 10.1 of the Company's Form 8-K, dated November 2, 2009).
10.36	*The FuelCell Energy, Inc. Section 423 Amended and Restated Stock Purchase Plan (refiled to reflect adjusted numbers due to reverse stock split on December 3, 2015)
10.54	*FuelCell Energy, Inc. 1998 Equity Incentive Plan (refiled to reflect adjusted numbers due to reverse stock split on December 3, 2015)
10.55	Lease agreement, dated March 8, 2000, between the Company and Technology Park Associates, L.L.C. (incorporated by reference to exhibit of the same number contained in the Company's 10-Q for the period ended April 30, 2000)
10.56	Security agreement, dated June 30, 2000, between the Company and the Connecticut Development Authority (incorporated by reference to exhibit of the same number contained in the Company's 10-Q for the period ended July 31, 2000)
10.57	Loan agreement, dated June 30, 2000, between the Company and the Connecticut Development Authority (incorporated by reference to exhibit of the same number contained in the Company's 10-Q for the period ended July 31, 2000)
10.58	*FuelCell Energy, Inc. 2006 Equity Incentive Plan (refiled to reflect adjusted numbers due to reverse stock split on December 3, 2015)
10.59	*Amended and Restated 2010 Equity Incentive Plan (refiled to reflect adjusted numbers due to reverse stock split on December 3, 2015)
10.60	Letter agreement, dated September 28, 2015, between the Company and Technology Park Associates, L.L.C. exercising the extension option per the terms of the Lease Agreement, dated March 8, 2000, between the Company and Technology Park Associates, L.L.C.
10.63	Intracreditor Subordination and Confirmation Agreement made and effective as of January 4, 2011 by JPMorgan Chase Bank, N.A. (incorporated by reference to exhibit of the same number contained in the Company's 10-K for the period ended October 31, 2010 dated January 14, 2011)
10.65	*Employment Agreement, dated January 28, 2010 between FuelCell Energy, Inc. and Arthur Bottone, Senior Vice President, Chief Commercial Officer (incorporated by reference to exhibit of the same number contained in the Company's 10-K for the period ended October 31, 2010 dated January 14, 2011).

Exhibit No. Description

- 10.66 \*First Amendment to Employment Agreement, dated December 19, 2011 and effective as of January 1, 2012 between FuelCell Energy, Inc. and Arthur Bottone, President and Chief Executive Officer (incorporated by reference to exhibit 10.3 of the Company's Form 8-K dated December 23, 2011).
- 10.67 \*Employment Agreement, dated March 21, 2012 and effective as of January 1, 2012 between FuelCell Energy, Inc. and Anthony Rauseo, Chief Operating Officer (incorporated by reference to the exhibit of the same number contained in the Company's Form 8-K, dated March 31, 2012).
- 10.68 \*Employment Agreement, dated March 21, 2012 and effective as of January 1, 2012 between FuelCell Energy, Inc. and Michael Bishop, Chief Financial Officer (incorporated by reference to the exhibit of the same number contained in the Company's Form 8-K, dated March 21, 2012).
- 10.69 Letter Agreement dated March 31, 2011, Guarantee dated April 1, 2011 by and between the Company and Enbridge, Inc. and Revised Special Rights and Restrictions attributable to the Class A Preferred Stock of FuelCell Energy, Ltd. for each (incorporated by reference to the Company's Form 8-K dated April 6, 2011).
- 10.70 Amendment dated June 23, 2015 to the Export Loan Agreement dated January 4, 2012, between the Company and JPMorgan Chase Bank N.A. (incorporated by reference to Exhibit 10.70 of the Company's Form 10-Q for the quarter ended July 31, 2015)
- 10.71 Securities Exchange Agreement dated December 20, 2012 by and among the Company and Versa Power Systems Inc., and the stockholders of Versa Power Systems Inc., (incorporated by reference to the Company's Form 8-K dated December 20, 2012).
- 10.72 Purchase and Sale Contract dated October 31, 2012 by and between POSCO Energy Co., LTD. and the Company (incorporated by reference to the Company's Form 8-K dated as of October 31, 2012).
- 10.73 Cell Technology Transfer and License Agreement dated October 31, 2012 by and between the Company and POSCO Energy, Co., LTD (incorporated by reference to the Company's Form 8-K dated as of October 31, 2012 and the Company's Form 8-K/A dated as of January 7, 2013).
- 10.74 Amendment to Technology Transfer Distribution and Licensing Agreement dated as of February 7, 2007 and the Stack Technology Transfer License Agreement dated as of October 27, 2009, each by and between the Company and POSCO Energy, Co., LTD (incorporated by reference to the Company's Form 8-K dated as of October 31, 2012).
- 10.75 Underwriting Agreement, dated as of March 22, 2012, among the Company, Lazard Capital Markets LLC, Stifel, Nicolaus & Company, Incorporated and FBR Capital Markets & Co. (incorporated by reference to exhibit 1.1 of the Company's Form 8-K dated March 22, 2012).

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Exhibit No.	Description
10.76	Securities Purchase Agreement, dated April 30, 2012, by and between the Company and POSCO Energy Co., Ltd, dated April 30, 2012 (incorporated by reference to exhibit 10.1 of the Company's Form 8-K dated April 30, 2012).
10.77	Underwriting Agreement, dated as of June 19, 2013, between the Company and Lazard Capital Markets LLC as representative of the several underwriters named therein (incorporated by reference to Exhibit 10.1 of the Company's Form 8-K, dated June 20, 2013).
10.79	Promissory Note of the Company, dated August 1, 2014, to JPMorgan Chase Bank, N.A. (incorporated by reference to Exhibit 10.64 of the Company's Form 8-K, dated August 1, 2014).
10.80	Loan Agreement, dated as of March 5, 2013, between Clean Energy Finance and Investment Authority, as Lender, and the Company, as Borrower (incorporated by reference to Exhibit 10.69 of the Company's Form 8-K, dated March 12, 2013).
10.81	Security Agreement, dated March 5, 2013, by the Company in favor of the Clean Energy Finance and Investment Authority (incorporated by reference to Exhibit 10.70 of the Company's Form 8-K, dated March 12, 2013).
10.82	Securities Purchase Agreement, dated July 30, 2014, between the Company and NRG Energy, Inc. (incorporated by reference to Exhibit 10.82 of the Company's Form 10-Q for the quarter ended July 31, 2014).
10.83	Loan Agreement, dated July 20, 2014, between FuelCell Energy Finance, LLC and NRG Energy (incorporated by reference to Exhibit 10.83 of the Company's Form 10-Q for the quarter ended July 31, 2014).
10.84	Assistance Agreement, dated November 9, 2015, by and between the State of Connecticut Acting by the Department of Economic Community and Development and FuelCell Energy, Inc.
10.85	Phase 1 Promissory Note, dated November 9, 2015, between the Company and the State of Connecticut Acting by the Department of Economic Community and Development.
14	Code of Ethics applicable to the Company's principal executive officer, principal financial officer and principal accounting officer. (incorporated by reference to exhibit of the same number contained in the Company's 10-K for the fiscal year ended October 31, 2003)
21	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes Oxley Act of 2002
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes Oxley Act of 2002



Exhibit No.	Description
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes Oxley Act of 2002
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes Oxley Act of 2002
101.SCH#	XBRL Schema Document
101.INS#	XBRL Instance Document
101.CAL#	XBRL Calculation Linkbase Document
101.LAB#	XBRL Labels Linkbase Document
101.PRE#	XBRL Presentation Linkbase Document
101.DEF#	XBRL Definition Linkebase Document

The exhibits marked with the section symbol (#) are interactive data files. Pursuant to Rule 406T of Regulation S-T, these interactive data files (i) are not deemed filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, are not deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, irrespective of any general incorporation language included in any such filings, and otherwise are not subject to liability under these sections; and (ii) are deemed to have complied with Rule 405 of Regulation S-T (“Rule 405”) and are not subject to liability under the anti-fraud provisions of the Section 17(a)(1) of the Securities Act of 1933, Section 10(b) of the Securities Exchange Act of 1934 or under any other liability provision if we have made a good faith attempt to comply with Rule 405 and, after we become aware that the interactive data files fail to comply with Rule 405, we promptly amend the interactive data files.

\* Management Contract or Compensatory Plan or Arrangement

\*\* Confidential Treatment has been granted for portions of this document

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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 on January 8, 2016.

FUELCELL ENERGY, INC.

/s/ Arthur A. Bottone

Arthur A. Bottone

President, Chief Executive Officer and  
Director

Dated: January 8, 2016

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Capacity	Date
/s/ Natica von Althann Natica von Althann	Director	January 7, 2016
/s/ Arthur A. Bottone Arthur A. Bottone	President, Chief Executive Officer and Director (Principal Executive Officer)	January 8, 2016
/s/ Michael S. Bishop Michael S. Bishop	Senior Vice President, Chief Financial Officer, Treasurer and Corporate Secretary (Principal Accounting and Financial Officer)	January 8, 2016
/s/ Richard A. Bromley Richard A. Bromley	Director	January 4, 2016
/s/ Paul F. Browning Paul F. Browning	Director	January 7, 2016
/s/ James H. England James H. England	Director	January 5, 2016
/s/ Matthew Hilzinger Matthew Hilzinger	Director	January 7, 2016
/s/ William A. Lawson William A. Lawson	Director	January 7, 2016
/s/ John A. Rolls John A. Rolls	Director - Chairman of the Board	January 4, 2016
/s/ Christopher S. Sotos	Director	January 4, 2016

Christopher S. Sotos

/s/ Togo Dennis West Jr.

Director

January 6, 2016

Togo Dennis West Jr.

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INDEX OF EXHIBITS

Exhibit 10.36	*The FuelCell Energy, Inc. Section 423 Amended and Restated Stock Purchase Plan (refiled to reflect adjusted numbers due to reverse stock split)
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