

- High efficiency reduces fuel costs
- Virtual lack of pollutants supports sustainability goals and benefits public health
- Reliable baseload power provides continuous electricity and heat, enhancing energy security
- Combined heat and power (CHP) further drives efficiency and contributes to a low carbon footprint
- Enhances grid resiliency by lessening/ avoiding reliance on transmission
- Fuel flexible including clean natural gas, renewable biogas on-site or directed biogas



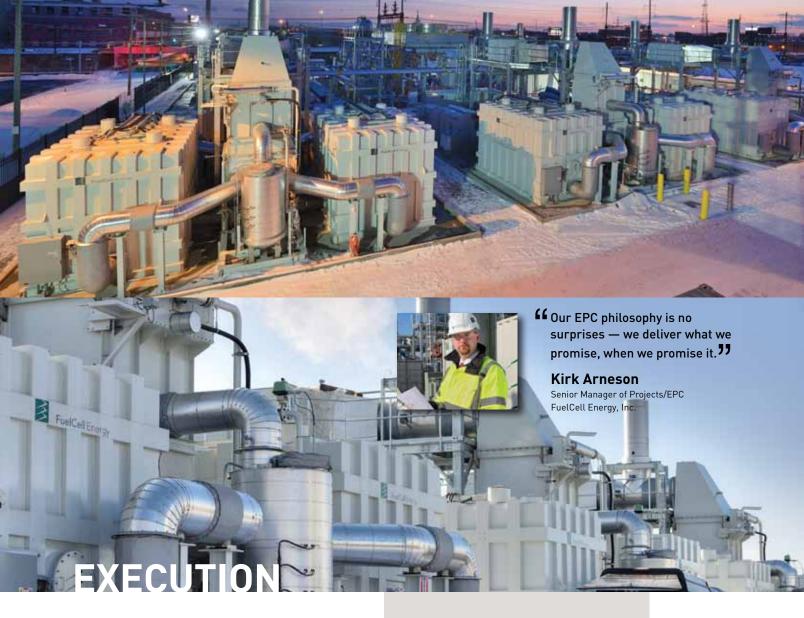
FuelCell Energy, Inc. (Nasdag: FCEL) is an integrated fuel cell company that designs, manufactures, operates and services megawatt-class stationary fuel cell power plants. Customers value the highly efficient and environmentally friendly power generation process and the ability to locate the power plants near where the power is used. The absence of virtually any pollutants, quiet operation and modest space requirements make FuelCell Energy power plants easy to site. The Company provides comprehensive turn-key power generation solutions including installation of the power plants as well as operating and maintaining the plants under multi-year service agreements from an operations center staffed by highly trained power plant operators around-the-clock, 365 days per year.

Customers are large-scale power users including electric utilities and independent power producers, industrial operations, universities, water treatment facilities, government and businesses in a variety of commercial enterprises.

Direct FuelCell® power plants are operating at more than 50 locations worldwide in nine countries and have generated more than 2 billion kilowatt hours (kWh) of electricity, which is equivalent to powering more than 181,000 average size U.S. homes for one year. With more than 300 megawatts installed or in backlog, FuelCell Energy is a global leader in stationary fuel cell power plants.

Fuel cells cleanly and efficiently convert chemical energy from clean natural gas or renewable biogas into electrical power and usable high quality heat in an electrochemical process that is virtually absent of pollut

Similar to a battery, a fuel cell is comprised of many individual cells that are grouped together to form a fuel cell stack. Each individual cell contains an anode, a cathode and an electrolyte layer. When the fuel enters the fuel cell stack, it reacts electrochemically with oxygen fi.e. ambient air] to produce electric current, heat and water, without combustion. Fuel cells continuously generate electricity as long as fuel is supplied and due to the absence of combustion, virtually no pollutants are emitted.



- 14.9 megawatts of renewable baseload power being supplied to the electric grid from a 1.5 acre remediated brownfield site in Bridgeport, Connecticut USA
- Enhances resiliency of electric grid and is a good neighbor with environmentally friendly power generation

Bridgeport project has several advantages. Commercial businesses, universities and military bases can become energy self-reliant. It reduces grid congestion and power transmission issues associated with centralized generation. It makes the grid better able to respond to severe weather events and does so with a process that is clean and efficient and available at all times. It is one of the possible keys to recovering from the next disruptive weather challenge that utilities will face.

#### David A. Christian

Executive Vice President, Dominion Resources, Inc. Chief Executive Officer-Dominion Generation Group



\*From Energybiz.com editorial

#### RELATIONSHIP:

- The 14.9 megawatt Bridgeport fuel cell park is owned by Dominion (NYSE: D), one of the largest utilities in North America
- FuelCell Energy:
- Developed the project and provided engineering, procurement and construction (EPC) services, delivering the project on schedule
- Operates and maintains the park for 15-year-term of the energy purchase agreement
- The State of Connecticut and City of Bridgeport actively supported the project, valuing the urban revitalization and job creation aspects as well as its clean power generation

  1



RELATIONSHIP:

- South Korean-based POSCO Energy is licensed to manufacture Direct FuelCell® power plants for sale in Asia.
- POSCO Energy is an independent power producer with a global power generation portfolio and is owned by POSCO (NYSE: PKX), one of the world's largest steel manufacturers.

POSCO

The scale of this installation is contributing to the power and heating needs of an urban population and generating the electricity in a highly efficient and ultra-low emission profile that supports our National renewable portfolio standard.

Tae-Ho Lee

Chief Executive Officer Gyunggi Green Energy\*



- World's largest fuel cell park with 21 DFC3000® fuel cell power plants providing 59 megawatts (MW) of ultra-clean power and usable high quality heat
- Continuous baseload electricity being supplied to the electric grid and steam to a district heating system
- Power added where needed and installed by POSCO Energy in only 12 months

<sup>\*</sup>Gyunggi Green Energy owns the fuel cell park

### Global Manufacturing

Supporting market growth and manufacturing flexibility

Production in South Korea advances the vision of below-grid pricing as global annual production of approximately 210 MW is expected to reduce product costs to the level that enables pricing beneath the electric grid without incentives

- North America: 100 MW capacity
- Asia: 100 MW capacity under construction and designed for expansion
- Europe: 20 MW capacity for sub-megawatt plants

There is an attractive market opportunity in Asia for high efficiency ultra-clean distributed power generation and local manufacturing will help us meet the rapidly growing market demand.

Jung-Gon Kim Senior Vice President POSCO Energy





Mike Cramer
Director Cell Manufacturing
Technology Transfer Program
FuelCell Energy, Inc.

Our focus on continuous improvement enabled us to increase capacity at our North American production facility by 11 percent in 2013 through process enhancements that required only minimal additional capital investment. This success is also transferable to the manufacturing facility being built by our partner, POSCO Energy, increasing total capacity with only minimal capital outlay.

facility in South Korea under licensing agreement executed in 2013 with POSCO Energy

연료전지 Cell 제조공 작공식

3

### Strength of Supply Chain

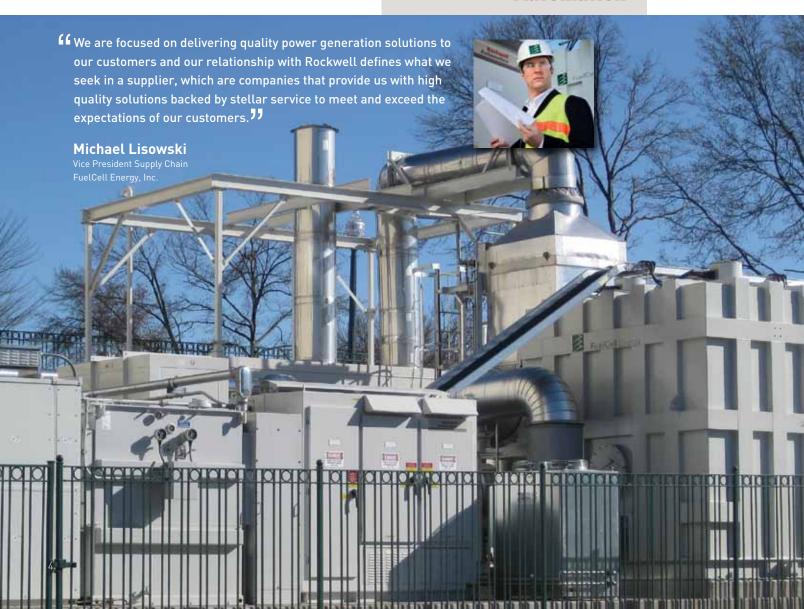
Robust supply chain exemplified by Rockwell Automation (NYSE: ROK) supplier of electrical inverters to convert the direct current (DC) produced by the fuel cells to alternating current (AC) suitable for the electric grid.

We invested in developing a
megawatt-class inverter for the
FuelCell Energy power plants as we
see significant potential for on-site
baseload power delivered efficiently
and virtually emission free.

#### **Brian Bosch**

Program Manager, OEM Drives Power and Control Business Rockwell Automation

> Rockwell Automation





# Supporting Sustainability

Environmentally friendly, low carbon power generation for a flagship mixed use development in London, England.

The award winning Quadrant 3 redevelopment project on Regent Street in central London, England, is a 270,000 square foot mixed use retail/office/ residential redevelopment project by The Crown Estate. The design maintains the historic character of the area while providing modern spaces for leading global tenants and incorporating industry leading sustainable technologies, such as a Direct FuelCell® which forms part of one of the most sophisticated central energy centers in the world. The use of the fuel cell power plant alongside other initiatives has seen Quadrant 3 become renowned as a leading example of sustainable central London development.

London sustainable development and the fuel cell is at the heart of its success. Our customers are increasingly becoming more discerning, taking a real interest in the green credentials of the buildings they occupy. Providing a consistent, clean and quiet supply of energy without having to rely on the grid, the fuel cell is a fantastic energy solution which has been a big attraction for leading global businesses.

Alastair Smart Head of Development, The Crown Estate



The Crown Estate manages a highly diverse portfolio of assets valued at over £8 billion (-\$14 billion). The responsibilities of The Crown Estate, which are set out in an Act of Parliament, are to maintain and enhance the value of the estate and its income over the long term. Each year The Crown Estate returns its profits to the UK Treasury.

RELATIONSHIP: FuelCell Energy Solutions, GmbH with its German manufacturing base, is the manufacturing, sales, and service platform for the European Served Area for FuelCell Energy, Inc.

FCES is a joint venture between Fraunhofer IKTS and FuelCell Energy, Inc. The three entities are working together to develop the European market for stationary fuel cell power plants as well as perform advanced R&D on the Direct FuelCell® (DFC®) technology to further enhance performance and the cost profile.



### Dear Shareholders,

2013 was an exciting year of continued progress. We executed on multiple high-profile projects and strategic initiatives in Asia, North America and Europe, validating our ultra-clean energy solutions and strategy.

Teamwork exemplifies both our approach to market and the progress we made in 2013—partnering with strong global entities for market development, with customers to solve power generation challenges, with our supply chain to ensure robust componentry delivered on time and within necessary cost parameters, all supported by our talented associates.

Executing on the largest product and services backlog in our history, we earned record revenues with expanding margins, while increasing the global manufacturing footprint. Strong teamwork drove our success. Building on the solid foundation we constructed in 2012, our capable associates enhanced relationships with customers and suppliers, refined manufacturing processes and developed alliances and partnerships.

POSCO Energy, our partner in South Korea, completed construction of the world's largest fuel cell park, a 59-megawatt installation, and is now executing on additional large, multi-megawatt fuel cell parks. Responding to growing Asian demand, POSCO began constructing a manufacturing facility in Pohang that will be capable initially of producing 100 megawatts annually and designed for up to 200 megawatts annually.

In North America, we completed—on schedule—the well-publicized Bridgeport Fuel Cell Park. The 14.9 megawatt turn-key project was sold to Dominion, one of the country's largest electric utility companies. Designed and constructed in only 12 months, this achievement further validated our highly efficient, environmentally friendly Direct FuelCell® technology, showcased our customer focus and heralded our ability to execute large projects on time.

Projects like these demonstrate the viability of stationary fuel cells for utility-scale baseload distributed generation, while earning recognition from energy consumers and producers, including major utilities.

Other notable achievements included expanding our North American manufacturing capacity; entering a co-marketing partnership with NRG Energy to sell to their customer base in North America; commissioning our power plant in a prestigious Central London office and retail complex; and delivering our first European-made power plant to a showcase project in Berlin, Germany.

By year-end, our expanding installed base had generated two billion kilowatt-hours of electricity—enough to power more than 181,000 average-size U.S. homes for one full year and reducing emissions equal to taking 499,000 cars off the road. This milestone highlights our accelerating growth. It took eight years to reach the one-billion kilowatt-hour mark, then only two to reach two-billion. Due to the rapid growth of our installed base, we expect to top the three-billion mark in less than a year.

#### **EXECUTING ON MULTI-MEGAWATT INSTALLATIONS**

Our successful execution of the Bridgeport Fuel Cell Park for Dominion provides a powerful, high-profile validation of our ultra-clean fuel cell solutions and diverse services capabilities. With 23,500 megawatts of generation in its portfolio, Dominion is one of North America's leading energy producers.

The largest project of its kind in North America, the fuel cell park is comprised of five of our DFC3000® fuel cell power plants, each generating 2.8 megawatts of electricity, and an organic Rankine cycle turbine converting heat into approximately one megawatt of additional electricity. The park is delivering ultra-clean energy to the grid under a 15-year energy purchase agreement with a Connecticut utility. Showcasing our diverse capabilities, our team developed the project; manufactured the power plants; provided Engineering, Procurement and Construction services; and is now operating and maintaining the fuel cell park for Dominion under a 15-year service agreement.

The park demonstrates the value that such projects deliver to diverse stakeholders. Owners like Dominion benefit from attractive economics. Communities obtain efficient and reliable distributed generation while enjoying cleaner air. Local economies benefit from tax revenue and new job creation. Located on only a 1.5 acre brownfield site, the project exemplifies sound urban renewal practices and supports the state's strategy of using limited ratepayer dollars to leverage private capital.

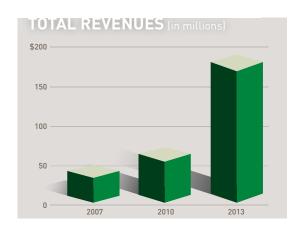
In Asia, POSCO's successful execution of the Gyeonggi Green Energy fuel cell park in Hwasung City, South Korea further validates our core technology and business strategy. Comprised of 21 of our DFC3000® power plants, the park is now fully operational, producing ultra-clean electricity for the grid and usable high quality heat for a district heating system.

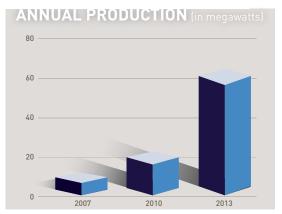
Constructed in a short 12 months, this project demonstrates the speed with which large-scale fuel cell installations can be deployed, reducing grid congestion and helping utilities to comply with clean energy mandates economically and incrementally. Their low emissions profile, relatively small footprint, quiet operation and Combined Heat and Power (CHP) capabilities make our Direct FuelCell® power plants ideal for densely populated environments needing efficient and economical distributed energy.

Our solutions are also well-suited for smaller, on-site CHP applications, as illustrated by an order during 2013 for a 1.4 megawatt DFC1500® power plant for Hartford Hospital in Connecticut. The ultra-clean electricity and steam will supply the hospital's baseload needs, with excess steam supplied to a district heating system.

#### GLOBAL MANUFACTURING SUPPORTS GROWTH

Globally, the trend to larger fuel cell installations is validating our strategy of expanding in key markets while reducing the cost of our projects. This has resulted in our increasing production levels generating corresponding revenue increases.





Global manufacturing is an important element of our business strategy, and includes expanding local capacity to address growing demand in our Asian, North American and European markets.

POSCO is licensed to manufacture complete fuel cell power plants in South Korea based on our DFC® technology. Now under construction, POSCO's manufacturing facility in Pohang will serve Asian markets and is expected to begin producing in 2015 with an initial capacity of 100 megawatts annually. Capacity will be increased as demand supports. This leverages our partner's substantial capabilities and resources.

In-country manufacturing enables our local partner to address fast-growing demand under South Korea's Renewable Portfolio Standard and meet customer expectations for lead times and costs. The added volume leverages our integrated global supply chain, reducing materials costs globally. Local production provides alternate sources of supply, minimizes logistics costs and ensures local product requirements are met. It creates jobs, fostering government support and contributing to energy policies that stimulate adoption.

FuelCell Energy Solutions, our European joint venture with Fraunhofer IKTS, produces products for our European Served Area at our facility in Germany.

In response to order flow, we increased the annual production rate of our North American manufacturing facility by 25 percent during 2013 to 70 MW. In addition, total capacity was increased 11 percent to 100 MW as our team implemented process improvements utilizing lean manufacturing principles and six sigma practices. These enhancements will be incorporated into POSCO's new facility manufacturing process.

This is consistent with our culture of continuous improvement. We focus on enhancing operational leverage and production flow within our existing footprint to maximize productivity while minimizing the need for additional capital investment.

#### **ROBUST MARKET ACTIVITY**

The global trend towards utility-scale projects has produced a broad and diverse landscape of rapidly growing opportunity. We have identified many hundreds of megawatts of prospective fuel cell projects in our existing markets. Based on execution of strategic initiatives over the past two years including the delivery of a utility-scale Bridgeport fuel cell park on schedule to a discerning utility customer and manufacturing capacity being added in Asia, we are pursuing utility-scale projects that we were not well positioned to pursue previously. Utility interest is growing as they recognize the value of easy-to-site fuel cells that can be located in urban areas to efficiently, cleanly and quietly produce baseload power.

We executed a co-marketing agreement with NRG Energy in 2013 for the marketing of our power plants. This relationship with the largest independent power producer in North America affirms our strategy, leverages our sales resources, and provides an additional avenue for project financing as customers can either choose to own the power plants outright or have NRG own the power plants and sell the power output to the end-user under a power purchase agreement.

Notable milestones achieved by our European operation, FuelCell Energy Solutions GmbH, during 2013 included the delivery of our first European-made power plant to the Federal Ministry of Education and Research's new office complex in Berlin, showcasing the benefits of our power generation solutions. Our recently commissioned power plant in the Crown Estate's mixed use office/retail/residential redevelopment in central London is helping to attract environmentally conscious tenants and we signed a service agreement with ewz, one of Switzerland's largest utilities.

The demand for stationary fuel cells continues to grow rapidly in Asia, driven by the South Korean government's "green growth" policies. Developing new markets include commercial buildings and a possible expansion of the renewable portfolio standard to include large commercial energy users. POSCO has identified hundreds of megawatts

of opportunities in Asia. Having completed the Hwasung City installation, POSCO is executing on multiple additional projects including 20-megawatt and 40-megawatt fuel cell parks.

Seeking to take advantage of the versatility of our core technology, our Advanced Technologies Group is focusing on multiple technologies with strong commercialization potential, including: Distributed Hydrogen, which will lower hydrogen costs and the carbon footprint for industrial and fueling applications; Solid Oxide Fuel Cells for sub-megawatt, specialty and storage applications; and a promising efficient and cost-effective Carbon Capture solution. An agreement we signed with a global chemical company in 2013 to demonstrate a solid-state electrochemical hydrogen separation unit demonstrates the potential for accelerated commercialization of distributed hydrogen technologies.

#### **WELL-POSITIONED FOR 2014**

FuelCell Energy is well-positioned for growth. We executed successfully on large, high-profile fuel cell parks in 2013, validating our ultra-clean solutions and services offerings. These achievements position us to execute on strategic initiatives in 2014 and propel us forward on our pathway to profitability.

Our project development capabilities, demonstrated by the on-time delivery of large projects adds momentum to the global movement toward large-scale installations. More than ever, our markets see value in distributed generation stationary fuel cells. A utility model is developing in North America and our qualified pipeline in North America and Europe is active and significantly higher than the annual volume we require to operate profitably.

With our newly expanded manufacturing capacity in North America, we can achieve profitable operations. Additional capacity from our Asian manufacturing facilities will provide the capacity needed to achieve our vision of below-grid pricing with supporting order volume.

I commend our associates, whose efforts helped us generate record revenues with expanding margins for the year. They have done a fine job of demonstrating commitment to our customers and partners, and focusing on teamwork and safety.

While pleased with our accomplishments, we recognize that there is more to do. We are well prepared and eager for the challenge. Thank you for your continued support!

Arthur A. Bottone

President and Chief Executive Officer



Selected Financial Data	11
Business Overview	12
Management's Discussion and Analysis of Financial Condition and Results of Operations	23
Management's Annual Report on Internal Control Over Financial Reporting	32
Report of Independent Registered Public Accounting Firm	33
Consolidated Balance Sheets	34
Consolidated Statements of Operations and Comprehensive Income (Loss)	35
Consolidated Statements of Changes In Shareholders' Equity	36
Consolidated Statements of Cash Flows	37
Notes To Consolidated Financial Statements	38
Forward-Looking Statement Disclaimer	55
Shareholder Information	56
Directors and Officers	i.b.c.

#### **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, 2013 have been derived from our audited consolidated financial statements together with the notes thereto included elsewhere in this annual report. 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 report.

#### Consolidated Statement of Operations Data:

Consolidated Statement of Operations Data:  (Amounts presented in thousands, except for per share amounts)	2013	2012	2011	2010	2009
Revenues:	2010	2012	2011		2007
Product sales	\$145,071	\$ 94,950	\$103,007	\$ 50,192	\$ 66,178
Service agreements and license revenues	28,141	18,183	12,097	9,034	7,626
Advanced technology contracts	14,446	7,470	7,466	10,551	14,212
Total revenues	187,658	120,603	122,570	69,777	88,016
Costs and expenses:	.07,000	120,000	122,070		00,010
Cost of product sales	136,989	93,876	96,525	54,433	84,714
Cost of service agreement and license revenues	29,683	19,045	30,825	23,627	22,319
Cost of advanced technology contracts	13,864	7,237	7,830	10,370	10,994
Total cost of revenues	180,536	120,158	135,180	88,430	118,027
Gross profit (loss)	7,122	445	(12,610)	(18,653)	(30,011)
Operating expenses:	,,	440	(12,010)	(10,000)	(00,011)
Administrative and selling expenses	21,218	18,220	16,299	17,150	17,194
Research and development costs	15,717	14,354	16,768	18,562	19,160
Total costs and expenses	36,935	32,574	33,067	35,712	36,354
Loss from operations	(29,813)	(32,129)	(45,677)	(54,365)	(66,365)
Interest expense	(3,973)	(2,304)	(2,578)	(127)	(265)
Income (loss) from equity investments	46	(645)	58	(730)	(812)
Impairment of equity investment	_	(3,602)	_	(766)	(012)
License fee and royalty income	_	1,599	1,718	1,561	146
Other income (expense), net	(1,208)	1,244	1,047	(254)	714
Redeemable minority interest	(1,200)	1,244	(525)	(2,367)	(2,092)
Provision for income tax	(371)	(69)	(17)	(44)	(2,072)
Net loss	(35,319)	(35,906)	(45,974)	(56,326)	(68,674)
Net loss attributable to noncontrolling interest	961	411	261	663	(00,074)
Net loss attributable to FuelCell Energy, Inc.	(34,358)	(35,495)	(45,713)	(55,663)	(68,674)
Adjustment for modification of redeemable	(34,330)	(55,475)	(43,713)	(55,005)	(00,074)
preferred stock of subsidiary	_	_	(8,987)	_	_
Preferred stock dividends	(3,200)	(3,201)	(3,200)	(3,201)	(3,208)
Net loss to common shareholders	\$ (37,558)	\$ (38,696)	\$ (57,900)	\$(58,864)	\$(71,882)
Net loss to common shareholders					
Basic	\$ (0.20)	\$ (0.23)	\$(0.47)	\$(0.63)	\$(0.99)
Diluted	\$ (0.20)	\$ (0.23)	\$(0.47)	\$(0.63)	\$(0.99)
Weighted average shares outstanding					
Basic	186,525	165,471	124,498	93,926	72,393
Diluted	186,525	165,471	124,498	93,926	72,393
Consolidated Balance Sheet Data:	2012		rs Ended Octo		2000
[Amounts presented in thousands, except for per share amounts]	2013	2012	2011	2010	2009
Cash and cash equivalents [1]	\$ 77,699	\$ 57,514	\$ 51,415	\$ 20,467	\$ 57,823
Short-term investments (U.S. treasury securities)	_	_	12,016	25,019	7,004
Working capital	83,066	55,729	18,783	48,171	77,793
Total current assets	189,329	140,626	132,948	102,209	119,679
Long-term investments (U.S. treasury securities)	_	_	_	9,071	_
Total assets	237,636	191,485	183,630	150,529	162,688
Total current liabilities	106,263	84,897	114,165	54,038	41,886
Total non-current liabilities	84,708	32,603	23,983	12,098	14,534
Redeemable minority interest	_	_	_	16,849	14,976
Redeemable preferred stock	59,857	59,857	59,857	59,857	59,950
Total equity (deficit)	(13,192)	14,128	(14,375)	7,687	31,342
[1] Includes short-term and long-term restricted cash and cash equivalent	c				

#### **BUSINESS OVERVIEW**

#### **BUSINESS**

#### **Overview**

We are a leading integrated fuel cell company with an expanding global presence. We design, manufacture, sell, install, operate and service ultra-clean, highly efficient stationary fuel cell power plants for distributed baseload power generation. Our power plants offer scalable on-site power and utility grid support, helping customers solve their energy, environmental and business challenges. 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. Our plants are operating in more than 50 locations worldwide in nine countries and have generated more than two billion kilowatt hours (kWh) of electricity, which is equivalent to powering more than 181,000 average size U.S. homes for one year. Our steadily 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 U.S. homes. Our customer base includes electric utility companies, municipalities, universities, government entities and businesses in a variety of commercial and industrial 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 next to or within populated buildings as they are virtually pollutant free, operate quietly and without vibrations, and have modest space requirements. Locating the power generation near the point of use provides many advantages including less reliance 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.

Our Company vision is to provide ultra-clean, highly efficient, reliable distributed generation baseload power at a cost per kilowatt hour that is less than the cost of grid-delivered electricity and we have a clear path to attaining this vision which we believe can be achieved with a production volume of approximately 210 megawatts annually. This capacity is either already available or currently under construction, as discussed in the 'Manufacturing' section below.

We provide distributed power generation solutions that provide multiple value streams in a highly efficient and environmentally friendly manner, with product solutions in the following three areas:

#### Direct FuelCell® (DFC®) power plants

Our DFC power plants use 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. DFC power 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 DFC power plants produce high quality heat, suitable for making steam for facility and water heating as well as absorption cooling. System efficiencies can reach up to 90 percent, depending on the application, when configured for Combined Heat and Power (CHP). Unlike intermittent solar and wind power. DFC plants are able to operate continuously regardless of geography, weather or time of day and with very modest space requirements that can be only one tenth of the land required for a solar array offering a similar power output.

We service two primary markets: ultra-clean power (fuel cells operating on natural gas) and renewable power (fuel cells operating on renewable biogas). Our global expansion strategy targets 11 distinct vertical submarkets focusing on regions that value environmentally friendly distributed generation.

#### Solid oxide fuel cell power plants

We are developing for commercialization solid oxide fuel cell (SOFC) power plants targeting sub-megawatt applications such as office buildings, high-rise residential and wastewater treatment plants that are not large enough to support a megawatt-class DFC power plant. Our solid oxide initiatives are leveraging our existing expertise with power plant design as well as manufacturing at high volume. We employ some of the world's foremost experts on SOFC technology, with research and development initiatives at our facilities in Danbury, Connecticut, Littleton, Colorado, and Calgary, Canada. We believe our technology is well suited for addressing the needs of the market with very high electrical efficiency, combined heat and power capability, and the ability to operate on a variety of fuels including natural gas, renewable biogas or directed biogas. We have successfully demonstrated extended testing of our SOFC technology in configurations of 3 kW to 60 kW and are currently working on both a renewable biogas demonstration at a dairy farm and a larger scale installation in Connecticut, both that will connect directly to the electric grid. We are actively seeking partners to commercialize our SOFC technology.

#### Distributed hydrogen generation

Our DFC technology is flexible, capable of providing multiple value streams, including electricity, heat and hydrogen. Hydrogen is generated within the fuel cells from the external fuel source (i.e. natural gas or biogas) although not all of the hydrogen is used by the power generation process. We have a demonstration tri-generation plant located at a wastewater treatment facility in California, USA that has operated for over two years providing on-site hydrogen suitable for industrial purposes or vehicle fueling. We are targeting on-site hydrogen generation applications that will utilize a megawatt-class DFC plant, with expectations of providing hydrogen at competitive market prices.

#### **PRODUCTS**

Our core fuel cell products (Direct FuelCell® or DFC® power plants) offer ultra-clean, highly efficient baseload power generation for customers including the 2.8 MW DFC3000®, the 1.4 MW DFC1500® and the 300 kW DFC300®. Our target customers are large power users with baseload power needs that support at least a 1.4 MW power plant. The plants are scalable for multi-megawatt utility scale applications or on-site power generation for large institutions and industrial applications. The sub-megawatt DFC300 is useful as a demonstration for showcasing the capabilities of DFC plants to new markets. We also market multi-megawatt DFC-ERG® (Direct FuelCell Energy Recovery Generation™) power plants for use in natural gas pipeline applications and DFC/Turbine™ power plants for large-load users. The DFC-ERG and DFC/ Turbine power plants are our highest-efficiency products and are nearly twice as efficient as the average U.S. central generation fossil fuel power plant. Our entire DFC product line is based on one core carbonate fuel cell technology enabling volume based cost reduction and optimal resource utilization.

Our DFC power plants are able to operate 24 hours per day, seven days per week providing continuous power to both on-site customers and grid-support applications. Our DFC power plants can be part of a total on-site power generation solution with our high-efficiency products providing continuous baseload power. Our power plants 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.

For power plants operating on natural gas, higher fuel efficiency results in lower emissions of carbon dioxide (CO<sub>2</sub>), a greenhouse gas, and also results in less fuel needed per kWh of electricity generated and Btu of heat produced. The high efficiency of the DFC power plant 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, many government agencies and regulatory bodies classify DFC power plants as carbon neutral due to the renewable nature of the fuel source. Greater efficiency reduces customers' exposure to volatile fuel costs, minimizes operating costs, and provides maximum electrical output from a finite fuel source. DFC power plants achieve electrical efficiencies of 47 percent to 60 percent or higher depending on configuration. location, and application, and up to 90 percent total efficiency in a CHP configuration, depending on the application. The electric grid in the United States is approximately 36 percent electrically efficient and does not support CHP configurations.

Our power plants offer many advantages:

- Distributed generation: The unique characteristics of our DFC power plants combine to make them an ideal form of distributed generation. Generating power near the point of use lessens the need for costly and difficult-to-site generation, transmission and distribution infrastructure, enhancing the resiliency of the power supply.
- *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. This process also produces high quality useful heat and water. Due to the absence of combustion, our power plants emit virtually no pollutants such as nitrogen oxide

(NOx) that causes smog, sulfur oxide (SOx) or particulate matter (i.e. PM-10) that exacerbates asthma and other health concerns. 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 baseload power generation option in their size class, providing the most power from a given unit of fuel. Their high 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 Combined Heat and Power (CHP) configurations, system efficiencies can reach up to 90 percent, 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 geography or weather.
- 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. These characteristics facilitate the installation of the power plants in urban locations such as next to hospitals or in the basement of office towers.

#### **Distributed Generation**

Our DFC power plants are ideal distributed generation solutions that are equally well suited to generating power 1) "on-site" for a variety of customers including commercial and industrial enterprises, municipalities and government entities, where the power plant is installed and the electricity and heat used at the customer's own facilities, and 2) for utility companies in a grid-support role, where the power plant is installed in any suitable location from which it can supply power to the electric grid. Our plants support micro-grid applications with their ability to operate independently of the electric grid.

On-Site Power: Our DFC power plants generate power efficiently, cleanly and reliably for on-site applications using natural gas or renewable biogas. Customers benefit from improved power reliability and energy security as installing DFC plants reduces reliance on the electric grid. Utilization of the high quality heat produced by the fuel cell in a combined heat and power (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 DFC power plants also help solve waste disposal problems for operations that generate

biogas, a greenhouse gas, as the waste biogas is a fuel source for the DFC plant. This capability to utilize on-site biogas allows wastewater treatment facilities and food and beverage processors to avoid the release of this greenhouse gas into the atmosphere or eliminate gas flaring, which emits pollutants and wastes a potential revenue source.

Utility Grid Support: Our DFC power plants are well suited for utility grid-support applications due to their high efficiency, reliability and distributed generation attributes. Our plants are scalable making fuel cell parks practical and economical, such as a 5 plant, 14.9 MW fuel cell park in Bridgeport, Connecticut that is supplying the electric grid and a 4 plant, 10.4 MW and a 4 plant, 11.2 MW fuel cell parks in South Korea that are providing power to the electric grid along with a 21 plant, 59 MW fuel cell park that became operational at the end of 2013 in Hwasung City, South Korea. Fuel cell parks enable electric utilities to add clean baseload power generation when and where needed. 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 populated areas.

Fuel cell parks enhance the resiliency of the electric grid by reducing reliance on large central generation plants and the associated transmission grid. By producing power near where the power is used, 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 team. Thus, our products can help 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.

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

#### Fuel Cell Overview and 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  $(CO_2)$  and only trace levels of pollutants compared to combustion-type power generation. The following table illustrates the favorable emission profile of our DFC 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 Power Plant	0.01	0.0001	0.00002	940	520 - 680

#### Direct FuelCell Technology

Our Direct FuelCell is so named because of its ability to generate electricity directly from a fuel, such as natural gas or renewable biogas, by reforming the fuel inside the fuel cell to produce hydrogen. 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 so our products are not dependent on the development of a hydrogen delivery infrastructure.

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, and the more expensive metals and ceramic materials required by these lower temperature fuel cells. As a result, we are able to use less expensive catalysts and readily available metals for our power plants. 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.

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 allows for the use of commodity metals rather than precious metals, and high quality heat suitable for CHP applications. We are also actively developing solid oxide fuel cell (SOFC) technology. 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, operating temperature, expected capacity range and byproduct heat use of the four principal types of fuel cells as well as highlights typical market applications:

	MW-Class	Sub-M	W-Class	Micro CHP	Mobile
Technology	Carbonate (MCFC)	Phosphoric Acid (PAFC)	Solid Oxide (SOFC)	PEM/SOFC	Polymer Electrolyte Membrane (PEM)
System Size Range	300kW - 2.8 MW	400kW	up to 200 kW	< 10 kW	5 - 100 kW
Typical Application	Utilities, universities, industrial - baseload	Commercial buildings - baseload	Commercial buildings - baseload	Residential and small commerical	Transportation
Fuel	Natural gas, biogas, others	Natural gas	Natural gas	Natural gas	Hydrogen
Advantages	Efficiency, scalable, fuel flexible & CHP	СНР	Efficiency	Load following & CHP	Load following
Electrical Efficiency	43% - 47% (or ~50% w/organic rankine cycle or ~70% w/turbine cycle)	40% - 42%	50% - 60%	25% - 35%	25% - 35%
Combined Heat & Power (CHP)	Steam, hot water, chilling & bottoming cycles	Hot water, chilling	Depends on technology used	Suitable for facility heating	No, which is preferred for transportation applications

#### **MARKETS**

Global power demand is increasing in response to growing populations, greater urban density, and lifestyles that increasingly revolve around power consuming devices. Central generation and its associated transmission and distribution grid is difficult to site, costly, and generally takes many years to 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.

#### **Primary Markets**

We have two primary markets for our products. The first is Ultra-Clean Power. This market consists of our DFC power plants operating on clean natural gas across seven distinct and diversified vertical markets. The second primary market is Renewable Power. This market is comprised of our DFC power plants operating on renewable biogas across four distinct and diversified vertical markets.

#### 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

The utilities and IPPs are currently our largest vertical market. The majority of our installed base is in South Korea where our DFC power plants are generating ultra-clean power primarily for the nation's electric grid, with the fuel cells' heat typically being used to heat and cool nearby buildings. 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. To date, POSCO Energy has ordered more than 260 megawatts of DFC power plants, modules and components.

Our DFC power plants are producing power for a variety of commercial, industrial, municipal and government customers including food processing plants, universities, government buildings, hotels and military installations. 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.

#### Renewable Power Markets:

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

Wastewater treatment facilities, food and beverage processors and agricultural operations produce harmful 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 excel at converting 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 continues to be an attractive segment for our DFC power plants as a result of a strong value proposition. 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 water treatment facility in California is the world's largest fuel cell plant utilizing renewable biogas.

In other Renewable Power vertical markets, our DFC power plants are using renewable biogas to produce ultra-clean power for food and beverage processing plants and a demonstration plant is being installed at a landfill in Vancouver, Canada to convert the landfill gas into multiple value streams, including electricity, heat and hydrogen suitable for vehicle fueling or industrial purposes.

The DFC plants 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 distribution network. However, directed biogas involves a greater degree of cleaning of the gas to meet pipeline standards.

#### Ownership Models

There are three different ownership models utilized by our customer base:

- *Direct Ownership:* The end-user of the power purchases and owns the power plant, such as an industrial company.
- Project Investor Ownership: An intermediary purchases and owns the power plant, selling the power and heat to the end user under a long-term power purchase agreement (PPA). We have sold a number of power plants to project investor intermediaries that own the plants and sell the power under PPA's to the end user with examples of end users including municipal water treatment facilities and universities.
- *Utility Rate-Base:* Electric utilities purchase and own the power plants under a rate-base model. We have sold power plants to two different electric utilities in California who have included the plants in their rate base. This is a model that we are pursuing with other utilities in additional U.S. states.

Availability of capital helps to drive adoption, as some end-users of the power prefer not to own the power plants directly. Taxexempt organizations like universities or municipalities prefer a power purchase agreement model that avoids an initial upfront capital investment and directs the available incentives to project investors that can monetize the tax credits. The financial investors earn attractive financial returns within acceptable risk parameters. Credit risk is mitigated by strong credit off-takers that are typically supported by a state (i.e. state universities), have taxing authority (municipalities), or a strong credit profile measured by debt ratings (industrial customers). The Company operates and maintains the power plants under service agreements generally matching the term of the agreement with the underlying power purchase agreement or length of financing. This aligns our interests with project investors as approximately half of our total revenue from an individual project is earned as the plant performs over time as the total revenue earned from a service agreement can be as much as the initial acquisition cost of the power plant.

#### Geographic Markets

We target geographic markets with high energy costs that value clean distributed generation and have regulatory and legislative support such as clean air requirements and economic incentives to support the adoption of clean and renewable power generation. Renewable Portfolio Standards (RPS) are one market enabler for demand of our power generation solutions.

An RPS is a mechanism designed to promote the adoption of renewable power generation. The RPS may be voluntary or mandated through legislation and generally places the obligation on the suppliers of electricity to generate a specified percentage of their electricity from renewable power sources. Countries (in the case of South Korea) and states (in certain

parts of the United States) may also provide incentives or other economic mechanisms to encourage the deployment of qualified technologies under RPS programs which creates a competitive marketplace whereby renewable energy costs are levelized and competitive with cheaper fossil fuel based generation. An RPS may also be structured to promote economic growth through adoption of renewable power generation.

Fuel cells can play a role in meeting RPS clean power mandates by generating highly efficient, clean electricity continuously. Fuel cells operating on renewable biogas meet the requirements of typical RPS programs and many RPS programs include fuel cells operating on natural gas due to the near zero emissions and highly efficient power generation process of fuel cells.

South Korea: The RPS in South Korea took effect at the beginning of 2012, requiring an increase of new and renewable power generation to 10 percent by 2022 from 2 percent in 2012. The program mandates the addition of 0.5 percent of renewable power generation per year through 2016, which equates to approximately 350 megawatts, increasing to 1 percent 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.

High efficiency fuel cells are an excellent green energy solution for South Korea due to the need to import fuels for power generation, ease of siting in populated areas, and the poor wind and solar profiles of the Korean Peninsula. The South Korean government has made clean distributed generation power sources a priority to support their 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 which will help South Korea achieve its RPS and electricity generation goals.

United States: Individual states in the U.S. seeking to secure cleaner energy sources, higher efficiency and greater energy independence have RPS's that require utilities to provide a certain amount of their electricity from renewable sources, including fuel cells. RPS requirements or goals have been established in 30 states plus the District of Columbia. Fuel cells using biogas qualify as renewable power generation technology in all of the RPS states in the U.S., and seven 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.

Most of our installed base in the U.S. is located in California and Connecticut, both of which have enacted RPS programs. The clean energy requirement in California is 33 percent and the state is undertaking an initiative to deploy 12,000 megawatts of clean distributed generation by 2020. Connecticut's RPS requires utilities to purchase 20 percent of their peak electricity needs, or about 1,000 megawatts, from clean power sources by 2020.

California: In some regions in California, clean air permitting is a significant hurdle to the installation of combustion-based power generation. The low emissions and near-zero pollutant profile of our products facilitates the clean air permitting process. All three of our DFC power plant models, including the 2.8 MW DFC3000, 1.4 MW DFC1500 and 300 kW DFC300 have received certification under the California Air Resources Board's distributed generation standards when operating on natural gas and both the DFC1500 and DFC300 are certified for operation on renewable biogas. In the State of California,

the CARB 2007 certification allows the local Air Quality Management District to exempt the fuel cell installation from the clean air permitting process, which accelerates the approval process. Outside of California, the CARB 2007 certification independently validates the clean air profile of DFC plants.

Programs which benefit fuel cells in California are the Self-Generation Incentive Program (SGIP), a renewable feed in tariff (FIT) program, and a CHP feed-in tariff (CHP FiT) program which were enacted to reduce greenhouse gases and encourage clean distributed generation. Under the SGIP program, qualifying fuel cell projects of up to three megawatts are eligible for incentives of up to \$4,250 per kilowatt when operating on renewable biogas and up to \$2,250 per kilowatt when operating on natural gas. Under both FIT programs, excess electricity not used on-site can be sold at a price higher than the normal wholesale power rate. These feed-in tariffs may improve the economics of some fuel cell projects.

California's carbon reduction cap and trade program under Assembly Bill AB32 provides preferential treatment for fuel cells as they are excluded from the compliance obligations of the program, whether operating on natural gas or renewable biogas. This legislation supports the economics of fuel cell power plants as facilities with combustion based power generation, heating and/or cooling can reduce or eliminate their compliance costs by deploying fuel cells. The latest carbon auction from August 2013 valued carbon credits at \$12.12/ton, a level that attracts attention as it is high enough to favorably impact project economies and represents an increase from the initial auction at approximately \$10/ton.

Connecticut: Connecticut has adopted a comprehensive clean energy policy, including a state RPS, designed to increase energy efficiency and expand renewable power and a long-term renewable energy credit (LREC) program funded with \$300 million over 20 years. The LREC program is expected to be more effective in fostering the near-term adoption of clean distributed generation than prior legislation. The State also passed legislation that allows each of the Connecticut electric utilities to own up to 10 MW of renewable power generation, including fuel cells. Prior to this legislation, the utilities owned only transmission and distribution, as they were not permitted to own power generation as well as transmission and distribution.

Our DFC power plants are providing power for food processors, a university, an insurance company data center and government facilities in the state as well as the previously mentioned 14.9 MW fuel cell park to support the electric grid and a plant is being installed at a hospital. As we grow, our Company is contributing to the state economy, creating sustainable and good paying jobs in the manufacturing sector as well as research, engineering and administrative jobs.

Other U.S. States: We have active business development activities in other states including New York and New Jersey. New Jersey, for example, implemented a program to support the adoption of clean distributed generation in combined heat and power configurations, including fuel cells. We are actively pursuing opportunities under this program. As states look to meet their RPS requirements and utilities further to 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 are supportive of demand and our initiatives to continue to lower product costs are expected to lead to increased adoption.

Canada: Our DFC-ERG (Direct FuelCell Energy Recovery Generation™) system, deployed with our partner Enbridge, Inc., is specifically designed for natural gas pressure letdown stations. Natural gas is piped under high pressure over long distances and the pressure must be reduced at letdown stations before it can be distributed locally. Our fuel cell power plant is coupled with a turbo expander to harness energy from the letdown process that is otherwise lost. The first DFC-ERG power plant was installed in Toronto in 2008. The 2.2 MW DFC-ERG plant attained an average electrical efficiency of 62.5 percent, peak electrical efficiency above 70 percent and reduction in greenhouse gas emissions of up to 45 percent. We see further market opportunities for this application on natural gas pipelines.

Europe: The European power generation market values efficiency and low emissions and represents significant opportunity for stationary fuel cell power plants. We are targeting Germany as they transition away from nuclear power generation and struggle to integrate a significant amount of intermittent power generation capacity, and the United Kingdom as they work to achieve aggressive carbon reduction goals. Our European Served Area pipeline also includes potential projects in other European countries including Italy, Spain, France as well as the Middle East.

FuelCell Energy Solutions, GmbH (FCES) is a German-based joint venture that is 75 percent owned by FuelCell Energy and 25 percent 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 below, Fraunhofer IKTS has expertise in fuel cell technology and is assisting with the development of the European market for our products. FCES sold a DFC power plant to the developer of a government office complex in Berlin, Germany that will house a Federal Ministry and sold a DFC power plant to the developer of an office tower in London, England. Both installations are high-visibility locations that are expected to increase awareness of the attributes and benefits of clean distributed generation fuel cell power plants.

Geographic data is reported in Note 13 to the consolidated financial statements.

#### **BUSINESS STRATEGY**

Our business strategy is to grow revenues by expanding in our key geographic and vertical markets while continuing to reduce product costs. Our DFC power plants are gross margin profitable and we believe that with annual production volume of 80 MW to 90 MW, we can achieve net income profitability. We believe that global production volume of 210 MW will result in product cost reductions adequate to enable pricing below the electric grid without incentives, further driving adoption. Our ongoing cost reduction program involves every aspect of our business, from engineering, procurement and manufacturing through installation and services. Close coordination with customers, suppliers and partners are key elements of the program. We have reduced the product cost of our megawatt-class power plants by more than 60 percent from the first commercial installation in 2003.

We are targeting vertical markets and geographic markets that value clean distributed generation, are located in markets where the cost of grid-delivered electricity is high, and have supportive legislative and regulatory programs that harmonize energy,

economic and environmental policies. Our business model addresses all three of these policy areas with highly efficient and economically attractive distributed generation that offers local job creation potential and delivers 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, California and Connecticut and we are pursuing opportunities in Western Europe as well as select states in Northeast USA.

Revenue diversification is a strategic priority including diversification by geography, by market and by revenue source. As an illustration, Services revenue represents a stable and consistent source of revenue and remains a growth focus for the Company. We have executed long-term service agreements with substantially all of our customers. These service agreements help us partner more closely with customers to deliver the value they expect and create opportunities for us to provide additional services. Service agreements generate predictable and stable recurring revenue; as our installed base continues to grow they are expected to generate sustainable revenue and contribute to profitability.

#### STRATEGIC ALLIANCES

We leverage our core capabilities by forging strategic alliances with carefully selected business partners. Our partners typically have extensive experience in developing, selling and servicing power generation products. We believe our strength in the development of fuel cell products; coupled with our partners' understanding of sophisticated commercial and industrial customers, products and services, enhances the sales, service and development of our products. Our business partners include:

**POSCO Energy:** We partner with POSCO Energy, an Independent Power Producer (IPP) with annual revenues of approximately \$2.5 billion and a subsidiary of South Korean-based POSCO, one of the world's largest steel manufacturers (NYSE: PKX). POSCO Energy owns 30.8 million of our common shares or approximately 16 percent of outstanding shares. POSCO Energy has extensive experience in power plant project development, owning and operating power plants in multiple countries and having built over 3,300 megawatts of power plants, equivalent to 4.3 percent of South Korea's national capacity.

Our relationship with POSCO Energy has expanded to support growing market demand for clean baseload distributed generation. We sold to POSCO Energy a sub-megawatt demonstration plant in 2003 and now the world's largest fuel cell park consisting of 21 DFC3000 power plants is nearing completion in South Korea. Major developments in the relationship include the following:

- In February 2007, we signed a 10-year manufacturing and distribution agreement with POSCO Energy to distribute and package DFC power plants in South Korea.
- In October 2009, we entered into a Stack Technology Transfer and License Agreement allowing POSCO Energy to assemble fuel cell scheduled module replacements from cell and module components provided by us. These fuel cell modules are combined with balance of plant (BOP) manufactured in South Korea to complete the fuel cell power plants for sale in South Korea or export to Asian markets.
- In October 2012, we entered into a Cell Technology Transfer and License Agreement, which provides the intellectual property and rights for POSCO Energy to manufacture DFC fuel cell components in South Korea. With the execution of this agreement, POSCO Energy has the rights to manufacture the

entire DFC power plant in South Korea. This relationship with POSCO Energy illustrates our strategy of executing locally for economic development, while leveraging our global expertise and infrastructure.

POSCO Energy has 100 megawatts of local BOP manufacturing capacity and fuel cell module assembly and conditioning capacity, and is currently constructing a DFC fuel cell component production facility with annual capacity up to 200 megawatts and initially configured with manufacturing equipment for 100 MW annually. An integrated global supply chain is closely managed by FuelCell Energy and will be used for supplying both the new POSCO Energy facility in Pohang, South Korea as well as production facilities in North America and Europe. Greater purchasing volume and consistent production levels help to reduce product costs. Local capacity in South Korea provides a second source of supply for DFC fuel cell stacks, which is valued by some prospective customers and project investors should a supply disruption occur at the FuelCell Energy production facility in Connecticut, USA. Locating final assembly of our DFC power plants closer to end users reduces costs and ensures our products meet the needs of individual markets. POSCO Energy fulfills South Korean energy policy objectives and creates local employment. POSCO Energy is also marketing power plants regionally in Southeast Asia, beginning with markets in Indonesia.

We have also partnered with POSCO Energy to expand the market for fuel cells in South Korea through development of a 100 kW DFC power plant with CHP capabilities that is targeted at the commercial/apartment building market in Asia. POSCO Energy designed the BOP for these small-scale power plants and installed two demonstration units in Seoul City that have been operating since late 2011.

Fraunhofer IKTS: We announced a partnership with The Fraunhofer Institute for Ceramic Technologies and Systems IKTS in 2012. The Fraunhofer IKTS with its staff of approximately 400 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 €1.8 billion (approximately \$2.4 billion) and more than 18,000 staff, primarily scientists and engineers. Fraunhofer has research centers and representative offices in Europe, USA, Asia and the Middle East, and more than 80 research units, including 60 Fraunhofer Institutes, at different locations in Germany.

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. Within six months of the initial partnership announcement between FuelCell Energy and Fraunhofer IKTS, the first DFC power plant sale was announced by FCES for the installation at the new Federal Ministry of Education and Research government complex in Berlin, Germany, and was closely followed by the sale of a DFC power plant to the 20 Fenchurch office tower in London, England.

**Enbridge, Inc.:** We have a market development relationship with Canada-based Enbridge (NYSE: ENB), a leader in energy transportation and distribution for the market development and deployment of the Direct FuelCell - Energy Recovery Generation (DFC-ERG®) power plant. Enbridge is the sole holder of Series 1

convertible preferred shares in the Company's Canadian subsidiary, FCE Ltd.

Abengoa: We announced a partnership in fiscal year 2012 with Spanish-based Abengoa (MCE: ABG), a multi-national company focused on renewable power generation, desalination and recycling. Under the partnership, Abengoa will develop and market stationary fuel cell power plants using fuel cell modules provided by us. Target markets are in Europe and Latin America for megawatt-class DFC power plants, including municipalities, large industrial power users and facilities that generate renewable biogas. Abengoa is an organization that has sufficient scale and reach to develop and grow a fuel cell market in the targeted geographies, particularly renewable biogas opportunities in Spain and other select European countries as well as liquid biofuel opportunities such as sugar cane ethanol in Brazil. Abengoa also has purchased a DFC module for installation at their headquarters in Seville, Spain.

NRG Energy: We entered into a teaming and co-marketing agreement with NRG Energy (NYSE: NRG) in September 2013. NRG is the largest independent power producer in the U.S. with 47,000 megawatts of generation capacity and more than 2 million retail and commercial customers. The agreement encompasses 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 a power purchase agreement. We are actively marketing with NRG Energy.

#### 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 our multi-megawatt 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 balance-of-plant 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 inverters. 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.

#### Manufacturing Process

As previously stated, our vision is to produce power for prices that are below typical grid prices. Annual global production of approximately 210 MW of DFC plants will provide the needed cost reductions to support this vision. This level of production capacity is either in place in North America and Europe or under construction by our partner, POSCO Energy in South Korea.

**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 transported to our test and conditioning facilities in Danbury, Connecticut for the final step in the manufacturing process and then shipped to customer sites. For the South Korean marketplace, the DFC components are currently manufactured in the USA and then shipped to South Korea for local stacking and conditioning.

We have solid oxide fuel cell assembly capacity at our solid oxide research facility in Calgary, Canada. Capacity is adequate for meeting the expected need of demonstration power plants but is not capable of high volume manufacturing.

Asia: Our South Korean partner, POSCO Energy, is constructing a fuel cell component manufacturing facility in Pohang, South Korea under a licensing agreement to serve the Asian market. The size of the facility will support annual production of 200 megawatts of carbonate fuel cell components. The facility is initially being configured with manufacturing equipment to support 100 MW annual production with production increasing thereafter as demand supports. The facility is expected to begin production in 2015.

**Europe:** We have a 20,000 square-foot manufacturing facility in Ottobrun, Germany that has the capability to produce up to 20 megawatts per year of sub-megawatt DFC power plants. The facility produced its first fuel cell stack in 2013 for an installation in Berlin, Germany and will increase production as European demand supports.

#### Localization

An advantage of our business model is the ability to localize certain aspects of BOP procurement and localize portions of the fuel cell stack assembly process as local demand supports. Localization ensures BOP designs meet local power needs, minimizes our inventory investment, reduces shipping costs and offers the potential for partners to create local jobs.

#### Capacity and Production Increase

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. Our total capacity in Torrington was expanded from 90 MW in 2013 as a result of process improvements. The Company intends to continue to pursue further process improvements and invest in automation in order to gain efficiencies, reduce costs and improve product quality. We currently estimate that at our current capacity, annual capital spending will be in the \$6 to \$9 million range to maintain equipment and also meet our efficiency, quality and cost reduction goals.

In conjunction with the 2012 license agreement, POSCO Energy is constructing a cell manufacturing facility in Pohang, South Korea to support the Asian market. Initial capacity will be 100 MW annually and the facility is physically sized for 200 MW annually.

If demand develops beyond the combined capacity of the Company and POSCO Energy, we have the ability to further expand production capacity at our Torrington facility by 100 MW to approximately 200 MW. This expansion would require the addition of equipment (e.g. furnaces, tape casting and other equipment) to increase the capacity of certain manufacturing operations. Due to the economies of scale and equipment required, we believe it is more cost effective to add capacity in large increments. We estimate that an expansion of the Company's Torrington facility to 200 MW would require additional capital investments of \$30 to \$40 million, although this expansion may occur in stages depending on the level of market demand. We do not have any immediate plans to undertake the expansion of this facility at this time and will expand capacity as backlog supports.

In 2012, POSCO Energy placed a 121.8 MW order with monthly delivery of DFC fuel cell kits through October 2016. This order

provides a base level of production for raw materials purchases and other operational considerations for a four-year period and is helping to further reduce costs through manufacturing and purchasing efficiencies and certainty of demand.

The service aspects of our business model provide a recurring and predictable revenue stream for the Company from service agreements. We have committed production for scheduled fuel cell module exchanges under service agreements through the year 2033. 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.

#### Raw Materials and Supplier Relationships

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. Our fuel cell stack raw materials are sourced from multiple vendors and are not considered precious metals. 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.

### ADVANCED TECHNOLOGY PROGRAMS (THIRD PARTY FUNDED RESEARCH AND DEVELOPMENT)

We perform 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 and hydrogen, suitable for vehicle fueling or industrial purposes. Our Advanced Technology Programs are focused on three strategic areas that have strong prospects for commercialization within a reasonable timeframe: solid oxide fuel cell (SOFC) development and commercialization, distributed hydrogen production, compression and storage, and carbon capture.

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 5 percent, 6 percent, and 6 percent of our revenue for the fiscal years ended 2013, 2012, and 2011, respectively.

Significant research and development programs on which we are currently working include:

Solid oxide fuel cell (SOFC) development and commercialization: We are working towards commercialization of solid oxide fuel cell technology to target sub-megawatt commercial applications including high-rise residential buildings, office buildings, and smaller wastewater treatments facilities that do not have the gas production to support a multi-

megawatt solution. The potential market opportunity is with sub-megawatt applications for customers that need on-site power generation in either combined heat and power or electriconly configurations. The DFC® product line utilizes carbonate technology and is well-suited for the megawatt class market as the technology and the economics scale very well with greater size. SOFC technology is complementary and leverages our existing knowledge base such as expertise in power plant design, fuel processing and high volume manufacturing and will leverage our existing installation and service infrastructure. FuelCell Energy is in discussions with several potential global partners to commercialize the SOFC technology.

In December 2012, the Company acquired Versa Power Systems, Inc. (Versa), a leading global developer of solid oxide fuel cell technology (SOFC). Prior to this action, we owned approximately 39 percent of Versa and partnered with Versa under the U.S. Department of Energy Solid State Energy Conversion Alliance (SECA) coal-based systems program. Versa has research facilities in Littleton, Colorado, USA and Calgary, Canada with 34 employees. Both facilities are leased. Research and development is being closely coordinated with existing FuelCell Energy research and development resources in Danbury, Connecticut, USA.

Versa is a supplier to The Boeing Co. under a U.S. Defense Advanced Research Projects Agency (DARPA) program to develop and fly a very long endurance unmanned aircraft. Versa's specialized solid state SOFC technology is paired with solar equipment to provide an on-board source of power for propulsion and communication equipment.

We have been a prime contractor in the DOE's Solid State Energy Conversion Alliance ("SECA") since 2003 and are currently working on an 18-month award that commenced in October 2013 to demonstrate a sub-megawatt solid oxide fuel cell power plant configured for combined heat & power (CHP) output and connected to the electric grid at our Danbury, Connecticut facility.

Development is continuing under a \$3.8 million contract by the U.S. Navy Office of Naval Research (ONR) entered into in July 2012 to develop and test a Hybrid SOFC-Battery power system for large displacement undersea vehicle propulsion. The objective of the project is to develop a refuelable power system, with high energy density, that is suitable for undertaking long duration underwater missions of unmanned submersibles. The Hybrid SOFC-Battery system will be capable of generating 1,800 kilowatt hours of electricity during a 70-day mission with no exhaust discharged outside of the vehicle at any time. It will use liquid fuel and be self-contained with no reliance on external air.

A solid oxide fuel cell power plant demonstration is planned for early 2014 at a dairy farm within the Sacramento Municipal Utility District (SMUD) in California, USA utilizing renewable biogas from the anaerobic digestion process to generate electricity and heat. SMUD will facilitate the installation and operation of the SOFC power system. Many agricultural operations generate more biogas and electrical generation potential than they can use for their daily operations, which is why the ability to interconnect to the electric grid is an important part of understanding the future market potential and ability to support sustainability of farms and agricultural industries.

Hydrogen production, compression and storage - 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. We capture the excess hydrogen that is not used in the electrical generation process. Gas separation technology can then be added to capture hydrogen that is not used by the electrical generation process, and we term this configuration DFC-H2. This value-added proposition may be compelling for industrial users of hydrogen or for vehicle fueling. A trigeneration DFC300-H2 power plant has been operating for over two years at the Orange County Wastewater Treatment Facility in Irvine, California to supply 1) hydrogen for use in fuel cell vehicle fueling, 2) clean renewable electricity, and 3) high quality heat for the wastewater treatment process. The demonstration is being performed under sub-contract to Air Products (NYSE: APD) with the majority of funding provided by the DOE.

**Carbon Capture** - Coal is an abundant, low cost, domestic resource which is widely used to generate electricity, but with a significant carbon footprint. Cost effective and efficient carbon capture from coal-fired power plants potentially represents a large global market because it could enable clean use of this domestic fuel. Our carbonate fuel cell technology separates and concentrates carbon dioxide  $(\mathrm{CO}_2)$  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  $\mathrm{CO}_2$ . We are currently in the second phase of a DOE program to evaluate the use of Direct FuelCell technology to efficiently and cost effectively separate  $\mathrm{CO}_2$  from the emissions of existing coal fired power plants and industrial flue gases.

### 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 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. 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,				
	<b>2013</b> 2012 201				
Cost of advanced technologies contract revenues	\$13,864	\$ 7,237	\$ 7,830		
Research and development expenses	15,717	14,354	16,768		
Total research and development	\$29,581	\$21,591	\$24,598		

#### 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.

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, ReliOn, and increasing activity by numerous automotive companies) stationary phosphoric acid fuel cells (ClearEdge Power), stationary solid oxide fuel cells (Delphi, Rolls Royce, Bloom Energy, and Acumentrics) and portable solid oxide fuel cells (Parker Hannifin). 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 South Korea, LG Electronics is engaged in SOFC development with its partner, Rolls Royce. In the United Kingdom, AFC Energy is engaged in alkaline fuel cell development. In Europe and Australia, Ceramic Fuel Cells is engaged in PEM fuel cell development for micro-CHP applications.

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, Solar Turbines and Kawasaki.

We also compete against the electric grid, which is readily available to prospective customers. The electric grid is supplied by large generation 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 baseload 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.

#### **SERVICES AND WARRANTY AGREEMENTS**

We offer a comprehensive portfolio of services including: engineering installation, performance contracts, long-term maintenance programs, refurbishment and complete product support 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. In addition to the standard product warranty of one year, we also offer customers service agreements (SA) for Direct FuelCell (DFC) power plants ranging from one to 20 years. Our standard SA term is five years and may be renewed if the parties mutually agree on future pricing. Pricing for service contracts is based upon the markets in which we compete, as well as estimates of future maintenance and stack replacement costs.

While the electrical and mechanical BOP in our DFC power plants is designed to last over 20 years, the fuel cell "stacks" must currently be replaced approximately every five years.

Under the typical provisions of the SAs, we provide services to monitor, operate and maintain customer power plants to meet performance levels. Should the power plant not meet the minimum performance levels, we may be required to replace the fuel cell stack with a new or used replacement and/or pay performance penalties.

#### PROPRIETARY RIGHTS AND LICENSED TECHNOLOGY

Our Company was founded as a research company in 1969 and began focusing on high-temperature carbonate fuel cells in the 1980s. After a multi-year period of research and development including installation and operation of demonstration carbonate fuel cell power plants, we began selling fully commercialized Direct FuelCell (DFC) power plants in 2003. Our extensive experience, trade secrets, proprietary processes and patents combine to safeguard our intellectual property rights and act as a significant barrier to entry for potential competitors.

We have 86 current U.S. patents and 63 international patents covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions). 82 of our U.S. patents relate to our Direct FuelCell technology, one patent relates to SOFC technology and three patents relate to PEM fuel cell technology. We also have submitted 20 U.S. and 77 international patent applications.

Our patents will expire between 2014 and 2031, and the current average remaining life of our patents is approximately 10.6 years. During 2013, 12 new U.S patents were issued or allowed and no U.S. and 10 international patents expired or were abandoned. The expiration of these patents has no material impact on our current or anticipated operations. We also have approximately 18 invention disclosures in process with our patent counsel that may result in additional patent applications.

In addition, our subsidiary, Versa Power Systems, Inc., has 28 current U.S. patents and 111 international patents covering their SOFC technology (in certain cases covering the same technology in multiple jurisdictions). Versa Power Systems, Inc. also has submitted nine U.S. and 87 international 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.

In addition, FuelCell Energy Solutions, GmbH has license rights to use FuelCell Energy's carbonate fuel cell technology as well as 10 U.S. and 138 international patents for carbonate fuel cell technology licensed from its co-owner, Fraunhofer IKTS.

#### SIGNIFICANT CUSTOMERS AND BACKLOG

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, 2013, 2012 and 2011, our top five customers, POSCO Energy (which is a related party and owns approximately 16 percent of the outstanding common shares of the Company), Dominion Bridgeport Fuel Cell, LLC, Department of Energy, BioFuels Fuel Cells, LLC and UTS BioEnergy, LLC, accounted for 88 percent, 85 percent and 66 percent, 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,			
	2013	2012	2011	
POSCO Energy	54%	76%	44%	
Dominion Bridgeport Fuel Cell, LLC	29%	-%	-%	
Department of Energy	5%	7%	-%	
BioFuels Fuel Cells, LLC	-%	-%	12%	
UTS BioEnergy, LLC	-%	2%	10%	
Total	88%	85%	66%	

Backlog refers to the aggregate revenues remaining to be earned at a specified date under contracts we have entered into. Revenue backlog is as follows:

- Product sales backlog was \$170.1 million at October 31, 2013 compared to \$288.1 million at October 31, 2012. Product backlog in megawatts totaled 107.3 MW at October 31, 2013 compared to 150.7 MW at October 31, 2012. Service backlog was \$166.8 million at October 31, 2013 compared to \$78.5 million at October 31, 2013 compared to \$78.5 million at October 31, 2012. The service contract for the Bridgeport fuel cell park project accounted for a significant portion of the year-over-year growth. Although backlog reflects business that is considered firm, cancellations or scope adjustments may occur and will be reflected in our backlog when known.
- For advanced technologies contracts, we include the total contract value including any unfunded portion of the total contract value in backlog. Advanced technology contract backlog totaled \$18.5 million as of October 31, 2013 compared to \$12.2 million as of October 31, 2012. The unfunded portion of our advanced technology contracts amounted to \$5.7 million and \$4.7 million as of October 31, 2013 and 2012, respectively. Due to the long-term nature of these contracts, fluctuations from year to year are not an indication of any future trend.

As of October 31, 2013 we had contracts for power plants totaling 1.5 MW under PPAs ranging from four to six years. Revenue under these agreements is recognized as electricity is produced. This revenue is not included in backlog described above.

#### **EMPLOYEES**

As of October 31, 2013, we had 610 full-time employees, of whom 298 were located at the Torrington, Connecticut manufacturing plant, 267 were located at the Danbury, Connecticut facility or various field offices, and 45 were located at our foreign locations. In addition, as of October 31, 2013, the Company had 34 temporary workers, 18 located at the Torrington manufacturing plant and 16 located at the Danbury facility. None of our employees are represented by a labor union or covered by a collective bargaining agreement.

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

#### **OVERVIEW AND RECENT DEVELOPMENTS**

#### Overview

We are 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 power plants offer scalable on-site power and utility grid support, helping customers solve their energy, environmental and business challenges.

Global urban populations are expanding, becoming more industrialized and requiring greater amounts of power to sustain their growth. As policymakers and power producers struggle to find economical and readily available solutions that will alleviate the impact of harmful pollutants and emissions while improving the resiliency of the electric grid, the market for ultra-clean, efficient and reliable distributed generation is rapidly growing.

With fully commercialized ultra-clean fuel cell power plants and decades of experience in the industry, we are well positioned to grow our installed base of power plants. Our plants are operating in more than 50 locations worldwide and have generated more than two billion kilowatt hours (kWh) of electricity, which is equivalent to powering more than 181,000 average size U.S. homes for one year. Our installed base and growing backlog exceeds 300 megawatts (MW).

Our diverse and growing customer base includes major utility companies, municipalities, universities, government entities and businesses in a variety of commercial and industrial enterprises. Our leading geographic markets are South Korea and the United States and we are actively pursuing expanding opportunities in Asia, Europe and Canada.

We service the power plants for virtually every customer we have globally under service agreements. We monitor and operate the power plants around the clock from our technical assistance center located at our Danbury, Connecticut headquarters. We have an extensive service network of FuelCell Energy technicians who provide on-site service and maintenance.

#### Recent Developments

#### Market Update

The Company has a strong sales pipeline in both North America and Europe totaling over 310 MW as of October 31, 2013 valued at over \$1.2 billion. Significant project development activities occurred in fiscal 2013 and we recently received regulatory approvals on several projects. As a result, we anticipate closing over 30 MW of new orders in the Northeast and California in the first half of 2014. Production levels, the Company's order closure expectations and the need to be able to execute on multi-plant projects quickly, are coordinated closely. In addition to our existing pipeline, we are actively developing opportunities directly and through our business partners.

Multiple utilities in four U.S. states have recently issued over one gigawatt of renewable power requests for proposals (RFP's) that all include fuel cells. The Company is actively bidding these solicitations. Utility-scale adoption is accelerating in South Korea with recent announcements by our partner POSCO Energy including a 20 megawatt and a 40 megawatt project. POSCO Energy's total order pipeline exceeded 300 MW as of October 31, 2013. These recent actions in North America and

Asia illustrate both the market potential as well as the growing awareness of the value of clean distributed generation.

In September 2013, we announced a teaming and co-marketing agreement with NRG Energy, the largest independent power producer in North America. This agreement leverages our resources and we believe it will lead to meaningful order flow. The agreement includes a power purchase agreement model for customers that prefer a pay-as-you-go option whereby NRG Energy will own the power plant and sell the ultra-clean power and high quality heat to the customer. The agreement adds an important new sales channel for the marketing and sale of FuelCell Energy power plants. NRG will market the power plants to its customer base and FuelCell Energy is expected to install, operate and maintain each power plant.

#### Operations Update

The Company began 2013 with North American production levels at an annual run-rate of 56 MW. The production rate was increased to 70 MW during the year and the Company expanded total capacity by about 11 percent through process improvements to 100 MW annually.

The Company maintained an annual production run-rate at the Torrington, Connecticut production facility of approximately 70 MW during the fourth quarter of 2013, producing 17.5 MW of cell components for fuel cell kits and fuel cell power plants.

During 2013, the Company built the 14.0 MW Bridgeport fuel cell park with Dominion (NYSE: D), as project owner. The project was completed on schedule with Dominion's final acceptance on December 20, 2013 and power is being delivered to the electric grid under a 15-year energy purchase agreement with a Connecticut electric utility. The installation consists of five fuel cell power plants and an organic rankine cycle turbine for added output and further efficiency gains, with the power output adequate to power approximately 15,000 average size U.S. homes. The associated service contract, valued at approximately \$69 million over the 15-year project life, began with Dominion's acceptance.

All 21 DFC3000® power plants have been installed at the 59 MW Gyeonggi Green Energy fuel cell park in Hwasung City, South Korea by POSCO Energy. The project is on schedule and delivering power to the electric grid and steam to a district heating system. The fuel cell park was constructed in only twelve months demonstrating the ability to add a significant level of renewable power near where the power is used in a very short period of time. We believe that the facility is a global showcase for clean baseload electric grid support from fuel cell power plants and a model for other regions of the world.

#### Advanced Technology Update

The Company continues to develop its solid oxide fuel cell (SOFC) technology and distributed hydrogen generation capabilities, utilizing global partners to build critical mass and to develop technology platforms suitable for markets around the world. During the fourth quarter of 2013, the Company entered into the following:

 A \$6.4 million cost shared cooperative agreement with the U.S. Department of Energy (DOE) to demonstrate a sub-megawatt SOFC plant configured for combined heat & power (CHP) output that is connected to the electric grid.

- A multi-phase two-year agreement to supply a demonstration solid-state electrochemical hydrogen separation (EHS) unit to a global chemical company for high efficiency separation of hydrogen from natural gas. Under the first phase, valued at approximately \$1.1 million, the Company will deliver a remotely monitored CE-compliant EHS system. Successful completion of the first phase is expected to lead to subsequent funding to increase the size and scale of the system for the targeted industrial market. The technology provides a unique way to separate hydrogen from natural gas or renewable biogas in a process with relatively low energy consumption and without the need for pressurization or moving parts, leading to lower operating costs than current hydrogen separation technologies.
- A DOE supported project to convert agricultural waste into renewable power utilizing an SOFC power plant at a dairy farm in California. The Sacramento Municipal Utility District (SMUD) will facilitate the installation and operation of the SOFC power system.

#### **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-out" 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") and as adjusted for certain items referenced below. Management also uses non-GAAP measures which exclude non-recurring items in order to measure operating periodic performance. Adjustments to GAAP are referenced below under "Revenues and Costs of Revenues" and "Net Loss to Common Shareholders." We have added this information because we believe it helps in understanding the results of our operations on a comparative basis. This adjusted information supplements and is not intended to replace performance measures required by U.S. GAAP disclosure.

#### COMPARISON OF THE YEARS ENDED OCTOBER 31, 2013 AND 2012

#### Revenues and costs of revenues

Our revenues and cost of revenues for the years ended October 31, 2013 and 2012 were as follows:

	Years Ended	l October 31,	Change		
(dollars in thousands)	2013	2012	\$	%	
Total revenues	\$187,658	\$120,603	\$67,055	56	
Total costs of revenues	\$180,536	\$120,158	\$60,378	50	
Gross profit	\$ 7,122	\$ 445	\$ 6,677	1,500	
Gross margin	3.8%	0.4%			

Total revenues for the fiscal year ended October 31 2013 increased \$67.1 million, or 56 percent, to \$187.7 million from \$120.6 million during the same period last year. Total cost of revenues for the fiscal year ended October 31, 2013 increased by \$60.4 million, or 50 percent, to \$180.5 million from \$120.2 million during the same period last year. A discussion of the changes in product sales and service agreement revenues and advanced technologies contract revenues follows.

#### Product sales and service and license revenues

Our product sales and service and license revenues and cost of revenues for the fiscal years ended October 31, 2013 and 2012 were as follows:

	Years Er	ded Oct	tober 31,	Cha	nge
(dollars in thousands)	2013		2012	\$	%
Revenues:					
Product sales	\$ 145,07	1 \$	94,950	\$50,121	53
Service agreements and license revenues	28,14	1	18,183	9,958	55
Total	\$ 173,21	2 \$	5113,133	\$60,079	53
Costs of Revenues:					
Product sales	\$ 136,98	9 \$	93,876	\$43,113	46
Service agreements and license revenues	29,68	3	19,045	10,638	56
Total	\$ 166,67	<b>'2</b> \$	5112,921	\$53,751	48
Gross profit (loss):					
Gross profit from product sales	\$ 8,08	<b>32</b> \$	5 1,074	\$ 7,008	653
Gross loss from service agreements and license revenues	(1,54	2)	(862)	(680)	79
Total	\$ 6,54	0 \$	3 212	\$ 6,328	2,985
Product sales gross margin	5	.6%	1.1%		
Service agreement and license revenues gross margin	(5	.5)%	(4.7)%		

Product sales and service agreements and license revenues increased \$60.1 million, or 53 percent, for the fiscal year ended October 31, 2013 to \$173.2 million compared to \$113.1 million for the prior year period. The increase is primarily due to revenue recognition for the Bridgeport fuel cell park project of approximately \$55.1 million, license and royalty income of \$4.1 million and service revenue related to a new Master Service Agreement with POSCO Energy entered into during the fourth guarter. 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 installations under the ongoing service contract. Cost of product sales and service and license revenues increased \$53.8 million, or 48 percent for the fiscal year ended October 31, 2013 to \$166.7 million compared to \$112.9 million in the prior year. The increase is a result of costs associated with the Bridgeport fuel cell park project and costs associated with the Master Service Agreement with POSCO Energy, Also, the Company incurred warranty and after-market costs during fiscal year 2013 as a result of a select number of fuel cell stacks requiring repair. This issue has been thoroughly investigated, manufacturing process changes implemented, and field repairs undertaken to support the limited number of customers impacted.

Gross profit for product sales and service agreements and license revenues is \$6.5 million, compared to a gross profit of \$0.2 million for the fiscal year ended October 31, 2012.

#### Product Sales and Cost of Sales

Product sales for the fiscal year ended October 31, 2013 included \$117.1 million from the construction of power plants and sale of fuel cell kits and \$28.0 million of revenue primarily related to power plant component sales and site engineering and construction services relating to the Bridgeport fuel cell park project. This is compared to product sales for the fiscal year ended October 31, 2012 which included \$77.0 million from the construction of power plants and sale of fuel cell kits and \$18.0 million of revenue primarily from power plant component sales and site engineering and construction services.

Cost of product sales increased \$43.1 million for the fiscal year ended October 31, 2013 to \$137.0 million, compared to \$93.9 million in the same prior year period. Gross profit increased \$7.0 million to a gross profit of \$8.1 million for the fiscal year ended October 31, 2013 compared to a gross profit of \$1.1 million for the fiscal year ended October 31, 2012. The increase was due to improved overhead absorption from higher production levels combined with a sales mix that included complete power plants along with fuel cell kits, partially offset by additional costs incurred in the first quarter of fiscal year ended October 31, 2013 due to a select number of fuel cell stacks requiring repair and costs related to the increase in production.

The annual production run-rate was increased to 70 MW as of May 1, 2013 to meet demand, and maintained for the remainder of the fiscal year. Higher production volumes supported increased quarterly revenue in fiscal year ended October 31, 2013 and we believe will lead to expanding margins from improved absorption of fixed overhead costs and broadening of the revenue mix to include complete power plant sales in North America and Europe.

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

Revenues for the fiscal year ended October 31, 2013 from service agreements and license fee and royalty agreements

totaled \$28.1 million, compared to \$18.2 million the prior fiscal year. Service agreement revenue increased year over year due to the recognition of service revenue related to a new Master Service Agreement with POSCO Energy entered into during the fourth quarter of fiscal year ended October 31, 2013. 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 installations under the ongoing service contract. There was minimal revenue recorded relating to scheduled module replacement compared to approximately \$3.0 million of service revenue recognized during fiscal year 2012 from scheduled module exchanges. Service revenue from 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. Also, license and royalty income was included within revenues beginning in the first quarter of fiscal year 2013. This change is a result of the new license agreement entered into on October 31, 2012 for our core technology and harmonization of the agreements to reflect fees and royalties for the manufacture of complete DFC Power Plants. Classification as revenue is reflective of our Asia market partnership and royalty based strategy and this business activity has become a significant component of non-product revenue and is expected to continue to grow over time. Service agreements and license cost of revenues increased to \$29.7 million from \$19.0 million for the prior year period primarily as a result of the costs recorded relating to the Master Service Agreement with POSCO Energy. The gross loss on service agreements and license agreements increased to \$1.5 million for the fiscal year ended October 31, 2013, compared to \$0.9 million for the comparable prior year period. The increase in service and license agreement negative margins is primarily due to costs associated with unplanned module exchanges partially offset by the inclusion of license and royalty income in revenues beginning in fiscal year 2013. The historical loss on service agreements has been due to high maintenance, stack replacement and other costs on older and sub-MW product designs. As profitable megawatt-class service agreements are executed and as early generation submegawatt products are retired or become a smaller overall percentage of the installed fleet, we expect the margins on service agreements to increase.

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 scheduled module replacements assembly and conditioning equipment sold to POSCO Energy, warranty expense, liquidated damages and inventory excess and obsolescence charges. Cost of service agreements include maintenance and stack replacement costs to service power plants for customers with service agreements and operating costs for our units under PPA's.

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.

#### Advanced technologies contracts

Advanced technologies contracts revenue and related costs for years ended October 31, 2013 and 2012 were as follows:

		Ended per 31,	Change		
(dollars in thousands)	2013	2012	\$	%	
Advanced technologies contracts	\$14,446	\$7,470	\$6,976	93	
Cost of advanced technologies contracts	13,864	7,237	6,627	92	
Gross profit	\$ 582	\$ 233	\$ 349	150	

Advanced technologies contracts revenue for the fiscal year ended October 31, 2013 was \$14.4 million, which increased \$7.0 million when compared to \$7.5 million of revenue for the fiscal year ended October 31, 2012. The increase was primarily related to solid oxide fuel cell development programs, particularly the unmanned aerial program with Boeing which was included in advanced technologies contract revenues as a result of the December 2013 acquisition of Versa. Cost of advanced technologies contracts increased \$6.6 million to \$13.9 million for the fiscal year ended October 31, 2013, compared to \$7.2 million for the same period in the prior year. Gross profit from advanced technologies contracts for the fiscal year ended October 31, 2013 was \$0.6 million compared to \$0.2 million for the fiscal year ended October 31, 2012.

#### Administrative and selling expenses

Administrative and selling expenses were \$21.2 million for the fiscal year ended October 31, 2013 compared to \$18.2 million during the fiscal year ended October 31, 2012. Administrative and selling expenses increased as a result of expenditures to develop and expand the European market for megawatt-class fuel cell power plants and to continue efforts to commercialize solid oxide fuel cell technology.

#### Research and development expenses

Research and development expenses increased \$1.3 million to \$15.7 million during the fiscal year ended October 31, 2013, compared to \$14.4 million during fiscal year 2012. The increase is a result of the consolidation of Versa's results with the results of the Company beginning in fiscal year 2013 combined with initiatives to continue to reduce the cost profile of large scale multi-megawatt installations through consolidating certain aspects of the balance of plant functions. Our internal research and development continues to be focused on cost reduction opportunities and product enhancements that have near-term product implementation potential.

#### Loss from operations

Loss from operations for the fiscal year ended October 31, 2013 was \$29.8 million compared to a loss of \$32.1 million in 2012. The change year-over-year is a result of favorable gross profit from product sales offset by the impact of increased business development activity in the North American and European markets and increased research and development costs associated with consolidating Versa.

#### Interest expense

Interest expense for the fiscal years ended October 31, 2013 and 2012 was \$4.0 million and \$2.3 million, respectively. Interest expense increased primarily as a result of interest expense 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 discount of \$2.0 million.

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

Income of \$0.05 million from equity investments recorded in fiscal year ended October 31, 2013 represents our share of Versa's income through the acquisition date. A loss of \$0.6 million was recorded for our share of Versa's losses for the fiscal year ended October 31, 2012.

#### License fee and royalty income

License fee income for the fiscal year ended October 31, 2012 was \$1.6 million which represents the license fee and royalty income earned from POSCO Energy. Beginning in fiscal year 2013, license fees and royalty income have been included within revenues under service agreements and license revenues. Refer to Critical Accounting Policies and Estimates for further discussion on this change.

#### Impairment of equity investment

An impairment charge was recorded in the fourth quarter of fiscal year ended October 31, 2012 as an adjustment to the carrying value of the investment in Versa to its estimated fair value.

#### Other income (expense), net

Other income (expense), net, was expense of \$1.2 million for the fiscal year ended October 31, 2013 compared to other income of \$1.2 million for the same period in 2012. The current period expense recorded is primarily associated with the non-cash fair value adjustment of certain embedded derivatives and the prior year income recorded primarily represents proceeds received relating to an insurance recovery from a prior year claim and income received from scrap sales.

#### 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 foreign taxes in South Korea. For the fiscal year ended October 31, 2013 our provision for income taxes was \$0.4 million. We have begun 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.

As of October 31, 2013, we had \$631.0 million of federal NOL carryforwards that expire in the years 2020 through 2033 and \$372.0 million in state NOL carryforwards that expire in the years 2013 through 2033. Additionally, we had \$9.9 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 fiscal year ended October 31, 2013 and 2012 was \$1.0 million and \$0.4 million, respectively.

#### Preferred stock dividends

Dividends recorded and paid on the Series B Preferred Stock were \$3.2 million in each of the fiscal years ending October 31, 2013 and 2012.

### 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 fiscal years ended October 31, 2013 and 2012, net loss attributable to common shareholders was \$37.6 million and \$38.7 million, respectively, and loss per common share was \$0.20 and \$0.23, respectively.

#### LIQUIDITY AND CAPITAL RESOURCES

The Company's future liquidity will be dependent on obtaining the order volumes and cost reductions necessary to achieve profitable operations. The Company has consistently demonstrated positive gross margin results at production volumes in excess of 50 MW on an annualized basis. Increasing annual order volume and reduced product costs are expected to further increase margins and improve operating cash flows. We expect positive cash flows and net income profitability at an annual production rate of 80 - 90 MW. EBITDA (earnings before interest, taxes, depreciation and amortization) breakeven is expected with annual production volumes between 70 to 80 MW. Actual results will depend on product mix (domestic vs. international), volume, future service costs and market pricing. Sales of complete power plants in the U.S. and Europe generally carry higher margins then sales of kits to POSCO Energy, thus the mix of actual backlog and production can impact the Company's profitability targets.

The production capacity at our manufacturing facility is approximately 100 MW with full utilization under its current configuration. Through industrial engineering, the total capacity was increased by 10 MW during fiscal year 2013. As a result of increased backlog, numerous actions were undertaken during the first half of fiscal year 2013 to increase the annual production run-rate at the Torrington, Connecticut facility to 70 MW which was achieved on April 30, 2013. We expect to continue to gain operating efficiencies and cost reductions at this runrate during fiscal year 2014. The Company is targeting positive quarterly cash flow as measured by EBITDA by the end of 2014 based on anticipated order flow and continued cost reductions.

Our current backlog, which includes a 121.8 MW order for POSCO Energy, combined with scheduled fuel cell module exchanges for existing power plant installations that are currently under service agreements, is expected to provide a base level of production of approximately 50 MW per year through 2016 at the Company's production facility in Torrington, Connecticut. The Company targets adding approximately 30-40 MW of incremental backlog annually to utilize our available capacity. The Company has a strong order pipeline which was greater than 300 MW as of October 31, 2013. In addition to our existing pipeline, we are actively developing opportunities directly and through our business partners. As order flow dictates, the Company will adjust production to meet demand. Ramping from 70 to 90 MW consists of hiring direct labor and increasing volume to our supply chain over approximately a 6month period. A ramp in this range would not require material incremental capital expenditures.

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 market access to sell power plants throughout Asia. This agreement has multiple benefits for both FuelCell Energy and POSCO Energy. POSCO Energy is currently constructing a cell manufacturing facility in South Korea that is physically sized for 200 MW of annual production and is expected to be initially configured for 100 MW annual production. Production in South Korea will improve responsiveness for meeting demand under the Renewable Portfolio Standard. The Company will avoid capital investment for Asian market development and will benefit from market expansion by receiving a royalty payment from POSCO Energy for each power

plant sold over a 15-year term with options to extend. Establishing a second source of supply for fuel cell modules mitigates a risk factor for prospective customers evaluating long-term fuel cell power plant projects that include scheduled replacement modules. Increased production volume, whether in the USA or South Korea, will reduce the cost of DFC plants, further spurring market adoption.

If demand develops beyond the combined capacity of the Company and POSCO Energy, we have the ability to further expand production capacity at our Torrington facility to approximately 200 MW assuming three shift operations six days a week. This expansion would require the addition of equipment (e.g. furnaces, tape casting and other equipment) to increase the capacity of certain manufacturing operations. Due to the economies of scale and equipment required, we believe it is more cost effective to add capacity in large blocks. We estimate that an expansion of the Company's Torrington facility to 200 MW would require additional capital investments of \$30 to \$40 million, although this expansion may occur in stages depending on the level of market demand. Management periodically reviews and updates the expansion plans as our order pipeline evolves.

During the fourth quarter of fiscal year 2013, the Company entered into a revised Master Service Agreement with POSCO Energy, its South Korean partner, whereby POSCO Energy assumes 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 royalty on each scheduled fuel cell module replacement under service agreements which were built by POSCO Energy and installed at any plant in Asia.

In addition to cash flows from operations, we may also pursue raising capital through a combination of; (i) equity or strategic investments, (ii) debt financing (with improving operating results as the business grows, the Company expects to have access to the debt markets to finance working capital and capital expenditures) and (iii) potential local or state Government loans or grants in return for manufacturing job creation and retention. We currently employ over 500 employees in the State of Connecticut and over 600 on a global basis. 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. We anticipate that our existing capital resources, together with anticipated order, revenues and cash flows, will be adequate to satisfy our financial requirements and agreements through at least the next twelve months.

#### Cash Flows

Cash and cash equivalents and restricted cash and cash equivalents totaled \$77.7 million as of October 31, 2013 compared to \$57.5 million as of October 31, 2012. As of October 31, 2013, restricted cash and cash equivalents was \$10.0 million, of which \$5.1 million was classified as current and \$4.9 million was classified as long term compared to \$10.6 million total restricted cash and cash equivalents as of October 31, 2012, of which \$5.3 million was classified as current and \$5.3 million was classified as long term.

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

Operating Activities - Cash used in operating activities was \$16.7 million during fiscal year 2013 compared to \$58.7 million

used in operating activities during fiscal year 2012. Net cash used in fiscal year 2013 was a result of increases in accounts receivable of \$12.0 million and an increase in inventory of \$5.9 million. These were offset by increases in deferred revenue of \$9.1 million due to achieving customer milestone billings, an increase in accounts payable of \$11.8 million due to the increased production rate and a decrease in other assets of \$6.1 million, primarily due to fuel cell stack assets which the Company provided to POSCO Energy under the terms of a revised Master Service Agreement. Net cash used in fiscal year 2012 of \$58.7 million was a result of a decrease in deferred revenue of \$9.6 million due to new order milestone payments in fiscal year 2011 and a decrease in accrued liabilities of \$6.1 million primarily due to the reserve established in fiscal year 2011 for the B1200 repair and upgrade program. There were also increases in accounts and license fee receivables of \$14.1 million which was partially offset by a decrease in other assets due to accumulated depreciation of restacks under service agreements (SA) offset by restacks.

Investing Activities - Cash used in investing activities was \$6.2 million during fiscal year 2013 compared to net cash provided by investing activities of \$7.5 million during fiscal year 2012. Net cash used during fiscal year 2013 related to capital expenditures of \$6.6 million, partially offset by cash acquired from the Versa acquisition of \$0.4 million. Cash provided by investing activities during fiscal year 2012 relates to the maturity of U.S. treasuries of \$12.0 million, partially offset by capital expenditures of \$4.5 million.

Financing Activities - Net cash provided by financing activities was \$43.6 million during fiscal year 2013 compared to net cash provided by financing activities of \$55.0 million in the prior year period. The net cash provided by financing activities during fiscal year 2013 was related to proceeds received from the convertible debt issuance of \$38.0 million, proceeds from the CEFIA Loan of \$4.8 million, a drawdown on the line of credit facility of \$2.5 million, a decrease in restricted cash of \$0.6 million for letters of credit issued to support the Company's obligations under customer contracts offset by the payment of preferred dividends and return of capital payments of \$4.4 million and the capitalization of financing costs associated with the convertible debt issuance of \$2.5 million. Net cash provided by financing activities in fiscal year 2012 included proceeds from the routine sale of common stock of \$2.0 million, net proceeds from the public offering of 23.0 million shares of common stock for proceeds of \$32.0 million and \$30.0 million of net proceeds from the sale of common stock to POSCO Energy offset by an increase in restricted cash of \$2.2 million and the payment of preferred dividends and return of capital payments of \$7.6 million.

#### Sources and Uses of Cash and Investments

We continue to invest in new product and market development and, as such, we are not currently generating positive cash flow from our operations. Our operations are funded primarily through cash generated from product sales and research and development contracts, license fee and royalty income, and sales of equity securities and hybrid debt instruments. In order to consistently produce positive cash flow from operations, we need to increase order flow to support higher production levels, leading to lower costs.

Increased production volumes lower costs by leveraging supplier/purchasing opportunities, creating opportunities for incorporating manufacturing process improvements, and spreading fixed costs over more units. Our overall

manufacturing process has a production capacity of up to 100 MW with full utilization. Updates on our key geographic markets are as follows:

South Korea: The RPS in South Korea took effect at the beginning of fiscal year 2012, requiring an increase of new and renewable power generation to 10 percent by 2022 from 2 percent in fiscal year 2012. The program mandates the addition of 0.5 percent of renewable power generation per year through 2016, which equates to approximately 350 megawatts, increasing to 1.0 percent 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.

High efficiency fuel cells are an excellent green energy solution for South Korea due to the need to import fuels for power generation, ease of siting in populated areas, and the poor wind and solar profiles of the Korean Peninsula. The South Korean government has made clean distributed generation power sources a priority to support their 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 which will help South Korea achieve its RPS and electricity generation goals.

United States: Individual states in the U.S. seeking to secure cleaner energy sources, higher efficiency and greater energy independence have RPS's that require utilities to provide a certain amount of their electricity from renewable sources, including fuel cells. RPS requirements or goals have been established in 30 states plus the District of Columbia. Fuel cells using biogas qualify as renewable power generation technology in all of the RPS states in the U.S., and 7 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.

Most of our installed base in the U.S. is located in California and Connecticut, both of which have enacted RPS programs. The clean energy requirement in California is 33 percent and the State is undertaking an initiative to deploy 12,000 megawatts of clean distributed generation by 2020. Connecticut's RPS requires utilities to purchase 20 percent of their peak electricity needs, or about 1,000 megawatts, from clean power sources by 2020.

California: In some regions in California, clean air permitting is a significant hurdle to the installation of combustion-based power generation. The low emissions and near-zero pollutant profile of our products facilitates the clean air permitting process. All three of our DFC power plant models, including the 2.8 MW DFC3000, 1.4 MW DFC1500 and 300 kW DFC300, have received certification under the California Air Resources Board's distributed generation standards when operating on natural gas and both the DFC1500 and DFC300 are certified for operation on renewable biogas. In the State of California, the CARB 2007 certification allows the local Air Quality Management District to exempt the fuel cell installation from the clean air permitting process, which accelerates the approval process. Outside of California, the CARB 2007 certification independently validates the clean air profile of DFC plants.

Programs which benefit fuel cells in California are the Self-Generation Incentive Program (SGIP), a renewable feed in tariff (FIT) program, and a CHP feed-in tariff (CHP FiT) program which were enacted to reduce greenhouse gases and encourage clean distributed generation. Under the SGIP program, qualifying fuel cell projects of up to three megawatts

are eligible for incentives of up to \$4,250 per kilowatt when operating on renewable biogas and up to \$2,250 per kilowatt when operating on natural gas. Under both FIT programs, excess electricity not used on-site can be sold at a price higher than the normal wholesale power rate. These feed-in tariffs may improve the economics of some fuel cell projects.

California's carbon reduction cap and trade program under Assembly Bill AB32 provides preferential treatment for fuel cells as they are excluded from the compliance obligations of the program, whether operating on natural gas or renewable biogas. This legislation supports the economics of fuel cell power plants as facilities with combustion based power generation, heating and/or cooling can reduce or eliminate their compliance costs by deploying fuel cells. The latest carbon auction from August 2013 valued carbon credits at \$12.12/ton, a level that attracts attention as it is high enough to favorably impact project economies and represents an increase from the initial auction at approximately \$10/ton.

Connecticut: Connecticut has adopted a comprehensive clean energy policy, including a state RPS, designed to increase energy efficiency and expand renewable power and a long-term renewable energy credit (LREC) program funded with \$300 million over 20 years. The LREC program is expected to be more effective in fostering the near-term adoption of clean distributed generation than prior legislation. The State also passed legislation that allows each of the Connecticut electric utilities to own up to 10 MW of renewable power generation, including fuel cells. Prior to this legislation, the utilities owned only transmission and distribution, as they were not permitted to own both power generation as well as transmission and distribution.

Our DFC power plants are providing power for food processors, a university, an insurance company data center and government facilities in the state as well as the previously mentioned 14.9 MW fuel cell park to support the electric grid and a plant being installed at a hospital. As we grow, our Company is contributing to the state economy, creating sustainable and good paying jobs in the manufacturing sector as well as research, engineering and administrative jobs.

Other U.S. States: We have active business development activities in other states including New York and New Jersey. New Jersey, for example, implemented a program to support the adoption of clean distributed generation in combined heat and power configurations, including fuel cells. We are actively pursuing opportunities under this program. As states look to meet their RPS requirements and utilities further to 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 are supportive of demand and our initiatives to continue to lower product costs are expected to lead to increased adoption.

Canada: Our DFC-ERG (Direct FuelCell Energy Recovery Generation™) system, deployed with our partner Enbridge, Inc., is specifically designed for natural gas pressure letdown stations. Natural gas is piped under high pressure over long distances and the pressure must be reduced at letdown stations before it can be distributed locally. Our fuel cell power plant is coupled with a turbo expander to harness energy from the letdown process that is otherwise lost. The first DFC-ERG power plant was installed in Toronto in 2008. The 2.2 MW DFC-ERG plant attained an average electrical efficiency of 62.5 percent, peak electrical efficiency above 70 percent and reduction in greenhouse gas emissions of up to 45 percent. We

see further market opportunities for this application on natural gas pipelines.

Europe: The European power generation market values efficiency and low emissions and represents significant opportunity for stationary fuel cell power plants. We are targeting Germany as they transition away from nuclear power generation and struggle to integrate a significant amount of intermittent power generation capacity, and the United Kingdom as they work to achieve aggressive carbon reduction goals. Our European Served Area pipeline also includes projects in other European countries including Italy, Spain, France as well as the Middle East.

FuelCell Energy Solutions, GmbH (FCES) is a German-based joint venture that is 75 percent owned by FuelCell Energy and 25 percent 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 below, Fraunhofer IKTS has expertise in fuel cell technology and is assisting with the development of the European market for our products. FCES sold a DFC power plant to the developer of a government office complex in Berlin, Germany that will house a Federal Ministry and sold a DFC power plant to the developer of an office tower in London, England. Both installations are high-visibility locations that are expected to increase awareness of the attributes and benefits of clean distributed generation fuel cell power plants.

Geographic data is reported in Note 13 to the consolidated financial statements in Part II, Item 8, "Consolidated Financial Statements And Supplementary Data" of the Form 10-K Report.

#### Cost reduction efforts

Product cost reductions are essential for us to further develop the market for our fuel cell products and attain 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. Product cost reductions come from several areas including:

- engineering improvements;
- technology advances;
- supply chain management;
- production volume; and
- manufacturing process improvements.

#### **COMMITMENTS AND SIGNIFICANT CONTRACTUAL OBLIGATIONS**

A summary of our significant future commitments and contractual obligations as of October 31, 2013 and the related payments by fiscal year is summarized as follows:

n .	_		D
<b>Payments</b>	Due	by	Period

(dollars in thousands) Contractual Obligations	Total	Less than 1 year	1 - 3 years	3 - 5 years	More Than 5 years
Purchase Commitments (1)	\$ 86,135	\$76,692	\$ 9,386	\$ 57	\$ -
Series 1 Preferred obligation [2]	12,908	1,195	2,389	2,389	6,935
Term loans (principal and interest)	8,990	212	445	2,589	5,744
Senior Unsecured Convertible Notes [3]	38,000	_	_	38,000	_
Capital and operating lease commitments [4]	5,247	2,215	2,385	647	_
Revolving Credit Facility <sup>(5)</sup>	6,500	6,500	_	_	_
Series B Preferred dividends payable [6]	_	_	_	_	_
Total	\$157,780	\$86,814	\$14,605	\$43,682	\$ 12,679

- [1] Purchase commitments with suppliers for materials, supplies and services incurred in the normal course of business.
- [2] 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, 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] On June 25, 2013, the Company issued, at par amount, 8.0% Senior Unsecured Convertible Notes ("Notes") with an aggregate principal amount of \$38.0 million. The Notes bear interest at a rate of 8.0% per annum. Interest on the Notes is payable in cash or subject to certain limitations, in common stock semi-annually in arrears on December 15 and June 15 of each year, beginning December 15, 2013. The Notes mature on June 15, 2018. The Notes are convertible, upon the Note holder's option, into shares of the Company's common stock initially at a conversion rate of 645.1613 shares per \$1,000 principal amount of notes (equivalent to an initial conversion price of approximately \$1.55 per share) plus a "make-whole" amount, as applicable. The interest payments have been excluded from the table above since the payments may, at the Company's option, be paid in stock. In December 2013, certain investors elected to convert a total of \$8.0 million principal of \$38.0 million in aggregate principal the 8.0% Senior Unsecured Convertible Notes. Refer to Note 20 of the Notes to Consolidated Financial Statements for more information.
- [4] Future minimum lease payments on capital and operating leases.
- [5] The amount represents the amount outstanding as of October 31, 2013 on an \$8.0 million revolving credit facility with JPMorgan Chase Bank, N.A. and the Export-Import Bank of the United States. 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 agreement has a one -year term with renewal provisions and the current expiration date is April 2, 2014. The outstanding principal balance of the facility bears interest, at the option of the Company of either the one-month LIBOR plus 1.5 percent 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.
- [6] 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 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 percent of the then prevailing conversion price (\$11.75) for 20 trading days during any consecutive 30 trading day period.

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, 2013, we had an outstanding balance of \$3.2 million on this loan. The interest rate is 5% 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) 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, which has yet to be determined, in forty-eight equal

monthly installments. Outstanding amounts are secured by future cash flows from the Bridgeport contracts. Advances of \$4.8 million were made under the CEFIA Note during fiscal year 2013. A prior loan from the Connecticut Clean Energy Fund Note in the amount outstanding of \$0.9 million was rolled into the new CEFIA Note. The outstanding balance on the CEFIA Note as of October 31, 2013 was \$5.7 million.

We have pledged approximately \$10.0 million of our cash and cash equivalents as collateral and letters of credit for certain banking requirements and contracts. As of October 31, 2013, outstanding letters of credit totaled \$7.7 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. Under the terms of the Bridgeport Equipment and Installation contract

with Dominion, the provisional acceptance payment to the Company totaling \$15.0 million shall be placed in a Grantor's Trust account to secure certain FCE obligations under the 15-year Service agreement. This transaction is expected to occur in the first quarter of fiscal 2014 and the cash will be reflected as Restricted Cash on the Company's balance sheet. The restrictions on the \$15.0 million will be removed upon completion of the final module exchange at the Bridgeport facility under terms of the services agreement.

As of October 31, 2013, 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 December 2013, certain investors elected to convert a total of \$8.0 million of principal of \$38.0 million in aggregate principal of the 8.0% Senior Unsecured Convertible Notes. Under the terms of the Notes they are convertible into shares of the Company's common stock at a conversion rate of 645.1613 shares of common stock per \$1,000 principal amount of convertible notes, equivalent to a conversion price of approximately \$1.55 per share of common stock plus a "make-whole" payment in regard to interest. As a result of these conversions, the Company retired \$8.0 million of outstanding principal and issued 6,283,385 shares of common stock.

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

#### Power purchase agreements

In California, we have 1.5 MW of power plant installations under power purchase agreements ranging in duration from four to six years. 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 to run the power plants. These agreements were executed when we first began

commercializing our technology. We are not actively pursuing this type of ownership structure at the present time.

#### 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 one to 20 years. Our standard and most prevalent services agreement term is five years. Pricing for service contracts is based upon estimates of future costs, which could be materially different from actual expenses.

### Advanced technologies contracts (Research and development cost-share contracts)

Advanced technologies contract revenues have been renamed from Research and development contracts to better describe the sources of revenue from contract research. We have contracted with various government agencies 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. As of October 31, 2013, Advanced technologies contracts backlog totaled \$18.5 million, of which \$12.7 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.

# 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, 2013, based on criteria for effective internal control over financial reporting established in *Internal Control — Integrated Framework*, 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, 2013 based on the specified criteria.

Arthur A. Bottone

President and Chief Executive Officer

Michael Bishop

Senior Vice President, Chief Financial Officer, Corporate Secretary and Treasurer

#### 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, 2013 and 2012, and the related consolidated statements of operations and comprehensive income (loss), changes in (deficit) equity, and cash flows for each of the years in the three-year period ended October 31, 2013. We also have audited FuelCell Energy, Inc.'s internal control over financial reporting as of October 31, 2013, based on criteria established in *Internal Control - Integrated Framework* 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, 2013 and 2012, and the results of its operations and its cash flows for each of the years in the three-year period ended October 31, 2013, 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, 2013, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

KPMG LLP

Hartford, Connecticut January 6, 2014

## **CONSOLIDATED BALANCE SHEETS** (Amounts in thousands, except share and per share amounts)

	October 31,	
	2013	2012
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 67,696	\$ 46,879
Restricted cash and cash equivalents — short-term	5,053	5,335
License fee receivable	_	10,000
Accounts receivable, net of allowance for doubtful accounts of \$14 and \$586, respectively	49,116	25,984
Inventories	56,185	47,701
Other current assets	11,279	4,727
Total current assets	189,329	140,626
Restricted cash and cash equivalents — long-term	4,950	5,300
Property, plant and equipment, net	24,225	23,258
Goodwill	4,075	_
Intangible assets	9,592	_
Investment in and loans to affiliate	_	6,115
Other assets, net	5,465	16,186
Total assets	\$ 237,636	\$ 191,485
LIABILITIES AND (DEFICIT) EQUITY Current liabilities:		'
Current portion of long-term debt	\$ 6,931	\$ 5,161
Accounts payable	24,535	12,254
Accounts payable due to affiliate		203
Accrued liabilities	21,912	20,265
Deferred revenue	51,857	45,939
Preferred stock obligation of subsidiary	1,028	1,075
Total current liabilities	106,263	84,897
Long-term deferred revenue	18,763	15,533
Long-term preferred stock obligation of subsidiary	13,270	13,095
Long-term debt and other liabilities	52,675	3,975
Total liabilities	190,971	117,500
Redeemable preferred stock (liquidation preference of \$64,020 at October 31, 2013 and October 31, 2012)	59,857	59,857
Total (deficit) equity:	ŕ	
Shareholders' (deficit) equity  Common stock (\$.0001 par value; 275,000,000 shares authorized at October 31, 2013 and 2012,		
respectively; 196,310,402 and 185,856,123 shares issued and outstanding at October 31, 2013 and 2012, respectively)	20	18
Additional paid-in capital	758,656	751,256
Accumulated deficit	(771,189)	(736,831
Accumulated other comprehensive income	101	66
Treasury stock, Common, at cost (5,679 shares at October 31, 2013 and 2012)	(53)	(53
Deferred compensation	53	53
Total shareholders' (deficit) equity	(12,412)	14,509
Noncontrolling interest in subsidiaries	(780)	(381
Total (deficit) equity	(13,192)	14,128
Total liabilities and (deficit) equity	\$ 237,636	\$ 191,485

See accompanying notes to consolidated financial statements.

# CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)

(Amounts in thousands, except share and per share amounts)	For t	he Years Ended	October 31,
	2013	2012	2011
Revenues (1):			
Product sales	\$145,071	\$ 94,950	\$103,007
Service agreements and license revenues	28,141	18,183	12,097
Advanced technologies contract revenues	14,446	7,470	7,466
Total revenues	187,658	120,603	122,570
Costs of revenues:			
Cost of product sales	136,989	93,876	96,525
Cost of service agreements and license revenues	29,683	19,045	30,825
Cost of advanced technologies contract revenues	13,864	7,237	7,830
Total cost of revenues	180,536	120,158	135,180
Gross profit (loss)	7,122	445	(12,610
Operating expenses:			
Administrative and selling expenses	21,218	18,220	16,299
Research and development expenses	15,717	14,354	16,768
Total operating expenses	36,935	32,574	33,067
Loss from operations	(29,813)	(32,129)	(45,677
Interest expense	(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	(1,208)	1,244	1,047
Loss before redeemable preferred stock of subsidiary	(34,948)	(35,837)	(45,432
Accretion of redeemable preferred stock of subsidiary	_	_	(525
Loss before provision for income taxes	(34,948)	(35,837)	(45,957
Provision for income taxes	(371)	(69)	(17
Net loss	(35,319)	(35,906)	(45,974
Net loss attributable to noncontrolling interest	961	411	261
Net loss attributable to FuelCell Energy, Inc.	(34,358)	(35,495)	(45,713
Adjustment for modification of redeemable preferred stock of subsidiary	-	_	(8,987
Preferred stock dividends	(3,200)	(3,201)	(3,200
Net loss to common shareholders	\$ (37,558)	\$(38,696)	\$ (57,900
Net loss to common shareholders per share	+ (31)333,	4(11)111,	+ (31)133
Basic	\$ (0.20)	\$ (0.23)	\$ (0.47
Diluted	\$ (0.20)	\$ (0.23)	\$ (0.47
Weighted average shares outstanding	<del></del>	+ (/	- · · · · · · · · · · · · · · · · · · ·
Basic	186,525,001	165,471,261	124,498,073
Diluted	186,525,001	165,471,261	124,498,073
Situation	100,020,001	100,471,201	124,470,070
	2013	2012	2011
Net loss	\$ (35,319)	\$ (35,906)	\$ (45,974
Other comprehensive income (loss):			
Foreign currency translation adjustments	35	51	4
Comprehensive loss	\$ (35,284)	\$ (35,855)	\$ (45,970)

<sup>(1)</sup> Includes revenue from a related party. Refer to Concentrations in note 1 to the financial statements. See accompanying notes to consolidated financial statements.

# **CONSOLIDATED STATEMENTS OF CHANGES IN (DEFICIT) EQUITY**

For the Years Ended October 31, 2013, 2012 and 2011 (Amounts in thousands, except share and per share amounts)

,					Accumulated Other			Noncontrollina	
	Commo Shares		Additional Paid-in Capital	Accumulated Deficit	Comprehensive Income (Loss)	Treasury Stock	Deferred Compensation	Interest in Subsidiaries	Total Equity (Deficit)
Balance, October 31, 2010	112,965,725	\$11	\$ 663,951	\$ (655,623)	\$ 11	\$ (53)	\$ 53	\$ (663)	\$ 7,687
Sale of common stock	24,064,924	2	32,862	_	_	_	_	_	32,864
Share-based compensation	_	_	2,577	_	_	_	_	_	2,577
Stock issued under benefit plans	1,369,848	_	654	_	_	_	_	_	654
Preferred dividends — Series B	_	_	(3,200)	_	_	_	_	_	(3,200)
FuelCell Ltd (adjustment from Series 1 modification)	_	_	(8,987)	_	_	_	_	_	(8,987)
Noncontrolling interest in subsidiaries	<b>–</b>	_	_	_	_	_	_	(261)	(261)
Effect of foreign currency translation	_	_	_	_	4	_	_	_	4
Net loss attributable to FuelCell Energy, Inc.	_	_	_	(45,713)	_	_	_	_	(45,713)
Balance, October 31, 2011	138,400,497	\$13	\$ 687,857	\$ (701,336)	\$ 15	\$ (53)	\$ 53	\$ (924)	\$ (14,375)
Sale of common stock	45,012,306	5	63,998	_	_	_	_	_	64,003
Share-based compensation	_	_	2,054	_	_	_	_	_	2,054
Stock issued under benefit plans	2,443,320	_	548	_	_	_	_	_	548
Preferred dividends — Series B	_	_	(3,201)	_	_	_	_	_	(3,201)
Sale of noncontrolling interest in subsidiary	_	_	_	_	_	_	_	954	954
Noncontrolling interest in subsidiaries	<b>–</b>	_	_	_	_	_	_	(411)	(411)
Effect of foreign currency translation	_	_	_	_	51	_	_	_	51
Net loss attributable to FuelCell Energy, Inc.	_	_	_	(35,495)	_	_	_	_	(35,495)
Balance, October 31, 2012	185,856,123	\$18	\$ 751,256	\$ (736,831)	\$ 66	\$ (53)	\$ 53	\$(381)	\$ 14,128
Sale of common stock	4,295,800	\$ 1	\$ 5,547	_	_	_	_	_	5,548
Common stock issued for acquisition	3,526,764	1	3,562	_	_	_	_	_	3,563
Share-based compensation	_	_	2,226	_	_	_	_	_	2,226
Stock issued under benefit plans	2,631,715	_	(173)	_	_	_	_	_	(173)
Reclass of noncontrolling interest due to liquidation of subsidiaries	_	_	(562)	_	_	_	_	562	_
Noncontrolling interest in subsidiaries	<b>—</b>	_	_	_	_	_	_	(961)	(961)
Preferred dividends — Series B	_	_	(3,200)	_	_	_	_	_	(3,200)
Effect of foreign currency translation	_	_	_	_	35	_	_	_	35
Net loss attributable to FuelCell Energy, Inc.	_		_	(34,358)	_	_	_	_	(34,358)
Balance, October 31, 2013	196,310,402	\$20	\$758,656	\$(771,189)	\$101	\$ (53)	\$ 53	\$(780)	\$(13,192)

See accompanying notes to consolidated financial statements.

# **CONSOLIDATED STATEMENTS OF CASH FLOWS**

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

For the Years Ended October 31,

	2013	2012	2011
Cash flows from operating activities:			
Net loss	\$(35,319)	\$(35,906)	\$(45,974)
Adjustments to reconcile net loss to net cash used in operating activities:			
Share-based compensation	2,226	2,054	2,577
(Income) loss in equity investments	(46)	645	(58)
Impairment of equity investment	_	3,602	_
Accretion of redeemable preferred stock of subsidiary	_	_	525
Change in fair value of embedded derivatives	1,359	180	137
Depreciation	4,097	5,192	6,431
Amortization of convertible note discount and interest expense	2,480	2,018	2,490
Other non-cash transactions	(382)	(297)	(23)
(Increase) decrease in operating assets:			
Accounts and license fee receivables	(12,000)	(14,066)	(4,046)
Inventories	(5,901)	(7,600)	(6,697)
Other assets	6,076	3,032	(15,586)
Increase (decrease) in operating liabilities:			
Accounts payable	11,776	(1,790)	3,405
Accrued liabilities	(172)	(6,081)	10,761
Deferred revenue	9,148	(9,642)	37,573
Net cash used in operating activities	(16,658)	(58,659)	(8,485)
Cash flows from investing activities:			
Capital expenditures	(6,551)	(4,453)	(3,350)
Cash acquired from acquisition	357	_	_
Convertible loan to affiliate	_	_	(600)
Treasury notes matured	_	12,000	55,000
Treasury notes purchased	_	_	(33,019)
Net cash (used in) provided by investing activities	(6,194)	7,547	18,031
Cash flows from financing activities:			
Repayment of debt	(374)	(173)	(306)
Proceeds from debt	45,250	_	4,000
Financing costs for convertible debt securities	(2,472)	_	_
Proceeds received for noncontrolling interest in subsidiary	_	954	_
Decrease (increase) in restricted cash and cash equivalents	632	(2,203)	618
Proceeds from sale of common stock, net of registration fees	5,040	64,003	32,930
Payment of preferred dividends and return of capital	(4,442)	(7,624)	(15,226)
Net cash provided by financing activities	43,634	54,957	22,016
Effects on cash from changes in foreign currency rates	35	51	4
Net increase in cash and cash equivalents	20,817	3,896	31,566
Cash and cash equivalents—beginning of year	46,879	42,983	11,417
Cash and cash equivalents—end of year	\$ 67,696	\$ 46,879	\$ 42,983

See accompanying notes to consolidated financial statements.

# NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the years ended October 31, 2013, 2012 and 2011 (Tabular amounts in thousands, except share and per share amounts)

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

#### Nature of Business and Basis of Presentation

FuelCell Energy, Inc. and 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 cell and other fuel cell technologies. We continue to invest in new product and market development and, as such, we are not currently generating net income from our operations. Our operations are funded primarily through cash generated from product sales, service and advanced technologies contracts, license fee income and sales of equity and debt securities. In order to continually produce positive cash flow from operations, we need to be successful at increasing annual order volume, production and in our cost reduction efforts.

The consolidated financial statements include our accounts and those of our wholly-owned subsidiaries, including FuelCell Energy, Ltd. ("FCE Ltd."), our Canadian subsidiary; Bridgeport Fuel Cell Park, LLC ("BFCP"), Waterbury Renewable Energy ("WRE"), DFC-ERG Milford, LLC and DFC-ERG Connecticut, LLC, which were formed for the purpose of developing projects within Connecticut; and FCE Korea Ltd., which was formed to facilitate our business operations in South Korea. FuelCell Energy Solutions GmbH ("FCES GmbH") which is a joint venture with Fraunhofer IKTS (Fraunhofer), was formed in the fourth guarter of fiscal year 2011 to facilitate business development in Europe. We have a 75 percent interest in FCES GmbH and accordingly, the financial results are consolidated with our financial results. Alliance Star Energy, LLC ("Alliance Star") is a joint venture with Alliance Power, Inc. ("Alliance") established to construct fuel cell power plants and sell power under power purchase agreements ("PPA"). We have an 80 percent interest in the entity and accordingly, the financial results of Alliance Star are consolidated with our financial results. Versa Power Systems, Inc. ("Versa"), which includes its subsidiary Versa Power Systems, Ltd., was previously one of our sub-contractors under the Department of Energy ("DOE") large-scale hybrid project to develop a coal-based, multi-megawatt solid oxide fuel cell ("SOFC") based hybrid system. We had a 39 percent ownership interest and historically accounted for Versa under the equity method of accounting. On December 20, 2012, the Company acquired the remaining 61 percent ownership position of Versa and it is now a wholly-owned subsidiary and consolidated with our financial results. All intercompany accounts and transactions have been eliminated.

Certain reclassifications have been made to the prior year amounts to conform to the current year presentation.

The Company has corrected the presentation of restricted cash balances which had been previously included in cash and cash

equivalents. As of October 31, 2012, short-term and long-term restricted cash balances in the amount of \$5.3 million and \$5.3 million, respectively, have been reclassified to short-term and long-term restricted cash. This revision also impacted net cash used in financing activities. There was no impact on net loss or net cash provided by (used in) operating activities as a result of the revision.

#### Significant Accounting Policies

#### Cash and Cash Equivalents and Restricted Cash

All cash equivalents consist of investments in money market funds with original maturities averaging three months or less at date of acquisition. We place our temporary cash investments with high credit quality financial institutions. We have pledged approximately \$10.0 million of our cash and cash equivalents as collateral against letters of credit, banking requirements and customer contracts. At October 31, 2013 and 2012, we had outstanding letters of credit of \$7.7 million and \$9.6 million, respectively.

#### 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 reserves 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.

# 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.

Goodwill and intangible assets with indefinite lives are evaluated annually for impairment in the third quarter. 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 fiscal year 2013. The Company did not have goodwill or indefinite lived intangible assets in fiscal year 2012 or 2011.

#### 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.

#### Revenue Recognition

We earn revenue from (i) the sale and installation of fuel cell power plants (ii) the sale of component part kits and spare parts to customers, (iii) site engineering and construction services, (iv) providing services under service agreements (SA), (v) the sale of electricity under PPA's as well as incentive revenue from 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. 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., Asia and Europe and from agencies of the U.S. Government.

Revenue from product, component part kits and spare part sales and construction services revenue is recorded as product sales in the consolidated statements of operations. Revenue from SA's, PPA's, license and royalty revenue and engineering services revenue is recorded as service and license revenues and 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. Changes in estimates are applied retrospectively and when adjustments 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 the 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. We have recorded an estimated contract loss reserve of \$0.09 million and \$0.04 million as of October 31. 2013 and October 31, 2012, respectively. Actual results could vary from initial estimates and reserve estimates will be updated as conditions change.

Revenue from component part kits 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 unready 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 agreement contracts is generally recorded ratably over the term of the SA, as our performance of routine monitoring and maintenance under these SA's are generally expected to be incurred on a straight-line basis. For SA's where we expect to have a module exchange at some point during the term (generally SA's 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 value related to the module exchange is deferred and is recognized upon such module exchange event.

Under PPA's, revenue from the sale of electricity is recognized as electricity is provided to the customer.

Beginning in fiscal year 2013, license fees and royalty income have been included within revenues on the consolidated

statement of operations. This change is a result of the new license agreement entered into on October 31, 2012 for our core technology and the harmonization of the existing agreements to provide fees and royalties for the manufacture of complete DFC Power Plants. Classification as revenue is reflective of our Asia market partnership and royalty based strategy and this business activity having become a significant component of non-product revenue.

Revenue from advanced technology contracts is recognized as costs are incurred less cost share plus general and administrative expenses to the extent the contract value is funded. 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 are required 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 reserve for estimated future warranty costs based on historical experience. We also provide for a specific reserve if there is a known issue requiring repair during the warranty period. Estimates used to record warranty reserves are updated as we gain further operating experience. As of October 31, 2013 and October 31, 2012, the warranty reserve, which is classified in accrued liabilities on the consolidated balance sheet totaled \$0.9 million and \$2.3 million, respectively.

In addition to the standard product warranty, we have entered into SA's with certain customers to provide monitoring, maintenance and repair services for fuel cell power plants. Under the terms of our SA's, 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 or replace the customer's fuel cell stack. The Company has provided for a reserve for performance guarantees, which based on historical fleet performance totaled \$0.5 million and \$2.2 million as of October 31, 2013 and 2012, respectively.

The Company provides for reserves on all SA's when the estimated future stack replacements and service costs exceed the remaining contract value. Reserve estimates for future costs on SA's are determined by a number of factors including the estimated remaining life of the stack, used replacement stacks available, our limit of liability on SA's and future operating plans for the power plant. Our reserve 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. As of October 31, 2013, our reserve on SA's contracts totaled \$3.7 million compared to \$5.0 million as of October 31, 2012.

At the end of our SA's, customers are expected to either renew the SA or based on the Company's ability to obtain 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. As of October 31, 2013, the total long-term stack asset balance was \$2.9 million compared to \$14.3 million as of October 31, 2012. As of October 31, 2013, accumulated depreciation on long-term stack assets totaled approximately \$2.1 million compared to \$7.6 million at October 31, 2012.

During fiscal year 2011, the Company committed to a repair and upgrade program for a select group of 1.2 megawatt (MW) fuel cell modules produced between 2007 and early 2009. As of October 31, 2013, the accrued obligation balance related to this item was \$7.3 million compared to \$4.8 million as of October 31, 2012. The increase in the reserve is a result of an incremental charge due to the Master Service Agreement with POSCO Energy., LTD (POSCO Energy) having caused us to provide three replacement modules to POSCO Energy. These modules are expected to be supplied to POSCO Energy in early 2014.

The remaining accrued balance is related to modules which are expected to be deployed as field replacements and will be provided to POSCO Energy per the terms of the commitment when needed.

#### License Agreements and Royalty Income

We generally recognize license fees and other revenue over the term of the associated agreement. Beginning in fiscal year 2013, license fees and royalty income have been included within revenues on the consolidated statement of operations. This change is a result of the new license agreement entered into on October 31, 2012 for our core technology and the harmonization of the existing agreements to provide license fees and royalties for the value of complete DFC Power Plants sold by POSCO Energy. Classification as revenue is reflective of our Asia market partnership and royalty based strategy having become a significant component of non-product revenue. Prior to November 1, 2012, license fee and royalty income were classified as such in the accompanying 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. On October 31, 2012, we entered into a Cell Technology Transfer Agreement ("CTTA") with POSCO Energy. The CTTA 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. Under the CTTA, the Company will also provide consulting and procurement expertise in the design and construction of a manufacturing facility in South Korea that will be financed and owned by POSCO Energy. In conjunction with this agreement, 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 percent to 3.0 percent 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 percent 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.

The Company recorded license and royalty income of \$4.1 million, \$1.6 million and \$1.7 million for the years ended October 31, 2013, 2012 and 2011, respectively, relating to the above agreements.

#### 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.

#### Share-Based Compensation

We account for restricted stock awards (RSA's) and restricted stock units (RSU's) based on the closing market price of the Company's common stock on the date of grant. We account for stock options awarded to employees and non-employee directors under the fair value method of accounting using the Black-Scholes valuation model to estimate fair value at the grant date. The model requires us to make estimates and assumptions regarding the expected life of the option, the risk-free interest rate, the expected volatility of our common stock price and the expected dividend yield. The fair value of equity awards is amortized to expense over the vesting period, generally four years. Refer to Note 14 for additional information.

#### Income Taxes

Income taxes are accounted for under the liability method.

Deferred tax assets and liabilities are determined based on net operating loss ("NOL") carryforwards, research and development credit carryforwards, and differences between financial reporting and the income tax basis of assets and liabilities. Deferred tax assets and liabilities are measured using enacted tax rates and laws expected to be in effect when the differences are expected to reverse. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recorded against deferred tax assets if it is unlikely that some or all of the deferred tax assets will be realized.

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.

#### Concentrations

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, 2013, 2012 and 2011, our top five customers accounted for 88 percent, 85 percent and 66 percent, respectively, of our total annual consolidated revenue.

The percent of consolidated revenues from each customer for the years ended October 31, 2013, 2012 and 2011, respectively, are presented below.

	2013	2012	2011
POSCO Energy	54%	76%	44%
Bridgeport Dominion Fuel Cell, LLC	29%	-%	-%
Department of Energy	5%	7%	-%
BioFuels Fuel Cells, LLC	-%	-%	12%
UTS BioEnergy, LLC	-%	2%	10%
Total	88%	85%	66%

POSCO Energy is a related party and owns approximately 16.0 percent of the outstanding common shares of the Company.

# Derivatives

We do not use derivatives for speculative purposes and through fiscal year end 2013, have not used derivatives for hedging or trading purposes. Derivative instruments consist of embedded derivatives for the change of control put redemption and an interest make-whole payment upon conversion feature embedded in the 8.0% Senior Unsecured Convertible Notes which each require bifurcation from the host debt contract and also for embedded derivatives in our Series 1 Preferred Shares. We account for these derivatives using the fair-value method with changes in the underlying fair value recorded to earnings. Refer to Notes 10 and 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, SA reserves, allowance for uncollectible receivables, depreciation and amortization, impairment of assets, 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 within stockholders' (deficit) equity.

Our Canadian subsidiary, FCE Ltd., is financially and operationally integrated and therefore the temporal method of translation of foreign currencies is followed. The functional currency is U.S. dollars. We are subject to foreign currency transaction gains and losses as certain transactions are denominated in Canadian dollars. We recognized a gain of \$0.4 million, a gain of \$0.1 million and a loss of \$1.0 million for the years ended October 31, 2013, 2012 and 2011, respectively. These amounts have been classified as other income (expense), net in the consolidated statements of operations.

#### Subsequent Events

We have evaluated subsequent events and are not aware of any significant events that occurred subsequent to the balance sheet date but prior to the filing of this Form 10-K with the SEC that would have a material impact on our consolidated financial statements other than in December 2013, certain investors elected to convert a total of \$8.0 million principal of \$38.0 million in aggregate principal the 8.0% Senior Unsecured Convertible Notes. Refer to Note 20 for more information.

#### Recently Adopted Accounting Guidance

In July 2012, the FASB issued guidance concerning the testing of indefinite-lived intangible assets for impairment. This guidance gives an entity the option first to assess qualitative factors to determine whether the existence of events and circumstances indicates that it is more likely than not that the indefinite-lived intangible asset is impaired. If, after assessing the totality of events and circumstances, an entity concludes that it is not more likely than not that the indefinite-lived intangible asset is impaired, then the entity is not required to take further action. However, if an entity concludes otherwise, then it is required to determine the fair value of the indefinitelived intangible asset and perform the quantitative impairment test by comparing the fair value with the carrying amount in accordance with ASC Subtopic 350-30, "Intangibles—Goodwill and Other, General Intangibles Other than Goodwill." Under the guidance, an entity also has the option to bypass the qualitative assessment for any indefinite-lived intangible asset in any period and proceed directly to performing the quantitative impairment test. An entity will be able to resume performing the qualitative assessment in any subsequent period. The

Company adopted this guidance effective November 1, 2012 and the revised standard did not have a material impact on the Company's consolidated financial statements.

# Recent Accounting Guidance Not Yet Effective None.

# Note 2. Acquisitions

Versa was previously one of our sub-contractors under the DOE's large-scale hybrid project to develop a coal-based, multi-megawatt SOFC based hybrid system. Versa has been developing advanced SOFC systems for various stationary and mobile applications since 2001. Prior to December 20, 2012, we had a 39 percent ownership interest and accounted for Versa under the equity method of accounting. We recognized our share of the income or losses as income/(loss) from equity investment on the consolidated statements of operations.

On December 20, 2012, the Company acquired the remaining 61 percent ownership position of Versa in a stock transaction by exchanging approximately 3.5 million shares of its common stock for the outstanding Versa shares held by the other Versa shareholders.

The transaction has been accounted for using the acquisition method of accounting which requires, among other things, that assets acquired and liabilities assumed be recognized at their fair values as of the acquisition date. Step-acquisition accounting guidance was applied and an impairment charge of \$3.6 million relating to the previously held equity investment was recorded in the fourth quarter of 2012.

The following table summarizes the final allocation of the purchase price to the estimated fair value of the assets acquired and liabilities assumed as of the acquisition date.

Cash and cash equivalents	\$ 357
Accounts receivable	1,133
Other current assets	23
Property, plant and equipment	480
Goodwill	4,075
In-process research and development	9,592
Other assets	101
Accounts payable	(302)
Other current liabilities	(1,492)
Deferred tax liabilities [1]	(3,377)
Other long-term liabilities	(155)
Total identifiable net assets	\$ 10,435

(1) Classified in Long-term debt and other liabilities on the consolidated balance sheets.

Acquisition-related costs of \$0.1 million were expensed as incurred. These costs were recognized in administrative and selling expenses on the statement of operations and comprehensive (loss) income for the year ended October 31, 2013.

Versa has been consolidated into the Company's financial statements as of the acquisition date. Versa receives revenue

under a number of research contracts including the U.S. Department of Energy Solid State Energy Conversion Alliance (SECA) coal-based systems program and a research contract with The Boeing Company. Revenue and associated costs are recognized under advanced technologies contract revenues in the consolidated statements of operations.

#### Note 3. Inventories

Inventories at October 31, 2013 and 2012 consisted of the following:

	2013	2012
Raw materials	\$ 20,599	\$17,683
Work-in-process (1)	35,586	30,018
Net inventories	\$ 56,185	\$47,701

[1] Work-in-process includes the standard components of inventory used to build the typical modules or stack components that are intended to be used in future power plant orders or to service SA's. Included in Work-in-process as of October 31, 2013 and 2012 is \$5.8 million and \$11.3 million, respectively, of completed standard components ready to be incorporated into power plants and deployed upon receipt of customer orders or to service SA's.

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, which are subcomponents of a power plant. Work-in-process also includes costs related to modules which have not yet been dedicated to a particular commercial customer contract.

Raw materials and work-in-process are net of valuation reserves of approximately \$1.4 million and \$2.4 million at October 31, 2013 and 2012, respectively.

#### Note 4. Accounts Receivable

Accounts receivable at October 31, 2013 and 2012 consisted of the following:

	2013	2012
Advanced technology research:		
Amount billed	\$ 786	\$ 20
Unbilled recoverable costs	639	890
	1,425	910
Commercial customers:		
Amount billed	17,344	18,786
Unbilled recoverable costs	30,347	6,288
	47,691	25,074
	\$49,116	\$25,984

We bill customers upon project milestones being reached. We bill SA's based on the contract price and billing terms of the contracts. The majority of advanced technology contracts are with the U.S. Government. We bill the U.S. Government based on actual recoverable costs incurred, typically in the month subsequent to incurring costs. The remainder of advanced technology contracts are billed based on milestones or costs incurred. Unbilled recoverable costs relate to revenue recognized

on customer contracts that have not been billed as the milestone billing date had not yet been reached. Unbilled amounts at October 31, 2013 included \$17.8 million due from Dominion under the Bridgeport fuel cell park project and \$6.7 million due from POSCO Energy. Accounts receivable are presented net of an allowance for doubtful accounts of \$0.01 million and \$0.6 million at October 31, 2013 and 2012, respectively.

Commercial customers accounts receivable (including Unbilled recoverable costs) are amounts due from POSCO Energy of \$17.4 million and \$18.1 million at October 31, 2013 and 2012, respectively.

# Note 5. Property, Plant and Equipment

Property, plant and equipment at October 31, 2013 and 2012 consisted of the following:

		2013		2012	Useful Life
Land	\$	524	\$	524	_
Building and improvements  Machinery, equipment		8,679	,	7,587	10-26 years
and software		73,051	6	8,265	3-8 years
Furniture and fixtures Power plants for use under PPAs		2,899 8,216	1	2,786	10 years 3-10 years
Construction in progress		9,537		7,970	,
	1	02,906	9	77,998	
Less: Accumulated depreciation	(	78,681)	(7	74,740)	
Property, plant and equipment, net	\$	24,225	\$ 2	23,258	

Depreciation expense was \$4.1 million, \$5.2 million and \$6.4 million for the years ended October 31, 2013, 2012 and 2011, respectively.

#### Note 6. Goodwill and Intangible Assets

As of October 31, 2013, the Company had goodwill of \$4.1 million and intangible assets of \$9.6 million associated with the Versa acquisition. Versa's fair value of goodwill resulted from the purchase price residual value method. All identifiable assets and liabilities were deducted from the total purchase price and the difference represents the implied fair value of goodwill. The intangible asset represents indefinite lived in-process research and development for which the fair value was determined utilizing the cost approach which estimated the costs to replicate cumulative research and development efforts associated with the development of SOFC stationary power generation and had a 10 percent obsolescence factor applied to account for improvements that could be made on the current technology.

The Company has completed a qualitative assessment as of July 31, 2013 and has determined that the goodwill and indefinite-lived intangible assets recorded as a result of the Versa acquisition and are included within the Versa reporting unit are not impaired.

#### Note 7. Other Current Assets

Other current assets at October 31, 2013 and 2012 consisted of the following:

	2013	2012
Advance payments to vendors (1)	\$ 4,235	\$2,261
Debt issuance costs (2)	494	_
Notes receivable (3)	478	475
Prepaid expenses and other (4)	6,072	1,991
Total	\$11,279	\$4,727

- [1] Advance payments to vendors relate to inventory purchases.
- [2] Represents the current portion of debt issuance costs capitalized relating to the convertible debt issuance and will be amortized over the term of the convertible notes which is five years.
- [3] Current portion of long-term notes receivable.
- [4] Primarily relates to other accounts receivable related to POSCO Energy royalties, receivable for common stock sales and other prepaid vendor expenses including insurance, rent and lease payments.

#### Note 8. Other Assets, net

Other assets, net at October 31, 2013 and 2012 consisted of the following:

	2013	2012
Long-term stack residual value (1)	\$2,898	\$14,316
Debt issuance costs (2)	1,721	_
Other (3)	846	1,870
Other assets, net	\$5,465	\$16,186

- [1] Relates to unplanned module exchanges performed under the Company's SA's. In circumstances where the useful life of the module extends beyond the contractual term of the SA and the Company retains title for the module from the customer upon expiration or non-renewal of the SA, the cost of the unplanned module exchanges is recorded as a long-term asset and is depreciated over its expected life. If the Company does not obtain rights to title from the customer, the cost of the module is expensed at the time of the module exchange. The reduction in the balance at October 31, 2013 is a result of costs of \$8.4 million primarily related to the provision of fuel cell stacks to POSCO Energy upon execution of Master Service Agreement with POSCO Energy to service the installations under the ongoing service contract. Additions during the year ended October 31, 2013 and 2012 were \$0.5 million and \$4.4 million, respectively. Accumulated depreciation was \$2.1 million and \$7.6 million for the years ended October 31, 2013 and 2012, respectively.
- [2] Represents the long-term portion of debt issuance costs capitalized relating to the convertible debt issuance and will be amortized over the term of the convertible notes, which is five years.
- [3] Includes security deposits and notes receivable.

#### Note 9. Accrued Liabilities

Accrued liabilities at October 31, 2013 and 2012 consisted of the following:

	2013	2012
Accrued payroll and employee benefits (1)	\$ 4,647	\$ 3,907
Accrued contract and operating costs (2)	87	39
Reserve for product warranty costs (3)	860	2,317
Reserve for service agreement costs (4)	4,186	7,222
Reserve for B1200 repair and upgrade program and modules due POSCO Energy (5)	7,267	4,753
Accrued taxes, legal, professional and other (6)	4,865	2,027
	\$21,912	\$20,265

- [1] Balance relates to amounts owed to employees for compensation and benefits as of the end of the period.
- [2] Balance includes estimated losses accrued on product sales contracts.
- [3] Activity in the reserve for product warranty costs during the year ended October 31, 2013 and 2012 included additions for estimates of potential future warranty obligations of \$1.2 million and \$3.1 million, respectively, on contracts in the warranty period and reserve reductions related to actual warranty spend and reversals to income of \$0.3 million and \$1.9 million, respectively, as contracts progress through the warranty period or are beyond the warranty period.
- [4] The Company provides for reserves on all SA agreements when the estimated future stack replacement and service costs exceed the remaining unrecognized contract value. Our reserve 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. As of October 31, 2013, our reserve on SA contracts totaled \$3.7 million compared to \$5.0 million as of October 31, 2012. If minimum output falls below the contract requirement, we may be subject to performance penalties and/ may be required to repair or replace the customer's fuel cell stack. 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 a reserve is recorded. The Company has provided a reserve for performance guarantees based on historical fleet performance which totaled \$0.5 million and \$2.2 million as of October 31, 2013 and 2012, respectively.
- [5] During fiscal year 2011, the Company incurred an obligation to repair and upgrade a select group of 1.2 megawatt (MW) fuel cell modules produced between 2007 and early 2009. The repair and upgrade obligation was based on events that occurred and knowledge obtained concerning the performance of this select group of modules. The program commenced in fiscal year 2011 and with the exception of providing replacement modules to POSCO Energy, was concluded during fiscal year 2012. The Company recorded an initial charge of approximately \$8.8 million which was recorded as cost of product sales and revenues on the consolidated statements of operations. The increase in the reserve as of October 31, 2013 compared to the prior year is a result of an incremental charge due to the terms of the Master Service Agreement with POSCO Energy requiring us to provide three replacement modules due to POSCO Energy.
- [6] Balance includes accrued sales, use and payroll taxes as well as estimated legal, professional and other expense estimates as of the end of the period.

#### Note 10. Debt and Leases

Debt at October 31, 2013 and 2012, consisted of the following:

	2013	2012
Revolving credit facility	\$ 6,500	\$4,000
Senior Unsecured Convertible Notes	38,000	_
Connecticut Development Authority Note	3,246	3,466
Connecticut Clean Energy Fund Note	_	847
Connecticut Clean Energy and Finance Investment Authority Note	5,744	_
Capitalized lease obligations	497	234
Total debt	\$53,987	\$8,547
Less: Unamortized debt discount (1)	(3,106)	
	50,881	8,547
Less: Current portion of long-term debt	(6,931)	(5,161)
Long-term debt	\$ 43,950	\$3,386

[1] The debt discount recorded in connection with the issuance of the Company's unsecured convertible notes relates to the fair value of the embedded derivatives at June 25, 2013 and is recorded on the consolidated balance sheets as a reduction to associated debt balance. The Company is amortizing the debt discount to interest expense over the term of the debt.

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, 2013 are as follows:

Year 1	\$	430
Year 2		381
Year 3		313
Year 4		256
Year 5	40	),363
Thereafter	Ę	5,744
	\$ 47	7,487

As of October 31, 2013, the Company has an \$8.0 million revolving credit facility with JPMorgan Chase Bank, N.A. and the Export-Import Bank of the United States. The revolver was increased from \$5.0 million on April 12, 2013. 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 agreement has a one-year term with renewal provisions and the current expiration date is April 2. 2014. 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 percent 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. At October 31, 2013, the outstanding amount owed under this facility was \$6.5 million and is classified as Current portion of long-term debt on the consolidated balance sheets.

On June 25, 2013, the Company closed an offering of \$38.0 million in aggregate principal amount of 8.0% Senior Unsecured Convertible Notes ("Notes"). Under the terms of the Notes, interest is payable semi-annually in arrears on December 15 and June 15 of each year, beginning December 15, 2013. The Notes will mature on June 15, 2018, unless earlier redeemed, repurchased or converted. The Notes are convertible into shares of the Company's common stock at a conversion rate of 645.1613 shares of common stock per \$1,000 principal amount of convertible notes, equivalent to a conversion price of approximately \$1.55 per share of common stock plus a "makewhole" equivalent to the shorter of three years of interest payments or interest payments from the date of conversion through the maturity date. The net proceeds of the offering to the Company were approximately \$35.5 million, after deducting underwriting discounts, commissions and offering expenses. Financing costs of \$2.5 million associated with this debt offering are being amortized over the term of the debt. At October 31, 2013, these costs are capitalized in Other current assets for the current portion and Other assets, net for the long-term portion.

We evaluated the instrument for embedded derivatives and determined the change of control put redemption and an interest make-whole payment upon conversion feature embedded in the Notes require bifurcation from the Notes. The aggregate fair value of these derivatives at June 25, 2013 was \$3.2 million. The aggregate fair value of these derivatives at October 31, 2013 is \$4.7 million. The derivatives are included in Long-term debt and other liabilities on the consolidated balance sheets and any change to the fair values are recorded in 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 borrowing of \$4.0 million. The stated interest rate is 5 percent and the loan is collateralized by the assets procured under this loan as well as \$4.0 million of additional machinery and equipment. Interest only payments were required through November 2009. Principal and interest payments are due commencing in December 2009 through May 2018. The outstanding balance on the Connecticut Development Authority loan was \$3.2 million and \$3.5 million for the periods ended October 31, 2013 and 2012, respectively.

On March 5, 2013 the Company closed on a new long-term loan agreement with the Connecticut Clean Energy and Finance Investment Authority (CEFIA) totaling \$5.9 million in support of the Bridgeport 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 forty-eight equal monthly installments. Outstanding amounts are secured by future cash flows from the Bridgeport contracts. Advances of \$4.8 million were made under the CEFIA loan during fiscal year 2013. The Connecticut Clean Energy Fund Note in the amount outstanding of \$0.9 million rolled into the new CEFIA Note. The outstanding balance on the CEFIA Note as of October 31, 2013 was \$5.7 million.

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

# Note 11. Shareholders' (Deficit) Equity

#### Common Stock

On December 20, 2012, the Company issued 3.5 million shares of common stock for the remaining 61 percent of outstanding Versa shares.

On March 27, 2012, the Company completed a public offering of 23 million shares of common stock, including 3.0 million shares sold pursuant to the full exercise of an over-allotment option previously granted to the underwriters. All shares were offered by the Company at a price of \$1.50 per share. Total net proceeds to the Company were approximately \$32.0 million.

On April 30, 2012, POSCO Energy purchased, and the Company issued, 20 million shares of common stock at a price of \$1.50 per share for proceeds of \$30.0 million. The cash payment was received on May 2, 2012.

The Company may sell common stock on the open market from time to time to raise funds in order to pay obligations related to the Company's outstanding Series I and Series B preferred shares and the 8.0% Senior Unsecured Convertible Notes. During fiscal year 2013 and 2012, the Company sold 4,295,800 and 2,012,506 shares, respectively, of the Company's common stock at prevailing market prices through periodic trades on the open market and raised approximately \$5.6 million and \$2.0 million, respectively, net of fees.

#### Warrant Issuance

On September 4, 2013, the Company entered into a comarketing agreement with NRG Energy ("NRG") for the marketing and sales of the Company's power plants. The terms of the agreement included the issuance of warrants to NRG that permit NRG to purchase up to 5.0 million shares of the Company's common stock at predetermined prices based on attaining minimum sales goals. There are three tranches of warrants with varying strike prices, varying minimum levels of qualifying orders, and different vesting and expiration dates. The weighted average strike price for all 5.0 million warrants is \$2.18. The qualifying order vesting dates range from March 2014 through September 2015 and the expiration dates range from February 2017 through August 2018. Any costs associated with the warrants will be recorded as a reduction of potential future revenue recorded under the arrangement. No warrants were vested as of October 31, 2013.

#### Note 12. Redeemable Preferred Stock

#### Redeemable Series B Preferred Stock

We have 250,000 shares of our 5 percent Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000) ("Series B Preferred Stock") authorized for issuance. At October 31, 2013 and 2012, 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 holder, 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, 2013, 2012 and 2011. There were no cumulative unpaid dividends at October 31, 2013 and 2012.

- 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, 2013 and 2012, 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 85.1064 shares of our common stock (which is equivalent to an initial conversion price of \$11.75 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 percent of the then prevailing conversion price (\$11.75 at October 31, 2013) 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 percent 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 Thermoelectric 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. With the sale of Global in May of 2004, the Series 2 Preferred Shares were cancelled, and replaced with substantially equivalent Series 1 Preferred Shares ("Series 1 Preferred Shares") issued by FCE FuelCell Energy Ltd. ("FCE Ltd").

On March 31, 2011, the Company entered into an agreement with Enbridge, Inc. ("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 Energy, 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.

Under the modified share provisions, the Company is required to make (i) equal quarterly return of capital cash payments to the holders of the Series 1 Preferred Shares on the last day of each calendar quarter starting on March 31, 2011 and ending on December 31, 2011 and (ii) additional return of capital cash payments of Cdn. \$750,000 annually calculated at a 9.8 percent rate per annum on the unpaid Cdn. \$12.5 million obligation, which additional payments will also be made to the holders of the Series 1 Preferred Shares on the last day of each calendar quarter starting on March 31, 2011 and ending on December 31, 2011. 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.

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. Due to the reclassification of the instrument to a liability, the Company has accounted for this modification of the Series 1 Preferred shares as an extinguishment and therefore the difference between the fair value of the consideration transferred to the holders of the preferred stock and the carrying amount of the preferred stock on our balance sheet prior to the modification of \$9.0 million represents a return to the preferred stockholder and treated in a manner similar to the treatment of dividends paid on preferred stock. Accordingly, this amount was subtracted from net loss to arrive at loss to common stockholders in the calculation of earnings per share.

The previous model used to value the original Series I Preferred shares was modified to value the pre-modification contract, to reflect the new cash-flows discussed above. The original obligation had been accounted for under purchase price accounting at the time of the Global Thermoelectric Inc. acquisition in November 2003. The valuation at that time included a market risk discount and used the exchange rate at the time of the acquisition. Under the new valuation, the future estimated cash flows were discounted using the current exchange rate. The notional amount of the instrument is accreted beginning in 2011 to correspond to the initial four quarterly returns of capital payments in 2011 and to the quarterly Cdn. \$187,500 paid from 2011-2020 as return of capital. It is assumed that the Company will exercise the call option to force conversion in 2020. The conversion feature is modeled using a lattice approach. Call option strikes are adjusted for cumulative dividends and the conversion ratio is adjusted by the notional schedule. The stock is projected in the future assuming a log-normal distribution. The stock volatility, the interest rate curve, the foreign exchange rates and credit spreads are assumed to be deterministic. The cumulative dividend is modeled as a quarterly cash dividend component and a cumulative payment in 2020.

The Company made its scheduled payments of Cdn. \$1.3 million and Cdn. \$4.4 million during fiscal year 2013 and 2012, respectively, under the terms of the modified agreement, including the recording of interest expense of approximately Cdn. \$2.0 million. As of October 31, 2013 and 2012, the carrying value of the Series 1 Preferred shares was Cdn. \$15.0 million (\$14.3 million USD) and Cdn. \$14.2 million (\$14.2 million USD), 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 percent 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 nonassessable common stock of the Company at the following
  exchange prices:
  - Cdn. \$129.46 per share of common stock after July 31, 2010 until July 31, 2015;
  - Cdn. \$138.71 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 percent 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 percent 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 accounted for separately 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 as of October 31, 2013 and 2012 was \$0.7 million.

# Note 13. Segment Information

We are engaged in the development, design, production, sale 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 stand-alone 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, 2013, 2012 and 2011 was as follows:

	2013	2012	2011
United States	\$ 80,199	\$ 26,929	\$ 66,531
South Korea	101,928	92,163	53,256
England	2,036	1,061	1,639
Indonesia	_	147	675
Germany	1,503	128	290
Canada	1,912	175	156
Spain	80	_	_
Japan	_	_	23
Total	\$187,658	\$120,603	\$122,570

#### 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, 5.0 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. During the second quarter of fiscal year 2013, the Company established an international award program to provide RSUs for the benefit of certain employees outside the United States. As of October 31, 2013, there were 1,014,989 shares available for grant. As of October 31, 2013, 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 as of October 31, 2013.

We account for stock options awarded to employees and nonemployee 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 weightedaverage assumptions:

	2013	2012	2011
Expected life (in years)	7.0	7.0	7.0
Risk free interest rate	1.2%	1.6%	3.0%
Volatility	76.5%	75.5%	73.0%
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.

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

	2013	2012	2011
Cost of revenues	\$ 584	\$ 587	\$ 841
General and administrative expense Research and	1,325	1,182	1,275
development expense	308	280	457
Total share-based compensation	\$2,217	\$2,049	\$2,573

The following table summarizes our stock option activity for the year ended October 31, 2013:

Outstanding at October 31, 2013	3,181,464	\$6.42
Cancelled	(218,738)	\$7.05
Granted	279,746	\$0.94
Outstanding at October 31, 2012	3,120,456	\$6.96
Options	Shares	•
		Weighted-Average Option

The weighted average grant-date fair value per share for options granted during the years ended October 31, 2013, 2012 and 2011 was \$0.66, \$0.89 and \$1.38, respectively. There were no options exercised in fiscal 2013, 2012 or 2011.

The following table summarizes information about stock options outstanding and exercisable at October 31, 2013:

		Options Outstanding		Options	s Exercisable
Range of Exercise Prices	Number outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number exercisable	Weighted Average Exercise Price
\$0.26 — \$ 5.10	1,221,787	7.7	\$ 1.83	1,081,913	\$ 1.95
\$5.11 — \$ 9.92	1,274,779	3.4	\$ 8.09	1,274,779	\$ 8.09
\$9.93 — \$14.74	675,398	1.8	\$11.46	675,398	\$11.46
\$14.75 — \$19.56	9,500	0.1	\$16.30	9,500	\$16.30
	3,181,464	4.7	\$ 6.43	3,041,590	\$ 6.68

There was no intrinsic value for options outstanding and exercisable at October 31, 2013.

During fiscal year 2013, we granted 2,934,860 RSAs and RSUs to employees. 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. The weighted average grant-date fair value of RSAs and RSUs were \$0.94 per share. During the year, 970,917 RSA's and RSU's vested and 53,192 RSAs and RSUs were cancelled. At October 31, 2013, there were 5,036,104 outstanding RSAs and RSUs with an average remaining life of 2.7 years and an aggregate intrinsic value of \$6.2 million.

As of October 31, 2013, total compensation cost related to nonvested stock options and RSAs not yet recognized was \$0.1 million and \$4.8 million, respectively, which is expected to be recognized over the next 0.4 and 2.7 years, respectively, on a weighted-average basis.

Stock may be issued to employees as part of the annual incentive bonus. During fiscal year 2012 and 2011, we issued 550,355 and 353,543 shares of common stock, respectively, in lieu of cash bonuses, with values of \$0.6 million and \$0.7 million, respectively, to fulfill the accrued obligation from each of the prior fiscal years. During fiscal 2013, the bonus was paid in cash to fulfill the accrued obligation from fiscal 2012.

#### Employee Stock Purchase Plan

Under the ESPP, eligible employees have the right to purchase shares of common stock at the lesser of (i) 85 percent of the last reported sale price of our common stock on the first business day of the offering period, or (ii) 85 percent 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. As of October 31, 2013, there were 549,584 shares of common stock available for issuance under the ESPP.

ESPP activity for the fiscal year ended October 31, 2013 was as follows:

Outstanding at October 31, 2013	549,584
Issued at \$0.79	(224,789)
Balance at October 31, 2012	774,373
Options	Number of Shares

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:

	2013	2012	2011
Expected life (in years)	0.5	0.5	0.5
Risk free interest rate	15.0%	7.0%	0.2%
Volatility	<b>75.0</b> %	92.0%	90.5%
Dividends yield	-%	-%	-%

The weighted-average fair value of shares issued under the ESPP during fiscal year 2013 was \$0.79 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. After suspending our matching contribution in February 2009, we commenced matching contributions of 1 percent in January 2012 and increased the amount to 2 percent in January 2013. Matching contributions under the Plan were \$0.3 million and \$0.1 million for the fiscal years ended October 31, 2013 and 2012, respectively.

#### Note 15. Income Taxes

The components of loss from continuing operations before income taxes for the fiscal years ended October 31, 2013, 2012, and 2011 were as follows:

	2013	2012	2011
U.S.	\$ (31,044)	\$ (35,535)	\$ (46,365)
Foreign	(3,904)	(302)	408
Loss before income taxes	\$ (34,948)	\$ (35,837)	\$ (45,957)

There was current income tax expense of \$0.4 million, \$0.07 million and \$0.02 million related to foreign withholding taxes and income taxes in South Korea and no deferred federal income tax expense (benefit) for each of the years ended October 31, 2013, 2012 and 2011, respectively. Franchise tax expense, which is included in administrative and selling expenses, was \$0.2 million, \$0.2 million and \$0.1 million for the years ended October 31, 2013, 2012and 2011, respectively.

The reconciliation of the federal statutory income tax rate to our effective income tax rate for the years ended October 31, 2013, 2012 and 2011 was as follows:

	2013	2012	2011
Statutory federal income tax rate	(34.0)%	(34.0)%	(34.0)%
Increase (decrease) in income taxes resulting from:			
State taxes net of Federal benefits	(1.7)%	(2.6)%	(2.3)%
Foreign withholding tax	0.9%	0.2%	0.3%
Net operating loss adjustment and true-ups	0.1%	(34.9)%	1.7%
Nondeductible expenditures	0.8%	1.2%	1.9%
Change in state tax rate	10.5%	(6.8)%	(2.4)%
Other, net	4.1%	(0.1)%	0.3%
Valuation allowance	20.3%	77.2%	34.8%
Effective income tax rate	1.0%	0.2%	0.3%

Our deferred tax assets and liabilities consisted of the following at October 31, 2013 and 2012:

	2013	2012
Deferred tax assets:		
Compensation and benefit accruals	\$ 6,452	\$ 5,745
Bad debt and other reserves	1,841	2,938
Capital loss and tax credit carryforwards	13,582	14,396
Investment in Versa	_	4,068
Net operating losses (domestic and foreign) Deferred license revenue	228,154 8,033	219,496 2,533
Lower of cost or market inventory reserves	509	857
Investment in partnerships	419	_
Accumulated depreciation	625	257
Gross deferred tax assets:	259,615	250,290
Valuation allowance	(259,615)	(249,294)
Deferred tax assets after valuation allowance	_	996
Deferred tax liability:		
Investment in partnerships	_	(996)
In process research and development	(3,377)	_
Gross deferred tax liability	(3,377)	(996)
Net deferred tax liability	\$ (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 \$4.2 million of the valuation allowance will reduce additional paid in capital upon subsequent recognition of any related tax benefits. In connection with our 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, 2013, we had federal and state NOL carryforwards of \$631.0 million and \$372.0 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 2033 while state NOL carryforwards expire in varying amounts from 2013 through 2033. Additionally, we had \$9.9 million of state tax credits available, of which \$1.0 million expires in 2018. The remaining credits do not expire.

Certain transactions involving the Company's beneficial ownership occurred in fiscal 2013 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 2013 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 2013 under Section 382. The acquisition of VERSA 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, 2013 and 2012 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 Korea and Germany. We are open to examination by the Internal Revenue Service and various states in which we file for fiscal years 1998 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, 2013, 2012 and 2011 was as follows:

	2013	2012	2011
Numerator			
Net loss	\$(35,319)	\$(35,906)	\$(45,974)
Net loss attributable to noncontrolling interest	961	411	261
Adjustment for modification of redeemable preferred stock of subsidiary	_	_	(8,987)
Preferred stock dividend	(3,200)	(3,201)	(3,200)
Net loss to common shareholders	\$(37,558)	\$(38,696)	\$(57,900)
Denominator	1.1		
Weighted average basic common shares	186,525,001	165,471,261	124,498,073
Effect of dilutive securities (1)	_	_	_
Weighted average diluted common shares	186,525,001	165,471,261	124,498,073
Basic loss per share	\$(0.20)	\$(0.23)	\$(0.47)
Diluted loss per share (1)	\$(0.20)	\$(0.23)	\$(0.47)

<sup>[1]</sup> 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, convertible preferred stock and convertible notes. At October 31, 2013, 2012 and 2011, there were options to purchase 3.2 million, 3.1 million and 3.3 million shares of common stock, respectively. On September 4, 2013, the Company entered into a co-marketing agreement with NRG for the marketing and sales of the Company's power plants which include the issuance of warrants to purchase up to 5.0 million shares of the Company's common stock. On January 13, 2011, we issued 10.2 million warrants in connection with a registered direct offering. Each warrant was exercisable for 1 share of common stock. The warrants had an exercise price of \$2.29 per share and were exercisable beginning six months and one day after the initial closing date and expired in the fourth quarter of 2012.

# Note 17. Commitments and Contingencies

#### Lease agreements

In December 2006, we entered into a master lease agreement that allows for the lease of computer equipment up to an aggregate cost of \$2.5 million. As of October 31, 2013 and 2012, we had capital lease obligations of \$0.5 million and \$0.2 million, respectively. 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 2015. Rent expense was \$1.6 million, \$1.6 million and \$1.5 million for the fiscal years ended October 2013, 2012 and 2011, respectively.

Non-cancelable minimum payments applicable to operating and capital leases as of October 31, 2013 were as follows:

	Operating	Capital
	Leases	Leases
2014	\$1,997	\$218
2015	1,421	164
2016	715	85
2017	379	16
2018	238	14
Thereafter	_	_
Total	\$4,750	\$497

#### Service and warranty agreements

Under the provisions of our SAs, we provide services to maintain, monitor, and repair customer power plants to meet minimum operating levels. Under the terms of our SA, 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 stack. 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 a reserve 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 a reserve for performance guarantees, based on actual historical fleet performance, which totaled \$0.5 million and \$2.2 million as of October 31, 2013 and 2012, respectively, and is recorded in Accrued Liabilities.

Our reserves on service agreement contracts, excluding the reserve for performance guarantees, totaled \$3.7 million and \$5.0 million as of October 31, 2013 and 2012, respectively, and is recorded in Accrued Liabilities. Our reserve 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 not required to produce minimum amounts of power under our PPA agreements and we have the right to terminate PPA agreements by giving written notice to the customer, subject to certain exit costs.

#### Other

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:

	Year Ended October 31,				
	:	2013	2012		2011
Cash interest paid	\$	280	\$ 302	\$	182
Income taxes paid		17	_		17
Noncash financing and investing activity:					
Common stock issued for employee annual incentive bonus		_	550		707
Common stock issued for Employee Stock Purchase Plan in settlement of prior year accrued employee contributions		85	84		58
Common stock issued for acquisition of Versa	3	,562	_		_
Adjustment for modification of redeemable preferred stock of subsidiary		_	_	8	3,987
Accrued sale of common stock, cash received in a subsequent period		509	_		_

# Note 19. Quarterly Information (Unaudited)

Selected unaudited financial data for each quarter of fiscal year 2013 and 2012 is presented below. We believe that the information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented.

	First	Second	Third	Fourth	Full
	Quarter	Quarter	Quarter	Quarter	Year_
Year ended October 31, 2013					
Revenues	\$ 36,358	\$42,436	\$53,707	\$ 55,157	\$187,658
Gross (loss) profit	(2,311)	2,314	4,522	2,597	7,122
Loss on operations	(11,070)	(7,197)	(4,594)	(6,952)	(29,813)
Net loss	(11,879)	(7,629)	(5,814)	(9,997)	(35,319)
Preferred stock dividends	(800)	(800)	(800)	(800)	(3,200)
Net loss to common shareholders	(12,481)	(8,165)	(6,412)	(10,500)	(37,558)
Net loss to common shareholders per basic and diluted common share (1)	\$ (0.07)	\$ (0.04)	\$ (0.03)	\$ (0.06)	\$ (0.20)
Year ended October 31, 2012					
Revenues	\$ 31,337	\$ 24,153	\$29,693	\$ 35,420	\$120,603
Gross profit (loss)	2,104	201	(2,738)	878	445
Loss on operations	(5,443)	(7,757)	(10,511)	(8,418)	(32,129)
Net loss	(6,014)	(8,363)	(10,010)	(11,519)	(35,906)
Preferred stock dividends	(800)	(801)	(800)	(800)	(3,201)
Net loss to common shareholders	(6,743)	(9,093)	(10,722)	(12,138)	(38,696)
Net loss to common shareholders per basic and diluted common share (1)	\$ (0.05)	\$ (0.06)	\$ (0.06)	\$ (0.07)	(0.23)

[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

In December 2013, certain investors elected to convert a total of \$8.0 million principal of \$38.0 million in aggregate principal the 8.0% Senior Unsecured Convertible Notes. Under the terms of the Notes they are convertible into shares of the Company's common stock at a conversion rate of 645.1613 shares of common stock per \$1,000 principal amount of convertible notes, equivalent to a conversion price of approximately \$1.55 per share of common stock plus a "make-whole" payment in regard to interest. As a result of these conversions, the Company retired \$8.0 million of outstanding principal and issued 6,283,385 shares of common stock.

# FORWARD-LOOKING STATEMENT DISCLAIMER

When used in this report, the words "expects", "anticipates", "estimates", "should", "will", "could", "would", "may", and similar expressions are intended to identify forward-looking statements. Such statements relate to the development and commercialization of FuelCell Energy, Inc.'s. and its subsidiaries ("FuelCell Energy", "Company", "we", "us" and "our") fuel cell technology and products, 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. These and other 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, general risks associated with product development and manufacturing, changes in the utility regulatory environment, potential volatility of energy prices, government appropriations, the ability of the government to terminate its development contracts at any time, rapid technological change, competition and changes in accounting policies or practices adopted voluntarily or as required by accounting principles generally accepted in the United States, as well as other risks contained in the Form 10-K filed with the U.S. SEC. We cannot assure you that we will be able to meet any of our development or commercialization schedules, that the government will appropriate the funds anticipated by us under our government contracts, that the government will not exercise its right to terminate any or all of our government contracts, that any of our new products or technology, once developed, will be commercially successful, that our existing DFC power plants will remain commercially successful, or that 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.

# Shareholder Information

# **Corporate Offices**

FuelCell Energy, Inc. 3 Great Pasture Road Danbury, CT 06813-1305

#### Form 10-K

A copy of the Annual Report on Form 10-K for the year ended October 31, 2013, which is filed with the U.S. Securities and Exchange Commission, can be accessed from our website at www.fuelcellenergy.com. We will provide, without charge, a copy of the Annual Report on Form 10-K for the year ended October 31, 2013. You may request a copy by writing to Investor Relations at the address below.

#### **Company Contacts**

For additional information about FuelCell Energy, Inc. please contact:

Investor Relations FuelCell Energy, Inc. Shareholder Relations 3 Great Pasture Road Danbury, CT 06813-1305 IR@fce.com

# **Corporate Website**

www.fuelcellenergy.com

# Registrar and Transfer Agent

Shareholders with questions regarding lost certificates, address changes or changes of ownership should contact:

American Stock Transfer & Trust Company, LLC Operations Center 6201 15h Avenue Brooklyn, NY 11219 (800) 937.5449 (718) 921.8124 info@amstock.com www.amstock.com

#### **Auditors**

KPMG LLP

# Legal Counsel

Robinson & Cole LLP

#### Annual Meeting

The Annual Meeting of Shareholders will be held Thursday, March 27, 2014 at 10:00 a.m. at:

The Hartford Marriott Downtown 200 Columbus Boulevard Hartford, CT 06103-2807

#### Common Stock Price Information

Our common stock has been publicly traded since June 25, 1992. From September 21, 1994 through February 25, 1997, it was quoted on the NASDAQ National Market, and from February 26, 1997 through June 6, 2000, it was traded on the American Stock Exchange. 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.

Common Stock Price	High	Low
Year Ended October 31, 2013		
First Quarter	\$ 1.30	\$ 0.83
Second Quarter	1.15	0.84
Third Quarter	1.64	1.00
Fourth Quarter	1.57	1.12
Year Ended October 31, 2012		
First Quarter	\$ 1.12	\$ 0.83
Second Quarter	1.95	0.97
Third Quarter	1.39	0.92
Fourth Quarter	1.10	0.85

#### Common Stock Dividend Policy

No cash dividends have been declared or paid by the Company on its common stock since its inception.

#### **Non-Discrimination Statement**

FuelCell Energy, Inc. is an Equal Opportunity/Affirmative Action employer. In order to provide equal employment and advancement opportunities to all individuals, our employment decisions will be based on merit, qualifications and abilities. We do not discriminate in employment opportunities or practices on the basis of race, color, religion, creed, age, sex, marital status, national origin, ancestry, past or present history of mental disorder, mental retardation, learning disabilities, physical disability, sexual orientation, gender identification, genetic information, or any other characteristic protected by law.

# **Directors and Officers**

#### **BOARD OF DIRECTORS**

John A. Rolls, 1, 2, 3, 5

Managing Partner of Core Capital Group, a private investment partnership

Arthur A. Bottone 2, 6

President and Chief Executive Officer, FuelCell Energy, Inc.

Richard A. Bromley 4,6

Retired Vice President—Law and Government Affairs for AT&T

James H. England 3, 4, 6

Corporate Director and Chief Executive Officer of Stahlman— England Irrigation, Inc.

James D. Gerson 2,3,5

Private Investor

William A. Lawson 4,5

Retired Chairman of the Board of Newcor, Inc.

Togo Dennis West, Jr. 4.6

Former U.S. Secretary of the Army and U.S. Secretary of Veterans Affairs

- <sup>1</sup> Chairman of the Board of Directors
- <sup>2</sup> Executive Committee
- <sup>3</sup> Audit and Finance Committee
- <sup>4</sup> Compensation Committee
- <sup>5</sup> Nominating and Corporate Governance Committee
- <sup>6</sup> Government Affairs Committee

#### **OFFICERS**

#### Arthur A. Bottone

President and Chief Executive Officer

# Michael S. Bishop

Senior Vice President, Chief Financial Officer, Corporate Secretary and Treasurer

# Anthony F. Rauseo

Senior Vice President and Chief Operating Officer

Statements in this Report relating to matters not historical are forward-looking statements that involve important factors that could cause actual results to differ materially from those anticipated. Cautionary statements identifying such important factors are described in reports, including the Form 10-K for the fiscal year ended October 31, 2013, filed by FuelCell Energy, Inc. with the Securities and Exchange Commission and available at www.fuelcellenergy.com.

FuelCell Energy with the corresponding logo is a registered trademark of FuelCell Energy, Inc. "Direct FuelCell," "DFC," "DFC-H2" and "DFC/T" are registered trademarks of FuelCell Energy, Inc. and Enbridge Inc.





www.FuelCellEnergy.com



You www.youtube.com/user/FuelCellEnergyInc?feature=watch



m www.linkedin.com/company/fuelcell-energy

