

FUELCELL ENERGY INC
Form S-1
January 21, 2005

As Filed with the Securities and Exchange Commission on January 21, 2005.

REGISTRATION NO. 333-_____

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM S-1

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

FUELCELL ENERGY, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of Incorporation or Organization)

3629

(Primary Standard Industrial Classification Code Number)

06-0853042

(I.R.S. Employer Identification Number)

3 Great Pasture Road
Danbury, Connecticut 06813
(203) 825-6000

*(Address, Including Zip Code, and Telephone Number, Including Area Code,
of Registrant's Principal Executive Offices)*

**Jerry D. Leitman
President**

**FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, Connecticut 06813
(203) 825-6000**

*(Name, Address, Including Zip Code, and Telephone Number, Including Area
Code, of Agent for Service)*

Copies of All Communications to:

Richard A. Krantz, Esq.
Robinson & Cole LLP
Financial Centre
695 East Main Street
Stamford, Connecticut 06904
(203) 462-7500

Approximate Date of Commencement of Proposed Sale to the Public: From time to time after the effective date of this registration statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☒.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box. ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Amount To Be Registered	Proposed Maximum Offering Price Per Share⁽¹⁾	Proposed Maximum Aggregate Offering Price⁽¹⁾	Amount of Registration Fee
Common Stock	1,800,000	\$ 8.90	\$ 16,020,000	\$ 1,885.55

⁽¹⁾Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933 based upon the average of the high and low prices of the common stock of the Registrant as reported by the Nasdaq National Market on January 19, 2005.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THESE SECURITIES MAY NOT BE SOLD UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED JANUARY [___], 2005

PROSPECTUS

[LOGO]

1,800,000 Shares of Common Stock

FuelCell, Inc. is filing this prospectus in connection with:

our issuance of up to 300,000 shares of our common stock to certain of our employees as partial payment of annual bonuses earned with respect to our fiscal year ended October 31, 2004 and future periods; and

our issuance as dividends upon our 5% Series B Cumulative Convertible Perpetual Preferred Stock (Series B preferred stock) of up to 1,500,000 shares to Continental Stock Transfer & Trust Company, our transfer agent (referred to herein as our transfer agent or the selling shareholder), which may be offered and sold by the selling shareholder on behalf of the holders of our Series B preferred stock or transferred by the selling shareholder to the holders of our Series B preferred stock as payment of dividends, in each case for each of the eight quarterly periods ending on February 15, May 15, August 15 and November 15, 2005 and 2006.

The selling shareholder may sell up to 1,500,000 shares of our common stock on behalf of the holders of our Series B preferred stock on the Nasdaq National Market or any other United States national or regional securities exchange or market on which our common stock is then listed or admitted for trading, directly or through qualified brokers or other agents, at the then prevailing market price for the shares of our common stock, subject to restrictions which we may impose upon the selling shareholder relating to the method and manner of sale of the shares of our common stock. For additional information on the method and manner of sale, refer to the section entitled Plan of Distribution on page 80. The selling shareholder will receive all proceeds from the sale of the 1,500,000 shares of our common stock and will distribute the net proceeds to make dividend payments to holders of our Series B preferred stock. The net proceeds from the sale of these shares will cover dividends payable for eight quarterly periods. We will not receive any portion of the proceeds from the sale of these shares of our common stock. A holder of our Series B preferred stock may alternatively elect to receive as payment of dividends the shares of our common stock offered by this prospectus in lieu of the proceeds received from the sale of these shares.

Our common stock is quoted on the Nasdaq National Market under the symbol FCEL . Our principal executive offices are located at 3 Great Pasture Road, Danbury, Connecticut 06813, and our telephone number is (203) 825-6000.

The last reported sale price of our common stock on the Nasdaq National Market on January 19, 2005 was \$8.90 per share.

Investing in our common stock involves risks. See Risk Factors beginning on page 7.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is January [__], 2005.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front of this prospectus.

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FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Words such as expects, anticipates, approximates, believes, estimates, intends and hopes and variations of such words and similar expressions are intended to identify such forward-looking statements. We intend such forward-looking statements, all of which are qualified by this statement, to be covered by the safe harbor provisions for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 and are including this statement for purposes of complying with these safe harbor provisions. We have based these statements on our current expectations and projections about future events. These forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that could cause actual results to differ materially from those projected in these statements. These risks and uncertainties include those set forth under Risk Factors. The forward-looking statements contained in this prospectus include, among others, statements about:

- the development and commercialization schedule for our fuel cell technology and products;
 - future funding under government research and development contracts;
- the expected cost competitiveness of our fuel cell technology and products;
 - our intellectual property;
 - the timing and availability of our products;
- the electric power supply industry and the distributed generation market;
 - our business strategy; and
- general economic conditions in the electric power supply industry and our target markets.

Except for our ongoing obligations to disclose material information under the federal securities laws, we are not obligated to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus might not occur.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process or continuous offering process. Under this shelf registration process, the selling shareholders may, from time to time, sell the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities that may be offered by the selling stockholders. Each time a selling stockholder sells securities, the selling stockholder is required to provide you with this prospectus and, in certain cases, a prospectus supplement containing specific information about the selling stockholder and the terms of the securities being offered. That prospectus supplement may also add, update or change information in this prospectus. If there is any inconsistency between the information in this prospectus and any prospectus supplement, you should rely on the information in that prospectus supplement. You should read both this prospectus and any prospectus supplement together with additional information described in the section entitled Where You Can Find

More Information.

BACKGROUND

Unless the context otherwise requires, references in this prospectus to FuelCell, we, us and our refer to FuelCell Energy, Inc. Direct FuelCell® and DFC® are registered trademarks of FuelCell Energy, Inc.

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

We define distributed generation as small (typically 50 MW or less) electric generation plants (combustion-based such as engines and turbines as well as non-combustion-based such as fuel cells) located at or near the end use customer. This is contrasted with central generation that we define as large power plants (typically hundreds to 1,000 megawatts or larger) that deliver electricity to end users through a comprehensive transmission and distribution system.

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

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

Additional technical terms and definitions:

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

Co-generation Configuration - A power plant configuration featuring simultaneous on-site generation of electricity and recovery of waste heat to produce process steam or hot water, or to use heat for space heating.

Ceramic Electrolyte - An active fuel cell component placed between the anode and cathode electrodes in a ceramic (SOFC) fuel cell, in which current is carried by the movement of oxide ions.

Cathode - An active fuel cell component functioning as a positive (electrically) electrode, where reduction of oxidant occurs. Also referred to as Oxidant Electrode .

Anode - An active fuel cell component functioning as a negative electrode, where oxidation of fuel occurs. Also referred to as fuel electrode .

Metallic Bipolar Plates - The conductive plates used in a fuel cell stack to provide electrical continuity from active components of one cell to those in an adjacent cell. The plates also provide isolation of fuel and air fed to the fuel cell.

Anaerobic Digester Gas - Fuel gas (rich in methane) produced in biomass digesters employing bacterial and controlled oxygen environment, in a municipal or an industrial wastewater treatment facility.

Humid Flue Gas - Exhaust gas from fuel cell and other power plants or a furnace. The gas typically contains humidity (moisture).

Reforming - Catalytic conversion of hydrocarbon fuel (such as pipeline natural gas) to hydrogen-rich gas, using steam. The hydrogen-rich gas serves as a fuel for the electrochemical reaction.

Synthesis Gas - A gas mixture of hydrogen and carbon monoxide generally derived from gasification of coal or other biomass. It can serve as a fuel for the fuel cell after any required fuel clean up.

Microturbine - A gas turbine limited in power output to less than 200 kW. Microturbines are characterized by low-pressure ratios (less than 5) and high-speed alternators. Waste heat from fuel cell may be fed to a microturbine to generate additional electricity. This system is referred to as Hybrid power plant.

SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information you should consider in making your investment decision. You should read this summary together with the more detailed information, including our financial statements and the related notes, included elsewhere in this prospectus. You should carefully consider, among other things, the matters discussed in the section entitled Risk Factors.

FuelCell Energy, Inc.

We are a leader in the development and manufacture of fuel cell power plants for clean, efficient and reliable electric power generation. We have been developing fuel cell technology since our founding in 1969. We are currently commercializing our core carbonate fuel cell products and continuing to develop our next generation of fuel cell products.

Our executive offices are located at 3 Great Pasture Road, Danbury, Connecticut 06813. Our telephone number is (203) 825-6000. We maintain a web site at the following Internet address: www.fuelcellenergy.com. The information on our web site is not part of this prospectus.

Direct FuelCell (DFC) Power Plants

Our proprietary DFC power plants electrochemically produce electricity from readily available hydrocarbon fuels such as natural gas and wastewater treatment gas. Our current commercial products, the DFC 300A, DFC 1500 and DFC 3000, are rated in capacity at 250 kW, 1 MW and 2 MW, respectively, and are scalable for distributed applications up to 50 MW. Our DFC products are designed to meet the base load power requirements of a wide range of commercial and industrial customers, including wastewater treatment plants, data centers, manufacturing and industrial facilities, office buildings, hospitals, universities and hotels, as well as for use in grid support applications for utility customers. In addition, our DFC products produce high quality by-product heat energy that can be harnessed for combined heat and power (CHP) applications. Through January 10, 2005, over 55 million kWh of electricity has been generated from power plants incorporating our DFC technology at customer sites throughout the world.

Our primary focus is carbonate fuel cell technology, which we have advanced from the laboratory into standard DFC products. We believe we have established a leading position for our DFC products in the commercial distributed generation marketplace due to a number of factors, including:

- We are selling ultra-clean high-temperature fuel cell power plants for stationary base load power, which provide high fuel efficiency and high-value waste heat for cogeneration applications.
- We have strong global distribution partners, including original equipment manufactures (OEMs) and energy service companies (ESCOs), with expertise in selling and marketing energy products and services to commercial and industrial customers worldwide.
- We obtained commercial product certifications for safety, interconnection, installation and performance.
- We are operating a fleet of DFC power plants at customer sites throughout the world, with a backlog that we expect will double the fleet in service in the next 12-18 months.
- We have established production facilities, with equipment in place to produce 50 MW of DFC products annually.

- We achieved our 2004 value-engineering cost reduction target of 25 percent and are confident we can continue to reduce costs.
 - We have expanded our sales and service capabilities to support our DFC products.
 - We have a strong balance sheet, with over \$240 million in cash, cash equivalents and investments (U.S. Treasury Securities) as of November 18, 2004 to support our growth.
-

Strategically, we are focused on developing sustainable markets targeting customer applications with the greatest opportunity for multiple and repeat orders. Our success will depend in part on reducing product cost and increasing operating experience for our core DFC products. By reducing component costs and improving fuel cell stack output, we believe we can lower the overall cost of electricity generated by our products enabling the price of our DFC power plants to be competitive with existing technologies. As more units are delivered, operating hours will increase, which should allow us to refine our products, our manufacturing processes and our marketing efforts. As a result of successes to date and initiatives under way, we believe we can achieve operating break-even at annual production volumes of approximately 100 MW. Our production volume was approximately 6 MW for the fiscal year ended October 31, 2004.

Solid Oxide Fuel Cells

In April 2003, we were selected by the Department of Energy (DOE) to lead a project team for its 10-year, \$139 million Solid State Energy Conversion Alliance (SECA) program. The goal of the SECA program is to accelerate the commercialization of low-cost solid oxide fuel cells (SOFC) for residential, commercial and light industrial applications ranging in product size from 3 kW to 10 kW each for applications up to 100 kW. To strengthen our commercialization capabilities for this contract, we have recently made strategic investments in SOFC technology including our August 2003 investment of \$2.0 million in Versa Power Systems, Inc., (Versa), our November 2003 acquisition of the SOFC operations of Global Thermoelectric, Inc. (Global), and our November 2004 transfer of substantially all of our SOFC assets (including those acquired in our acquisition of Global) and operations to Versa in exchange for an additional equity interest in Versa. Versa was formed to produce a range of products for the distributed generation market incorporating its patented reduced temperature SOFC system. If successfully commercialized, these products would be complementary to our larger scale DFC product line.

Recent Developments

On November 3, 2003 we completed our acquisition of Global Thermoelectric, Inc. (Global) located in Calgary, Canada. At the time of acquisition, Global had been developing solid oxide fuel cell (SOFC) power plants since 1997 with the goal of commercializing its technology for residential, commercial and light industrial applications ranging in size from 3 to 10 kW. Through its thermoelectric generator (TEG) product line, Global also sold thermoelectric generators for use as a source of electrical power in remote areas.

In connection with the acquisition, we issued, in the aggregate, approximately 8.2 million of our common shares and exchangeable shares (exchangeable shares) issued by FuelCell Energy, Ltd., our wholly-owned Canadian subsidiary (formerly FCE Canada Inc.). We also assumed Global's Series 2 preferred shares. Total consideration for the acquisition was approximately \$94.8 million.

On May 28, 2004, we sold Global's TEG business for approximately \$16 million. The sale of the TEG business was effected through a sale of all of the outstanding common shares of Global. Prior to the sale, Global transferred substantially all of its assets and liabilities not relating to its TEG business (including substantially all of Global's assets and liabilities relating to its SOFC business and substantially all of its cash) to FuelCell Energy, Ltd. In addition, prior to the sale, the Global Series 2 preferred shares were cancelled and replaced with substantially equivalent Class A cumulative redeemable exchangeable preferred shares (which we refer to as the Series 1 preferred shares) issued by FuelCell Energy, Ltd.

On October 29, 2004, we redeemed all of the approximately two million issued and outstanding exchangeable shares issued by FuelCell Energy, Ltd. The exchangeable shares were redeemed in exchange for shares of our common stock on a one-for-one basis. The redemption had no impact on the total number of shares of our common stock deemed outstanding.

On November 1, 2004, we transferred substantially all of FuelCell Energy, Ltd.'s SOFC assets and operations to Versa Power Systems, Ltd., a Canadian corporation and wholly-owned subsidiary of Versa Power Systems, Inc. (Versa). In exchange, we received additional shares of Versa common stock, increasing our ownership position in Versa to 42 percent. We also received a second seat on Versa's board, which was increased from six to seven members.

Following the transaction, we pledged the Versa shares we received in the transaction to Enbridge, Inc., the holder of all of the Series 1 preferred shares issued by FuelCell Energy, Ltd. The pledge secures our guaranty of the obligations of FuelCell Energy, Ltd. under the Series 1 preferred shares to Enbridge.

On November 11, 2004 we entered into a purchase agreement with Citigroup Global Markets Inc., RBC Capital Markets Corporation, Adams Harkness, Inc., and Lazard Freres & Co., LLC (collectively referred to as the "Initial Purchasers") for the private placement under Rule 144A of up to 135,000 shares of our 5% Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000). On November 17, 2004, we closed on the sale of 100,000 shares of Series B preferred stock to the Initial Purchasers. Net proceeds to us were approximately \$93.5 million. Under the terms of the purchase agreement, the Initial Purchasers have an option through January 25, 2005 to purchase an additional 35,000 shares of Series B preferred stock and are entitled to indemnification from us in certain circumstances. On November 15, 2004, 5,875 of such shares have been sold and the Initial Purchasers now have the option through January 25, 2005 to purchase the remaining 29,125 shares of Series B preferred stock.

The Offering

Common stock offered	1,800,000 shares.
Common stock to be outstanding after this offering	49,963,424 shares. ⁽¹⁾
Use of proceeds	Up to 300,000 shares of our common stock will be issued to certain of our employees as partial payment for annual bonuses earned with respect to our performance targets for our fiscal year ended October 31, 2004 and future periods. The proceeds from the sale of up to 1,500,000 shares of our common stock that may be offered and sold by the selling shareholder pursuant to this prospectus, net of any brokers' fees or commissions, shall be held and used by the selling shareholder to make dividend payments to holders of our Series B preferred stock for eight quarterly periods, or in the alternative, a holder of our Series B preferred stock may elect to receive as payment of dividends the shares of our common stock offered by this prospectus in lieu of the proceeds received from the sale of these shares. We will not receive any proceeds from the sale of the shares of our common stock offered by this prospectus. See "Use of Proceeds" and "Plan of Distribution."
Risk factors	See section entitled "Risk Factors" and other information in this prospectus for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock.
Dividend policy	We have never paid a cash dividend on our common stock and do not anticipate paying any cash dividends on common stock in the foreseeable future.
Nasdaq National Market symbol	FCEL.

⁽¹⁾ The above outstanding share information is based upon shares of our common stock outstanding as of January 11, 2005. The above outstanding share information excludes approximately 9,010,640 shares of our common stock issuable upon conversion of 105,875 shares of our Series B preferred stock (see "Description of Capital Stock - Series B Preferred Stock"), 225,286 shares of our common stock issuable upon conversion of the Series 1 preferred shares issued by FuelCell Energy, Ltd., our wholly-owned Canadian subsidiary (formerly known as FCE Canada, Inc.) (see "Description of Capital Stock - Series 1 Preferred Shares and Exchangeable Shares"); 1,640,000 shares of our common stock issuable upon exercise of warrants outstanding at January 11, 2005 at a weighted average exercise price of \$35.51 per share; 5,353,791 shares of our common stock issuable upon exercise of options outstanding at January 11, 2005 at a weighted average exercise price of \$10.63 per share under our stock option plans; 15,593 shares of our common stock issuable upon exercise of options outstanding at January 11, 2005 at a weighted average exercise price of \$10.49 per share under our employee stock purchase plans; and 2,072,786 shares of our common stock available for future issuance under our stock option and stock purchase plans at January 11, 2005.

Summary Financial Information

The selected consolidated financial data presented below as of the end of each of the years in the five-year period ended October 31, 2004 have been derived from our audited consolidated financial statements together with the notes thereto included elsewhere in this prospectus. The data set forth below is qualified by reference to, and should be read in conjunction with, such financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this prospectus.

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

Consolidated Statement of Operations Data:

	Year Ended October 31,				
	2004	2003	2002	2001	2000
Revenues:					
Research and development contracts	\$ 18,750	\$ 17,709	\$ 33,575	\$ 20,882	\$ 17,986
Product sales and revenue	12,636	16,081	7,656	5,297	2,729
Total revenues	31,386	33,790	41,231	26,179	20,715
Costs and expenses:					
Cost of research and development contracts	27,290	35,827	45,664	19,033	12,508
Cost of product sales and revenues	39,961	50,391	32,129	16,214	4,968
Administrative and selling expenses	14,901	12,631	10,451	9,100	8,055
Research and development expenses	26,677	8,509	6,806	3,108	1,917
Purchased in-process research and development	12,200	--	--	--	--
Total costs and expenses	121,029	107,358	95,050	47,455	27,448
Loss from operations	(89,643)	(73,568)	(53,819)	(21,276)	(6,733)
License fee income, net	19	270	270	270	266
Interest expense	(137)	(128)	(160)	(116)	(141)
Interest and other income, net	2,472	6,012	4,876	5,684	2,138
Minority interest	--	--	--	--	11
Provision for taxes	--	--	7	--	--
Net loss from continuing operations	(87,289)	(67,414)	(48,840)	(15,438)	(4,459)
Discontinued operations, net of tax	846	--	--	--	--
Net loss	\$ (86,443)	\$ (67,414)	\$ (48,840)	\$ (15,438)	\$ (4,459)
Basic and diluted loss per share					
Continuing operations	\$ (1.82)	\$ (1.71)	\$ (1.25)	\$ (0.45)	\$ (0.16)
Discontinued operations	\$ 0.01	\$ --	\$ --	\$ --	\$ --
Net loss	\$ (1.81)	\$ (1.71)	\$ (1.25)	\$ (0.45)	\$ (0.16)
Basic and diluted weighted average shares outstanding	47,875	39,342	39,135	34,359	28,298

Consolidated Balance Sheet Data:

	As of October 31,				
	2004	2003	2002	2001	2000
Cash, cash equivalents and short term investments (U.S. treasury securities)	\$ 152,395	\$ 134,750	\$ 205,996	\$ 274,760	\$ 74,754
Working capital	156,798	143,998	218,423	276,173	71,576
Total current assets	178,866	160,792	234,739	289,225	79,405
Long-term investments (U.S. treasury securities)	--	18,690	14,542	15,773	--
Total assets	236,510	223,363	289,803	334,020	91,028
Total current liabilities	22,070	16,794	16,316	13,052	7,588
Total non-current liabilities	1,476	1,484	1,785	1,252	--
Total shareholders' equity	212,964	205,085	271,702	319,716	83,251
Book value per share(1)	\$ 4.42	\$ 5.20	\$ 6.93	\$ 8.20	\$ 2.65

(1) Calculated as total shareholder's equity divided by common shares issued and outstanding as of the balance sheet date.

RISK FACTORS

Investing in our securities involves risks. Before investing in our securities, you should carefully consider the following risk factors as well as the other information included and incorporated by reference in this prospectus. If any of the following risks actually occur, our business, financial condition, or results of operations and could be materially and adversely affected. In such cases, the trading price of our securities could decline, and you may lose all or part of your investment.

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

We have been transitioning from a U.S. government contract research and development company to a commercial products developer and manufacturer. As such, we have not achieved profitability since our fiscal year ended October 31, 1997 and expect to continue to incur net losses and generate negative cash flow until we can produce sufficient revenues to cover our costs.

We incurred net losses of \$86.4 million and \$67.4 million for the fiscal years ended October 31, 2004 and 2003, respectively. We anticipate that we will continue to incur losses and generate negative cash flow until we can cost-effectively produce and sell our Direct FuelCell products, which we do not expect to occur for several years. We may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. For the reasons discussed in more detail below, there are substantial uncertainties associated with our achieving and sustaining profitability.

Our cost reduction strategy may not succeed or may be significantly delayed, which may result in our inability to offer our products at competitive prices and may adversely affect our sales.

Our cost reduction strategy is based on the assumption that a significant increase in production will result in economies of scale. In addition, certain aspects of our cost reduction strategy rely on advancements in our manufacturing process, engineering design and technology (including projected power output) that, to a large degree, are currently not ascertainable. Our failure to achieve a lower Direct FuelCell product cost structure through economies of scale, improvements in the manufacturing process and engineering design and technology maturation would have a material adverse effect on our commercialization plans and, therefore, our business, prospects, results of operations and financial condition.

The production costs of our initial commercial products are higher than their sales prices. We recognize that successfully implementing our strategy and obtaining a significant share of the distributed generation market requires that we offer our Direct FuelCell products at competitive prices, which can only be accomplished when production costs are cut substantially from current levels. If we are unable to produce Direct FuelCell products at competitive prices relative to alternative technologies and products, our target market customers will be unlikely to buy our fuel cell products.

Our products will compete with products using other energy sources, and if the prices of the alternative sources are lower than energy sources used by our products, sales of our products will be adversely affected.

Our Direct FuelCell has been operated using a variety of hydrocarbon fuels, including natural gas, methanol, diesel, biogas, coal gas, coal mine methane and propane. If these fuels are not readily available or if their prices increase such that electricity produced by our products costs more than electricity provided by other generation sources, our products would be less economically attractive to potential customers. In addition, we have no control over the prices of several types of competitive energy sources such as oil, gas or coal. Significant decreases in the price of these fuels could also have a material adverse effect on our business because other generation sources could be more

economically attractive to consumers than our products.

Commercialization of our products depends on conducting successful field trials, and any delay, performance failure or perceived problem with our field trials could have a material adverse effect on our business, prospects, results of operations and financial condition.

One key aspect of our strategy is to leverage the success of our demonstration, field trial and field follow projects into long-term distributor-type relationships that will result in these distributors marketing our Direct FuelCell products directly to energy customers. For example, we are operating fourteen Direct FuelCell units in the United States and five Direct FuelCell units in Japan and MTU CFC Solutions GmbH is currently field-testing eight 250 kW power plants in Germany and Spain that incorporate the Direct FuelCell as their fuel cell components. We believe that our Direct FuelCell commercialization program depends upon our conducting additional commercial field trials and demonstration projects of our power plants and completing substantial additional research and development.

Our demonstration, field trial and field follow projects may encounter problems and/or delays for a number of reasons, including the failure of our technology, the failure of the technology of others (including our balance of plant suppliers), the failure to combine these technologies properly (including control system coordination) and the failure to maintain and service the test prototypes properly. Many of these potential problems and delays are beyond our control. A failure by us to conduct field trials and demonstration projects of our megawatt class products or a failure to site the scheduled sub-megawatt power plants and complete these commercial field trials and research and development as currently planned could delay the timetable by which we believe we can begin to commercially sell our Direct FuelCell products. The failure of planned commercial field trials to perform as well as we anticipate could also have a material adverse effect on our commercialization plans, including the ability to enter into long-term distributor-type relationships for our Direct FuelCell products. Any delay, performance failure or perceived problem with our field trials could hurt our reputation in the distributed generation market and, therefore, could have a material adverse effect on our business, prospects, results of operations and financial condition.

We currently face and will continue to face significant competition.

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

Many companies in the United States are involved in fuel cell development, although we believe we are the only domestic company engaged in significant manufacturing and commercialization of carbonate fuel cells in the sub-megawatt and megawatt classes. Emerging fuel cell technologies (and companies developing them) include proton exchange membrane fuel cells (Ballard Power Systems, Inc.; United Technologies Corp. or UTC Fuel Cells; and Plug Power), phosphoric acid fuel cells (UTC Fuel Cells) and solid oxide fuel cells (Siemens Westinghouse Electric Company, Sulzer Hexis, McDermott, GE/ Honeywell, Delphi and Accumentrics). Each of these competitors has the potential to capture market share in our target markets.

There are other potential carbonate fuel cell competitors internationally. In Asia, Ishikawajima Harima Heavy Industries is active in developing carbonate fuel cells. In Europe, a company in Italy, Ansaldo Fuel Cells, is actively engaged in carbonate fuel cell development and is a potential competitor. Our licensees in Germany, MTU CFC Solutions GmbH, and its partners have been the most active in Europe.

Other than fuel cell developers, we must also compete with such companies as Caterpillar, Cummins, and Detroit Diesel, which manufacture more mature combustion-based equipment, including various engines and turbines, and have well-established manufacturing, distribution, and operating and cost features. Significant competition may also come from gas turbine companies like General Electric, Ingersoll Rand, Solar Turbines and Kawasaki, which have recently made progress in improving fuel efficiency and reducing pollution in large-size combined cycle natural gas fueled generators. These companies have also made efforts to extend these advantages to smaller sizes.

We may not meet our product development and commercialization milestones, which may have a material adverse effect on our operations and stock price.

We have established product development and commercialization milestones that we use to assess our progress toward developing commercially viable Direct FuelCell products. These milestones relate to technology and design improvements as well as to dates for achieving development goals. To gauge our progress, we operate, test and evaluate our Direct FuelCell products under actual conditions. If our systems exhibit technical defects or are unable to meet cost or performance goals, including power output, useful life and reliability, our commercialization schedule could be delayed and potential purchasers of our initial commercial Direct FuelCell products may decline to purchase them or choose to purchase alternative technologies. We cannot be sure that we will successfully achieve our milestones in the future or that any failure to achieve these milestones will not result in potential competitors gaining advantages in our target market. Failure to meet publicly announced milestones might have a material adverse effect on our operations and our stock price.

We have limited experience manufacturing our Direct FuelCell products on a commercial basis, which may adversely affect our planned increases in production capacity and our ability to satisfy customer requirements.

To date, we have focused primarily on research and development and conducting demonstrations and field trials. We have limited experience manufacturing our Direct FuelCell products on a commercial basis. We have installed equipment that will allow us to produce 50 MW of Direct FuelCell products per year. We expect that we will then increase our manufacturing capacity based on market demand. We believe that we can expand our manufacturing capacity to between 125 and 150 MW of Direct FuelCell products at our current facility. We cannot be sure that we will be able to achieve our planned increases in production capacity. Also, as we scale up our production capacity, we cannot be sure that unplanned failures or other technical problems relating to the manufacturing process will not occur.

Even if we are successful in achieving our planned increases in production capacity, we cannot be sure that we will do so in time to meet our product commercialization schedule or to satisfy the requirements of our customers. Given our dependence on government research and development contracts and the necessity of providing government entities with substantial amounts of information, our sales process has historically been long and time-consuming. We will need to continue to shorten the time from initial contact to final product delivery if we hope to expand production, reach a wider customer base and forecast revenues with any degree of certainty. Additionally, we cannot be sure that we will be able to develop efficient, low-cost manufacturing capabilities and processes (including automation) that will enable us to meet our cost goals and profitability projections. Our failure to shorten the sales cycle for our Direct FuelCell products or to develop these advanced manufacturing capabilities and processes, or meet our cost goals, could have a material adverse effect on our business, prospects, results of operations and financial condition.

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

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

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

Our commercialization plans are dependent on market acceptance of our Direct FuelCell products.

Our commercialization plans are dependent upon market acceptance of, as well as enhancements to, those products. Fuel cell systems represent an emerging market, and we cannot be sure that potential customers will accept fuel cells as a replacement for traditional power sources. As is typical in a rapidly evolving industry, demand and market acceptance for recently introduced products and services are subject to a high level of uncertainty and risk. Since the distributed generation market is new and evolving, it is difficult to predict with certainty the size of the market and its growth rate. The development of a market for our Direct FuelCell products may be affected by many factors that are out of our control, including:

- the cost competitiveness of our fuel cell products;
- the future costs of natural gas and other fuels used by our fuel cell products;
- consumer reluctance to try a new product;
- consumer perceptions of the safety of our fuel cell products;
- the pace of utility deregulation nationwide, which could affect the market for distributed generation;
- local permitting and environmental requirements; and,
- the emergence of newer, more competitive technologies and products.

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

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

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

Our fuel cell revenues have been principally derived from a long-term cooperative agreement and other contracts with the U.S. Department of Energy (DOE), the U.S. Department of Defense, the U.S. Navy and the National Aeronautics and Space Administration. These agreements are important to the continued development and commercialization of our technology and our products.

Generally, our U.S. government research and development contracts, including the DOE (Product Design Improvement) cooperative agreement, are subject to the risk of termination at the convenience of the contracting agency. Furthermore, these contracts, irrespective of the amounts allocated by the contracting agency, are subject to annual congressional appropriations and the results of government or agency sponsored audits of our cost reduction efforts and our cost projections. We can only receive funds under these contracts ultimately made available to us annually by Congress as a result of the appropriations process. Accordingly, we cannot be sure whether we will

receive the full amount allocated by the DOE under our DOE cooperative agreements or the full amounts awarded under our other government research and development contracts. Failure to receive the full amounts under any of our government research and development contracts could materially and adversely affect our commercialization plans and, therefore, our business, prospects, results of operations and financial condition.

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

Many of our United States patents relating to our carbonate fuel cell technology are the result of government-funded research and development programs, including the DOE cooperative agreement. Four of our patents that were the result of DOE-funded research prior to January 1988 (the date that we qualified as a small business) are owned by the United States government and have been licensed to us. This license is revocable only in the limited circumstances where it has been demonstrated that we are not making an effort to commercialize the invention. We own all patents resulting from research funded by our DOE contracts awarded after January 1988 to date, based on our small business status when each contract was awarded. Under current regulations, patents resulting from research funded by government agencies other than the DOE are owned by us, whether or not we are a small business.

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

A failure to qualify as a small business could adversely affect our rights to own future patents under DOE-funded contracts.

Qualifying as a small business under DOE contracts allows us to own the patents that we develop under DOE contracts. A small business under applicable government regulations generally consists of no more than 500 employees. If we continue to grow, we will no longer qualify as a small business and no longer own future patents we develop under contracts, grants or cooperative agreements funded by the DOE based on such certification, unless we obtain a patent waiver from the DOE. As a result of our acquisition of Global, the number of our employees increased and therefore, we temporarily did not qualify as a small business. Following the sale of Global and its TEG product line on May 27, 2004, we again qualify as a small business; however, we cannot assure you that we will continue to qualify as a small business in the future.

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

We do not plan to establish a direct distribution infrastructure for our Direct FuelCell products. A key aspect of our strategy is to use multiple third-party distribution channels to ultimately service our diverse customer base. Depending on the needs of the customer, our Direct FuelCell products could be distributed through a value-added distributor who could provide a package of our products and various other components such as flywheels and battery storage devices; through an energy services company that could arrange various ancillary services for the customer; or through power generation equipment suppliers.

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

We cannot be sure that MTU will continue to, or original equipment manufacturers (OEMs) will, manufacture or package products using our Direct FuelCell components. In this area, our success will largely depend upon our ability to make our products compatible with the power plant products of OEMs and the ability of these OEMs to sell their products containing our products. In addition, some OEMs may need to redesign or modify their existing power plant products to fully incorporate our products. Accordingly, any integration, design, manufacturing or marketing problems encountered by MTU or other OEMs could adversely affect the market for our Direct FuelCell products and, therefore, our business, prospects, results of operations and financial condition.

We depend on third party suppliers for the development and supply of key components for Direct FuelCell products.

We purchase several key components of our Direct FuelCell products from other companies and rely on third-party suppliers for the balance-of-plant components in our Direct FuelCell products. There are a limited number of suppliers for some of the key components of Direct FuelCell products. A supplier's failure to develop and supply components in a timely manner or to supply components that meet our quality, quantity or cost requirements or technical specifications or our inability to obtain alternative sources of these components on a timely basis or on terms acceptable to us could harm our ability to manufacture our Direct FuelCell products. In addition, to the extent the processes that our suppliers use to manufacture components are proprietary, we may be unable to obtain comparable components from alternative suppliers.

We do not know when or whether we will secure long-term supply relationships with any of our suppliers or whether such relationships will be on terms that will allow us to achieve our objectives. Our business, prospects, results of operations and financial condition could be harmed if we fail to secure long-term relationships with entities that will supply the required components for our Direct FuelCell products.

We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success.

Failure to protect our existing intellectual property rights may result in the loss of our exclusivity or the right to use our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement or misappropriation or be enjoined from using such intellectual property. We do not currently conduct freedom to operate analyses. We rely on patent, trade secret, trademark and copyright law to protect our intellectual property. The patents that we have obtained will expire between 2005 and 2023 and the average remaining life of our U.S. patents is approximately 10.7 years.

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

any of the U.S., Canadian or other foreign patents owned by us or other patents that third parties license to us will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others; or,

any of our pending or future patent applications will be issued with the breadth of claim coverage sought by us, if issued at all.

In addition, effective patent, trademark, copyright and trade secret protection may be unavailable, limited or not applied for in certain foreign countries.

We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our subcontractors, vendors, suppliers, consultants, strategic partners and employees. We cannot assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships. Certain of our intellectual property has been licensed to us on a non-exclusive basis from third parties that may also license such intellectual property to others, including our competitors. If our licensors are found to be infringing third-party patents, we do not know whether we will be able to obtain licenses to use the intellectual property licensed to us on acceptable terms, if at all.

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

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

Our future success will depend on our ability to attract and retain qualified management and technical personnel.

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

management and technical personnel. Our inability to attract and retain additional qualified management and technical personnel, or the departure of key employees, could materially and adversely affect our development and commercialization plans and, therefore, our business, prospects, results of operations and financial condition.

Our management may be unable to manage rapid growth effectively.

We expect to rapidly expand our manufacturing capabilities, accelerate the commercialization of our products and enter a period of rapid growth, which will place a significant strain on our senior management team and our financial and other resources. The proposed expansion will expose us to increased competition, greater overhead, marketing and support costs and other risks associated with the commercialization of a new product. Our ability to manage our rapid growth effectively will require us to continue to improve our operations, to improve our financial and management information systems and to train, motivate and manage our employees. Difficulties in effectively managing the budgeting, forecasting and other process control issues presented by such a rapid expansion could harm our business, prospects, results of operations and financial condition.

We may be affected by environmental and other governmental regulation.

As we begin to commercialize our Direct FuelCell products, we will be subject to federal, state, provincial or local regulation with respect to, among other things, emissions and siting. Assuming no co-generation applications are used in conjunction with our larger Direct FuelCell plants, they will discharge humid flue gas at temperatures of approximately 700-800° F, water at temperatures of approximately 10-20° F above surrounding air temperatures and carbon dioxide. These emissions will require permits that we expect (but cannot ensure) will be similar to those applicable to generating units.

In addition, it is possible that industry-specific laws and regulations will be adopted covering matters such as transmission scheduling, distribution and the characteristics and quality of our products, including installation and servicing. This regulation could limit the growth in the use of carbonate fuel cell products, decrease the acceptance of fuel cells as a commercial product and increase our costs and, therefore, the price of our Direct FuelCell products. Accordingly, compliance with existing or future laws and regulations as we begin to commercialize and site our products could have a material adverse effect on our business, prospects, results of operations and financial condition.

Utility companies could impose customer fees or interconnection requirements on our customers that could make our products less desirable.

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

Several states (Texas, New York, California and others) have created and adopted or are in the process of creating their own interconnection regulations covering both technical and financial requirements for interconnection to utility grids. Depending on the complexities of the requirements, installation of our systems may become burdened with additional costs that might have a negative impact on our ability to sell systems. There is also a burden in having to track the requirements of individual states and design equipment to comply with the varying standards. The Institute of Electrical and Electronics Engineers has been working to create an interconnection standard addressing the technical requirements for distributed generation to interconnect to utility grids. Many parties are hopeful that this standard will be adopted nationally when it is completed to help reduce the barriers to deployment of distributed generation such as fuel cells; however this standard may be delayed or never completed thereby limiting the commercial prospects and profitability of our fuel cell systems.

Changes in government regulations and electric utility industry restructuring may affect demand for our Direct FuelCell products.

Our target market, the distributed generation market, is driven by deregulation and restructuring of the electric utility industry in the United States and elsewhere and by the requirements of utilities, independent power producers and end users. Deregulation of the electric utility industry is subject to government policies that will determine the pace and extent of deregulation. Many states have recently delayed the implementation of deregulation as a result of power disturbances in California several summers ago. Changes in government and public policy over time could further delay or otherwise affect deregulation and, therefore, adversely affect our prospects for commercializing our Direct FuelCell products and our financial results. We cannot predict how the deregulation and restructuring of the electric utility industry will ultimately affect the market for our Direct FuelCell products.

We could be liable for environmental damages resulting from our research, development or manufacturing operations.

Our business exposes us to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. Our business is subject to numerous federal, state and local laws and regulations that govern environmental protection and human health and safety. These laws and regulations have changed frequently in the past and it is reasonable to expect additional and more stringent changes in the future.

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

We may be required to conduct environmental remediation activities, which could be expensive.

We are subject to a number of environmental laws and regulations, including those concerning the handling, treatment, storage and disposal of hazardous materials. These environmental laws generally impose liability on present and former owners and operators, transporters and generators for remediation of contaminated properties. We believe that our businesses are operating in compliance in all material respects with applicable environmental laws, many of which provide for substantial penalties for violations. We cannot assure you that future changes in such laws, interpretations of existing regulations or the discovery of currently unknown problems or conditions will not require substantial additional expenditures. Any noncompliance with these laws and regulations could subject us to material administrative, civil or criminal penalties or other liabilities. In addition, we may be required to incur substantial costs to comply with current or future environmental and safety laws and regulations.

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

Our business exposes us to potential product liability claims that are inherent in hydrogen and products that use hydrogen. Hydrogen is a flammable gas and therefore a potentially dangerous product. Hydrogen is typically generated from gaseous and liquid fuels that are also flammable and dangerous, such as propane, natural gas or methane, in a process known as reforming. Natural gas and propane could leak into a residence or commercial

location and combust if ignited by another source. In addition, our Direct FuelCell products operate at high temperatures and our Direct FuelCell products use corrosive carbonate material, which could expose us to potential liability claims. Any accidents involving our products or other hydrogen-using products could materially impede widespread market acceptance and demand for our Direct FuelCell products. In addition, we might be held responsible for damages beyond the scope of our insurance coverage. We also cannot predict whether we will be able to maintain our insurance coverage on acceptable terms.

We are subject to risks inherent in international operations.

Since we plan to market our Direct FuelCell products both inside and outside the United States and Canada, our success depends, in part, on our ability to secure international customers and our ability to manufacture products that meet foreign regulatory and commercial requirements in target markets. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. In addition, we are subject to tariff regulations and requirements for export licenses, particularly with respect to the export of some of our technologies. We face numerous challenges in our international expansion, including unexpected changes in regulatory requirements, fluctuations in currency exchange rates, longer accounts receivable requirements and collections, difficulties in managing international operations, potentially adverse tax consequences, restrictions on repatriation of earnings and the burdens of complying with a wide variety of international laws. Any of these factors could adversely affect our operations and revenues.

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

MTU currently owns approximately 5.7% of our outstanding common stock (based upon the number of shares of our common stock outstanding as of January 11, 2005). James D. Gerson beneficially owns approximately 2.8% of our outstanding common stock. Loeb Investors Co. LXXV and Warren Bagatelle (a managing director of an affiliate of Loeb Investors Co. LXXV) collectively beneficially own approximately 2.3% of our outstanding common stock (based upon the number of shares of our common stock outstanding as of January 11, 2005). These ownership levels could make it difficult for a third party to acquire our common stock or have input into the decisions made by our board of directors, which include Michael Bode (Chief Executive Officer of MTU CFC Solutions GmbH), James D. Gerson, Warren Bagatelle and Thomas L. Kempner (Chairman and Chief Executive Officer of an affiliate of Loeb Investors Co. LXXV). MTU is also a licensee of our technology and a purchaser of our Direct FuelCell products. Therefore, it may be in MTU's interest to possess substantial influence over matters concerning our overall strategy and technological and commercial development.

MTU may develop competing technologies for its own products.

MTU is currently developing carbonate fuel cell technologies based on the know-how that we have provided to MTU under license. If MTU develops its own carbonate fuel cell design before our license expires in 2010, it must use good faith efforts to license the technology to us. If MTU is successful but does not grant us a license, it may be directly competing with us while having a significant ownership interest in us, and a seat on our board of directors. We have agreed with MTU to continue developing products with as much commonality as possible. However, the license agreement between us and MTU provides that each of us retains the right to independently pursue the development of carbonate fuel cell technologies.

Our stock price has been and could remain volatile.

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

failure to meet our product development and commercialization milestones;

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

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

announcements of technological innovations or new products or services by us or our competitors;

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

additions or departures of key personnel;

investor perception of our industry or our prospects;

insider selling or buying;

demand for our common stock; and,

general technological or economic trends.

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

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

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

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

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

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

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

The rights of the Series 1 preferred shares and Series B preferred shares could negatively impact our company.

The terms of the Series 1 preferred shares issued by FuelCell Energy, Ltd., our wholly-owned, indirect subsidiary, provide rights to the holder, Enbridge, Inc. (Enbridge), including dividend and conversion rights among others that could negatively impact us. For example, the terms of the Series 1 preferred shares provide that the holders are entitled to receive cumulative dividends for each calendar quarter for so long as such shares are outstanding. Assuming the exchange rate for Canadian dollars is Cdn.\$1.3104 to U.S.\$1.00 at the time of the applicable dividend payment date, we could be required to pay a preferred dividend of approximately \$238,477 per calendar quarter, subject to reduction in accordance with the terms of the Series 1 preferred shares. The terms of the Series 1 preferred shares also require that the holder be paid any accrued and unpaid dividends on December 31, 2010. To the extent that there is a significant amount of accrued dividends that is unpaid as of December 31, 2010 and we do not have sufficient working capital at that time to pay the accrued dividends, our financial condition could be adversely affected. We have guaranteed these dividend obligations, including paying a minimum of Cdn.\$500,000 in cash annually to Enbridge for so long as Enbridge holds the Series 1 preferred shares. We have also guaranteed the liquidation obligations of FuelCell Energy, Ltd. under the Series 1 preferred shares.

We are also required to issue common stock to the holder of the Series 1 preferred shares if and when the holder exercises its conversion rights. The number of shares of common stock that we may issue upon conversion could be significant and dilutive to our existing stockholders. For example, assuming the holder of the Series 1 preferred shares exercises its conversion rights after July 31, 2020, the exchange rate for Canadian dollars is Cdn.\$1.3104 to U.S.\$1.00 at the time of such conversion and our common stock price is \$14.62 at the time of such conversion, we would be required to issue approximately 1,373,615 shares of our common stock.

The terms of the Series B preferred shares also provide rights to their holders that could negatively impact us. Holders of the Series B preferred shares are entitled to receive cumulative dividends at the rate of \$50 per share per year, payable either in cash or in shares of our common stock. To the extent the dividend is paid in shares, additional issuances could be dilutive to our existing stockholders and the sale of those shares could have a negative impact on the price of our common stock. The Series B preferred stock is also convertible into common stock at a price of \$11.75 per share. Conversion of the Series B preferred stock at a time when the price of our common stock is greater than \$11.75 per share would also have a dilutive impact on our existing stockholders. Furthermore, the conversion rate applicable to the preferred stock is subject to adjustment upon the occurrence of certain events.

USE OF PROCEEDS

Up to 300,000 shares of our common stock registered on a registration statement on Form S-1, for which this prospectus forms a part, will be issued to certain of our employees as partial payment for annual bonuses earned with respect to our performance targets for our fiscal year ended October 31, 2004 and future periods.

The proceeds from the sale of up to 1,500,000 shares of our common stock that may be offered and sold by the selling shareholder pursuant to this prospectus, net of any broker's fee or commissions, shall be held by the selling shareholder and used to make dividend payments to holders of our Series B preferred stock, in each case for each of the eight quarterly periods ending on February 15, May 15, August 15 and November 15, 2005 and 2006. (See section entitled "Plan of Distribution").

Accordingly, we will not receive any proceeds from the sale of the 1,800,000 shares of our common stock offered by this prospectus. In the alternative, a holder of our Series B preferred stock may elect to receive as payment of dividends the shares of our common stock offered by this prospectus in lieu of the proceeds received from the sale of these shares.

PRICE RANGE OF COMMON STOCK

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 has traded under the symbol **FCEL** on the Nasdaq Stock Market since June 7, 2000. The following table sets forth the high and low closing sale prices for our common stock for the fiscal periods indicated as reported by the Nasdaq Stock Market during the indicated quarters.

	Common Stock Price	
	High	Low
Year Ended October 31, 2002		
First Quarter	\$ 21.85	\$ 13.55
Second Quarter	\$ 18.46	\$ 15.15
Third Quarter	\$ 16.73	\$ 6.62
Fourth Quarter	\$ 8.01	\$ 4.58
Year Ended October 31, 2003		
First Quarter	\$ 9.05	\$ 5.39
Second Quarter	\$ 6.22	\$ 5.03
Third Quarter	\$ 9.90	\$ 6.28
Fourth Quarter	\$ 15.37	\$ 6.81
Year Ended October 31, 2004		
First Quarter	\$ 17.25	\$ 11.44
Second Quarter	\$ 19.44	\$ 11.86
Third Quarter	\$ 17.23	\$ 8.36
Fourth Quarter	\$ 13.14	\$ 7.42

On January 19, 2005, the last reported sale price of our common stock on the Nasdaq Stock Market was \$8.90 per share. As of January 3, 2005, there were 814 holders of record of our common stock.

DIVIDEND POLICY

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

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, 2004 have been derived from our audited consolidated financial statements together with the notes thereto included elsewhere in this prospectus. The data set forth below is qualified by reference to, and should be read in conjunction with, such financial statements and Management's Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this prospectus.

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

Consolidated Statement of Operations Data:

	Year Ended October 31,				
	2004	2003	2002	2001	2000
Revenues:					
Research and development contracts	\$ 18,750	\$ 17,709	\$ 33,575	\$ 20,882	\$ 17,986
Product sales and revenue	12,636	16,081	7,656	5,297	2,729
Total revenues	31,386	33,790	41,231	26,179	20,715
Costs and expenses:					
Cost of research and development contracts	27,290	35,827	45,664	19,033	12,508
Cost of product sales and revenues	39,961	50,391	32,129	16,214	4,968
Administrative and selling expenses	14,901	12,631	10,451	9,100	8,055
Research and development expenses	26,677	8,509	6,806	3,108	1,917
Purchased in-process research and development	12,200	--	--	--	--
Total costs and expenses	121,029	107,358	95,050	47,455	27,448
Loss from operations	(89,643)	(73,568)	(53,819)	(21,276)	(6,733)
License fee income, net	19	270	270	270	266
Interest expense	(137)	(128)	(160)	(116)	(141)
Interest and other income, net	2,472	6,012	4,876	5,684	2,138
Minority interest	--	--	--	--	11
Provision for taxes	--	--	7	--	--
Net loss from continuing operations	(87,289)	(67,414)	(48,840)	(15,438)	(4,459)
Discontinued operations, net of tax	846	--	--	--	--
Net loss	\$ (86,443)	\$ (67,414)	\$ (48,840)	\$ (15,438)	\$ (4,459)
Basic and diluted loss per share					
Continuing operations	\$ (1.82)	\$ (1.71)	\$ (1.25)	\$ (0.45)	\$ (0.16)
Discontinued operations	\$ 0.01	\$ --	\$ --	\$ --	\$ --
Net loss	\$ (1.81)	\$ (1.71)	\$ (1.25)	\$ (0.45)	\$ (0.16)
Basic and diluted weighted average shares outstanding	47,875	39,342	39,135	34,359	28,298

Consolidated Balance Sheet Data:

	As of October 31,				
	2004	2003	2002	2001	2000
Cash, cash equivalents and short term investments (U.S. treasury securities)	\$ 152,395	\$ 134,750	\$ 205,996	\$ 274,760	\$ 74,754
Working capital	156,798	143,998	218,423	276,173	71,576
Total current assets	178,866	160,792	234,739	289,225	79,405
	--	18,690	14,542	15,773	--

Long-term investments (U.S.
treasury securities)

Total assets	236,510	223,363	289,803	334,020	91,028
Total current liabilities	22,070	16,794	16,316	13,052	7,588
Total non-current liabilities	1,476	1,484	1,785	1,252	--
Total shareholders' equity	212,964	205,085	271,702	319,716	83,251
Book value per share(1)	\$ 4.42	\$ 5.20	\$ 6.93	\$ 8.20	\$ 2.65

(1) Calculated as total shareholders' equity divided by common shares issued and outstanding as of the balance sheet date.

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

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) is provided as a supplement to the accompanying financial statements and footnotes to help provide an understanding of our financial condition, changes in our financial condition and results of operations. The MD&A is organized as follows:

Overview and recent developments. This section provides a general description of our business. We also briefly summarize any significant events occurring subsequent to the close of the reporting period.

Critical accounting policies and estimates. This section discusses those accounting policies and estimates that are both considered important to our financial condition and operating results and require significant judgment and estimates on the part of management in their application.

Results of operations. This section provides an analysis of our results of operations for the years ended October 31, 2004, 2003 and 2002. In addition, a description is provided of transactions and events that impact the comparability of the results being analyzed.

Liquidity and capital resources. This section provides an analysis of our cash position and cash flows.

Recent accounting pronouncements. This section summarizes recent accounting pronouncements and their impact on the company.

Factors that may affect future results. In this section, we detail risk factors that affect our quarterly and annual results, but which are difficult to predict.

OVERVIEW AND RECENT DEVELOPMENTS

Overview

FuelCell Energy is a world leader in the development and manufacture of fuel cell power plants for clean, efficient and reliable electric power generation. We have been developing fuel cell technology since our founding in 1969. We are currently commercializing our core carbonate fuel cell products (Direct FuelCell® or DFC® Power Plants), stationary applications for commercial and industrial customers, and continuing to develop our next generation of carbonate fuel cell products. In addition, we are beginning the development of another high temperature fuel cell system, planar solid oxide fuel cell (SOFC) technology, as a prime contractor in the U.S. Department of Energy's (DOE) Solid State Energy Conversion Alliance (SECA) Program and through our 42 percent ownership interest in Versa Power Systems (Versa).

Direct FuelCell Power Plants

Increasing demand for reliable power worldwide, supplemented by air pollution concerns caused by older, combustion power generation, and unreliable electrical grid delivery systems present significant market opportunities for our core distributed generation products. Our proprietary carbonate DFC power plants electrochemically produce electricity directly from readily available hydrocarbon fuels, such as natural gas and wastewater treatment gas. We believe our products offer significant advantages compared to other power generation technologies, including:

- High fuel efficiency;

- Ultra-clean emissions;
- Improved reliability;
- Quiet operation;
- Flexible siting and permitting requirements;
- Scalability;
- Ability to provide electricity and heat for cogeneration applications, such as district heating, process steam, hot water and absorption chilling for air conditioning;
- Potentially lower operating, maintenance and generation costs than alternative distributed power generation technologies; and
- Because our DFC power plants produce hydrogen from readily available fuels such as natural gas and wastewater treatment gas, they can be used to cost-effectively cogenerate hydrogen as well as electricity and heat.

Our current products, the DFC300A, DFC1500 and DFC3000, are rated in capacity at 250 kW, 1 MW and 2 MW, respectively, and are scalable for distributed applications up to 10 MW or larger. Our products are designed to meet the base load power requirements of a wide range of commercial and industrial customers including wastewater treatment plants (municipal, such as sewage treatment facilities, and industrial, such as breweries and food processors), data centers, manufacturing facilities, office buildings, hospitals, universities, prisons, mail processing facilities and hotels, as well as in grid support applications for utility customers. We are currently operating 29 power plants that incorporate our DFC technology at customer sites throughout the U.S., Europe and Japan. Installations at customer sites, including those that have completed their operations, have generated more than 55 million kWh of electricity through January 10, 2005.

On November 3, 2003, we completed our acquisition of Global located in Calgary, Canada. At the time of the acquisition, Global had been developing SOFC power plants since 1997 with the goal of commercializing its technology for residential, commercial and light industrial applications ranging in size from 3 to 10 kW. Through its thermoelectric generator (TEG) product line, Global also sold thermoelectric generators for use as a source of electrical power in remote areas. In connection with the acquisition, we issued, in the aggregate, approximately 8.2 million shares of our common stock and exchangeable shares, the latter of which were issued by FuelCell Energy, Ltd., our wholly-owned Canadian subsidiary (formerly FCE Canada Inc.). We also assumed Global's Series 2 Preferred Shares. Total consideration for the acquisition was approximately \$94.8 million.

On May 28, 2004, we sold Global's TEG business for proceeds of approximately \$16 million. The sale of the TEG business was affected through a sale of all of the outstanding common shares of Global. Prior to the sale, Global transferred substantially all of its assets and liabilities not relating to its TEG business (including substantially all of Global's assets and liabilities relating to its SOFC business and substantially all of its cash) to FuelCell Energy, Ltd. In addition, prior to the sale, the Global Series 2 Preferred Shares were cancelled and replaced with substantially equivalent Class A cumulative redeemable exchangeable preferred shares (which we refer to as the Series 1 preferred shares) issued by FuelCell Energy, Ltd.

On October 31, 2004, we redeemed all of the approximately two million issued and outstanding exchangeable shares issued by FuelCell Energy, Ltd. The exchangeable shares were redeemed in exchange for shares of our common stock on a one-for-one basis. The redemption had no impact on the total number of shares of our common stock deemed outstanding.

Recent Developments

Preferred Share Offering

On November 11, 2004 we entered into a purchase agreement with Citigroup Global Markets Inc., RBC Capital Markets Corporation, Adams Harkness, Inc., and Lazard Freres & Co., LLC (collectively referred to as the Initial Purchasers) for the private placement under Rule 144A of up to 135,000 shares of our 5% Series B Cumulative Convertible Perpetual Preferred Stock (Liquidation Preference \$1,000). On November 17, 2004, we closed on the sale of 100,000 shares of Series B preferred stock to the Initial Purchasers. Net proceeds to us were approximately \$93.5 million.

Under the terms of the purchase agreement, the Initial Purchasers have an option through January 25, 2005 to purchase an additional 35,000 shares of Series B preferred stock and are entitled to indemnification from us in certain circumstances. On November 15, 2004, 5,875 of such shares have been sold and the Initial Purchasers now have the option through January 25, 2005 to purchase the remaining 29,125 shares of Series B preferred stock.

Sale of Canadian Solid Oxide Fuel Cell Operation to Versa Power Systems, Inc.

On November 1, 2004, pursuant to an asset purchase agreement, dated October 19, 2004, by and among us, our wholly-owned Canadian subsidiary, FuelCell Energy, Ltd., Versa Power Systems, Inc. (Versa), a Delaware corporation, and Versa Power Systems, Ltd., a Canadian corporation and wholly-owned subsidiary of Versa Power Systems, Inc., FuelCell Energy, Ltd. transferred substantially all of its solid oxide fuel cell (SOFC) assets and operations (including manufacturing and test equipment, intellectual property and personnel) to Versa Power Systems, Ltd. In exchange, we received 5,714 shares of Versa Power Systems, Inc. common stock, increasing our ownership position in Versa to 7,714 shares, or 42 percent. No cash was exchanged in the transaction.

Assets sold to Versa totaled approximately \$12.4 million and were classified as held for sale on the balance sheet as of October 31, 2004. Upon closing of the sale on November 1, 2004, our total investment in Versa was approximately \$14.4 million and will be classified as Equity investments . We will account for this investment under the equity method in future periods.

Pursuant to the terms of the transaction, we expect to incur cash costs in the range of approximately \$1.0 million to \$1.5 million related to severance and facility consolidations in Calgary, Canada. Approximately \$0.1 million of this amount is related to severance payments to employees paid during the quarter ended October 31, 2004. The remaining payments are expected to be made during fiscal year 2005. In addition, we have committed to paying future severance costs for time and service accrued up to November 1, 2004 by employees that are moving to Versa in the event that they are terminated by Versa Power Systems, Ltd. (or its parent). Our liability for such severance costs is limited to the period commencing on November 1, 2004 through the earlier of (1) award of Phase 2 of the SECA program to FuelCell, (2) one year after completion of Phase 1 of the SECA program, or (3) February 26, 2008. Subsequent to this period, Versa Power Systems, Ltd. (or its parent) will be responsible for the severance liability for such employees. We estimate this liability at approximately \$0.8 million.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Revenue Recognition

We contract with our customers to perform research and development or manufacture and install fuel cell components and power plants under long-term contracts. We recognize revenue on a method similar to the percentage-of-completion method.

Revenues on fuel cell research and development contracts are recognized proportionally as costs are incurred and compared to the estimated total research and development costs for each contract. In many cases, we are reimbursed only a portion of the costs incurred or to be incurred on the contract. Revenues from government funded research, development and demonstration 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.

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 has authorized the funds. As of October 31, 2004, research and development sales backlog totaled \$16.4 million, of which 79 percent is funded. Should funding be temporarily delayed or if business initiatives change, we may choose to devote resources to other activities, including internally funded research and development.

Fuel cell product sales and revenues include revenues from product sales and service contracts. Revenues from fuel cell product sales are recognized proportionally as costs are incurred and assigned to a customer contract by comparing the estimated total manufacture and installation costs for each contract to the total contract value. Revenues from service contracts are recognized ratably over the contract term while costs are expensed as incurred. As our fuel cell products are in their initial stages of development and market acceptance, actual costs incurred could differ materially from those previously estimated. Once we have established that our fuel cell products have achieved commercial market acceptance and future costs can be reasonably estimated, then estimated costs to complete an individual contract, in excess of revenue, will be accrued immediately upon identification.

Warrant Value Recognition

Warrants have been issued as sales incentives to certain of our business partners. These warrants vest as orders from our business partners exceed stipulated levels. Should warrants vest, or when management estimates that it is probable that warrants will vest, we will record a proportional amount of the fair value of the warrants against related revenue as a sales discount. During the three months ended April 30, 2004, a tranche of 200,000 warrants issued to one of our business partners vested with the receipt of a 4 MW order. The fair value of these warrants was determined to be \$0.5 million. This has been recorded as other current assets on the consolidated balance sheet with the offsetting entry to additional paid in capital. In accordance with our warrant value recognition policy, as we recognize the associated revenue for orders placed in accordance with these sales agreements, a proportional amount of the fair value of the warrants will be recorded against the revenue as a sales discount. To date, approximately \$0.1 million of sales discounts have been recognized.

Inventories

During the procurement and manufacturing process of a fuel cell power plant, costs for material, labor and overhead are accumulated in raw materials and work-in-process (WIP) inventory until they are transferred to a customer contract.

Our inventories are stated at the lower of cost or market price. As we sell products at or below cost, we provide for a lower of cost or market (LCM) adjustment to the cost basis of inventory. This adjustment is estimated by comparing the current sales prices of our power plants to estimated costs of completed power plants. In certain circumstances, for long-lead time items, we will make advance payments to vendors for future inventory deliveries, which are recorded as a component of other current assets on the consolidated balance sheet. We also provide for a LCM adjustment to the advance payments to vendors.

As of October 31, 2004 and October 31, 2003, the LCM adjustment to cost basis of inventory and advance payments to vendors was approximately \$13.5 million and \$11.0 million respectively, which equates to a reduction of approximately 45 and 41 percent respectively of the inventory value. The increase in the adjustment to cost basis and percentage over our fiscal year ended October 31, 2003 is due to changes in the mix of inventory. As of October 31, 2004, our balance of plant inventory and advances to vendors had increased over the prior year-end due to our current production schedule. As inventory levels increase or decrease, appropriate adjustments to cost basis are made.

Internal Research and Development Expenses

We conduct internally funded research and development activities to improve current or anticipated product performance and reduce product life-cycle costs. These costs are classified as research and development expenses on our statements of operations.

RESULTS OF OPERATIONS

Management evaluates the results of operations and cash flows using a variety of key performance indicators. Indicators that management uses include 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 contained under the heading Management's Discussion and Analysis of Financial Condition and Results of Operations.

Comparison of the Years Ended October 31, 2004 and October 31, 2003

Revenues and costs of revenues

The following tables summarize our revenue and cost mix for the years ended October 31, 2004 and 2003 respectively (dollar amounts in thousands):

	Year Ended October 31, 2004		Year Ended October 31, 2003		Percentage Increase (Decrease) in
Revenues:	Revenues	Percent of Revenues	Product Revenues	Percent of Revenues	Revenues
Research and development contracts	\$ 18,750	60%	\$ 17,709	52%	6%
Product sales and revenues	12,636	40%	16,081	48%	(21%)
Total	\$ 31,386	100%	\$ 33,790	100%	(7%)

Year Ended October 31, 2004

Year Ended October 31, 2003

Percentage Increase /

Cost of revenues:

Costs of Revenues

Percent of Costs of Revenues

Costs of Revenues

Percent of Costs of Revenues

**(Decrease)
in Costs of Revenues**

Research and development contracts

\$	27,290
----	--------

	41
--	----

%	
\$	35,827

	42
--	----

%	
	(24

Product sales and revenues	
----------------------------	--

	39,961
--	--------

	59
--	----

%	
	50,391

	58
--	----

%	
	(21

Total	
-------	--

\$	67,251
----	--------

	100
--	-----

%	
\$	86,218

	100
--	-----

%	
	56

%)

(22

24

Total revenues for the year ended October 31, 2004 decreased by \$2.4 million, or 7 percent, to \$31.4 million from \$33.8 million during the same period last year. The components of our revenues and cost of revenues are further described as follows:

Research and development contracts

Revenue from research and development contracts will vary from year to year depending on government funding levels, new contracts and work on existing contracts. Revenue from research and development contracts increased 6 percent during the year ended October 31, 2004 to \$18.8 million from \$17.7 million in same period of the prior year. Revenues have increased on the Vision 21 and Solid State Energy Conversion Alliance (SECA) contracts with the U.S. Department of Energy (DOE). These increases were offset by lower revenue from the Clean Coal contract as the installation phase for this two megawatt DFC3000 power plant was completed.

The cost of research and development contract revenue declined by \$8.5 million for the year ended October 31, 2004 (fiscal 2004) compared to the prior year due to the mix of cost shared contracts and reduced costs for the Clean Coal, Product Design Improvement (PDI), and King County contracts as major tasks were completed on those contracts. The ratio of costs to contract revenues was 1.5 to 1, which decreased from 2.0 to 1 when compared to the same period of the prior year. The primary driver of the improved cost ratio was increased funding for the PDI program during fiscal 2004. Significant cost share contracts in fiscal 2004 included Clean Coal, PDI, Vision 21, King County, Navy Phase II and SECA. We concluded work on the PDI contract during the quarter ended October 31, 2004 and do not expect significant future revenues or costs related to this contract.

For strategic reasons, we currently plan to continue to participate in government cost share contracts that advance the development of fuel cells. As a result, we expect that costs on these contracts will be higher than revenues received.

Fuel cell product sales and revenues and product costs

Fuel cell product sales were \$12.6 million for the year ended October 31, 2004 compared to \$16.1 million in the same period of a year ago. The lower product sales and revenues were due to production scheduling for customer requirements and production on power plants for power purchase agreements where product revenues are not recognized until power is sold to the customer over an extended term. Power plant production was at approximately the same level as the prior year (6 MW). As of October 31, 2004, product sales backlog totaled approximately \$26.3 million, compared to \$14.4 million as of October 31, 2003. This backlog does not include 1.5 MW of orders for power purchase agreements for Santa Barbara and Sierra Nevada Brewing Co.

Product costs decreased with lower revenue to \$40.0 million from \$50.4 million. The ratio of costs to revenue increased slightly from 3.1 to 3.2 to 1 over the prior year due to costs totaling approximately \$2.0 million associated with the power purchase agreements noted above. This increase was partially offset by lower overall product costs recognized on power plants built in 2004 when compared to the prior year due to progress on our cost out program.

Our products do not ship on an even production schedule. The shipment date to customers depends on a number of factors that are outside of our control, including siting requirements, construction and permits. We do not have the sales or order history to quantify trends as of yet.

Administrative and selling expenses

Excluding costs from our Canadian SOFC operations, administrative and selling expenses increased by \$1.1 million or 9 percent, to \$13.7 million during the year ended October 31, 2004 compared to \$12.6 million in the prior year. Approximately \$0.8 million of this increase was due to increased sales and marketing expenses and \$0.2 million was

due to higher investor relations costs related to our increased shareholder base. In addition, we incurred \$1.2 million of administrative and selling expenses in our Canadian SOFC operations as a result of our acquisition during the year ended October 31, 2004. We do not expect to incur any significant administrative and selling expenses related to the Canadian SOFC operation in our fiscal year ending October 31, 2005 (fiscal 2005) as it was sold effective November 1, 2004.

Research and development expenses

Excluding costs from our Canadian SOFC operations, research and development expenses increased to \$17.6 million during year ended October 31, 2004 compared to \$8.5 million recorded in 2003. The increase is due to continued focus on our cost-out program (implemented in fiscal 2003), product documentation and engineering support for products in the field. During fiscal 2004, we expanded our cost out program by hiring additional engineering employees. Our cost-out program is expected to: reduce material costs, simplify design, improve manufacturing yields, reduce product assembly labor, and reduce production cycle time of our DFC products. In addition, we incurred \$9.0 million of research and development expenses in our Canadian SOFC operations as a result of our acquisition during the year ended October 31, 2004. We do not expect to incur any significant research and development expenses related to the Canadian SOFC operation in fiscal 2005, as it was sold effective November 1, 2004.

Purchased in-process research and development

The \$12.2 million in-process research and development (IPR&D) charge relates to SOFC technology acquired in the Global transaction. In 1997, Global began developing SOFC technology, which is still in development. The \$12.2 million allocated to IPR&D was determined using two established valuation techniques. An average of the cost valuation and market valuation approaches were used to determine the IPR&D amount. The amounts estimated in this valuation were calculated using a risk-adjusted discount rate of 30 percent. As the acquired technology has not yet reached technological feasibility and no alternative future uses existed, it was expensed upon acquisition in accordance with Statement of Financial Accounting Standards (SFAS) No. 2, Accounting for Research and Development Costs.

The IPR&D acquired was related to one project, the development of a solid oxide fuel cell. Prior to the transaction date, Global spent approximately five years developing this technology. In 2003, we received notice of an award to participate in the DOE's ten-year SECA program to develop low cost solid oxide fuel cells for residential, commercial, and light industrial applications. We currently estimate that it will take approximately five to ten years to complete the development. The SECA program is a cost-share program totaling approximately \$139 million. This technology was subsequently sold to our partner in the SECA program, Versa, along with fixed assets in exchange for stock, which increased our ownership in Versa to approximately 42 percent.

Loss from operations

The loss from operations for the year ended October 31, 2004 totaled \$89.6 million compared to the \$73.6 million recorded in 2003. The loss from operations for the year ended October 31, 2004 totaled \$67.2 million compared to the \$73.6 million recorded in 2003 or a reduction of approximately 9 percent excluding the Canadian SOFC operation. The reduction in operating loss was due to lower cost of research and development and product revenues partially offset by increased administrative, selling and internal research and development costs.

We expect to incur operating losses in future reporting periods as we continue to participate in government cost share programs, sell products at prices lower than our current production costs, and invest in our cost out initiatives. As a result of selling our Canadian SOFC operations, we expect to reduce our annual cash use by approximately \$10.0 million. The Global and SOFC operations were part of Global, which was acquired by us in November 2003, thus there are no comparable periods of the prior year.

Interest and other income, net

Interest and other income, net, declined by \$3.5 million when comparing the fiscal year ended October 31, 2004 to the prior year. During the year ended October 31, 2003, we realized Connecticut state research and development incentives totaling \$3.4 million. We did not realize tax incentives during the year ended October 31, 2004 although we have applied for approximately \$1.5 million of such credits. During the year ended October 31, 2004, we realized foreign currency gains totaling approximately \$0.5 million, which offset a decline (compared to the prior year) of interest income totaling approximately \$0.9 million. The reduction in interest income is due to reduced average interest rates on the invested cash.

Provision for income taxes

We believe, that due to our efforts to commercialize our DFC technology, we will continue to incur losses. Based on projections for future taxable income over the period in which the deferred tax assets are realizable, management believes that significant uncertainty exists surrounding the recoverability of the deferred tax assets. Therefore, no tax benefit has been recognized related to current year losses and other deferred tax assets.

Discontinued operations, net of tax

Discontinued operations reflects the net income of \$0.8 million of the TEG business segment that was sold on May 28, 2004. Refer also to Note 2 - Discontinued Operations of our consolidated financial statements. The Global TEG business segment was acquired by us in November 2003, thus there are no results from discontinued operations in the comparable period of the prior year.

Comparison of the Years Ended October 31, 2003 and October 31, 2002**Revenues and cost of revenues**

The following tables summarize our revenue and cost mix for the years ended October 31, 2003 and 2002, respectively (dollar amounts in thousands):

	Year Ended October 31, 2003		Year Ended October 31, 2002		Percentage Increase / (Decrease) in
Revenues:	Revenues	Percent of Revenues	Revenues	Percent of Revenues	Revenues
Research and development contracts	\$ 17,709	52%	\$ 33,575	81%	(47%)
Product sales and revenues	16,081	48%	7,656	19%	110%
Total	\$ 33,790	100%	\$ 41,231	100%	(18%)

	Year Ended October 31, 2003		Year Ended October 31, 2002		Percentage
Cost of revenues:	Cost of Revenues	Percent of Costs of Revenues	Cost of Revenues	Percent of Costs of Revenues	

**Increase /(Decrease)
in Cost**

Research and development contracts

\$	35,827
----	--------

	42
--	----

%	
\$	45,664

	59
--	----

%	
	(22

%)	
----	--

Product sales and revenues	50,391
----------------------------	--------

	58
--	----

%	
	32,129

	41
--	----

%	
	57

%	
Total	

\$	86,218
----	--------

	100
--	-----

%	
\$	77,793

	100
--	-----

%	
	11

%	
---	--

Total revenues for the year ended October 31, 2003 decreased by \$7.4 million or 18 percent, to \$33.8 million from \$41.2 million during the prior year. This decrease in total revenues was comprised of a 47 percent decrease in government research and development contracts partially offset by a 110 percent increase in product sales revenue.

Research and development contracts

Fiscal 2002 research and development contract revenue included a large portion of our one-megawatt and two megawatt power plants for King County, Washington and Clean Coal, respectively. Combined revenue on these contracts was lower in 2003. Also, in 2003, under budgetary constraints, funding from the U.S. government for certain of our other contracts was delayed.

Cost of research and development contracts decreased to \$35.8 million during the year ended October 31, 2003, compared to \$45.7 million during fiscal 2002. The decrease was partially due to completion of tasks on the King County, Washington project and delayed funding on certain government contracts. While our funding was reduced due to timing and budgetary constraints, we continue to participate in cost-share contracts and invest in developing fuel cell technology. Our significant cost share contracts during fiscal 2003 included Clean Coal, Department of Energy, King County, and Navy Phase II. The ratio of costs to contract revenues increased in 2003 as the mix of cost-share contracts increased during the year.

Product sales and revenues

The fiscal 2003 increase in product sales revenue was related to increased manufacturing and delivery of our DFC300A power plants for both our distribution partners and direct customers. As a percent of total revenues, product revenues comprised 48 percent compared to 19 percent in the prior year as we continue to focus our business initiatives on the manufacture and delivery of our fuel cell products.

Cost of product sales and revenues increased to \$50.3 million during the year ended October 31, 2003 compared to \$32.1 million during the prior year. This increase was due to additional product sales recorded during the year. The ratio of costs to contract revenues decreased in 2003 as we have reduced overall product costs through our cost-out initiatives and incurred less first time costs including qualifying multiple vendors for materials and components.

Administrative and selling expenses

Administrative and selling expenses increased by 21 percent, to \$12.6 million during the year ended October 31, 2003 compared to \$10.5 million in the prior year. This increase was primarily comprised of higher business insurance costs, sales and marketing salaries and franchise taxes.

Research and development expenses

Research and development expenses increased 25 percent, to \$8.5 million during the year ended October 31, 2003 compared to the \$6.8 million recorded in fiscal 2002. This increase is primarily due to increased investment in development costs associated with the design, engineering, fabrication and installation of our products.

Loss from operations

The net result of our revenues and costs was a loss from operations during the year ended October 31, 2003 totaling \$73.6 million. This operating loss is approximately 37 percent higher than the \$53.8 million loss recorded in fiscal 2002. We continue to invest in the standardization of our DFC power plants. For strategic reasons, we also continue to participate in government cost share contracts to advance the development of fuel cells. These factors contributed to

our operating loss. Other factors impacting the operating loss included reduced funding on certain government contracts, development of our distribution network, and increases in operating costs including depreciation on new production equipment, business insurance premiums, information systems and infrastructure.

Interest and other income, net

Interest and other income, net, increased by 23 percent, to \$6.0 million during the year ended October 31, 2003 compared to the \$4.9 million recorded in fiscal 2002. We have participated in a program available from the State of Connecticut that allows certain taxpayers to exchange the amount of research and development credits generated during a taxable year for cash to be received over a three-year period. The increase to interest and other income, net was due, in part, to tax credits generated in fiscal years 2001 and 2002 totaling \$3.4 million being recorded in fiscal 2003. There were no tax credits recorded during fiscal 2002. Interest income for the year declined by \$2.3 million or 47 percent as a result of reduced interest rates and lower cash and investment balances compared to the prior year.

Taxes

We believe that due to our efforts to commercialize our DFC technology, we have and will continue to incur losses. Based on projections for future taxable income over the period in which the deferred tax assets are realizable, management believes that significant uncertainty exists surrounding the recoverability of the deferred tax assets. Therefore, no tax benefit has been recognized related to current year losses and other deferred tax assets.

LIQUIDITY AND CAPITAL RESOURCES

We had approximately \$152.4 million of cash, cash equivalents and investments as of October 31, 2004 compared to \$153.4 million as of October 31, 2003. Net cash and investments used during the year was \$1.0 million, consisting of approximately \$70 million used in operations offset by \$69 million of cash and investments received in the Global Thermoelectric, Inc. (Global) transactions. Cash used during the year included approximately \$10.9 million related to our Canadian operations. As our Canadian operations were sold in fiscal 2004, we expect reduced cash use in Canada in future periods.

Subsequent to our fiscal year end, we received net proceeds of approximately \$93.5 million from our preferred stock sale, which closed on November 17, 2004.

Sources and Uses of Cash and Investments

We continue to invest in new product development and bringing our products to market and, as such, we are not currently generating positive cash flow from our operations. Our operations are funded primarily through sales of equity securities and cash generated from operations. Cash from operations includes revenue from government research and development contracts, product sales, license fees and interest income. Our future cash requirements depend on numerous factors including future involvement in research and development contracts, implementing our cost reduction efforts on our fuel cell products and increasing annual order volume.

Future involvement in research and development contracts

Our research and development contracts are generally multi-year, cost reimbursement type contracts. The majority of these are U.S. Government contracts that are dependent upon the government's continued allocation of funds and may be terminated in whole or in part at the convenience of the government. We will continue to seek research and development contracts. To obtain these contracts, we must continue to prove the benefits of our technologies and be successful in our competitive bidding.

Implementing our cost reduction efforts on our fuel cell products

We believe that reducing product cost is essential for us to penetrate the market for our fuel cell products and is critical to achieving profitability. We believe this will reduce and/or eliminate the need for incentive funding programs that are currently available to allow our product pricing to compete with grid-delivered power and other distributed generation technologies. In 2003, we began a cost-out program that focuses on three key areas:

- increased performance output;
- increased stack life; and
- design simplification and materials replacement and/or elimination to reduce product cost.

Increasing annual order volume

We believe that increased production volumes will spread fixed costs over more units of production, resulting in a lower per unit cost. Our manufacturing, testing and conditioning facilities have equipment in place to accommodate 50 MW of annual production. Our multi-disciplined cost reduction program is expected to significantly reduce our product costs over time. We currently believe that we can achieve operating break-even at annual production volumes of approximately 100 MW. Our fiscal 2004 production volume is estimated at approximately 6 MW.

We anticipate that our existing capital resources, together with anticipated revenues, will be adequate to satisfy our planned financial requirements and agreements through at least the next twelve months.

Cash Inflows and Outflows

During year ended October 31, 2004, total cash and cash equivalents and investments decreased by \$1.0 million, compared with a decrease of \$67.1 million during the year ended October 31, 2003. In fiscal 2004, we had a net cash use of approximately \$70.0 million offset by cash and investments acquired in the Global acquisition and subsequent disposition (net of fees) totaling \$69.0 million.

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

Operating Activities: During the year ended October 31, 2004, we used \$64.6 million in cash in our operating activities, which consists of a net loss for the period of approximately \$86.4 million, offset by non-cash adjustments totaling \$20.6 million, cash generated from working capital of approximately \$2.0 million and income from discontinued operations of approximately \$.8 million. This compares to an operating cash usage of \$58.8 million during the year ended October 31, 2003.

Accounts Receivable

Accounts receivable as of October 31, 2004 increased by approximately \$2.7 million from October 31, 2003 due to approximately \$3.2 million more in product receivables offset by a decline of government accounts receivable totaling \$0.5 million. The increase in product receivables is due to greater milestone billings to customers consistent with the expanded product backlog. We bill our fuel cell contracts based upon certain milestones that generally commence with contract signing and extend to commissioning of a completed power plant. We generally bill our government contracts on a monthly basis as costs are incurred. As revenues increase or decrease, billings and accounts receivable will increase or decrease as well.

Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses combined have increased by approximately \$2.7 million since October 31, 2003 due to the timing of inventory payments related to our current production schedule. In addition we had accrued approximately \$0.8 million in severance costs as of October 31, 2004 related to our sale of the SOFC business to Versa.

Investing Activities: We acquired Global on November 3, 2003 by issuing, in total, approximately 8.2 million common and exchangeable shares. In connection with the acquisition, we acquired \$55.8 million of cash and investments. The cash acquired from Global was offset by approximately \$2.8 million of transaction and professional fees. In May 2004, we completed our sale of the Global entity and its TEG product line for net proceeds of approximately \$16.0 million.

Capital expenditures for the year ended October 31, 2004 were approximately \$7.9 million compared to \$6.6 million in the prior period. Reductions in systems and infrastructure spending during fiscal 2004 have been offset by capital expenditures totaling approximately \$4.7 million related to power plants being built for power purchase agreements. In addition, there were capital expenditures totaling approximately \$1.0 million relating to one DFC300A that we have provided to the Department of Defense (DoD) Fuel Cell Test and Evaluation Center (FCTec).

Financing Activities: During the year ended October 31, 2004, we generated \$2.7 million from financing activities through the exercise of stock options, partially offset by repayments of debt and preferred dividends. This compares with \$0.5 million generated in the year ended October 31, 2003.

Commitments and Significant Contractual Obligations

A summary of our significant future commitments and contractual obligations as of October 31, 2004 and the related payments by fiscal year is summarized as follows (in thousands):

Contractual Obligation:	Payments Due by Period				
	Total	Less than 1 Year	1 - 3 Years	3 - 5 Years	More than 5 Years
Lease commitments ⁽¹⁾	\$ 5,222	\$ 1,328	\$ 1,751	\$ 1,545	\$ 598
Term loan (principal and interest)	1,580	433	864	283	--
Purchase commitments ⁽²⁾	14,855	14,734	121	--	--
Preferred dividends payable ⁽³⁾ ⁽⁴⁾	20,452	379	758	758	18,557
Totals	\$ 42,109	\$ 16,874	\$ 3,494	\$ 2,586	\$ 19,155

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

(2) Short-term purchase commitments with suppliers for materials supplies, and services incurred in the normal course of business.

(3) Quarterly dividends of Cdn.\$312,500 accrue on the Series 1 preferred shares (subject to possible reduction pursuant to the terms of the Series 1 preferred shares on account of increases in the price of FuelCell's common stock). We have agreed to pay a minimum of Cdn.\$500,000 in cash or common stock annually to Enbridge, Inc., the holder of the Series 1 preferred shares, so long as Enbridge holds the shares. Interest accrues on cumulative unpaid dividends at a 2.45 percent quarterly rate, compounded quarterly, until payment thereof. Cumulative unpaid dividends and interest at October 31, 2004 were approximately \$2.8 million. For the purposes of this disclosure, we have assumed that the minimum dividend payments would be made through 2010. In 2010, we would be required to pay any unpaid and accrued dividends. From 2010 through 2020, we would be required to pay annual dividend amounts totaling Cdn.\$1.25 million.

(4) We have assumed a constant exchange rate for the purposes of this disclosure at 0.76 U.S. dollars to 1.0 Canadian dollar.

On June 29, 2000, we entered into a loan agreement, secured by machinery and equipment, and have borrowed an aggregate of \$2.2 million under the agreement. The loan is payable over seven years, with payments of interest only for the first six months and then repaid in monthly installments over the remaining six and one-half years with interest computed annually based on the ten-year U.S. Treasury note plus 2.5 percent. Our current interest rate at July 31, 2004 is 7.2 percent and the outstanding principal balance on this loan is approximately \$1.5 million.

Approximately \$0.6 million of our cash and cash equivalents have been pledged as collateral for certain banking relationships in which we participate.

Research and Development Cost-Share Contracts

We have contracted with various government agencies as either a prime contractor or sub-contractor on cost-share contracts and agreements. Cost-share terms require that participating contractors share the total cost of the project in an agreed ratio with the government agency. For example, our DOE sponsored demonstration of our two-megawatt DFC 3000 power plant operating on synthesis gas derived from coal has a total project value of \$34.5 million. The DOE will reimburse us 50 percent of the cost on this project and we will incur the balance. Thus, over the life of this program and assuming that funding is approved annually by Congress, our share of the total research and development expenditures would be approximately \$17.3 million for this program. As of October 31, 2004, our research and development sales backlog totaled \$16.4 million. As this backlog is funded in future periods, we will incur additional research and development cost-share totaling approximately \$15.5 million for which we would not be reimbursed by the government.

Product Sales Contracts

Our fuel cell power plant products are in the initial stages of development and market acceptance. As such, costs to manufacture and install our products exceed current market prices. As of October 31, 2004, we had product sales backlog of approximately \$26.3 million. We do not expect sales from this backlog to be profitable.

RECENT ACCOUNTING PRONOUNCEMENTS

In December 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 123 (revised 2004) (SFAS No. 123R), *Share-Based Payment* which revised SFAS No. 123, *Accounting for Stock-Based Compensation*. This statement supercedes APB Opinion No. 25, *Accounting for Stock Issued to Employees*. The revised statement addresses the accounting for share-based payment transactions with employees and other third parties, eliminates the ability to account for share-based compensation transactions using APB 25 and requires that the compensation costs relating to such transactions be recognized in the consolidated statement of operations. The revised statement is effective as of the first interim period beginning after June 15, 2005. We are currently evaluating the provisions of SFAS No. 123R and will adopt it on August 1, 2005 as required.

In November 2004, the FASB ratified the consensus reached by the Emerging Issues Task Force (EITF), on Issue No. 03-13, *Applying the Conditions in Paragraph 42 of FASB Statement No. 144 in Determining Whether to Report Discontinued Operations*. The Issue provides a model to assist in evaluating (a) which cash flows should be considered in the determination of whether cash flows of the disposal component have been or will be eliminated from the ongoing operations of the entity and (b) the types of continuing involvement that constitute significant continuing involvement in the operations of the disposal component. Should significant continuing ongoing involvement exist, then the disposal component shall be reported in the results of continuing operations on the consolidated statements of operations and cash flows. We applied the provisions of this accounting standard to our financial statements.

In November 2004, the FASB issued SFAS No. 151, Inventory Costs, which amends the guidance in ARB No. 43, Chapter 4, Inventory Pricing, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material. This Statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of so abnormal. In addition, this Statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. We are currently evaluating the provisions of SFAS No. 151 and will adopt it on November 1, 2005, as required.

In December 2003, the FASB issued FIN No. 46R, Consolidation of Variable Interest Entities, which requires an entity to consolidate a variable interest entity if it is designated as the primary beneficiary of that entity even if the entity does not have a majority of voting interests. A variable interest entity is generally defined as an entity where its equity is inadequate to finance its activities or where the owners of the entity lack the risk and rewards of ownership. We have evaluated the provisions of FIN No. 46R, as required, and determined that we did not have any material variable interest entities and did not have any variable interest entities that require consolidation into our financial statements.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Exposure

Our exposure to market risk for changes in interest rates, relates primarily to our investment portfolio and long term debt obligations. Our investment portfolio includes both short-term United States Treasury instruments with maturities averaging three months or less, as well as U.S. Treasury notes with fixed interest rates with maturities of up to twenty months. Cash is invested overnight with high credit quality financial institutions. Based on our overall interest exposure at October 31, 2004, including all interest rate sensitive instruments, a near-term change in interest rate movements of 1 percent would affect our results of operations by approximately \$0.5 million annually.

Foreign Currency Exchange Risk

We are subject to foreign exchange risk although we have taken steps to mitigate those risks where possible. As of October 31, 2004 approximately \$2.4 million (or 2 percent) of our total cash, cash equivalents and investments was in currencies other than U.S. dollars.

Our functional currency is the U.S. dollar as is our foreign subsidiary FuelCell Energy, Ltd. as the majority of our cash is invested in U.S. dollar investments.

During the year ended October 31, 2004, we recognized a foreign exchange gain totaling \$0.5 million which has been recorded as a component of interest and other income on our consolidated statement of operations. Although we have not experienced significant foreign exchange rate losses to date, we may in the future, especially to the extent that we do not engage in hedging activities. We do not enter into derivative financial instruments. The economic impact of currency exchange rate movements on our operating results is complex because such changes are often linked to variability in real growth, inflation, interest rates, governmental actions and other factors. These changes, if material, may cause us to adjust our financing and operating strategies. Consequently, isolating the effect of changes in currency does not incorporate these other important economic factors.

BUSINESS

FuelCell Energy is a world leader in the development and manufacture of fuel cell power plants for clean, efficient and reliable electric power generation. We have been developing fuel cell technology since our founding in 1969. We are currently commercializing our core carbonate fuel cell products (Direct FuelCell® or DFC® Power Plants),

offering stationary applications for commercial and industrial customers and continuing to develop our next generation of carbonate fuel cell products. In addition, we are beginning the development of another high temperature fuel cell system, planar solid oxide fuel cell (SOFC) technology, as a prime contractor in the U.S. Department of Energy's (DOE) Solid State Energy Conversion Alliance (SECA) Program and through our 42 percent ownership interest in Versa Power Systems (Versa).

Direct FuelCell (DFC) Power Plants

Increasing worldwide demand for reliable power presents significant market opportunities for our core distributed generation products. Our proprietary carbonate DFC power plants electrochemically produce electricity directly from readily available hydrocarbon fuels, such as natural gas and wastewater treatment gas. We believe our products offer significant advantages compared to other power generation technologies, including:

- High fuel efficiency;
- Ultra-clean emissions;
- Improved reliability;
- Quiet operation;
- Flexible siting and permitting requirements;
- Scalability;
- Ability to provide electricity and heat for cogeneration applications, such as district heating, process steam, hot water and absorption chilling for air conditioning;
- Potentially lower operating, maintenance and generation costs than alternative distributed power generation technologies; and
- Because our DFC power plants produce hydrogen from readily available fuels such as natural gas and wastewater treatment gas, they can be used to cost-effectively cogenerate hydrogen as well as electricity and heat.

Our current products, the DFC300A, DFC1500 and DFC3000, are rated in capacity at 250 kW, 1 MW and 2 MW, respectively, and are scalable for distributed applications up to 10 MW or larger. Our products are designed to meet the base load power requirements of a wide range of commercial and industrial customers including wastewater treatment plants (municipal, such as sewage treatment facilities, and industrial, such as breweries and food processors), telecommunications/data centers, manufacturing facilities, office buildings, hospitals, universities, prisons, mail processing facilities, hotels and government facilities, as well as in grid support applications for utility customers. Through January 10, 2005, over 55 million kWh of electricity has been generated from power plants incorporating our DFC technology at customer sites throughout the world.

We see significant market potential for our DFC products. In October 2004, Energy User News reported that Allied Business Intelligence (ABI) projected distributed generation to the grid may increase to 200,000 MW worldwide by 2011 compared with 65,000 MW currently, with 6 percent or 12,000 MW from fuel cells. A year earlier, ABI reported that global stationary fuel cell cumulative shipments would rise from 55 MW cumulative through 2003 to nearly 18,000 MW cumulative through 2013, according to its moderate forecast. Another study, prepared by the DOE/Energy Information Administration (EIA) in 2000, estimated the potential market for combined heat and power (CHP) plant installations in the United States to be greater than 77,000 MW. This includes 6,500 MW for hotels/motels, 8,000 MW for hospitals, 19,000 MW for schools/colleges/universities, and over 18,600 MW for office buildings.

We have invested more than \$450 million in the development of our fuel cell technology, including funding from various U.S. government agencies such as the DOE and the Environmental Protection Agency. Our primary focus is

carbonate fuel cell technology, which we have advanced from the laboratory into standard DFC products. We believe we have established a leading position for our DFC products in the commercial distributed generation marketplace due to a number of factors, including:

- We are selling ultra-clean high-temperature fuel cell power plants for stationary base load power, which provide high fuel efficiency and high-value waste heat for cogeneration applications.
- We have strong global distribution partners, including original equipment manufactures (OEMs) and energy service companies (ESCOs), with expertise in selling and marketing energy products and services to commercial and industrial customers worldwide.
 - We obtained commercial product certifications for safety, interconnection, installation and performance.
- We are operating a fleet of DFC power plants at customer sites throughout the world, with a backlog that we expect will double the fleet in service in the next 12-18 months.
- We have established production facilities, with equipment in place to produce 50 MW of DFC products annually.
- We achieved our 2004 value-engineering cost reduction target of 25 percent and are confident we can continue to reduce costs.
 - We have expanded our sales and service capabilities to support our DFC products.
- We have a strong balance sheet, with over \$240 million in cash, cash equivalents and investments (U.S. Treasury Securities) as of November 18, 2004 to support our growth.

We believe there are positive trends within the distributed generation and fuel cell markets that will benefit our DFC power plant business. Increasing worldwide demand for reliable power, concerns over air pollution caused by combustion power generation, and unreliable electrical grid delivery systems present significant market opportunities for our core DFC products. Furthermore, because of their non-combustion, non-mechanical power generation process, fuel cells are more efficient, produce significantly less pollutant emissions, are better suited to provide combined heat and power (CHP) and offer more quiet and flexible siting distributed generation solutions than comparable conventional power plants.

In introducing our products to the marketplace, we face obstacles that can lengthen the sales cycle. At the macro-economic level, these include varying energy demand, capital appropriation cycles and changing economic environments such as rising fuel prices. For example, in the short term, the sales effort for DFC projects and other distributed generation projects operating on natural gas were adversely affected in 2004 by higher fuel prices. Grid-delivered electricity prices have a regulatory lag of up to one year or more before fuel costs are reflected in local utility rates. Over the longer term, our higher fuel efficiency should result in customer preference for base load power generation using our DFC products.

Other market obstacles vary by region, but include regulatory uncertainty for distributed generation, monopoly-based electricity markets, interconnect issues, disparate recognition of the locational value and environmental benefits of distributed generation, standby power costs and stranded asset exit fees. We believe that the marketplace is responding to these issues.

In the U.S., which is among the most difficult regulatory environments, interconnect standards, standby charges and exit fees are being adjusted to accommodate newer technologies that generate electricity with greater fuel efficiency and reduced emissions. New York and Massachusetts adopted exemptions from these charges for our DFC products in 2004, following California's lead in 2003. We expect that this trend will continue and help to accelerate the market penetration of our DFC power plants.

To further stimulate the market, significant incentive programs are available in Asia, the U.S. and Europe, with many being renewed and new ones being introduced. For example, new energy policies in Japan and Korea were announced to meet clean energy requirements in those countries, and new initiatives in Connecticut and New York are requesting large scale renewable projects of 10 MW or larger. California renewed its Self Generation Incentive Program in 2004, with funding approved for clean distributed generation projects through 2007. European incentive programs are similar and our partner, MTU CFC Solutions, GmbH (MTU), a DaimlerChrysler subsidiary, has technology, manufacturing and distribution rights for carbonate fuel cell power plants and is focused on the European market.

High product cost due to the early stage of commercializing our DFC power plants results in our product pricing being substantially higher than competing products that are more mature. Available government subsidies make us more competitive with other sources of delivered electrical energy, but the approval and funding process for these government incentive programs can be protracted. We are beginning to see evidence that timing for this process is shortening, e.g., in California, where we are participating with government agencies in an increasing number of projects.

Our products produce electricity and thermal energy which are commodities to end users. While our products compete essentially on price, the attributes of our DFC products enhance our value proposition. In some global regions with strict air emissions controls, the ultra-clean designation of our DFC power plants enables our products to be sited where combustion-based technologies cannot. We believe our DFC products can provide more favorable attributes such as improved reliability, quiet operation, scalability, ability to provide electricity and heat for cogeneration applications, such as district heating, process steam, hot water and absorption chilling for air conditioning, and ultra low emissions at less cost with volume production. We are currently selling our products to customers in high cost

electricity markets at prices that, when combined with government incentives, are economically competitive with other power sources. We believe that our progress in 2004 enhances our opportunity to increase sales and continue to reduce costs to market clearing prices for our DFC products. In the higher cost regions of the U.S., i.e., California and the Northeast, we believe that market clearing prices are between \$2,000 and \$3,000 per kW. In regions where electricity prices are even higher, i.e., Asia and Europe, and for mission critical applications that demand higher reliability, we believe market clearing prices can be higher. The cost of our sub-MW product design at the end of 2004 was reduced from over \$8,000 per kW to approximately \$6,000 per kW, which is a 25 percent reduction in cost. Our MW-class products have an inherent 20 to 25 percent cost advantage over the sub-MW product due to economies of scale primarily in the balance-of-plant. With our currently achieved and projected annual cost reduction targets, we believe we can reach gross margin break-even on product sales at a sustained annual order and production volume of approximately 35 MW to 50 MW, depending on product mix, geographic location and other variables such as fuel prices. We believe that Company net income break-even can be achieved at a sustained annual order and volume production of approximately 100 MW. Our fiscal 2004 production volume was approximately 6 MW.

Our strategy for 2005 is to continue our cost reduction program and focus our selling efforts on markets that have the potential for repeatable volume. These markets have some combination of high electrical costs, strict emissions controls, grid constraints and other characteristics that require a clean, efficient distributed generation solution. In addition, we are focusing on market segments that offer sufficient funding availability to make our current product pricing competitive with the local cost of electricity and cogeneration. We see these markets as a bridge to support our order activity while we are operating at higher cost and lower volume. We will concentrate our market efforts on Japan/Asia, California and the Northeast United States where such programs are most prevalent, while MTU will focus on Europe. As the results of our product cost reduction efforts enable us to lower prices, we expect we will move from these bridge markets to broader market acceptance.

DIRECT FUEL CELL® (DFC®) TECHNOLOGY

Direct FuelCell power plants represent an environmentally friendly alternative power generation source when compared to traditional combustion technologies, such as gas turbines or internal combustion engines. These fuel cell power plants can potentially yield a lower cost of electricity. Less restrictive permitting requirements, due to the favorable DFC emissions profiles, can reduce installation costs. Greater fuel efficiency, minimal moving parts and remote monitoring can provide lower ongoing fuel and maintenance costs.

A fuel cell converts a hydrocarbon fuel, such as natural gas or wastewater treatment gas, into electricity without the combustion of the fuel. The primary byproducts of the fuel cell are heat, water, reduced emissions of carbon dioxide and virtually no sulfur dioxide (SOX) or nitrogen oxide (NOX) emissions. A fuel cell power plant can be thought of as having two basic segments: the fuel cell stack module, the part that actually produces the electricity, and the balance of plant (BOP), which includes various fuel handling and processing equipment, such as pipes, blowers, and electrical interface equipment such as inverters to convert the direct current (DC) output of the fuel cell to alternating current (AC).

Conventional non-nuclear power plants generate electricity by combustion of hydrocarbon fuels, such as coal, oil or natural gas. In the case of reciprocating engines, combustion of the fuel takes place within the engine that drives a generator. In a gas turbine combined cycle plant, fuels, such as natural gas, are burned in the gas turbine to generate electricity. The exhaust heat from the gas turbine is used to boil water, converting it to high-pressure steam, which is used to rotate a steam turbine generating additional electricity. Each step in these processes consumes some of the potential energy in the fuel, and the combustion process typically creates emissions of SOX and NOX, carbon monoxide, soot and other air pollutants.

The following table shows our estimates of the electrical efficiency, operating temperature, expected capacity range and certain other operating characteristics of the principal types of fuel cells being developed for commercial applications:

Fuel Cell Type	Electrolyte	Electrical Efficiency %	Operating Temperature °F	Expected Capacity Range	By-Product Heat Use
PEM	Polymer Membrane	30-35	180	5kW to 250 kW	Warm Water
Phosphoric Acid	Phosphoric Acid	35-40	400	50kW to 200 kW	Hot Water
Carbonate (Direct FuelCell®)	Potassium/Lithium Carbonate	45-57	1200	250 kW to 3 MW	High Pressure Steam
Solid Oxide (Tubular)	Stabilized Zirconium dioxide Ceramic	45-50	1800	100 kW to 3 MW	High Pressure Steam
Solid Oxide (Planar)	Stabilized Zirconium dioxide Ceramic	40-60	1200-1600	3 kW to 10 kW	High Pressure Steam

Our carbonate fuel cell, known as the Direct FuelCell, operates at approximately 1200°F. This temperature avoids 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 higher temperature fuel cells, such as solid oxide (tubular). As a result, we are able to use less expensive catalysts and readily available metals in our designs. In addition, our fuel cell produces high quality by-product heat energy (700°F) that can be harnessed for CHP applications using hot water, steam or chiller water to heat or cool buildings.

Our Direct FuelCell has been demonstrated using a variety of hydrocarbon fuels, including natural gas, methanol, diesel, biogas, coal gas, coal mine methane and propane. Our commercial DFC power plants currently can achieve an electrical efficiency of between 45 percent and 47 percent, and are expected to achieve an electrical efficiency of up to 57 percent at product maturity. Depending on location, application and load size, we expect that a co-generation configuration will reach an overall energy efficiency of between 70 percent and 80 percent. The following diagram shows the difference between a typical low temperature, external reforming fuel cell and our Direct FuelCell in the conversion of fuel into electricity.

**LOW TEMPERATURE EXTERNAL
REFORMING FUEL CELL**
(Other Companies Technology)

**HIGH TEMPERATURE INTERNAL
REFORMING DIRECT FUELCELL**
(FuelCell Energy Technology)

Our Direct FuelCell is so named because of its ability to generate electricity directly from a hydrocarbon fuel, such as natural gas or wastewater treatment gas, by reforming the fuel inside the fuel cell to produce hydrogen. We believe that this "one-step" process results in a simpler, more efficient and cost-effective energy conversion system compared with external reforming fuel cells. External reforming fuel cells, such as PEM and phosphoric acid, generally use complex, external fuel processing equipment to convert the fuel into hydrogen. This external equipment increases capital cost and reduces electrical efficiency.

Our initial market entry commercial products are rated at 250 kW, 1 MW and 2 MW in capacity. Our products are targeted for utility, commercial and industrial customers in the growing distributed generation market for applications up to 10 MW or larger. We are also developing additional DFC products based on our core carbonate technology including:

- Direct FuelCell/Turbine® (DFC/T®) - a combined-cycle system that produces additional electricity from by-product heat energy using an unfired gas turbine with electrical efficiency expected to approach 70 percent in large applications; and,
- Ship Service Fuel Cell (SSFC) - a DFC power plant that operates on marine-diesel fuel with applications such as hotel power (non-propulsion) for naval vessels and cruise ships, as well as power generation for islands.

Value Proposition

Our products produce electricity and thermal energy which are commodities to end users. While our products compete essentially on price, the attributes of our DFC products enhance our value proposition. For example, in some global regions with strict air emissions controls, the ultra-clean designation of our DFC power plants enables our products to be sited where combustion-based technologies cannot. We believe our DFC products can provide more favorable attributes, such as improved reliability, quiet operation, scalability, ability to provide electricity and heat for cogeneration applications, such as district heating, process steam, hot water and absorption chilling for air conditioning, and ultra low emissions at less cost with volume production. We are currently selling our products to customers in high cost electricity markets at prices that, when combined with government incentives, are economically competitive with other power generating sources. Over time, as our cost-out program enables us to reduce our prices, we believe we will be less reliant on and eventually eliminate the need for government subsidies to price our products at market clearing prices. A specific example of how the economics would work currently is set forth below.

Based on a \$7.00/MMBtu gas price, the raw life cycle cost of electricity to the end user at the prices we are quoting today (absent any subsidies), is between \$0.15 and \$0.20/kWh. With an incentive of \$2,500/kW, the cost of electricity to the end user is in the low-teens per kWh, a competitive price in many high cost energy regions of the world. Factoring in the value of the heat used for cogeneration (\$0.01-\$0.02/kWh), the added value of increased reliability (\$0.005 to \$0.015/kWh), and the offset due to emissions credits (up to \$0.01/kWh if regionally available), the net cost to the end user could be \$0.10/kWh or less, depending on location. In many areas of the world, this competes with grid-delivered electricity.

The recent rise in the cost of natural gas during the past year has made our products as well as other conventional distributed generation technologies less competitive with the grid (grid-delivered electricity prices are not immediately affected by spot changes in energy prices such as natural gas, coal and oil due to previously secured long-term supply contracts and a regulatory system that takes 6 months to a year or more to approve rate increases when requested by local utilities). Specifically, the average delivered price of natural gas sold to commercial consumers in the California and Northeastern U.S. markets of \$6.00/MMBtu to \$6.50/MMBtu for commercial customers increased to as high as \$9.00/MMBtu in mid-2004. We estimate that each \$1.00/MMBtu change in natural gas prices increases the cost of electricity of our DFC products by \$0.0083/kWh. Natural gas prices have subsided from their recent peak, but variability has increased (\$2.00/MMBtu depending on demand and weather). Over time, energy prices tend to revert to the oil price per barrel equivalent, so we view the disparate fuel and electricity prices as a short-term phenomenon that will be resolved over time.

DISTRIBUTED GENERATION MARKETS

The demand for reliable power, increasing concerns about the emission of harmful greenhouse gases and particulate matter, and the inability of central power generation systems to cogenerate heat and electricity, have created demand for new technologies that can provide clean, economic on-site generation. Consequently, projected demand for distributed generation is growing throughout the world. In October 2004, Energy User News reported that ABI projected distributed generation to the grid may increase to 200,000 MW worldwide by 2011 compared with 65,000 MW currently, with 6 percent or 12,000 MW from fuel cells. A year earlier, ABI reported that global stationary fuel cell cumulative shipments would rise from 55 MW cumulative through 2003 to nearly 18,000 MW cumulative through 2013 , according to its moderate forecast.

We believe distributed generation using our Direct FuelCell power plants are an alternative power generation solution because they:

- ***Increase reliability by locating power closer to the end user.*** On-site power generation bypasses the congested transmission and distribution system, increasing electrical reliability to the end user.
- ***Provide better economics.*** The economic justification for distributed generation is a result of a number of factors, such as avoidance of transmission and distribution system investment, reduction of line losses, and utilization of the heat by-product from on-site power generation.
- ***Ease congestion in the transmission and distribution system.*** Each kilowatt of on-site power generation removes the same amount from the transmission and distribution system, thereby easing congestion that can cause power outages and hastening the grid recovery after electrical infrastructure problems have been resolved.
- ***Provide greater capacity utilization in less time.*** Distributed generation can be added in increments that more closely match expected demand in a shorter time frame (weeks to months) compared with traditional central power generating plants and transmission and distribution systems (often 12 to 36 months or longer) which require more extensive siting and right of way approvals.
- ***Enhance security.*** By locating smaller, incremental power plants in dispersed locations closer to energy consumers, distributed generation can reduce dependence on a vulnerable centralized electrical infrastructure.

Our DFC power plants provide the following attributes:

- **Offer higher operational efficiency.** Our DFC power plants currently achieve electrical efficiencies of 45 to 47 percent and have the potential to reach an electrical efficiency 57 percent at product maturity in single-cycle applications. In addition, our DFC power plants can achieve overall energy efficiency of 70 to 80 percent for combined heat and power applications. This is greater than the fuel efficiency of competing fuel cell and combustion-based technologies of similar size and potentially results in a lower cost per kWh over the life of the power plant.
- **Lower emissions.** Our DFC power plants have significantly lower emissions of greenhouse gases and particulate matter than conventional combustion-based power plants. They emit virtually no NOX or SOX and have been designated "ultra-clean" by the California Air Resources Board (CARB). Comparative emissions of fuel cell power plants versus traditional combustion-based power plants as compiled by the DOE/National Energy Technology Laboratory and company product specification sheets are as follows:

	Emissions (Lbs. Per MWh)	
	Nox	SO ₂
Average U.S. Fossil Fuel Plant	4.200	9.210
Microturbine (60-kW)	0.490	0.000
Small Gas Turbine (250-kW)	0.467	0.000
Combined Cycle Gas Turbine	0.230	0.005
Fuel Cell, Single Cycle (DFC)	0.016	0.000

- **Utilize multiple fuels.** Our DFC power plants can utilize many fuel sources, such as natural gas, industrial and municipal wastewater treatment gas, propane, and coal gas (escaping gas from active and abandoned coal mines as well as synthesis gas processed from coal), thereby enhancing energy independence from imported oil.

Many governments at various levels, both in the U.S. and abroad, are proactively pursuing incentive programs to stimulate the development of distributed generation in general and fuel cells in particular. New programs have emerged in Connecticut, New York, Japan, Korea and Canada, and an existing program was renewed and extended in California. We believe we can capitalize on the substantial global incentives available for distributed generation, alternative energy and renewable technologies, which include subsidies ranging up to 55 percent of project costs depending on the application and the site. We and our partners have been able to take advantage of specific incentives in the U.S., Japan and Germany.

In the near-term, we believe these government-sponsored incentive programs will facilitate DFC product sales. In the longer term, we believe that our product cost reduction program and higher production volumes will lessen or eliminate the need for incentives.

We continue to target our initial commercialization efforts for the following stationary power applications:

- Customers in regions with high electricity prices.
- Customers with 24/7 base load power requirements.
- Customers with electric grid distribution or transmission shortages or congestion.
- Commercial and industrial customers who can use the high-quality heat by-product for cogeneration applications.

- Customers with opportunity fuels such as anaerobic digester gas from municipal and industrial wastewater treatment facilities.

- Customers in regions with strict air pollution requirements.

These customer characteristics are prevalent in selected regions in the United States, such as California and the northeastern states, and internationally in Canada, Europe, Japan and Korea. These are areas where government incentives and other approved legislation support distributed generation in general and fuel cells in particular. We are focusing on market segments that offer sufficient incentive funding available to make our current product pricing competitive with the local cost of electricity and cogeneration. We see these markets as a bridge to support order activity while we are operating at higher cost and lower volume. As the results of our product cost out efforts enable us to lower our prices, we expect we will move from these bridge markets to broader commercial acceptance.

Because our DFC products can operate on wastewater treatment gas, a biomass renewable fuel, we can provide one of the few sources of base load distributed generation within the renewable portfolio standards (RPS) many states and countries are beginning to implement. In some jurisdictions, our DFC power plants, due to their favorable ultra-low emissions and 'ultra-clean' status, can qualify for RPS programs when operating on natural gas. This classifies our fuel cell products similar to wind and solar projects that are eligible for funding under these programs.

Geographical Markets

We are pursuing a strategy of global geographic penetration through our strong strategic partners, which has enabled us to introduce our products in early adopter markets throughout the world. In selected regions, local market conditions, incentives and regulations have evolved which have enabled customers to purchase our products. These early adopters recognize the environmental and economic value of our DFC power plants.

Japan

Japan's electricity prices are among the highest in the world. In addition, the government has strict emissions goals, following the Kyoto Protocol, which have resulted in the need to reduce emissions from the power-generating sector. Employing CHP technology is an important means to reduce carbon dioxide emissions, however, Japanese air pollution protection laws restrict installing and operating traditional generating technologies in urban areas. Since the Japanese Ministry of Environmental Protection has approved our DFC power plants as meeting or exceeding all air pollution control laws, we believe demand for our DFC products will increase. We have seen the most progress with our DFC products in this market, with Marubeni ordering 1.25 MW in 2001 followed by repeat orders of 3 MW and 4 MW in 2003 and 2004, respectively.

There are a number of other market drivers beyond strict emissions requirements that we believe will stimulate demand for our DFC power plants in Japan. First, a new regulation requires the use of wastewater treatment facilities for agriculture and farming. The Japanese government is subsidizing these new wastewater treatment facilities, including any power generation equipment that makes efficient use of opportunity fuels that result from wastewater treatment. Second, a national RPS for the power generation sector was adopted. The initial targets are approximately 3,500 MW by 2010. Our DFC products operating on anaerobic digester gas qualify under this standard. Third, a number of government-backed subsidy programs are available to DFC products, with incentives ranging from 35 percent to 55 percent. The aggregate annual budget by the various Japanese ministries for these programs total \$50 million. Fourth, the Japanese Ministry of Economy, Trade and Industry announced a new energy program with the goal of 2,200 MW of fuel cell power by 2010. Our Japanese partner, Marubeni Corporation (Marubeni), has been successful in working with various Japanese ministries to obtain approvals for broad siting flexibility to meet the growing demand for our DFC products.

Korea

With the addition of POSCO as a sub-distributor and eventual packager of our DFC products for Marubeni, we have broadened our Asian marketing presence to include Korea. In 2004, fuel cells were identified as one of the 10 economic growth engines for the Korean economy and POSCO was assigned by the Korean government to develop and commercialize large stationary fuel cell power plants. POSCO selected our DFC products through Marubeni to pursue this effort, which we believe further confirms our leadership position in large stationary fuel cell power plants for the commercial and industrial customers. The Korean government's goal is to install 300 stationary fuel cell power plants, sized 250-kW to 1 MW, by 2012, and has designated \$1.6 billion to support this effort.

North America - U.S.

The U.S. is characterized by high electricity costs and grid-constraints in selected regions, such as California and the northeastern states such as New Jersey, New York, Connecticut and Massachusetts. We have found that the utility monopoly status is more entrenched in the U.S. than in other global markets, but we are seeing developments that favor clean and efficient distributed generation such as our DFC power plants. Existing programs are being renewed, and new initiatives are being implemented.

California has become a leader in regulatory policy. For example, our DFC power plants have been certified to meet interconnection standards of investor owned electric utilities ("Rule 21"). In addition, our DFC power plants meet the strict emissions requirement of the California Air Resources Board standard for 2007 ("CARB2007"), and have been designated as an 'ultra-clean' distributed generation technology. As a result, customers have access to certain incentive funding for the purchase of our DFC power plants. In addition, customers who install and operate our DFC power plants are exempt from exit fees and stand-by charges, saving them from paying fees of approximately \$.025-\$0.03/kWh. End-users of fuel cell power plants are eligible to sell back unused power to publicly owned utilities during off-peak hours at wholesale or generation-based rates of approximately \$0.04-\$0.05/kWh. The California Self Generation Program provides \$100 million per year of incentive funding for 'ultra-clean' technologies on the basis of \$2,500/kW for our DFC products operating on natural gas and \$4,500/kW for our DFC products operating on renewable fuels such as anaerobic gas from wastewater treatment facilities.

We were able to demonstrate the competitiveness of our DFC products through this program during the past 12 months. In fiscal year 2004, Alliance Power secured two customers through this program (City of Santa Barbara, 500 kW, and Sierra Nevada Brewing Co., 1MW). Chevron Energy Solutions secured our first DFC1500 project in the State with the Santa Rita Correctional Facility in Alameda County, and, early in fiscal 2005, secured a 250-kW project for the San Francisco Mail Processing Facility. This program has been extended through 2007, enabling over 20 MW of project funding per year.

In Connecticut, legislation was recently passed that will require the state's utility distribution companies to have 100 MW of generation from renewable technologies contracted by mid-2007. The request for proposals for the first round (30 MW) was issued and project submissions (between 1 MW and 15 MW) are due March 17, 2005. Final projects are expected to be selected by September 30, 2005. The Round 2 (30 MW) and the Round 3 (40 MW) selection process are expected to follow in succession. Our DFC power plants operating on natural gas are a Class I renewable technology and meet the eligibility requirements for this program.

Other states are also implementing policies to accelerate the installation of clean distributed generation technologies. For example, New York State exempts our DFC power plants from stand-by charges if the installation represents less than 15 percent of the customer's maximum potential demand. In addition, the New York Public Service Commission adopted a renewable energy policy to increase electricity from renewable sources to 25 percent by 2013. To meet this requirement, it is estimated that New York State will need up to 3,700 MW of generation from renewable technology. Our DFC power plants operating on natural gas meet the renewable eligibility requirements in New York State.

These renewable energy initiatives in Connecticut and New York may provide us with opportunities for large scale multi-MW projects sized to 10-15 MW or larger.

At the U.S. federal level, in addition to significant research and development funds that we receive from the U.S. federal government, the U.S. Department of Defense Climate Change Fuel Cell Program grants funds to fuel cell power plant buyers, providing up to \$1,000 per kW of plant capacity (not to exceed one-third of total program costs). In fiscal year 2005, there is approximately \$1.2 million available for buyers of these fuel cell system incentive grants. While the Energy Policy Act of 2003 was not passed by Congress, it contained important incentives, including: (1) an

investment tax credit of 30 percent or \$1,000 per kW, whichever is less, for fuel cell power plant installations; and, (2) an advanced power system technology incentive program which provided for a 1.8 to 2.5 cents per kWh subsidy to owner-operators of qualifying facilities, including fuel cells, turbines and hybrid power systems. As a result of the November 2004 election, we expect an energy bill will be initiated in fiscal year 2005. We expect to benefit should similar provisions be included in a renewed energy bill.

North America - Canada

Our distribution partner, Enbridge Inc., is currently developing provincial relationships in Canada to have our DFC products included in a portfolio approach to replace more than 100 MW of coal and nuclear power plants and other projects with funding through the country's Cdn\$250 million Sustainable Development Technology Program. Enbridge Inc., is the owner and operator of Canada's largest natural gas distribution company, Enbridge Gas Distribution, which provides natural gas to industrial, commercial and residential customers in Ontario, Quebec and New York State.

Europe

While, electricity prices in Europe are not as high as they are in Japan and in the more expensive regions of the U.S., emphasis remains on reducing carbon dioxide emissions and grid-connected CHP projects are encouraged. The CHP Law, enacted in 2002, provides a 0.0511/kWh subsidy payable for 10 years for grid-connected CHP power plants, up to 2 MW. We estimate that this is the equivalent of a \$1,000 to \$2,000 per kW capital cost subsidy. In 2004, Germany's Renewable Energy Law opened up eligibility for fuel cells to receive up to 0.20/kWh, including a 0.02/kWh premium over combustion-based technologies. RWE, Europe's largest investor owned utility, has invested in and has partnered with our German partner, MTU CFC Solutions GmbH, a DaimlerChrysler subsidiary. In a June 2003 report commissioned by World Wildlife Fund For Nature in co-operation with Fuel Cell Europe, it was reported that RWE expects 1,000 to 5,000 MW of German electricity demand to be supplied by distributed power by 2015.

In the broader European market, the European Union has earmarked 100 million for research and demonstration projects for hydrogen and fuel cells through 2006.

Target Applications

Our products are designed to meet the base load power requirements of a wide range of commercial and industrial customers including wastewater treatment plants, data centers, manufacturing and industrial facilities, office buildings, hospitals, mission critical applications, universities and hotels, as well as in grid support applications for utility customers. Some specific markets we are targeting have substantial market potential as set forth in the table below.

Source: DOE/Onsite Sycom Energy Corp., The Market and Technical Potential for Combined Heat and Power in the Commercial/Industrial Sector, January 2000 (Revision 1)

Some specific applications of these representative applications include:

- **Wastewater treatment plants.** This application provides a unique opportunity because the methane generated from the anaerobic gas digestion process is used as fuel for the DFC power plant, which in turn generates the electricity to operate the wastewater treatment equipment at the facility. Wastewater treatment gas is considered a renewable fuel eligible for many government incentive funding for project installations throughout the world.
- o **Industrial.** We delivered our first commercially available DFC300A power plant to the Kirin Brewery in Japan in January 2003. In 2005, we expect to install 1-MW of DFC power (4 DFC300A power plants) for a beer brewery at the Sierra Nevada Brewing Co. in Chico, Calif. through our North American distribution partner, Alliance Power, and a 250-kW DFC300A power plant for a food recycling facility for Bioenergy Co. at Tokyo Super Eco Town in Japan through our Asian distribution partner, Marubeni Corp.
- o **Municipal.** We began operating our first MW-class DFC1500 at the King County Wastewater Facility in Washington State on natural gas in 2004 that has now switched over to operation on anaerobic digester gas. We have installed 250-kW DFC300A power plants to the following municipal wastewater treatment facilities - the City of Fukuoka (through Marubeni Corp.), Terminal Island for the Los Angeles Department of Water and Power (direct sale), Sanitation Districts of Los Angeles County (through Caterpillar), and the City of Santa Barbara (two units through Alliance Power).
- **Hotels.** Our DFC 300A power plants at the 300-room Sheraton Edison and Sheraton Parsippany hotels in New Jersey provide each hotel with their 250 kW base load electricity requirements and 25 percent of their hot water needs. Our recently installed DFC300A power plant at the 1,750-room Sheraton New York Hotel and Towers in Manhattan will provide approximately 10 percent of the electricity and hot water requirements.
- **Institutional - Universities.** At the Environmental Science Center near Yale University's Peabody Museum in New Haven, Connecticut, our DFC 300A power plant provides approximately 25 percent of the building's electricity needs, with the heat byproduct being used primarily to maintain tight temperature and humidity controls for its artifact storage facility. At the Michigan Alternative and Renewable Energy Center at Grand Valley State University in Muskegon, Mich., our DFC300A power plant is part of a comprehensive grid-independent energy system (includes solar panels and batteries for load following power requirements) that provides substantially all of the facility's base load electricity and uses the heat byproduct for heating and cooling. At Ocean County College in New Jersey, our DFC300A power plant provides 90 percent of the daily power requirements for three of the campus buildings and 20 percent of the heating needs for six buildings. One of the three DFC300A power plants purchased by Marubeni's Korean sub-distributor, POSCO, is expected to be installed at the Pohang University Science and Technology Center in Pohang City, Korea.
- **Institutional - Hospitals.** MTU has provided its sub-MW carbonate fuel cell power plant, which incorporates our DFC components, for a number of hospitals and clinics in Germany that supply electricity to the local clinic grid and the hot exhaust air is used to produce process steam for the facilities. Installations include the Rhon Klinikum Bad Neustadt (which completed its field trial in August 2004 after operating for more than 21,000 hours), Rhon Klinikum Bad Berka, Magdeburg Clinic and the Gruenstadt Clinic/Pfalzwerke.
- **Industrial.** MTU has installed its sub-MW carbonate fuel cell power plant for industrial CHP applications in Europe, such as a Michelin tire factory in Germany and a IZAR ship building factory in Spain. Marubeni has installed two DFC power plants for an Epson factory in Japan and a natural gas gathering station at Japex, also in Japan. Caterpillar has installed and operated a DFC300A power plant at its technology center in Peoria, Illinois.

Institutional - Telecommunications/Data Centers. MTU has installed a sub-MW carbonate fuel cell power plant for Deutsche Telecom in Munich, Germany that provides DC backup power for a telecommunications center. PPL Energy Plus installed two sub-MW DFC300A power plants at the headquarters building of Zoot Enterprises, a provider of customized instant credit decision making applications for financial institutions, that is designed to be part of its critical reliability base load needs.

- ***Institutional - Prisons.*** We announced our first one-MW DFC1500 power plant sale in California to Alameda County for the Santa Rita Correctional Facility in Dublin, Calif. This also was the first fuel cell project with our North American distribution partner, Chevron Energy Solutions, and delivery is expected in calendar year 2005.
- ***Grid Support.*** The Los Angeles Department of Water and Power has been a long-standing customer of ours, and operated one of our first field trial units. They have installed two separate DFC300 power plants that provide electricity to the grid - one at their corporate headquarters and one at another downtown location. In 2004, we delivered a DFC300A power plant to a Westerville, Ohio substation facility for American Municipal Power-Ohio for its municipal distribution system. In 2005, we expect to deliver a DFC300A power plant for the Salt River project, which was sold through our North American distribution partner, Caterpillar. This unit will be located at the Arizona State University East Campus in Mesa, Ariz. and provide electricity to the local grid.

- **Federal.** We are targeting the U.S. Government as an end-use customer for our DFC products. Since the blackout of August 2003, we have seen a growing interest by the government in increasing the reliability of power for mission critical applications. There is a DFC300A power plant installed at the Coast Guard Air Station Cape Cod in Bourne, Mass. that was sold through our North American distribution partner, PPL Energy Plus. Our North American distribution partner, Chevron Energy Solutions, sold a 250-kW DFC300A power plant to the U.S. Postal Service's San Francisco Processing and Distribution Center that is expected to be delivered in calendar year 2005. The market for combined heat and power applications for federal facilities is estimated to be 1,590 MW.

We have installed a DFC300A power plant at the Fuel Cell Test and Evaluation Center in Johnstown, Penn., for a combined heat and power demonstration. The goals of this demonstration are to (1) analyze the use of available system heat output for trigeneration - the supply of electricity as well as chilled and hot water in a combined system - and (2) analyze the simultaneous operation on natural gas and propane for dual-fueled capability. This is part of a \$7 million fiscal 2005 budget appropriation by the U.S. Government for carbonate fuel cells, which also includes funding for two other MW-class systems.

Strategic Alliances/Market Development Agreements

Our sales and marketing strategy is to work predominantly with established OEMs and ESCOs who have significant expertise in selling equipment and/or comprehensive services to energy users. These relationships strengthen our ability to bring our stationary fuel cell power plants to key target markets and applications and provide valuable input for our cost reduction and product improvement efforts. In certain circumstances, we sell our products directly to end-users.

Our OEM partners have extensive experience in designing, manufacturing, distributing and servicing energy products worldwide. We believe our strength in the development of fuel cell products coupled with their understanding of sophisticated commercial and industrial customers, products and services will enhance the sales, service and product development of our high temperature stationary fuel cell power plants.

Our energy service company partners have extensive experience in selling comprehensive energy services to commercial and industrial customers that include demand side management, product selection and commodity procurement. They have added our DFC power plants to their offering of power generation products and services as a cost effective energy solution to their customers.

Through our field trial program, we have directly partnered with certain customers who have hosted our product demonstrations. These customer partners have the option to negotiate arrangements for the sale, distribution and service of FuelCell's DFC power plants upon completion of the project.

Original Equipment Manufacturers (OEM) Partners

MTU CFC Solutions GmbH, a subsidiary of DaimlerChrysler. MTU, headquartered in Munich, Germany, has been an investor in our company and co-developer of our DFC technology since 1989. The sub-MW power plant is a collaborative effort utilizing our DFC technology and the Hot Module® BOP design of MTU. In July 2003, RWE Fuel Cells GmbH, a subsidiary of RWE AG, Germany's largest electric utility, established a joint venture with MTU and RWE Fuel Cells GmbH holds a 25.1 percent stake in MTU CFC Solutions, GmbH.

MTU currently has sub-MW fuel cell power plant installations at eight locations in Europe (in Germany unless otherwise noted), including an energy park at RWE; a telecommunications center for Deutsche Telecom; a tire manufacturing facility for Michelin; at a Berlin-based utility, Vattenburg/BeWag (first European dual-fueled

carbonate fuel cell power plant); at Bad Berka Hospital; at Magdeburg Clinic; at Gruendstat Clinic; and at IZAR, a shipbuilder, in Spain. MTU has announced that it will install two additional units in 2005, including the first European digester gas carbonate power plant in Ahlen, Germany.

We have two agreements with MTU, a Cell License Agreement and a Balance of Plant License Agreement. Under our current Cell License Agreement, which has been extended through December 2009, we license our DFC technology to MTU for use exclusively in Europe and the Middle East and non-exclusively in Africa and South America. We also sell our DFC components and stacks to MTU under this agreement. Under the Cell License Agreement, MTU also granted us an exclusive, royalty-free license to use any of their improvements to our Direct FuelCell that MTU developed as of December 1999 under a previous license agreement. In addition, MTU has agreed to negotiate a license grant of any separate carbonate fuel cell know-how it develops once it is ready for commercialization. Under our Balance of Plant Cross Licensing and Cross-Selling Agreement, we may sell to MTU our MW-class modules and MTU may sell their sub-MW class modules to us. The Balance of Plant License continues through July 2008 and may be extended for up to three additional 5-year terms, at the option of either MTU or us. As an OEM developer of stationary fuel cell power plants, MTU assembles and stacks the DFC components that we sell to them and then adds their mechanical and electrical balance of plants for ultimate sale to their customers. MTU owns approximately 2.7 million shares of our common stock and is represented on our Board of Directors.

Marubeni Corporation. Marubeni delivered DFC 300A units in Japan to the Kirin Brewery near Tokyo; the City of Fukuoka municipal wastewater treatment facility; Japex's Katakai natural gas gathering station located in the Niigata Prefecture; and two units to Epson's Quartz Device Division in the City of Ina, Nagano Prefecture, Japan.

Under our agreement with Marubeni extended in 2004, Marubeni ordered an additional 4 MW of our DFC power plants, and to date has a commitment for 8.25 MW of our DFC power plants. Marubeni invested \$10 million in FuelCell Energy in 2001 through the purchase of approximately 268,000 shares. In addition, we have granted Marubeni warrants to purchase an additional 1.0 million shares of our common stock that vest based on order commitments for our DFC products. The exercise prices of the warrants range from \$13.78 to \$18.73 per share and the warrants will expire between April 2005 and April 2007, if not exercised sooner. Warrants to purchase 200,000 shares have vested to date.

Late in fiscal 2004, FuelCell Energy and Marubeni entered into strategic alliances with leading industrial companies to be sub-distributors and packagers of DFC products and to participate in our cost-out program.

- **Kawasaki Heavy Industries.** In October 2004, Marubeni, FuelCell Energy and Kawasaki Heavy Industries (KHI) entered into an agreement for KHI to become Marubeni's packaging partner for Japan to design and manufacture balance of plant components, and to be a sub-distributor to Marubeni in Japan. KHI is a leader in the field of stationary power generation, and is a leading international supplier of ultra-clean gas turbines. KHI has stated it believes the greatest opportunity for DFC power plants is in high efficiency, cogeneration applications for large commercial and light industrial sectors, particularly due to reduced greenhouse gas emissions. As part of the agreement, Kawasaki purchased a DFC300A power plant from Marubeni, to be installed at the Kawasaki Akashi Works near Osaka, Japan.
- **POSCO.** In November 2004, Marubeni, FuelCell Energy and POSCO entered into an agreement for POSCO to become Marubeni's packaging partner for Korea to design and manufacture balance of plant components, and to be a sub-distributor to Marubeni in Korea. POSCO is a world leader in the materials industry, and is a top producer of steel for the global market. POSCO has extensive experience in power plant project development, building over 2,400 MW of power plants, equivalent to 3.7 percent of Korea's national capacity, for its various facilities. As part of the agreement, POSCO purchased three DFC300A power plants through Marubeni, with the first unit to be sited at the Pohang University of Science and Technology) in Pohang City, Korea.
- Subsequent to the end of our fiscal year, Marubeni announced the siting of a DFC300A power plant for Bioenergy Co. of Japan for a food recycling facility at the Tokyo Super Eco Town Project.

Caterpillar, Inc. Caterpillar operated a DFC 300A power plant at its Technology Center near its corporate headquarters in Peoria, Illinois and is expected to do so again in 2005. In addition, we have shipped DFC 300A power plants for two Caterpillar customers: American Municipal Power-Ohio for a grid-support application at a substation in the City of Westerville, Ohio, and a municipal wastewater treatment application for the Sanitation Districts of Los Angeles County. Caterpillar is currently offering our DFC products to its customers and has stated it intends to offer its own branded fuel cell power plant that will incorporate our DFC technology.

Under our ten-year agreement with Caterpillar, customers are able to purchase our DFC power plants from Caterpillar dealers in selected regions in North America. The agreement calls for us to jointly develop Caterpillar-branded power plants in the 250 kW to 3 MW size range, incorporating our fuel cell modules. In December 2003, Caterpillar announced plans to market a hybrid fuel cell/natural gas generator product which would combine our MW-class DFC power plant with Caterpillar's gas engine-driven generator to provide clean, efficient and economical base load and peaking power requirements for commercial and industrial customers.

Energy Service Company Partners

We have five Energy Service Company (ESCO) distribution partners for our DFC products.

PPL Energy Plus. PPL, a subsidiary of PPL Corporation, ordered 1.75 MW of DFC power plants and currently has units installed at three Starwood Resorts properties (Sheraton Edison and Sheraton Parsippany in New Jersey and Sheraton New York Towers in Manhattan); two units at Zoot Enterprises headquarters building in Bozeman, Montana; one unit at the U.S. Coast Guard station in Bourne, Massachusetts; and one unit at Ocean County College in New Jersey.

Enbridge Inc. Enbridge, a leader in energy transportation and distribution in North America and internationally, entered into a three-year distribution agreement with us in November 2003 to distribute our current DFC products in Canada. As part of the agreement, Enbridge received warrants to purchase up to 500,000 shares of our common stock which vest based on order commitments for our fuel cell products. The exercise prices of the warrants range from \$14.65 to \$19.04 per share and the warrants will expire in November 2006, if not exercised sooner. These warrants have not yet vested.

Alliance Power, Inc. In June 2003, we signed an agreement with Alliance Power, Inc. to integrate our ultra-clean DFC power plants into its portfolio of distributed generation solutions. Alliance Power is a developer of distributed generation facilities ranging in size from 1 MW to 49 MW. Alliance has been initially focusing its efforts in California. In fiscal 2004, we announced two multi-unit projects - 500 kW for a municipal wastewater treatment facility for the City of Santa Barbara (2 DFC300A power plants) and 1 MW for an industrial wastewater facility for the Sierra Nevada Brewing Co. in Chico, Calif. (4 DFC300A power plants).

Chevron Energy Solutions. We entered into an agreement with Chevron Energy Solutions (Chevron), a subsidiary of ChevronTexaco, in December 2001, to jointly market and sell DFC power plants, with initial projects targeted for the northeastern U.S. and California. Chevron partners with institutions and businesses to improve facilities and increase their efficiency, help reduce energy expenses and help ensure reliability, high quality power for critical operations. In October 2004, Chevron announced the sale of a one-MW DFC1500 power plant in California to Alameda County for the Santa Rita Correctional Facility. In December 2004, Chevron announced the sale of a DFC300A power plant for the U.S. Postal Service's San Francisco Processing and Distribution Center. Both power plants are expected to be installed in 2005.

LOGANEnergy Corp. We entered into an agreement with LOGANEnergy Corp. (LOGAN) in July 2004 to jointly market and sell DFC power plants with an initial focus on MW-class systems in California. LOGAN has been

specializing in planning, designing, developing and implementing fuel cell projects since 1994 and has been involved with over 40 commercial, small-scaled fuel cell projects representing more than 7 MW of capacity at 21 locations in 12 states.

Customer Partners

Through our field trial program, we have partnered directly with certain customers who have hosted our product demonstrations. These customer partners have the option to negotiate arrangements for the sale, distribution and service of our DFC power plants upon completion of the project.

Our longest standing customer partner relationship is with the Los Angeles Department of Water and Power (LADWP), the largest municipal utility in the U.S. with 640,000 water customers and 1.4 million electric customers. LADWP participated with us on our 2 MW Santa Clara Demonstration Project in 1996-1997 and currently has three DFC 300A power plant installations (grid-connected units at its Main Street facility and headquarters building, and a wastewater treatment plant installation at Terminal Island).

Other customer partners include the Alabama Municipal Electric Authority, which participated in the operation of a sub-MW DFC power plant at a Mercedes-Benz manufacturing facility in Tuscaloosa, Alabama and completed in December 2003.

MEETING CUSTOMER EXPECTATIONS

A focused commercial cost-out program cannot begin until there are a number of units in the field operating at customer sites. We delivered our first DFC300A power plant to the Kirin Brewery in January 2003 and since then have delivered 34 units, including our first one-MW DFC1500 and our first two-MW DFC3000, to customer sites throughout the world. These units constitute our field follow program.

We went into our field follow program anticipating there would be operational issues that would cause service interruptions, such as fuel and water variability, as well as site-specific issues such as temperature and altitude. This is not uncommon with the introduction of a new technology.

Approximately one-third of all service interruptions affecting our DFC power plant are the result of grid disturbances. Software controls were developed to allow our units to maintain operating temperature (hot standby mode) during these disturbances and return to producing electricity once the grid situation was resolved.

Beyond grid disturbances, some of the other lessons learned include fuel variations at different sites. For example, our DFC power plants might encounter fuel composition instability due to seasonal variations (e.g., peak-shaving gas during winter months). In addition, industrial wastewater treatment facilities, such as beer breweries, are subject to fuel variability depending on the type of beer being processed which can change the hydrocarbon content of the fuel. We resolved this by developing software controls that allow the DFC power plant to react quickly to these changes and installing hardware to facilitate these rapid changes.

Many of our customers require the ability to switch fuel sources. For example, our one-MW DFC1500 power plant at King County, Washington, switches fuel between anaerobic digester gas and natural gas. Software controls were developed to automate this. Similarly, our DFC300A power plant at the Kirin Brewery in Japan switches from anaerobic digester gas to liquefied petroleum gas (during the weekends when beer is not brewed). We developed the appropriate software controls and installed the appropriate hardware to facilitate this.

We have operated our DFC power plants in cold weather environments (to minus 40°F in Montana) and hot weather environments (120°F in California). Appropriate weather packages were developed and installed to minimize service interruptions due to these temperature extremes.

Natural gas applications incur differences in the odorants that are employed. To accommodate for this, a new type of carbon mix was developed for the desulfurizer beds.

From these experiences and others, we are learning about the reliability of our DFC power plant components in varying applications and customer environments. All failed components are returned to our service center in Danbury and undergo rigorous analyses. This is done to improve the reliability of the components by allowing us and our component vendors to develop comprehensive technical solutions. We are measuring the Mean Time Between Failure of key components to ensure they are improving. We are also using this data to develop predictive maintenance practices and plans.

A year into our field follow program, we wanted to better understand our customer requirements. We sent out a customer satisfaction survey in which we polled 85 percent of the operating units in the U.S. and Japan, soliciting feedback on all aspects of our customer service, i.e., operations, engineering, project management, quality, sales/marketing, and service. Quantitative results produced a satisfactory rating. Additionally, our customers requested a multi-level training program, a 24/7 customer service call center and a web-based portal that allows them to obtain real-time power plant data. All of these were successfully implemented in 2004. Customer feedback also indicated that power plant size is not as important to them as the ability to service and maintain the units. This has been incorporated into future designs and modifications.

We regularly monitor the availability of our DFC power plants and the average availability of our DFC power plants to date is approximately 87 percent as of January 10, 2005. The industry standard in the power industry for availability is 95 percent, and we believe we will improve our availability to achieve or exceed that benchmark.

COST REDUCTION

Reducing product cost is essential for us to penetrate the market for our high temperature fuel cell products. Cost reduction will reduce and/or eliminate the need for incentive funding programs that are currently available to allow our product pricing to compete with grid-delivered power and other distributed generation technologies, and is critical to achieving and sustaining profitability. We recognized this during our initial product development efforts leading up to our 2-MW Santa Clara proof-of-concept project in 1996-1997. We continued our cost reduction and performance improvement efforts as we developed commercial designs for our products, incorporating lessons learned from this project, our 250-kW Danbury project in 1999 as well as our U.S. field trials with the Los Angeles Department of Water and Power and the Mercedes-Benz facility in Tuscaloosa, Alabama (project partnership with Southern Company Services, Inc., Mercedes-Benz U.S. International, the Alabama Electric Authority) in 2001-2002. Cost per kW was declining substantially during this period, from over \$20,000 per kW to approximately \$10,000 per kW at the start of commercial cost-out program in mid-2003.

A more focused commercial cost-out program, however, could not commence until we had a number of units in the field. Six months into our field-follow program we concluded that our DFC power plants were meeting customer expectations and we decided to move forward with our cost-out program.

Our value-engineering cost reduction program commenced in mid-2003 and is focused on reducing initial capital costs of the products as well as testing, conditioning, installation, operation and maintenance expenses. We expect further cost reductions from increasing volume production above our current levels. Product cost reduction comes from three areas - our field follow program, our cost-out program and our performance improvement program. Engineers and scientists are dedicated to each area, but it is a collaborative effort that contributes to the overall serviceability, cost-reduction and performance improvement of our DFC products. We have created an interdepartmental team that regularly analyzes, verifies and tests value-engineering initiatives. Presently, approximately 20 percent of our employees are involved in this cost-out program, including a staff of 20 engineers dedicated exclusively to this effort,

and contributions are solicited and considered from our distribution partners, component suppliers, packaging engineering firms and directly from end-use customers. In addition, we expect to leverage the capabilities and resources of our distribution partners and key suppliers to enhance our cost reduction efforts. These continuing efforts are expected to reduce material costs, simplify design, improve manufacturing yields, reduce product assembly labor and reduce production cycle time.

Selected examples of successful cost reduction initiatives include changing the material of our bipolar plates and reforming unit separators within our fuel cells, switching our piping material, changing our nitrogen purging methodologies in our sub-MW product balance of plant, and substituting a standard shipping container for the custom-made balance of plant enclosure. We are building global sourcing capabilities for the most cost effective component and material supply.

We have achieved significant cost reductions since the program's inception. Product design changes are introduced in blocks rather than individually to minimize impact to manufacturing and to the customer. For example, in 2004 we reduced the cost of our DFC300A power plant by approximately 25 percent in two block changes. Block One changes were released into production beginning in late calendar year 2004 and block two changes will be implemented in products released for production in the summer of 2005.

Concurrent with our field follow and cost-out programs, we continue to advance the performance of our core stack technology to increase power output and extend stack life. Increasing power output will reduce the initial capital cost per/kW and increasing stack life will reduce operation and maintenance costs to make our products even more competitive. Subscale testing of our carbonate fuel cells has successfully demonstrated an increase in power output. Efforts are underway to validate these advances in larger stacks before we incorporate these improvements into our commercial DFC products.

Recently, we have demonstrated trouble-free operation of our DFC power plants on U.S. commercial grade propane, a commonly available storable fuel that potential customers are telling us is required for certain critical power applications. We plan to operate a DFC300A unit on propane in 2005 to show readiness for critical power/Homeland Security applications. Field operating experience has shown that plant trips from grid-related disturbances are a significant factor contributing to plant outages. To alleviate the impact of this, we have demonstrated going from a trip disturbance to hot standby followed with full power recovery in less than ten minutes in a full-scale engineering unit subsequent to a grid disturbance-related outage. This feature will be incorporated into the product in 2005.

We have established value-engineering cost targets of 20 to 25 percent for each year through 2006. The cost of our sub-MW product design at the end of 2004 was reduced from over \$8,000 per kW to approximately \$6,000 per kW, which is a 25 percent reduction in cost. Our MW-class products have an inherent 20 to 25 percent cost advantage over the sub-MW product due to economies of scale of the balance-of-plant and other components. We believe that increasing our annual production volume to our production capacity of 50 MW can yield up to 30 percent of additional cost reduction. Realization of these cost reductions in our financial statements is dependent upon inventory levels, procurement and production decisions and order flow. We believe that we can reach market clearing prices in the higher energy cost regions of the world.

Manufacturing, Service, Testing and Conditioning

We have established a 65,000 square foot manufacturing facility in Torrington, Connecticut where since 2001 we have produced our repeating fuel cell components: the anode and cathode electrodes and the electrolyte matrix. After the components have been produced, they are combined in sub-assembly operations to create the final fuel cell package and delivered to final assembly for stacking into our 250 kW (nominal rating) building block stacks, which comprise our fuel cell modules. These modules are then delivered to our test and conditioning facilities in Danbury, Connecticut, and combined with the balance of plant to complete our DFC300A power plants. The completed DFC300A power plant is tested and conditioned in Danbury before being shipped to the customer site. Our MW-modules for the DFC1500 and DFC3000 are tested in Danbury and then shipped to the customer site for final testing with an assembled balance of plant.

Our manufacturing, testing and conditioning facilities have equipment in place for a production capacity of 50 MW per year. We believe manufacturing capacity can be increased to 125 - 150 MW within our existing Torrington facility through the addition of parallel production lines and additional machinery. We also have additional land access surrounding our Torrington facility, on which we could expand to 400 MW of annual production of our repeating fuel cell components. Expansion of our manufacturing facilities beyond 50 MW would also require new facilities for the fuel cell stack and module assembly, test and conditioning which could be deployed regionally. These regional assembly, test and conditioning facilities are expected to provide additional cost savings as they will reduce shipping costs, enhance delivery times and improve customer service.

Our service organization offers comprehensive service and maintenance programs including total fleet management, refurbishment and recycling services, and complete product support including spare parts inventory. We are offering service agreements at various levels for one to five years, with flexible renewal options. Our service business is located at our Danbury facility.

Government Regulation

We presently are, and our fuel cell power plants will be, subject to various federal, state and local laws and regulations relating to, among other things, land use, safe working conditions, handling and disposal of hazardous and potentially hazardous substances and emissions of pollutants into the atmosphere. Emissions of SOX and NOX from our fuel cell power plants will be much lower than conventional combustion-based generating stations, and are well within existing and proposed regulatory limits. The primary emissions from our DFC power plants, assuming no cogeneration application, is humid flue gas that is discharged at a temperature of approximately 700-800° F, water that will be discharged at a temperature of approximately 10-20° F above ambient air temperatures and carbon dioxide at levels below many competing technologies because of our high efficiency. In light of the high temperature of the gas emissions, we will likely be required by regulatory authorities to site or configure our power plants in a way that will allow the gas to be vented at acceptable and safe distances. We believe that this regulation of the gas emissions will be similar to the regulation of other power plants with similar heat and discharge temperatures. The discharge of water from our power plants will likely require permits whose terms will depend on whether the water is permitted to be discharged into a storm drain or into the local wastewater system. Lastly, as with any use of hydrocarbon fuel, the discharge of particulates will have to meet emissions standards. While our products have very low carbon monoxide emissions, there could be additional permitting requirements in smog non-attainment areas with respect to carbon monoxide if a number of our units are aggregated together.

Proprietary Rights and Licensed Technology

To compete in the marketplace, align effectively with business partners and protect our proprietary rights, we rely primarily on a combination of trade secrets, patents, confidentiality procedures and agreements and patent assignment agreements. In this regard, we have 40 current U.S. patents (including four allowed awaiting issuance by the Patent and Trademark Office) and 89 international patents covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions). All of the 40 U.S. patents relate to our Direct FuelCell technology. We also have submitted 27 U.S. and 85 international patent applications.

The patents we have obtained will expire between 2005 and 2023, and the average remaining life of our patents is approximately 10.6 years. In 2004, two new U.S patents were issued, four more were allowed and four U.S. patents expired. The expiration of these patents has no material impact on our current or anticipated operations. We also have 19 invention disclosures in process with our patent counsel that may result in additional patent applications.

Many of our U.S. patents are the result of government-funded research and development programs, including the DOE cooperative agreement. Three of our patents, which resulted from government-funded research before January 1988 (when we qualified as a small business), are owned by the U.S. government and have been licensed to us.

U.S. patents that we own that resulted from government-funded research are subject to the government exercising march-in rights. We believe, however, 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.

We have also entered into certain license agreements through which we have obtained the rights to use technology developed under joint projects. Through these agreements we must make certain royalty payments on the sales of products that contain the licensed technology, subject to certain milestones and limitations.

Competition

We compete on the basis of our products' reliability, fuel efficiency, environmental considerations and cost. We believe that our DFC carbonate fuel cell offers competitive advantages over most other fuel cell designs for stationary base load power generation. These benefits include high fuel efficiency, significantly lower emissions, scalability, the proven ability to utilize multiple fuels and potentially lower operating, maintenance and generation costs. We believe that we are the most advanced high temperature stationary fuel cell company.

Several companies in the U.S. are involved in fuel cell development, although we believe we are the only domestic company engaged in significant manufacturing and commercialization of carbonate fuel cells in the sub-MW and MW classes. Emerging fuel cell technologies (and companies developing them) include PEM fuel cells (Ballard Power Systems, Inc.; UTC Fuel Cells; and Plug Power), phosphoric acid fuel cells (UTC Fuel Cells) and solid oxide fuel cells (Siemens Westinghouse Electric Company, Sulzer Hexis, McDermott, GE/Honeywell, Delphi and Accumentrics). Each of these competitors has the potential to capture market share in our target markets.

There are other potential carbonate fuel cell competitors internationally. In Asia, Ishikawajima Harima Heavy Industries is active in developing carbonate fuel cells. In Europe, a company in Italy, Ansaldo Fuel Cells, is actively engaged in carbonate fuel cell development and is a potential competitor. Our licensees in Germany, MTU, and its partners have been the most active in Europe.

Other than fuel cell developers, we must also compete with such companies as Caterpillar, Cummins Inc., and Detroit Diesel Corporation (a subsidiary of DaimlerChrysler AG), which manufacture more mature combustion-based equipment, including various engines and turbines, and have more established manufacturing, distribution, operating and cost features. Significant competition may also come from gas turbine companies like General Electric, Ingersoll-Rand Company Limited, Solar Turbines Incorporated and Kawasaki, which have recently made progress in improving fuel efficiency and reducing pollution in large-size combined cycle natural gas fueled generators. These companies have also made efforts to extend these advantages to smaller sizes. We believe, however, that these smaller gas turbines will not be able to match our fuel efficiency or favorable environmental characteristics.

Research and Development

The goal of our research and development efforts is to improve our core DFC products and expand our technology portfolio in complementary high temperature fuel cell systems, such as SOFC. In addition, we are also conducting limited development work on advanced applications for other fuel cell technologies, such as PEM. A significant portion of our research and development has been funded by government contracts and is classified as cost of research and development contracts in our consolidated financial statements. For the fiscal years ended 2004, 2003 and 2002,

total research and development expenses, including amounts received from the DOE, other government departments and agencies and our customers, and amounts that have been self-funded, were \$44.9 million, \$44.3 million and \$52.5 million, respectively.

Government Research and Development Contracts

Since 1975, we have worked on the development of our DFC technology with various U.S. government departments and agencies, including the DOE, the Navy, the Coast Guard, the Department of Defense, the Environmental Protection Agency, the Defense Advance Research Projects Agency and the National Aeronautics and Space Administration. Government funding, principally from the DOE, provided approximately 60 percent, 52 percent, and 81 percent of our revenue for the fiscal years ended 2004, 2003 and 2002, respectively. From the inception of our carbonate fuel cell development program in the mid-1970s to date, approximately \$450 million has been invested to support the development of our DFC technology. This includes approximately \$280 million from government agencies, with the balance provided by private entities such as FuelCell Energy, utility organizations and licensees.

DFC Programs

Product Design Improvement (PDI) In 1994 we entered into a cooperative agreement with the DOE to focus on our DFC technology and system optimization for cost reduction, product design development and fuel cell system field trials. Since 1994, the aggregate dollar amount expended under the DOE contract is approximately \$213 million, with the DOE providing approximately \$135 million in funding. Work under this agreement was completed in 2004.

King County, Washington In 2001, we signed an agreement with King County, Washington to deliver a 1 MW DFC 1500 power plant to operate on anaerobic digester gas from its municipal wastewater treatment facility. This MW-class field trial demonstration, with a total project value of approximately \$18.8 million, is cost-shared by King County through a cooperative grant from the U.S. Environmental Protection Agency and us. We began operating the unit on natural gas in July 2004 and then switched to anaerobic digester gas in August 2004. This demonstration project is expected to run through 2006.

Clean Coal Project In July 2002, we received approval from the DOE to accelerate the demonstration of our 2 MW DFC 3000 power plant operating on synthesis gas derived from coal. The total value of the project is \$34.6 million, with 50 percent of the cost shared by the DOE. We installed the DFC3000 power plant at a coal gasification site in Indiana in July 2004 and expect to begin operating the unit when the gasification facility is operational. Coal is the dominant fuel for electric power generation in the U.S., with a little more than 50 percent of the power coming from coal-fired plants in 2002.

Ohio Coal Mine Methane Project In 2000, we were selected by the DOE's National Energy Technology Laboratory to demonstrate the ability of DFC power plants to generate electricity using coalmine methane emissions that otherwise escape into the atmosphere. We delivered a sub-MW DFC power plant to an AEP Ohio Coal LLC Rose Valley Site in Hopedale, Ohio in August 2003 and completed the successful operation phase of this project in December 2003.

Future Products

Direct FuelCell/Turbine In October 2002, we received a modification to our existing Vision 21 program agreement with the DOE to demonstrate two additional sub-MW power plants based on our DFC/T technology. This modification provides an additional \$16 million to the budget, cost-shared by the DOE and us. We will test the first DFC/T at our facility in Danbury, Connecticut and demonstrate the second DFC/T plant in Montana. In fiscal year 2004, we successfully completed our proof-of-concept test of a 250 kW power plant integrated with a 60 kW micro turbine, and completed the design of our first packaged sub-MW alpha unit. This power plant will be assembled for factory testing in Danbury in the third calendar quarter of 2005. In this patented technology, heat generated by the fuel cell is used to drive an unfired modified micro turbine to generate additional electricity. The ultimate objective of this program is the design of a 10 to 40 MW DFC/T power plant that is expected to approach the 75 percent efficiency goal specified by the DOE's Vision 21 program. The DOE's Office of Fossil Energy established its Vision 21 Program

in 1999 with the objective of developing a 21st Century Energy Plant that can generate electricity, heat/steam, clean fuels, chemicals and hydrogen from a variety of feedstocks such as fossil fuels and biomass with high efficiency and low environmental impact.

DFC Marine/Diesel We are currently working on marine applications of our DFC products under programs with the U.S. Navy. These ship service fuel cell (SSFC) power plants are required to operate on liquid fuels such as diesel. We have a contract with the Office of Naval Research to deliver a 500 kW SSFC power plant for land-based demonstration at the Naval Sea Systems Command in Philadelphia. We have assembled the balance of plant process equipment for the DFC power plant and initiated testing in Danbury. Upon successful completion of this phase of the project, the balance of plant will be integrated with two 250-kW fuel cell stacks. The complete power plant is expected to be tested in Danbury during the summer of 2005. This \$21.6 million cost-shared project started in 2000 and is a continuation of an earlier \$4.6 million contract that completed the conceptual design and testing of the critical components for the marine fuel cell module.

Additionally, we are performing a number of smaller contracts related to the development of SSFC products. In October 2003, we received a \$954,000 subcontract award for a supplemental program. Specific tasks for this program include the design engineering for installing diesel-fueled DFC power plants at naval facilities and on ships, operational testing of a DFC 300A power plant in Danbury from a control center in Maine, and development of a marine fuel cell simulator for use as an operator training aid. We expect that successful demonstration of this project can lead to additional diesel fuel cell power plant applications for commercial ships and island power generation.

SECA Program In September 2004, we entered into a contract with the DOE to lead a project team for its SECA program. The goal of the SECA program is to accelerate the commercialization of low-cost solid oxide fuel cells, a part of the DOE's commitment to developing clean, efficient, reliable and affordable power generation. We plan to do this by reducing the operating temperature of the SOFC system to introduce cheaper materials in its construction and extend the operating life of the SOFC systems. The FuelCell team members currently include Versa, Materials and Systems Research, Inc. (MSRI), University of Utah (UU), Gas Technology Institute (GTI), Electric Power Research Institute (EPRI), Dana Corporation (Dana) and Pacific Northwest National Laboratory (PNNL). Additional SECA industrial team leaders include Accumetrics, Cummins Power Generation, Delphi Automotive Systems, General Electric Power Systems, and Siemens Westinghouse Power Corporation.

The 10-year, \$139 million program has three phases. The first phase will develop stationary modules in the 3 to 10 kilowatt size range and scalable systems for applications up to 100 kW operating on natural gas with target efficiencies of 45 percent. Phase one is a three-year, \$24 million program to be cost-shared by the DOE (\$15 million) and the FuelCell team (\$9 million). This contract for this first phase was finalized in September 2004.

Phases two and three will focus on enhancing system efficiencies to 50 percent and 55 percent, respectively, as well as operating on additional fuels such as propane and diesel. The development of hybrid power plants combining fuel cells with turbines and stirling engines will also be evaluated in the latter phases. These latter two phases are also to be cost shared by the DOE (\$52 million) and the project's participants (\$63 million). Advancement to these stages is dependent upon successes achieved in Phase one, selection by the DOE as a continuing project participant and subsequent congressional appropriations.

On November 1, 2004, we consolidated our Canadian SOFC operations into Versa in exchange for stock in Versa, increasing our ownership interest from 16 percent to 42 percent. We believe consolidating SOFC development into a single entity provides a greater opportunity to commercialize SOFC products under the DOE's SECA program.

Versa, founded in 1991, is a joint venture of GTI, EPRI, UU, MSRI and FuelCell Energy. Versa's proprietary intellectual property (19 patents and pending patent applications), mutually developed and owned by the joint venture partners, includes a patented planar SOFC system and process that uses a unique cell configuration and components designed to enable operation at much lower temperature with increased power density.

Our former Canadian SOFC operations, part of Global Thermoelectric Inc. acquired in November 2003, initiated its SOFC research and development program in 1997. This Canadian SOFC operation has developed a key proprietary fuel cell design and pilot manufacturing processes and methods. This cell design, combined with advanced stack technology, is now being tested in complete systems, with a focus on the development of stationary natural gas-fueled prototypes.

We continue as a prime contractor under SECA and we are collaborating with Versa and other partners on SOFC systems development. Versa established its headquarters in Colorado and continues technology development in Calgary, Alberta, Canada. A 2-kW SOFC system is currently being tested as part of expected delivery of a 3-kilowatt system for the DOE in 2006.

Target markets for these SOFC products include remote sites, telecommunications facilities, commercial and residential buildings, back-up, mobile standby and auxiliary power units. If successfully commercialized, these SOFC products, ranging in size from 3-kW to 100-kW, will be complementary to our larger-scaled DFC power plants, ranging in size from 250-kW to 2-MW, that we are delivering to commercial, industrial and government customers today.

BACKLOG

Our backlog as of October 31, 2004 was approximately \$47 million compared with backlog of approximately \$46 million as of October 31, 2003. Backlog refers to the aggregate revenues remaining to be earned at a specified date under contracts we hold. For U.S. government contracts, we include the total contract value including any unfunded portion of the total contract value in backlog. U.S. government contract backlog was approximately \$16 million and \$31 million as of October 31, 2004 and 2003, respectively. The unfunded portion of our U.S. government contracts amounted to approximately \$4 million and \$17 million respectively as of October 31, 2004 and 2003, respectively. Due to the long-term nature of our government contracts, fluctuations from year to year are not an indication of any future trend. Although backlog reflects business that is considered firm, cancellations or scope adjustments may occur and will be reflected in our backlog when known. Product order backlog was approximately \$26 million and \$15 million as of October 31, 2004 and 2003, respectively. Product orders represent approximately 62 percent of our total funded backlog.

EMPLOYEES

As of October 31, 2004 we had 346 full-time employees, of whom 104 were located at the Torrington, Connecticut manufacturing plant, and 242 were located at the Danbury, Connecticut facility or various field offices. All employees in our SOFC business were transferred to Versa Power Systems, Inc. effective November 1, 2004 and are not included in these numbers.

PROPERTIES

Our headquarters are located in Danbury, Connecticut. The following is a summary of our offices and locations:

Location	Business Use	Square Footage	Lease Expiration Dates
Danbury, Connecticut	Corporation Headquarters, Research and Development, Sales, Marketing, Purchasing and Administration	72,000	Company owned
Torrington, Connecticut	Manufacturing	65,000	December 2010 ⁽¹⁾
Danbury, Connecticut	Manufacturing and Operations	38,000	October 2009
Pasadena, California	Sales & Marketing	200	June 2005
Calgary, Alberta, Canada	Research and Development	103,000	January 2006 ⁽²⁾

(1) We have an option to extend the lease for an additional five years.

(2) Facilities acquired with the acquisition of Global Thermoelectric, Inc. on November 3, 2003 for which we have remaining lease obligations. We are currently sub-leasing part of this facility to Versa Power Systems, Inc.

LEGAL PROCEEDINGS

We are not currently a party to any legal proceedings that, either individually or taken as a whole, we believe could materially harm our business, prospects, results of operations or financial condition.

MANAGEMENT**EXECUTIVE OFFICERS OF FUELCELL**

Our executive officers and their ages are as follows:

NAME	AGE	POSITION WITH FUELCELL
Jerry D. Leitman	62	President, Chief Executive Officer and Chairman of the Board
Dr. Hansraj C. Maru	60	Executive Vice President, Chief Technical Officer
	62	Executive Vice President, Chief Operating Officer

Christopher R.
Bentley

Joseph G. Mahler	52	Senior Vice President, Chief Financial Officer, Treasurer & Corporate Secretary
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Herbert T. Nock	55	Senior Vice President of Marketing and Sales
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R. Daniel Brdar	45	Vice President of Product Development
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Jerry D. Leitman. Mr. Leitman has been our President and Chief Executive Officer since August 1997 and became Chairman of our board of directors in June 2002. Mr. Leitman was previously President of Jaydell Inc., a personal investment-Sub S Corporation from 1995 to 1997. From 1992 to 1995, Mr. Leitman was President of Asea Brown Boveri s (ABB) global air pollution control businesses. Prior to joining ABB, Mr. Leitman was Group Executive Vice President of FLAKT AB, a Swedish multinational company, responsible for FLAKT s worldwide industrial businesses from 1989 to 1992. Mr. Leitman is also a Director and Chairman of the compensation committee of Esterline Technologies Inc.

Dr. Hansraj C. Maru. Dr. Maru has been our Executive Vice President since December 1992 and was appointed our Chief Technology Officer in August 2000. Mr. Maru was a director of FuelCell from December 1992 to March 2004. Dr. Maru was Chief Operating Officer from December 1992 to December 1997. Prior to that he was Senior Vice President Research and Development. Prior to joining us in 1977, Dr. Maru was involved in fuel cell development at the Institute of Gas Technology. Dr. Maru received a Ph.D. in Chemical Engineering from the Illinois Institute of Technology in 1975.

Christopher R. Bentley. Mr. Bentley has been our Executive Vice President since September 1990 and our Chief Operating Officer since August 2000. Mr. Bentley was a director of FuelCell from June 1993 to March 2004. Mr. Bentley was President of Fuel Cell Manufacturing Corporation, our former subsidiary, from September 1990 to December 1997. From 1985 through 1989, he was Director of Manufacturing (1985), Vice President and General Manager (1985-1988) and President (1988-1989) of the Turbine Airfoils Division of Chromalloy Gas Turbine Corporation, a major manufacturer of gas turbine hardware. Mr. Bentley received a BSME from Tufts University in 1966.

Joseph G. Mahler. Mr. Mahler joined us in October 1998 as Senior Vice President, Chief Financial Officer, Corporate Secretary and Treasurer. Mr. Mahler worked for Ernst & Young from 1974 - 1992 in the New York and Hartford offices. In Hartford, he was a partner in the Entrepreneurial Services Group. From 1993 to 1998, Mr. Mahler was Vice President Chief Financial Officer at Earthgro, Inc. Mr. Mahler received a BS in Accounting from Boston College in 1974.

Herbert T. Nock. Mr. Nock joined us in August 2000 as Senior Vice President of Marketing and Sales. Mr. Nock previously worked for General Electric's Power Systems business for 29 years, most recently as Product General Manager for small gas turbine products. Mr. Nock received his BS in Mechanical Engineering from Worcester Polytechnic Institute in 1971 and his MBA from Boston University in 1977.

R. Daniel Brdar. Mr. Brdar joined us in January 2001 as Vice President of Distributor Operations and has been Vice President of Product Development since June 2003. Prior to joining FuelCell Energy, Mr. Brdar was the Gas Turbine Product Manager for General Electric's (GE) Power Systems business. Before joining GE, he led the U.S. Department of Energy's Power Systems Product Management organization. Mr. Brdar received his BS in Engineering from the University of Pittsburgh in 1981.

We have a Code of Ethics, as defined in SEC rules, that applies to our principal executive officer, our principal financial officer and our principal accounting officer.

DIRECTORS OF FUELCELL

Our directors and their ages are as follows:

NAME	AGE	DIRECTOR SINCE
Jerry D. Leitman	62	1997
W a r r e n D . Bagatelle	66	1988
Michael Bode		