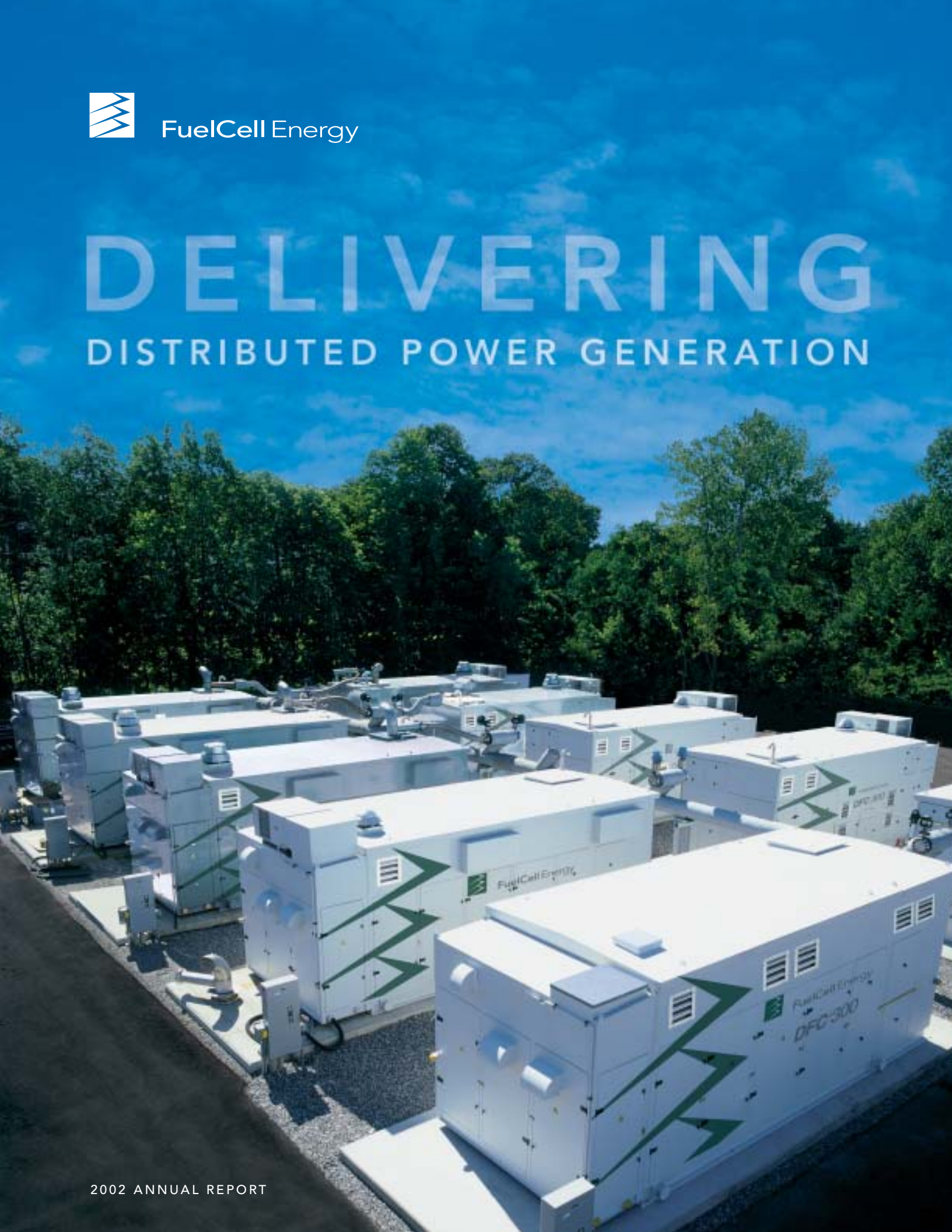
FuelCell Energy

DELIVERING

DISTRIBUTED POWER GENERATION



2002 ANNUAL REPORT

COMPANY PROFILE

FuelCell Energy, Inc. (NasdaqNM:FCEL) is a world-recognized leader in the development and manufacture of fuel cells for distributed power generation. The Company's patented Direct FuelCell® (DFC®) technology combines high efficiency, low emissions, simplicity and economical cost for stationary power generation. Our products are designed for a wide range of customers such as utilities, industrial facilities, data centers, shopping centers, wastewater treatment plants, office buildings, hospitals, universities and hotels with power requirements ranging from 250 kW to 50 MW.

MARKET DRIVERS

Accelerated growth of stationary fuel cell power generation is based on the following factors:

Operational Efficiency – Our DFC power plants have the potential to reach efficiencies of 45 to 57 percent in single cycle applications and 70 to 80 percent for combined heat and power and combined cycle applications.

Reliability – The continued growth of the 24x7 global economy increases the need for higher electrical reliability than existing central power plant generation and the constrained transmission and distribution system can provide.

Grid Constraints – In many areas, the electrical transmission and distribution system has not kept pace with economic development, resulting in a shortage of available power, a trend that is expected to continue.

Emissions – Highly industrialized regions of the world suffer from high pollution levels that restrict the ability to add traditional combustion-based power generation.

Security – Our DFC products can enhance security by installing smaller, incremental power plants in dispersed locations, thereby reducing our dependence on a large vulnerable infrastructure.

Transmission and Distribution Efficiency – Line losses related to delivering electricity from large central power plants through the transmission and distribution system to end-use customers has been estimated to be greater than 10 percent.

Capacity Addition Efficiency – DFC distributed power generation can be added in increments that more closely match expected demand and in a shorter time frame than large central power plants and long transmission and distribution lines.

Energy Independence – DFC power plants utilize domestic fuel sources, such as natural gas, coal (which can be converted to synthetic gas) and industrial and municipal wastewater treatment gas, all abundant U.S. resources.

FINANCIAL HIGHLIGHTS

		October 31,			
(Dollars in thousands, except per share data)	**2002**	2001	2000	1999	1998
Revenues	**$ 41,231**	$ 26,179	$ 20,715	$ 19,965	$ 24,318
Net loss	**(48,840)**	(15,438)	(4,459)	(985)	(382)
Basic and diluted loss per share	**(1.25)**	(0.45)	(0.16)	(0.04)	(0.02)
Total assets	**289,803**	334,020	91,028	19,831	26,843
Total shareholders' equity	**271,702**	319,716	83,251	14,815	15,870

Front Cover Picture: Sub-megawatt section of our Danbury, Connecticut, test and conditioning facility. FuelCell Energy expanded this facility to accommodate 50 MW of fuel cell power plants per year — 25 MW for DFC300A sub-megawatt power plants, and 25 MW for DFC1500 and DFC3000 megawatt class power plants.

Target customers include hotels (a 300 room hotel has an approximate base load requirement of 250 kW, the nominal output of our DFC300A), office buildings, hospitals, and data/ telecommunications centers (a typical data center has a load of 1 MW, the nominal output of our DFC1500).

"With our achievements in 2002, and our focus on delivering DFC power plants and generating orders, we are positioned to take advantage of increasing market opportunities to deliver clean, reliable and efficient fuel cell power plants to our customers."

TO OUR SHAREHOLDERS,

As a global leader in clean, efficient and reliable stationary fuel cell technology, we believe we have the right products, distribution partners and financial strength to bring our DFC power plants to commercial and industrial markets in the U.S., Europe and Asia.

Importantly, we find that the market drivers for distributed generation, and our fuel cell power plants in particular, are strong and growing. Distributed generation responds to the demand for higher reliability, lower emissions, and higher efficiency utilizing cogeneration. Moreover, our products can distribute power with more flexibility to specific load centers, enhance security because incremental power plants can be dispersed in various locations, and increase energy independence by using multiple domestic fuels.

Since DFC power plants can generate hydrogen internally from natural gas and other fuels, we do not need to wait for the creation of a hydrogen infrastructure. Our DFC products are ready to enter commercial and industrial stationary power markets today.

Our DFC products are more efficient, cleaner and more easily sited than traditional power generation equipment. We believe near-term sales will continue to be achieved through "early adopters," energy users who have strong environmental or energy efficiency concerns, need more reliable electricity sources than what's currently available, are willing to pay higher per-kilowatt prices to obtain the power they need, and can take advantage of worldwide government subsidies that provide funding for fuel cell installations.

Meanwhile, traditional energy markets were in a state of turmoil in 2002, with the power industry credit crunch, relatively flat energy demand due to the current sluggish economic environment, low prices, and power plant project cancellations.

While this impacted us in 2002, we made significant progress in our near-term strategy – developing standardized DFC products, increasing manufacturing capacity, strengthening our organization and distribution partnerships, and adding new customer sites in a variety of applications, including hotels, industrial and municipal wastewater treatment facilities, manufacturing facilities and data/telecommunications centers.

Standardizing Our Products

The foundation of our business is fuel cell technology specifically designed to meet the need for distributed power generation for commercial and industrial customers. Here's a brief review of our products:

DFC300A – We developed the enhanced 250 kW DFC300A based on our experience with nine DFC300 field trial units in the U.S. and Germany. The DFC300A incorporates design improvements that result in higher performance, lower costs and a smaller footprint. The first DFC300A was delivered to Japan in the fourth calendar quarter of 2002. Additional DFC300A power plants are scheduled to be delivered to customers' sites during 2003.

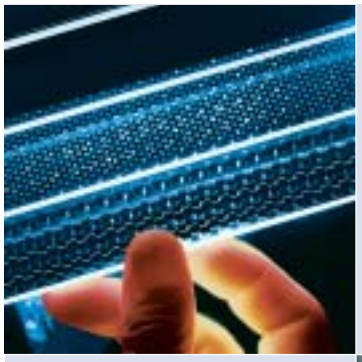
DFC1500 – We completed the design of a one-megawatt DFC power plant, which includes four 250 kW stacks in a single module. The DFC1500 field trial unit will operate on natural gas, grid-connected, in Torrington, Connecticut, before being delivered to a municipal wastewater treatment facility in King County, Washington, in the first half of calendar year 2003.

DFC3000 – In July 2002, the DOE accelerated the timetable for the first two-megawatt DFC3000 power plant demonstration when it approved a change in location to a coal gasifier in Indiana. This plant will also operate initially on natural gas, grid-connected, in Torrington, before being delivered to the customer later in calendar year 2003.

Direct FuelCell/Turbine® (DFC/T®) – During 2002, we completed operation of the 'proof-of-concept' DFC/T system that combined a sub-megawatt DFC with a 30 kW microturbine. In October, the DOE modified its Vision 21 agreement to include the demonstration of two packaged sub-megawatt units, one in Danbury and one at a customer site in Montana. This modification added an additional $16 million to the project's budget that we will share with the DOE.

In the patented DFC/T system, the fuel cell is operated in a combined-cycle using the byproduct heat of the fuel cell with an unfired gas turbine. In the larger 10-50 MW combined-cycle design, the DFC/T is expected to approach the 75 percent electrical efficiency target as specified by the Vision 21 program, while retaining the ultra-low emissions of our DFC power plants.

Diesel DFC – The ability to use liquid fuel, such as diesel, is important for many defense, marine, remote and island power generation applications. Under a program with the U.S. Navy, the Company has designed the fuel processing system and a packaged 500 kW DFC power plant that will be demonstrated at the Philadelphia Navy Yard in calendar year 2004.



FuelCell Energy has the equipment in place to manufacture 50 MW of fuel cells annually. Production levels will be dependent on market demand.

Developing Our Distribution Network

FuelCell Energy has established strong commercial distribution alliances with electric power equipment sales and service companies, energy service and solution providers and specialty application developers. These strategic partnerships will accelerate the process of getting our DFC power plants to market. Our continued collaboration on a number of proposals, some in the multi-megawatt size range, reflect the strong interest in our fuel cell technology.

MTU DaimlerChrysler – Our European partner, MTU, placed orders for fuel cell components for six additional sub-megawatt units, and began operating five new sub-megawatt DFC power plants at customer sites. These sites include RWE, Germany's largest utility; IZAR, a ship builder in Spain; a Deutsche Telecom communications center in Munich; a Michelin tire plant in Karlsruhe; and a hospital in Magdeburg.

Marubeni – Our Asian distribution partner announced the first three DFC300A customers in Japan. An installation at the Kirin Brewery, Tokyo, delivered in December 2002, will operate on industrial wastewater treatment gas, serving part of the brewery's needs for both electric power and steam. DFC300As are scheduled for installation in 2003 at a municipal wastewater treatment facility in Fukuoka and at Nippon Metal, a specialty steel manufacturer.

Caterpillar – We established a 10-year alliance agreement to distribute DFC power plants and to develop Caterpillar-branded DFC power plants. These units, in the 250 kW to 3 MW size range, will incorporate our DFC fuel cell modules into Caterpillar power plant systems. More than 60 Caterpillar dealer representatives participated in our training seminars and are actively pursuing market opportunities.

PPL Energy Plus – PPL Energy announced five additional customers, adding to the Coast Guard project announced in fiscal 2001. DFC300A power plants will be delivered in 2003 to two Sheraton hotels in New Jersey; Ocean County College in New Jersey; and the Zoot Enterprises' headquarters building in Montana, which requires two DFC300A plants.

Energy Solutions Companies/Specialty Applications – We also entered into market development agreements with Chevron Energy Solutions and CMS Viron Energy Services, focusing on California, as well as MWH Global, which focuses on the wastewater treatment market.

Significant Market Potential

We see significant growth potential for our products. One estimate from Allied Business Intelligence forecasts that 16,000 MW of stationary fuel cell power plants will be installed worldwide in the next 10 years.

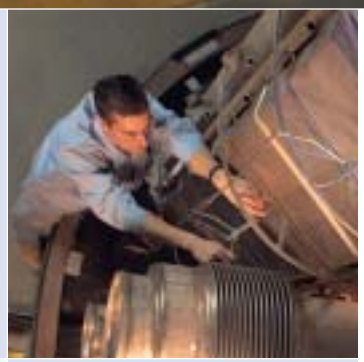
Another study, prepared for the DOE/EIA in 2000, estimated the potential market for combined heat and power (CHP) installations in the U.S. to be greater than 77,000 MW. This includes 6,500 MW for hotels/motels; 8,800 MW for hospitals; 19,000 MW for schools/colleges/universities; and over 18,600 MW for office buildings. Of this 77,000 MW CHP total in the U.S., 50 percent was identified in nine states – California, Florida, Illinois, Michigan, New Jersey, New York, Ohio, Pennsylvania and Texas.

Along with our distribution partners, we are targeting these specific geographic markets because of their high electricity costs, strict emissions requirements and congested and aging transmission and distribution infrastructures.

One challenge in this pursuit is the sales cycle time which, from initial discussion to contract closing, has proved to be longer than originally expected. Issues such as interconnection requirements, net metering, exit fees, and stand-by and backup charges affect distributed generation in general. Working on projects that are eligible for state and/or federal incentives also involves detailed negotiations with requisite government agencies. To address these challenges, we have focused much of our training on ways to streamline the approval process, and we're working with state legislatures and regulatory agencies to overcome regulatory and utility-driven obstacles.

The good news is that global government initiatives, especially in the form of incentives for our fuel cell technology, are available and proving to be an important impetus for early adopters, which include such recent siting successes as Sheraton Hotels and Ocean County College in New Jersey, the Coast Guard in Massachusetts, and units in Germany and Japan.

In 2003, FuelCell Energy will begin the field trial program of its megawatt class units, the DFC1500 and DFC3000. This 1 MW DFC1500 will be operated on natural gas, grid-connected, in Torrington, Connecticut, before being delivered to King County, Washington, to operate on municipal wastewater treatment gas in 2003. Similarly, a 2 MW DFC3000 will be operated on natural gas in Torrington before delivery to Wabash, Indiana, to operate on coal derived synthetic gas during the second half of calendar year 2003.



Increasing Manufacturing Capabilities

Anticipating our growth, we continued to expand our production capabilities in Danbury and Torrington, and our partner, MTU, expanded its assembly and testing facility in Munich. The Danbury facility was expanded to test and condition more than 50 MW of fuel cell power plants per year. Additional equipment was installed at our manufacturing plant in Torrington to bring our manufacturing equipment capacity to 50 MW. Our production levels will be determined based on market demand.

Growing the Organization to Meet the Demand

To implement the product strategy of standardizing our DFC power plants, increasing our manufacturing production volume and developing our distribution network, we continue to build a strong organization.

The Company has added more than 160 employees during fiscal 2002, which increased staffing to 425. We also continue to develop the necessary infrastructure to support the business, including information systems, a parts and service organization, quality/productivity process controls, and sales and service training for our distribution partners, as well as our field service staff and applications engineers.

Focus for 2003

Our focus for 2003 includes:

- Delivering and commissioning DFC300A power plants in backlog.
- Generating orders for targeted commercial and industrial applications in the U.S., Europe and Asia.
- Implementing a field-follow program for the DFC300A to monitor fleet performance with additional instrumentation, field service and data gathering.
- Initiating a field trial program for the megawatt class, grid-connected DFC1500 and DFC3000 power plants.
- Building on the capabilities of our distribution network and accelerating proposal activities through additional sales and service training and by offering terms and conditions that include warranties, performance guarantees and extended service agreements.
- Reducing product cost and focusing on value engineering, performance improvements, manufacturing cost efficiencies and supplier development.
- Managing cash consistent with market demand, following the completion of our near-term product strategy.

With our achievements in 2002, and our focus on delivering DFC power plants and generating orders, we are positioned to take advantage of increasing market opportunities to deliver clean, reliable and efficient fuel cell power plants to our customers.

Jerry D. Leitman
Chairman, President and
Chief Executive Officer

OFFICERS

Jerry D. Leitman

President, Chief Executive Officer

Dr. Hansraj C. Maru

Executive Vice President,
Chief Technology Officer

Christopher R. Bentley

Executive Vice President,
Chief Operating Officer

Joseph G. Mahler

Senior Vice President,
Chief Financial Officer, Secretary, Treasurer

Herbert T. Nock

Senior Vice President, Marketing and Sales

DIRECTORS

Jerry D. Leitman (1997) * ✣

Chairman, President and
Chief Executive Officer,
FuelCell Energy, Inc.

Thomas L. Kempner (1988) * ✣

Chairman and Chief Executive Officer,
Loeb Partners Corporation

Christopher R. Bentley (1993)

Executive Vice President,
Chief Operating Officer,
FuelCell Energy, Inc.

Warren D. Bagatelle (1988) * ●

Managing Director,
Loeb Partners Corporation

William A. Lawson (1988) * ^ ✣

President, W.A. Lawson Associates

Dr. Hansraj C. Maru (1992)

Executive Vice President,
Chief Technology Officer,
FuelCell Energy, Inc.

James D. Gerson (1992) * ●

Vice President, Fahnestock & Co., Inc.

Michael Bode (1993)

Chief Executive Officer,
MTU CFC Solutions GmbH,
an affiliate of DaimlerChrysler Ag

John A. Rolls (2000) * ^ ✣

President and Chief Executive Officer,
Thermion Systems International

Thomas R. Casten (2000) ^

Chairman and Chief Executive Officer,
Private Power LLC

Charles J. Murphy (2002) ●

Private Investment Banking Consultant
Power and Energy Technology

* Executive Committee
● Audit Committee
^ Compensation Committee
✣ Nominating Committee

The following is a portion of our Annual Report on Form 10-K as filed with The Securities and Exchange Commission.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)
[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: **October 31, 2002**

OR

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

For the transition period from _____ to _____

Commission File Number: 1-14204

FUELCELL ENERGY, INC.

(Exact name of registrant as specified in its charter)

Delaware	**06-0853042**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
3 Great Pasture Road **Danbury, Connecticut**	**06813**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **(203) 825-6000**

Securities registered pursuant to Section 12(b) of the Act:
None

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $.0001 par value per share
(Title of class)

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

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

The aggregate market value of voting stock held by non-affiliates of the registrant was approximately $187,789,044 which is based on the closing price of $5.65 on January 22, 2003. On January 22, 2003 there were 39,318,251 shares of common stock of the registrant issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE **Certain information contained in the registrant's definitive proxy statement relating to its forthcoming 2003 Annual Meeting of Stockholders to be filed not later than 120 days after the end of registrant's fiscal year ended October 31, 2002 is incorporated by reference in Part III of this Annual Report on Form 10-K.**

FUELCELL ENERGY, INC.

INDEX

Forward-looking Statement Disclaimer

When used in this Report, the words "expects", "anticipates", "estimates", "should", "will", "could", "would", "may", and similar expressions are intended to identify forward-looking statements. Such statements include statements relating to 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 technology, and the timing and availability of products under development. These and other forward looking statements contained in this Report are subject to risks and uncertainties, known and unknown, that could cause actual results to differ materially from those forward-looking statements, including, without limitation, general risks associated with product development and introduction, changes in the utility regulatory environment, potential volatility of energy prices, government appropriations, the ability of the government to terminate its development contracts at any time, rapid technological change, and competition, as well as other risks contained under Item 1 "Business-Risk Factors" of this Report. We cannot assure that we will be able to meet any of our development or commercialization schedules, that the government will appropriate the funds anticipated by us under our government contracts, that the government will not exercise its right to terminate any or all of our government contracts, that any of our products or technology, once developed, will be commercially successful, or that we will be able to achieve any other result anticipated in any other forward-looking statement contained herein. The forward-looking statements contained herein speak only as of the date of this Report. Except for ongoing obligations to disclose material information under the federal securities laws, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any such statement to reflect any change in our expectations or any change in events, conditions or circumstances on which any such statement is based.

Background

Information contained in this Report 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 Annual Report, they have not been independently verified by us and, accordingly, we cannot assure you that such information is accurate in all material respects. Our estimates, particularly as they relate to our general expectations concerning the electric power supply industry and the distributed generation market, involve risks and uncertainties and are subject to change based on various factors, including those discussed under "Risk Factors" in Item 1 of this Annual Report.

As used in this Annual Report, all degrees refer to Fahrenheit (^{o}F), and kilowatt and megawatt numbers designate nominal or rated capacity of the referenced power plant. As used in this Annual Report, "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; "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; and "terawatt hour" (TWh) is equal to 1 TW of power supplied to or taken from an electric circuit steadily for one hour.

PART I

Item 1. Business

Introduction

We are a world leader in the development and manufacture of carbonate fuel cell power plants for distributed power generation. We have designed and are developing standard fuel cell power plants that offer significant advantages compared to existing power generation technology. These advantages include higher fuel efficiency than existing distributed generation equipment, significantly lower emissions, quieter operation, lower vibration, flexible siting and permitting requirements, scalability and potentially lower operating, maintenance and generation costs. We are currently conducting, and have successfully concluded, field trials of fuel cell power plants ranging from 250 kW to 2 MW.

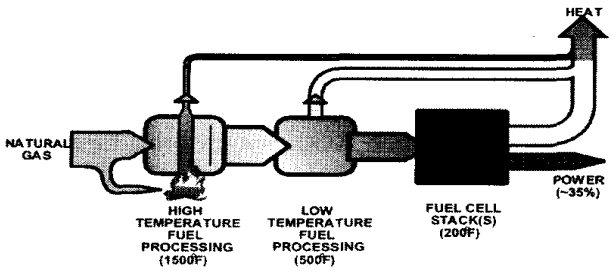
According to a 2001 study by Allied Business Intelligence (ABI), the cumulative worldwide electrical generating capacity is expected to grow from 3,137 gigawatts in 2000 to 4,280 gigawatts in 2011, a 2.8 percent compound annual growth rate. At an estimate of $750 per kW, that amounts to an approximate $850 billion market potential for new central station and distributed power generation. We estimate that distributed generation currently captures between 10% and 20% of this market. We believe that there is a market opportunity to increase the share for distributed generation equipment that can respond to the need for higher reliability, lower emissions, higher efficiency utilizing cogeneration, the ability to distribute power in more flexible sizes at specific load centers, enhanced security by installing incremental power plants in dispersed locations, and increased energy independence by utilizing fuels other than oil. Our Direct Fuelcell® (DFC®) products, which have higher efficiency, cleaner generation and are more easily sited than existing distributed generation equipment, have the attributes to penetrate this market and further enable its growth.

From our founding in 1969, we focused on developing fuel cells and specialized batteries. These efforts resulted in our obtaining various patents and expertise in these electrochemical technologies. Since 1975, we have concentrated on developing products in cooperation with United States Department of Energy ("DOE"), the United States Department of Defense ("DOD"), and other sources such as MTU-Friedrichshafen GmbH ("MTU"), a unit of DaimlerChrysler, our European partner, to whom we have licensed our fuel cell technology internationally. In April 2000 and June 2001, we raised net proceeds of approximately $299,000,000 from additional public offerings of our common stock. Since September 2000, we have received an additional $25,000,000 from other equity investment partners.

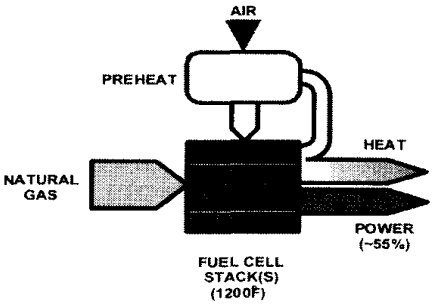
Our carbonate fuel cell, known as the Direct FuelCell, is so named because of its ability to generate electricity directly from a hydrocarbon fuel, such as natural gas, by reforming the fuel inside the fuel cell to produce hydrogen. We believe that this "one-step" process results in a simpler, more efficient and cost-effective energy conversion system compared with external reforming fuel cells. External reforming fuel cells, such as proton exchange membrane (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 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 plant products are expected to achieve an electrical efficiency of between 45% and 57%. Depending on location, application and load size, we expect that a co-generation configuration will reach an overall energy efficiency between 70% and 80%. 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



HIGH TEMPERATURE INTERNAL REFORMING DIRECT FUEL CELL



Our designs use the basic single fuel cell stack incorporated in our sub-megawatt class product as the building block for our megawatt class products. All three of our products will offer the capability of using the exhaust heat by-product for combined cycle applications utilizing an unfired gas turbine, and for co-generation applications using the high quality heat by-product for high-pressure steam, district heating and air conditioning.

Our products are designed to meet the power requirements of a wide range of customers such as utilities, industrial facilities, data centers, shopping centers, wastewater treatment plants, office buildings, hospitals, universities and hotels. Our initial market entry commercial products, the DFC300A, DFC1500 and DFC3000, will be rated at 250 kW, 1 MW and 2 MW in capacity. We expect our commercial products to mature to three configurations: 300 kW, 1.5 MW and 3 MW for distributed applications generally up to 10 MW. We are also developing new products, based on our existing power plant design, for applications in the 10 to 50 MW range.

We believe that our initial commercial sales will be to "early adopters." Energy users that, due to environmental or energy efficiency concerns, are unable to or choose not to site traditional combustion-based generation, or energy users that need more reliable electricity sources than provided by the grid, current diesel back-up generators, and batteries, may be willing to pay higher prices per kW to obtain the power that they need. We expect that these "early adopters" will include energy users that are able to take advantage of government subsidies that provide funding for fuel cell installations. We believe examples of "early adopters" will be institutions, commercial and industrial customers in pollution non-attainment zones and customers in grid-constrained regions. "Early adopters" will also include customers with opportunity fuels such as industrial or municipal wastewater treatment gas, and co-generation and reliability applications such as hospitals, schools, universities and hotels.

Units operating and in backlog include customers that are representative of these early adopter categories. Our Direct FuelCell has demonstrated grid-connected operation in the United States at our Santa Clara demonstration in California, at our Danbury, Connecticut facility, at the Mercedes-Benz manufacturing facility in Tuscaloosa, Alabama, and at the downtown headquarters of the Los Angeles Department of Water and Power in Los Angeles, California. In Europe, we have demonstrated grid-connected operation through installations by MTU at the University of Bielefeld in Germany; at the Rhön-Klinikum Hospital in Germany; at an energy park owned by RWE, Germany's largest utility, since April 2002; at a telecommunications center for Deutsche Telecom in Germany since October 2002; at a hospital in Germany for IPF since November 2002; at a Michelin tire plant in Germany since November 2002; and for IZAR, a shipbuilder in Spain, since November 2002. Units in backlog include two 250 kW units which will be located at Starwood hotels in New Jersey; a 250 kW unit which will be located at Ocean County College in New Jersey; a 250 kW wastewater treatment unit for the City of Fukuoka in Japan; a 1 MW wastewater treatment power plant for King County, Washington; two 250 kW units which will be located at Zoot Enterprises high-technology campus in Montana; a 250 kW unit at a Coast Guard base in Massachusetts; a 2 MW plant, which will operate on coal gas, at a site in Indiana; and a 250kW unit, utilizing coal mine methane gas, at a coal mine in Ohio.

Our current focus is to standardize our products, increase production volume, further develop our distribution network and concentrate our sales efforts on "early adopter" markets. We believe that the initial early adopter customers will lead to additional orders that will enable us to increase volume and subsequently implement our cost reduction plan. As a result, we believe we will eventually be able to provide a lower cost product and therefore achieve greater market potential with commercial and industrial customers.

Recent Developments

On December 16, 2002, Marubeni Corporation announced the siting of a Direct FuelCell power plant at the Nippon Metal Industry Co., Ltd., in Japan. Marubeni will install a 250 kW DFC power plant at the Sagamihara Works of Nippon Metal in the first calendar half of 2003. The facility produces specialty steels for a wide variety of applications and industries worldwide including in our fuel cell stacks. Our DFC cogeneration unit will operate using town gas and supply the facility with electricity and steam.

Our Direct FuelCell® Technology

We have been developing fuel cell technology since our founding in 1969 and carbonate fuel cells since the mid-1970s. Fuel cell systems represent an environmentally friendly alternative power generation source that can potentially yield a lower cost of electricity, primarily because of lower fuel and maintenance costs when compared to traditional combustion technologies, such as gas turbines or internal combustion engines. A fuel cell converts a hydrocarbon fuel, such as natural gas, into electricity without combustion of the fuel. The only by-products of the fuel cell are heat and water and reduced emissions of carbon dioxide.

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, including pipes and blowers, computer controls, inverters to convert the DC output of the fuel cell to AC and other related equipment.

Conventional non-nuclear power plants burn a hydrocarbon fuel, such as coal, oil or natural gas, to create heat. The heat boils water, converting it to steam, which rotates a turbine, which produces electricity. Some large power plants use a combined cycle approach where the gas is fired in the turbines and the exhaust heat produces steam, which generates additional power in steam turbines. Each step in these processes consumes some of the potential energy in the fuel, and the combustion process typically creates emissions of sulfur and nitrogen oxides, carbon monoxide, soot and other air pollutants.

Because of the non-combustion, non-mechanical power generation process, fuel cells are more efficient than comparable conventional power plants. Emissions of sulfur and nitrogen oxides from fuel cells are nearly zero, and other pollutants are minimal or non-existent. With the only moving parts being the air blower, in contrast to large rotating turbines, fuel cells are quieter than these turbines. Also, since they are quieter than other power generation sources, fuel cells can be located near the customer and provide both electrical and thermal energy. In addition, fuel cells typically achieve high efficiency at extremely small sizes, allowing fuel cells to satisfy the needs of the distributed generation market, such as providing electrical power to a hospital or a commercial building.

The following table shows our estimates of the electrical efficiency, operating temperature, expected capacity range and certain other operating characteristics of single cycle PEM, phosphoric acid, carbonate (Direct FuelCell) and solid oxide fuel cells operating on natural gas:

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

Our Direct FuelCell operates at approximately 1200°F, which is a higher temperature than most other fuel cells. This is an optimal temperature that avoids the use of precious metal electrodes required by lower temperature fuel cells, such as PEM and phosphoric acid, and the more expensive metals and ceramic materials required by higher temperature fuel cells, such as solid oxide. As a result, less expensive electrocatalysts and readily available metals are used in our design. In addition, our fuel cell produces high quality by-product heat energy (700°F) that can be harnessed for combined heat and power (CHP) applications using hot water, steam or chilled water to heat or cool buildings.

Our Direct FuelCell is so named because of its ability to generate electricity directly from a hydrocarbon fuel, such as natural 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 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 plant products are expected to achieve an electrical efficiency of between 45% and 57%. Depending on location, application and load size, we expect that a co-generation configuration will reach an overall energy efficiency of between 70% and 80%.

We believe that the advantages of our Direct FuelCell technology include the following:

- *High Efficiency*. The high efficiency, internal fuel reforming system incorporated within our Direct FuelCell leads to a simpler, more cost-effective power plant with superior operating characteristics that offer a variety of benefits to energy providers and end users. The elimination of external reforming contributes to higher operating efficiency, lower fuel use and, therefore, lower operating costs compared to competing fuel cell technologies.

- *Optimal Operating Temperature*. Our Direct FuelCell operates at a temperature of approximately 1200ºF. This temperature generates high quality by-product heat that provides superior energy efficiencies and allows the use of multiple fuels. This operating temperature avoids combustion of the fuel, and as a result, reduces pollutants to a minimal level. It also allows the fuel cell to be built with less expensive and commonly available materials.

- *Atmospheric Pressure*. Our Direct FuelCell operates at atmospheric pressure. This enables it to be constructed at a lower cost than other fuel cell systems that operate in a pressurized environment. This also allows our Direct FuelCell to operate unattended, with lower maintenance requirements, and greatly enhances the fuel cell stack-operating lifetime.

- *Multiple Fuel Capacity*. Because of the internal fuel reforming system and the high operating temperature, our Direct FuelCell has the capability to operate using multiple fuel sources, including natural gas, diesel, methanol, biogas, coal gas, coal mine methane and propane. We think that this provides a distinct competitive advantage in that it enables our Direct FuelCell to be used in a variety of applications where the supply or delivery of natural gas is limited.

- *Scalability*. Our power plant design is modular, allowing several units to be combined to provide incremental power capabilities. This allows our Direct FuelCell to be utilized by a wide range of customers with different power needs.

Market Opportunities for Distributed Generation

According to a 2001 study by Allied Business Intelligence (ABI), the cumulative worldwide electrical generating capacity is expected to grow from 3,137 gigawatts in 2000 to 4,280 gigawatts in 2011, a 2.8 percent compound annual growth rate. At an estimate of $750 per kW, that amounts to an approximate $850 billion market potential for new electric generation.

Electricity demand is closely tied to economic growth, with the proliferation of consumer electronic devices such as computers (desktops, laptops and hand-held devices), video games, televisions, and cell phones contributing to increased electrical usage as well. Peak demand continued to set records over the summer of 2002, even in an economy characterized as sluggish. In August 2002, New York City reported a weekend record of over 416,000 MWh in July (equivalent to what Vermont uses in three months). They also reported that July 2002 set a record for electric generation with nearly 6.2 million MWh, and that 5 of their top 10 peak days have been recorded in 2002. As per an August 2002 *New York Times* article, the Long Island Power Authority set a peak record of over 5,000 MW in July 2002 and reported that power demand on Long Island is growing at 4 to 5 percent per year, three times the state average. Similar records were set in New England, as the Independent System Operator of New England reported a peak demand of 25,500 MW on August 14, 2002.

A clear solution to meet the growing worldwide demand for electricity is distributed generation in general and our fuel cell technology in particular. This is recognized in the marketplace as ABI reported that global fuel cell energy generating capacity would increase to nearly 16,000 MW within 10 years, a substantial increase from the currently installed fuel cell generating capacity of approximately 45 MW.

The key drivers for fuel cell distributed generation have been defined for a number of years and recent general economic events as well as specific power industry developments have strengthened the need for our clean, reliable and highly efficient DFC power plants.

- *Operational Efficiency.* The average efficiency of power generation in the United States, heavily reliant on older coal plants and other technologies, is less than 35 percent. Efficiencies for smaller scale, combustion-based distributed generation technologies range from 20 to 25 percent for microturbines to 30 to 45 percent for engines and gas turbines. Our DFC power plants have the potential to reach efficiencies of 45 to 57 percent in single cycle applications and 70 to 80 percent for combined heat and power (CHP) applications.

- *Reliability.* The continued growth of the 24/7 global economy increases the need for higher electrical reliability. Distributed generation can respond to this need by locating power generation close to the end

user and avoiding the transmission and distribution infrastructure altogether. Power disturbances result in lost revenue, lost productivity, customer dissatisfaction, lower equipment performance, equipment damage, degradation of equipment life, and an adverse effect on safety. According to ABI, losses related to power interruptions are estimated to run $30 billion per year in the U.S. alone, with hourly loss estimates from $14,500 in bank/automated teller machine service fees to $6.4 million for transactions at stock brokerage firms. Such power interruptions are rarely caused by generation failures (only 6 percent). Rather, weather (65 percent) and animal interference (10 percent) affecting transmission and distribution lines are the primary causes of power outages.

- *Grid Constraints.* In many areas, the electrical transmission and distribution system has not kept pace with economic development, resulting in a shortage of available power and this trend is expected to continue. According to the North American Electric Reliability Council's (NERC) recent Reliability Assessment Study 2002-2011, merchant developers announced plans for more than 286,000 MW of new capacity during the next ten years, a potential increase of nearly 31 percent over the 934,370 MW currently installed in North America. However, only 10,100 new circuit miles of transmission facilities (230 kilovolts or higher) are planned for construction throughout North America over the corresponding time period, a five percent increase over the 203,159 miles currently installed. Several forces keep utilities from building new transmission lines and expanding the capacity of existing lines.

    - Siting new transmission is extremely difficult. Unlike the strong federal authority that rests with Federal Energy Regulatory Commission (FERC) to site natural gas pipelines, states currently site transmission lines. This can lead to long delays, especially if multiple states are involved.
    - The amount of money (rate of return) that FERC allows transmission owners to earn on investments in transmission facilities is too low to attract the capital needed to finance new transmission investments.
    - Public opposition to new facilities can keep utilities from building new transmission lines.

Two areas of the U.S., New York and southwestern Connecticut, are among those in need of additional transmission facilities to get needed power in their respective regions. In a 2002 update of New York ISO's Power Alert report prepared the previous year, over 7,000 MW of new generation will be needed in the state by 2005, with 2,000 to 3,000 MW needed to be sited within New York City because the city's energy needs cannot be satisfied by imported electricity due to limited transmission capabilities. Likewise, ISO New England has identified severe reliability problems in southwestern Connecticut due to inadequate capability to import electricity into the area as well as the inability to move electricity within the area.

- *Emissions.* Highly industrialized regions of the world, especially urban areas, suffer from high pollution rates that restrict the ability to add traditional combustion-based power generation. Fuel cells, which have ultra-low emissions, can be sited in these areas and allow these regions to grow their economies by increasing power generation while reducing pollution. Comparative emissions of fuel cell power plants versus traditional combustion-based power plants as complied by the DOE/National Energy Technology Laboratory are as follows:

	Emissions (Lbs. Per MWh)	
	NOx	**SO_2**
Average U.S. Fossil Fuel Plant	4.20	9.21
Microturbine	0.29	0.00
Combined Gas Cycle Turbine	0.23	0.005
Fuel Cell, Single Cycle (DFC)	0.016	0.00
Fuel Cell, Combined Cycle (DFC/T)	0.013	0.00

- *Security.* The events of 2001 have placed greater emphasis on reducing our dependence on a large vulnerable infrastructure. Cambridge Energy Research Associates identified the placement of distributed energy assets at customer facilities along critical energy paths, similar to the microgrid concept currently being deployed in many parts of the world (particularly after natural disasters) as part of the Homeland Security efforts by the U.S. Substituting smaller, site-specific generation plants such as our DFC power plants for large central power plants is consistent with this finding.
- *Transmission and Distribution Efficiency.* According to a 2002 survey by World Alliance for Decentralized Energy (WADE), worldwide transmission and distribution (T&D) losses totaled 1,366 TWh

in 1999, the equivalent of 11.66 percent of the world's electrical consumption, or more than the combined electrical demand of Germany, the United Kingdom, France and Spain. Including losses from T&D systems, the worldwide waste of energy arising from central power is very close to the total amount of energy consumed by the global transportation sector. Our DFC power plants, located directly at the customers' site, avoid this because power is generated at the load center.

- *Capacity Addition Efficiency.* Fuel cell distributed generation extends beyond the operations of each individual power plant to aggregate capacity additions. Our DFC power plants range in size from 250 kW to 2 MW, and multiple units combined together can provide power plants up to 50 MW. Conversely, traditional combustion-based central and/or regional power plants are larger in size, typically 50 to 100 MW or larger, resulting, in many cases, in excess capacity until demand grows over time. The same is true with transmission and distribution line additions. Consequently, our DFC distributed power generation can be added in increments that more closely match expected demand and in a shorter time frame from order to start up. End users benefit by not having to pay financing costs related to excess capacity. According to the New York ISO, efficient base load power generation plants take two to three years to build after approval is reached, adding to the difficulty in the installation of traditional, combustion-based power plants.
- *Energy Independence.* According to a DOE/ Energy Information Administration (EIA) study, the U.S. currently imports over 50 percent of the oil it consumes. Political implications of a possible war with Iraq, and the economic costs associated with even a slight near-term disruption of Middle East oil imports, warrant significant dedication of resources to develop technologies that can mitigate adverse impact such supply shocks can cause. Our DFC power plants are designed to primarily operate on natural gas, coal (which can be converted to synthetic gas), as well as municipal and industrial wastewater treatment gas, all abundant U.S resources. In addition, our DFC power plants utilize these domestic fuel sources significantly more efficiently, thereby enhancing the use of our existing U.S. resources.

Many governments at various levels, both here in the U.S. and abroad, are proactively pursuing programs and subsidies to stimulate the development of alternative energy generation in general and fuel cells in particular. We estimate there are over $500 million of global incentives available for distributed generation, alternative energy and renewable technologies, including our DFC power plants, with subsidies ranging up to 50 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 New Jersey, Massachusetts, Germany and Japan, and we have projects that have received preliminary approval for incentives in New York and Connecticut. For example, the New York State Energy Research and Development Authority has established a $40 million annual program for CHP projects with grants up to 50 percent of project costs up to $1 million per project. In addition, the German Parliament currently provides a credit of up to 5.11 eurocent/kWh for CHP units, up to 2 MW in size, connected to the national grid.

Clean coal technology is also a focus for the U.S. EPRI indicates that additional investment of $5-$6 billion over the next several years is needed to fully evolve clean coal technologies, with President Bush pledging to invest $2 billion in clean coal technology over the next ten years. Our first DFC3000 power plant will be delivered to the Wabash, Indiana coal gasifier site in the second half of calendar year 2003 to operate on coal-derived synthetic gas, a $30-plus million project partially funded by the DOE.

Our Products and Target Markets

Our initial market entry commercial products will be rated at 250 kW (DFC300A), 1 MW (DFC1500) and 2 MW (DFC3000) in capacity. We expect our commercial products to mature to three configurations: 300 kW, 1.5 MW and 3 MW. Our balance of plant is currently designed for these mature products. Our products are targeted for utility, commercial and industrial customers in the growing distributed generation market for applications generally up to 10 MW. We are also developing new products incorporating unfired gas turbines, based on our existing power plant design, for applications in the 10 to 50 MW range. Our designs use the basic single fuel cell stack incorporated in our sub-megawatt class product as the building block for our megawatt class products, with the same fuel cell components being used for all of our products.

All of our products offer the capability for co-generation where the heat by-product is suitable for high-pressure steam, district heating and air conditioning. The majority of our units currently operating or scheduled for delivery at customer sites in the U.S., Europe and Japan are CHP units.

Our sub-megawatt class product is a skid-mounted, compact power plant that could be used to power a light industrial or commercial facility, school or other similar sized applications. Additional units could subsequently be added to meet incremental demand growth. We expect to begin delivering our DFC300A sub-megawatt class product to the market in calendar year 2003.

Customers with larger power requirements will look to our megawatt-class power plants that combine several fuel cell stacks to provide increased power output. The megawatt class products are designed to meet the power requirements of customers such as utilities, industrial facilities, data centers, shopping centers, wastewater treatment plants, office buildings, hospitals and hotels. We expect to bring our DFC1500 and DFC3000 megawatt class products to market in calendar year 2003.

We are targeting our initial commercialization efforts for the following stationary power applications:

- customers in regions with high electricity costs;
- customers with 24/7 base-load requirements;
- those seeking to address electric grid distribution or transmission shortages or congestion;
- industrial and commercial customers who can make use of the high quality heat by-product for CHP applications;
- customers with opportunity fuels such as wastewater treatment gas or other waste gases from municipal and industrial processes;
- customers in regions where air pollution requirements are particularly strict and;
- customers who possess several of the above characteristics.

Our commercialization efforts after these initial applications will largely depend on the development of the distributed generation market as well as on our ability to lower the cost of our products. We believe our efforts will continue to focus on commercial and industrial end markets where self-generation is a viable option. We will focus on original equipment manufacturers (OEMs), energy service providers, specialty distributors and utilities as potential buyers and distributors of our products.

In conjunction with our partners, we have identified the northeastern U.S. as well as California as having high electricity prices, selected areas of transmission and distribution grid congestion, available government subsidies and home to commercial and industrial applications with significant CHP market potential. According to a 2000 study prepared for the DOE and the EIA, there is over 77,000 MW of CHP potential in the U.S. Fifty percent of the total commercial/institutional CHP potential is located in nine states: California, Florida, Illinois, Michigan, New Jersey, New York, Ohio, Pennsylvania and Texas.

We have announced orders in the following commercial/industrial segments.

- *Hotels/Motels.* Our North American energy service company (ESCO) partner, PPL, announced two hotel customer sub-megawatt DFC power plant sitings at Sheraton hotels, two of over 740 Starwood Resorts properties located in 80 countries worldwide. The New Jersey Sheraton establishments in Parsipanny and Edison are 300-400 room hotels and have approximate electrical base load requirements of 250 kW and peaking electrical loads of 750 kW to almost 1 MW. Our DFC300A will be part of PPL's master energy services agreement with the Sheraton hotels to provide their energy needs. According to the 2000 DOE/EIA Study, the overall U.S. market for CHP applications for hotels/motels is greater than 6,500 MW, with over two-thirds of that potential sized at 5 MW or less.
- *Water Treatment/Sanitary.* We will be operating our first MW DFC power plant on natural gas in our Torrington facility in preparation for delivery to the King County municipal wastewater facility to run on anaerobic digester gas. Additional DFC300A customer sitings were announced by our Asian partner, Marubeni, at the Kirin Brewery to operate on industrial wastewater treatment gas at a brewery and the municipal wastewater facility at the City of Fukuoka, both in Japan. We sponsored our own study in 1998 that identified over 550 municipal wastewater facilities throughout the U.S. capable of generating at least

250 kW of electricity. This is consistent with the DOE/EIA 2000 study that identified over 8,770 CHP sanitary/wastewater establishments in the U.S. with a total capacity of 949 MW. Operation of our DFC power plants on wastewater treatment facilities characterizes our products as a renewable energy technology, which enables them to qualify for significantly more incentive funding worldwide.

- *Universities/Colleges/Schools.* MTU's sub-megawatt unit completed more than two years of operation in March 2002, running for more than 16,000 hours. In August 2002, PPL announced the siting of a DFC-300A at Ocean County College in New Jersey. According to the 2000 DOE/EIA study, universities, colleges, and schools, collectively, represent over 19,000 MW of CHP potential in the U.S.
- *Office Buildings.* We have been operating a DFC300 power plant field trial demonstration at the Los Angeles Department of Water and Power headquarters building since mid-2001. Office buildings represent the single largest commercial/industrial sector in the 2000 DOE/EIA study with over 18,600 MW of CHP potential.
- *Hospitals.* Hospitals represent another important CHP application for our DFC power plants, and, to date, our European partner, MTU, has demonstrated sub-megawatt units at Rhon-Klinikum, which has been operational for more than a year, and IPF/Magdeburg, which began operating in the fall of 2002. According to the 2000 DOE/EIA study, the CHP application potential in the U.S. is over 8,800 MW, with over 60 percent in the 1-5 MW size range. ABI estimates there are about 6,000 hospitals in the U.S., approximately 10,600 in Japan and more than 6,000 in Western Europe.
- *Telecommunications/Internet Data Centers.* In the fall of 2002, MTU began operating a sub-megawatt DFC power plant at a telecommunications center at Deutche Telecom in Munich. Also in 2002, our North American distribution partner, PPL, announced that two DFC300A will be installed in 2003 at the headquarters building of Zoot Enterprises, a provider of customized instant credit decision making applications for financial institutions, that will be part of its critical reliability base load energy needs. ABI estimates there is nearly 25,000 data centers in the world and that each requires at least a megawatt of power. This is a potential 25 gigawatt market.
- *Grid-constrained areas.* Selected areas of the country, including southwestern Connecticut, Long Island, New York City and central California, are in need of additional power. The existing transmission and distribution infrastructure is insufficient to accommodate these local needs, and proposals to upgrade and enhance these lines have been met with public opposition. Our DFC power plants can be sited within these regions to deliver the power to meet these local needs.
- *International Markets.* Through our international distribution partners – MTU in Europe and Marbueni in Asia – we will be delivering our DFC power plants in those markets. ABI estimates the cumulative fuel cell electric generating capacity in Germany and Japan will grow to 530 megawatts and 720 megawatts, respectively, by 2010.

In connection with the DOE's Vision 21 program, we are designing a 40 MW ultra-high efficiency power system that will combine our Direct FuelCell and a gas turbine that we expect will compete for applications between 10 and 50 MW in the distributed generation market. In addition, because of the ability to operate on a variety of hydrocarbon fuels, we are currently developing in conjunction with the U.S. Navy, a DFC power plant to provide power to ships using diesel fuel. Commercial markets for diesel fuel cells include island communities that have limited natural gas or similar resources and rely on the use of diesel fuel for the generation of electricity, and the cruise ship industry, which we believe has substantial "hotel" power needs.

The overall slowdown of the economy, particularly in the industrial sector, the resulting decline in electricity prices and deterioration in the credit quality of independent power producers has caused a dramatic decline in new power plant construction. According to energy information provider Platts, power companies have already canceled or delayed construction of 164,000 MW of power generation in 2002, more than double the year before. Credit rating agency Standard & Poors reported that in the first nine months of 2002 there were 135 credit downgrades of utility holding companies and their subsidiaries, nearly quadruple the number in the year-earlier period, and one-third of the major companies in the sector were on watch for future downgrades. These current impediments to traditional power plant financing provides us with near-term market opportunities as our DFC power plants can be sited in smaller increments and more dispersed locations, and time from order placement to initial start-up is less than the two to three year time frame for larger, central generation units. We are finding sufficient interest in regional markets to meet the needs for early adopter customers and our focus for 2003 is to generate orders for our DFC products with competitive terms and conditions.

Our Fuel Cell Development Program

Based on experience gained from over 68,000 accumulated operating hours (as of December 2002) from our demonstrations and field trial program, we have developed the next generation product, the DFC300A, which incorporates design improvements throughout the power plant, including more efficient thermal management and gas flow within the fuel cell module and enhancements to the mechanical and electrical balance-of-plant systems which result in higher performance, lower cost, and smaller footprint.

Demonstration Projects. We have over 24,000 hours of experience with our demonstration projects and "alpha" units. We've used these demonstration projects to develop our core fuel cell component technology, including our full-height vertical stack design. We will continue to use demonstration projects as we expand our development of fuel cell/ turbine and liquid fueled products. Significant demonstrations include the following:

Santa Clara Demonstration Project. During 1996 and 1997, we operated our "proof-of-concept" megawatt scale fuel cell plant in Santa Clara, California. The Santa Clara plant achieved a peak power output of 1.93 MW, 7% above rated power, and an electrical efficiency of 44%, a record for a single cycle fossil fuel power plant of this kind at that time. The Santa Clara plant also achieved record low emissions of sulfur and nitrogen oxides. The demonstration involved the largest carbonate fuel cell power plant in the world and the largest fuel cell of any type operated in the United States.

The Santa Clara plant operated at various electrical outputs for almost one year and was connected to the utility grid for half of that time. Despite encountering equipment problems unrelated to the basic fuel cell technology, the Santa Clara plant achieved most of the goals that we set for the project and established new milestones. After operation of the Santa Clara plant ended in March 1997, all of the fuel cell stacks were returned to us for comprehensive analysis. We used the results of this analysis, along with the results of ongoing research and development activities, to develop a commercial fuel cell design significantly more compact, reliable and cost-effective than the Santa Clara plant design. The fuel cell stack design used at the Danbury, Connecticut and Bielefeld, Germany sites were developed with cells that are approximately 50% larger in area, 40% lighter per unit area and 30% thinner than the Santa Clara plant design. These improvements have doubled the power output from a fuel cell stack. Our current fuel cell power plant design will be capable of producing the same output as the Santa Clara plant with a footprint one-ninth as large. We believe that this reduction in size and increase in power per fuel cell stack will result in significant manufacturing cost savings.

Commercial Design Endurance Project. Between April 1998 and July 2000, we operated an 8 kW multiple fuel commercial design fuel cell located at our Danbury, Connecticut facility. This unit operated for approximately 17,500 hours. This project, together with other test data, enabled us to project expected commercial performance.

Danbury Project. In February 1999, we began operating a 250 kW DFC grid-connected power plant at our headquarters in Danbury, Connecticut. The plant operated on pipeline natural gas and ran for approximately 11,800 hours before being disconnected for a scheduled evaluation. Before being disconnected for post-test analysis, this power plant delivered approximately 1.9 million kWh to our Danbury facility and demonstrated a wear rate of 0.3% per 1,000 hours. The ruggedness of this product design was demonstrated in planned stress tests, such as rapid ramp-up and thermal cycling tests and simulated emergency fuel loss. These tests verified that the DFC could be maintained in the field despite operating stresses and fuel supply and power failures, without decreasing performance, meeting our expectations and projections.

Direct FuelCell/Turbine® (DFC/T®) *Power Plant.* During 2002, we completed successful proof-of-concept testing of a DFC/T power plant based on a 250 kW DFC integrated with a Capstone Turbine Corporation modified Model 330 Microturbine. The combined system does not require any combustion in the turbine. The DOE, through its Office of Fossil Energy, funded the first-of-a-kind test of the high efficiency DFC/T power plant. The National Energy Technology Laboratory, as part of the DOE's Vision 21 program, manages the cooperative agreement. The power plant was designed to operate in a dual mode: as a stand-alone fuel cell system or in combination with a microturbine. Heat generated by the fuel cell is used as the fuel to drive the modified microturbine to generate additional electricity. This proof-of-concept demonstration has provided information for the continued design of a 40 MW DFC/T power plant that is

expected to approach the 75 percent efficiency goal as specified by the Vision 21 program, as well as to serve as a platform for high efficiency DFC/T in smaller sizes. We will continue the proof-of-concept testing of the DFC/T power plant with a 60 kW microturbine.

In April 2002, we received a patent, titled "High Efficiency Fuel Cell System," for our combined cycle DFC/T power plant.

In October 2002, we received a modification to the existing Vision 21 program agreement with the DOE to demonstrate two additional sub-megawatt power plants based on the our DFC/T technology. This modification provides an additional $16 million to the project's budget that will be shared by the DOE and us. We will build and test the first DFC/T power plant at our facility in Danbury, Connecticut, and then demonstrate the second DFC/T power plant in Montana.

DFC Marine/Diesel. Currently we are working on DFC power plants for marine applications under programs with the U.S. Navy. These power plants are required to operate on liquid fuels such as diesel. We have already produced a fuel cell-compatible fuel from marine diesel using a compact fuel processing system. In 1999, a sub-scale fuel stack was tested on this fuel under conditions simulating marine requirements. Another sub-scale stack was successfully tested for shock and vibration tolerance. In May 2000, the U.S. Navy selected us for a $16.8 million project ($13.2 million of which will be funded by the Navy) to continue development work under Phase II of this program, leading to a 500 kW land based demonstration at the Philadelphia Navy Yard. This power plant will be tested at our Danbury, Connecticut facility in calendar 2003 and shipped to the Navy yard in calendar 2004.

Field Trial Program. Since the inception of our field trial program in 1999, we have accumulated over 44,000 hours of combined operational experience with our DFC300 product, including nine DFC300 field trial units in the U.S. and Germany, in a variety of conditions and settings and on a range of fuels. We have used this program for our DFC300 to test operational characteristics of our designs; gain "end-user site" experience to better understand interconnection, installation and operating issues; to identify design improvement opportunities; and to test redesigned components and solutions. Significant field trials include the following:

Bielefeld,GermanyProject. In November 1999, MTU, commissioned a 250 kW power plant at the University of Bielefeld in Bielefeld, Germany. This field trial, which ran for approximately 16,000 hours, was terminated in February 2002. The power plant was a skid-based, sub-megawatt power plant designed by MTU that incorporated our DFC as its fuel cell component. The Bielefeld plant achieved a peak electrical efficiency of 47%. Employing co-generation applications that used the heat by-product to produce process steam for the University and district heating, the plant achieved an overall energy efficiency of 77%.

Rhön Clinic Project. The State of Bavaria, the Rhönklinikum AG Bad Neustadt/S, a public company operating approximately 40 German hospitals, the local gas supplier, Ferngas Nordbayern GmbH, and MTU are operating a 250 kW power plant designed by MTU that incorporates our DFC as its fuel cell component. The purpose of this field trial is to demonstrate the viability of a fuel cell power plant in a hospital environment. The power plant was commissioned and began operation in May 2001. The electrical power is being fed into the local clinic grid and the hot exhaust air is used to produce process steam for the clinic.

Southern Company Services, Inc. — Alabama Municipal Electric Authority — Mercedes-Benz U.S. International, Inc. In conjunction with Southern Company Services, Inc. (Southern), the Alabama Municipal Electric Authority (AMEA) and Mercedes-Benz U.S. International, Inc. (Mercedes-Benz), we have built and installed a 250 kW fuel cell power plant at the Mercedes-Benz facility in Tuscaloosa, Alabama utilizing MTU's design. We delivered the unit to the customer site in July 2001. Southern and AMEA have each contributed $1 million to this project, and have options to negotiate exclusive arrangements with us for the sale, distribution and service of our DFC power plants in several southern states that must be exercised upon completion of the field trial.

Los Angeles Department of Water and Power. In August 1999, LADWP selected us to install a 250 kW DFC power plant at its headquarters in Los Angeles. The installation of this power plant has helped

LADWP gain knowledge and experience in the installation, maintenance and operation of fuel cell power plants. The agreement we entered into in May 2000 provided for LADWP to contribute $2.4 million to this project. This field trial unit was delivered to the customer site in July 2001.

MTU. Between April and November 2002, MTU installed, and is currently operating, five 250 kW power plants based on our DFC technology utilizing fuel cells manufactured at our Torrington, Connecticut facility. These include a unit to provide heat and power at a fuel cell energy park in Essen, Germany for RWE, Germany's largest utility; at IZAR, Europe's largest shipbuilder based in Cartagena, Spain, to provide energy for this ship building company; in Munich, Germany at a telecommunications center owned by a subsidiary of Deutsche-Telekom, to provide DC power back-up; in Germany at the University Clinic of Magdeburg, to provide back-up power and heat, which will be maintained by IPF KG; and at a tire manufacturing plant owned by EnBW/Michelin, to provide electricity and process steam.

In 2003, we will initiate our field trial program for our 1 MW DFC1500 and 2 MW DFC3000 power plants and build and install a 250 kW coal mine methane power plant.

King County, Washington. In January of 2001, we signed an agreement with King County, Washington to deliver a 1 MW (DFC1500) DFC power plant using municipal wastewater digester gas. The two-year demonstration project is being cost-shared equally by King County, through a cooperative grant to the county from the Environmental Protection Agency (EPA), and us. The total value of the contract is approximately $18.8 million (of which approximately $9.4 million has been funded by us). We completed the design of the one megawatt DFC power plant, which includes four 250 kW stacks in a module. Balance-of-plant equipment was factory tested, delivered and installed at our Torrington, CT facility. The DFC1500 field trial unit will be installed at a municipal wastewater treatment facility in King County in the first calendar half of 2003. While final site preparations are being completed at the customer location, the unit will operate on natural gas, grid-connected, at the company's Torrington facility.

Clean Coal Project. In late 1999, the DOE transferred a long-standing clean coal project to a wholly owned subsidiary of Global Energy, Inc.; a Cincinnati based independent power producer. This project is the first clean coal technology plant to employ a fuel cell. The objective of this project is to demonstrate coal gasification technology along with a megawatt class carbonate fuel cell power plant. The clean, low-cost fuel generated by the gasifier will be used to fire gas turbines and to demonstrate the operation of a 2 MW (DFC3000) fuel cell power plant. We have entered into a sub-contract, with Global Energy, Inc., for the design, construction and operation of the power plant. We have designed the two megawatt DFC power plant, which includes eight 250 kW stacks in two modules. Factory testing of balance-of-plant equipment is ongoing and equipment deliveries have begun.

In July of 2002, the DOE accelerated the timetable of this demonstration by approving the relocation from the Kentucky Pioneer integrated gasification combined cycle (IGCC) site, which is still in development, to the Wabash River Energy IGCC site in Indiana, which is in operational status. Both sites are owned by Global Energy, Inc. Contract modifications approved by the DOE and Global Energy, Inc. include appropriation of the funding for the remainder of the project and the site relocation. The remaining project cost will be $32.3 million, with 50% of the cost shared by the DOE. This plant will operate initially on natural gas, grid-connected, at our Torrington, Connecticut facility before being delivered to the customer during the second half of calendar year 2003.

Ohio Coal Mine Methane Project. In October 2000, the DOE's National Energy Technology Laboratory selected us to design, construct and operate a 250 kW DFC power plant, utilizing coal mine methane gas, at the Harrison Mining Corporation coal mine in Cadiz, Ohio. The cost for the three-year program will be shared equally by the DOE and us, subject to the annual congressional appropriations process. We were selected for this project to demonstrate the ability of our DFC to generate electricity using coal mine methane emissions that otherwise escape into the atmosphere. We anticipate delivery of this DFC power plant in the second half of calendar year 2003 assuming funding is authorized by the DOE.

Field Follow Program for our DFC300A design: Our field follow program will be used to monitor fleet performance including additional instrumentation, field service and data gathering, to build operational history (availability, kWh output, etc.), of our DFC300A power plants in order to further enhance our product design to allow for cost reduction, performance improvement, increased reliability and serviceability. Field follow projects in our backlog include the following:

PPL Spectrum, Inc. (PPL). In October of 2001, we received an order from PPL Spectrum, Inc., a subsidiary of PPL, for a 250 kW DFC power plant slated for installation at the United States Coast Guard Air Station Cape Cod located in Bourne, Massachusetts. The power plant will provide electricity and heating for the base, which includes barracks, hangars and administrative buildings. The contract value is $1.25 million. This power plant is scheduled for delivery and installation in the first half of calendar year 2003.

In April of 2002, PPL announced the customer siting of two 250 kW DFC power plants for installation at New Jersey hotels owned by Starwood Hotels & Resorts Worldwide, Inc. PPL will install one 250kW DFC power plant at the Sheraton Edison Raritan Center and another at the Sheraton Parsippany Hotel. Both power plants are expected to be used in a combined heat and power application. The total value of these projects is $3.3 million. The New Jersey Clean Energy Fund will be providing approximately $1.7 million in funding to PPL in support of these projects. These power plants are scheduled for delivery and installation in the first half of calendar year 2003.

In August of 2002, we announced that PPL will install a 250 kW DFC power plant at Ocean County College in New Jersey. The power plant is to be operated in co-generation mode, supplying electricity and heat to several buildings on campus. The total value of the project is $1.65 million. The New Jersey Clean Energy Fund will provide $827,000 in the form of grants. This power plant is scheduled for delivery and installation in the first half of calendar year 2003.

On October 31, 2002, PPL signed a contract with Zoot Enterprises to install two of our 250 kW DFC power plants a Zoots' Galactic Park high-technology campus in Montana. Zoot plans to use the power plants to help meet the electrical reliability requirements of its headquarters building, and to support future development at the campus. Total value of the project is $3.8 million, with $1.4 million provided in the form of a grant from the DOE. Site preparation has begun, and installation of the power plants is scheduled to begin in the first half of calendar year 2003.

Marubeni. In December 2001, Marubeni announced the customer and siting of its first 250 kW fuel cell power plant, Kirin Brewery in Japan located outside of Tokyo. The unit will operate in cogeneration mode, with the thermal output of the fuel cell to be used by the anaerobic digester, which treats the brewery effluent. The power plant was shipped to the customer site in November 2002.

In May 2002, Marubeni Corporation and us announced the customer and siting of a Direct FuelCell power plant for a municipal wastewater treatment facility in Japan, the first of its kind in this country. Marubeni will install a 250 kW fuel cell power plant at a wastewater treatment facility in the City of Fukuoka, which will consume the electricity and steam generated by the unit. This power plant is scheduled for delivery and installation in the first half of calendar year 2003.

LADWP. In October 2000, we entered into an agreement to provide LADWP with two 250 kW DFC power plants. This agreement provides for LADWP to pay $2.45 million for these power plants. These units are scheduled for delivery in the first half of calendar 2003.

Connecticut Innovations. In August of 2001, we received a $1.25 million contract from the Connecticut Clean Energy Fund (which is managed by Connecticut Innovations, Inc.) for a 250 kW DFC power plant. The power plant is scheduled for delivery and installation in the first half of calendar year 2003.

Strategic Alliances and License Agreements

In the past three years, we entered into significant strategic alliance, distribution, and market development agreements. Our partners include Caterpillar, Inc.; Marubeni Corporation; PPL; CMS Viron Energy Services; MWH Energy Solutions, Inc; and Chevron Energy Solutions L.P.

Caterpillar. On November 15, 2001, we announced the signing of an agreement with Caterpillar to distribute ultra-low emission fuel cell products for industrial and commercial use. Under the agreement, Caterpillar will distribute our products through selected Caterpillar dealers in the United States. Both companies will also pursue an alliance to jointly develop fuel cell systems, including highly efficient hybrid products integrating Caterpillar's turbine engine technology.

On April 26, 2002, we signed an alliance agreement with Caterpillar, Inc. Under the ten-year agreement, customers will be able to purchase our Direct FuelCell systems from Caterpillar dealers in selected regions in North America. The agreement calls for the companies to jointly develop Caterpillar-branded power plants in the 250 kW to 3 MW size range, incorporating our fuel cell module. We will also explore the development of a hybrid power system utilizing Caterpillar's turbine engine technology and our energy products.

As part of the agreement, Caterpillar received warrants to purchase 1,500,000 shares of our common stock with exercise prices ranging from $17 to $23 per share. The warrants will be earned on a graduated scale contingent upon the first 45 MW's of order commitments to purchase our products. For accounting purposes, the fair value of these warrants will be netted against the revenues attributable to the purchase of our products by Caterpillar.

CMS Viron. On January 8, 2002, we entered into a market development agreement with CMS Viron Energy Services to jointly pursue fuel cell projects in the State of California. Under the agreement, we will jointly market and sell DFC power plants and will perform project, customer and site development, system integration, permitting and project financing for those plants.

Chevron Energy Services. On December 21, 2001, we announced the signing of a marketing development agreement with Chevron Energy Services L.P., a subsidiary of ChevronTexaco, to jointly pursue fuel cell projects. Under the agreement, FuelCell Energy and Chevron Energy Solutions will jointly market and sell DFC power plants and will perform project, customer and site development, system integration, permitting and project financing. Initial projects will be targeted for development in the Northeastern United States and California.

Marubeni. On June 18, 2001, we announced the signing of a comprehensive strategic alliance agreement with Marubeni. Under the agreement, Marubeni will initially order 3 MW of Direct FuelCell power plants, in addition to the 1.25 megawatts previously ordered, and is targeting orders of at least 45 MW over the next two years in Japan and Asia. We plan to form a joint venture with Marubeni for the purpose of assembling Direct FuelCell modules in Asia from fuel cells provided by us.

Marubeni has invested $10 million in FuelCell Energy through the purchase of 268,114 shares of our common stock and is expected to invest an additional $30 million over the term of the agreement. In addition, we have granted Marubeni warrants to purchase 1,140,000 shares of our common stock, with exercise prices ranging from approximately $37 to $48 per share. These warrants will vest over the next year, based on Marubeni reaching 45 MW of orders for DFC power plants. For accounting purposes, the fair value of these warrants will be netted against the revenues attributable to the purchase of our products by Marubeni. The warrants will expire in September 2003.

PPL. In September 2000, we entered into a distributor agreement with PPL pursuant to which PPL agreed to become the first distributor of our Direct FuelCell products in North America. PPL has agreed to use its reasonable efforts to promote and sell our products, on a non-exclusive basis, throughout North America. Pursuant to the agreement, PPL has ordered 1.75 MW of our products at agreed-upon prices, and will need to establish the next minimum order amount by the end of 2003. In connection with this distributor agreement, an affiliate of PPL purchased 425,216 shares of our common stock for $10 million. The agreement terminates on December 31, 2004, subject to three-year extensions. Prior to December 31, 2004, PPL may terminate the agreement upon 60 days' written notice to us and, after December 31, 2004, either party may terminate the agreement upon 60 days' written notice.

Los Angeles Department of Water and Power. We signed an agreement with LADWP in May of 2000 for the installation of a 250 kW DCF power plant at LADWPs corporate headquarters in Los Angeles. This unit has been operating since July 2001. Under this agreement, we are required to pay LADWP annual royalties of 2% of net sales revenues, beginning when sales of fuel cells reach 50 MW per year, and continuing until the earlier of termination of the agreement or the payment to LADWP of $5 million in royalties.

In October of 2000, we entered into a second agreement to provide LADWP with two additional 250 kW DFC power plants. This agreement provides for LADWP to pay $2.45 million dollars for these power plants.

On May 14, 2002, we announced the signing of an agreement with MWH Energy Solutions, Inc. to distribute our Direct FuelCell power plants in municipal, utility support, commercial and industrial applications. Initial focus will be on wastewater treatment facilities throughout the United States.

We expect to establish additional long-term relationships that will facilitate the marketing, development and installation of our fuel cell power plants throughout the world.

Our other significant relationships include the following:

Bath Iron Works. In August 1999, we entered into an agreement with the Advanced Technology Division of Bath Iron Works, a General Dynamics company, to develop an advanced DFC power plant for defense marine applications. We expect this agreement to lead to the development of the first new power generation technology for surface ships since nuclear power was adopted for aircraft carriers, addressing the market for advanced marine power systems. This agreement continues through 2004, and may be terminated by either Bath Iron Works or us, upon 30 days' written notice.

Fluor Daniel, Inc. We have a long-standing relationship with Fluor Daniel, Inc., a subsidiary of Fluor Corporation (Fluor Daniel), one of the largest engineering, procurement, construction and technical services companies in the world. Fluor Daniel's Oil, Gas & Power unit has been working with us providing architectural, design, engineering and construction management services in developing, based on our specifications, the balance of plant systems required to support our fuel cells in natural gas and coal fueled power plants. Fluor Daniel is a resource that we expect will continue to provide us with the technical and management expertise and experience required for designing and optimizing our fuel cell power plants. In connection with the King County field trial, for example, we have subcontracted with Fluor Daniel for design and engineering support.

In addition to our strategic relationships, we have entered into several licensing agreements, including the following:

MTU. In 1989, we entered into a license agreement with DASA, a German aerospace and aircraft equipment manufacturer and a subsidiary of Daimler Benz Corporation, one of the largest industrial companies in Europe. In 1993, that agreement was transferred to a subsidiary of DASA, MTU, now a DaimlerChrysler subsidiary.

In December 1999, the 1989 license agreement was replaced by a revised MTU license agreement, in which we granted MTU an exclusive license to use our Direct FuelCell patent rights and know-how in Europe and the Middle East, and a non-exclusive license in South America and Africa, subject to certain rights of us and others, in each case for a royalty. Under this agreement, MTU has granted us an exclusive, royalty-free license to use any improvements to our Direct FuelCell made by MTU anywhere in the world except Europe and the Middle East. In addition, MTU has agreed to negotiate a license grant of any separate fuel cell know-how it develops once it is ready for commercialization. Under this agreement, we have also agreed to sell our Direct FuelCell components and stacks to MTU at cost, plus a modest fee. The new MTU agreement continues through December 2004 and may be extended for additional 5-year terms, at the option of MTU, by written notice at least 180 days prior to expiration. Upon termination, MTU will retain a non-exclusive license to use our Direct FuelCell patent rights and know-how for a royalty.

In 1992, MTU formed a European consortium (ARGE) with RWE Energie, the largest electric utility in Germany, Ruhrgas, the largest natural gas supplier in Germany and Elkraft, a large Danish utility. The activities of this group complement our efforts to design and manufacture natural gas and coal gas fueled carbonate fuel cell systems based on our designs.

During 1998, MTU designed and built a 250 kW co-generation fuel cell unit that incorporates our fuel cell assemblies and uses an innovative integration of a portion of the balance of plant into the fuel cell stack module itself, with the expectation of reducing costs to the power plant as a whole. The design is compact and especially suitable for co-generation applications.

In July 1998, we entered into a cross-licensing and cross-selling agreement with MTU pursuant to which we have granted MTU a non-exclusive license to use our balance of plant know-how (excluding fuel cell technology included in the 1999 license agreement) in Europe, the Middle East, South America and Africa, and MTU has granted us a worldwide, non-exclusive license to use MTU's balance of plant know-how (excluding fuel cell technology included in the 1999 license agreement), in all territories except Europe and the Middle East. Each party is required to pay to the other a royalty for each kW of rating which uses the licensed balance of plant know-how of the other. MTU is not required to pay us royalties under this agreement if MTU is obligated to pay us royalties under the 1999 license agreement. This agreement continues through 2003 and may be extended by written notice at least 180 days prior to expiration.

Santa Clara. In 1993, we obtained an exclusive license, including rights to sublicense, to use the balance of plant technology we developed under the Santa Clara plant contract. The license specifically excludes fuel cell and fuel cell stack technology. The license becomes non-exclusive after 2005 or earlier, at the option of Santa Clara, if we do not meet certain commercialization milestones. Under this license, royalties are $15 per kilowatt (subject to consumer price index and other upward adjustments) on North American sales of commercial fuel cell power plant stacks of capacities of 100 kW or more that use the licensed balance of plant technology.

In addition to the above royalties, the license to use the Santa Clara balance of plant technology in connection with fuel cell plants sold or licensed outside North America, is subject to the quarterly payment by us of license fees equal to the lesser of (a) 2% of the proportional gross revenues from the sale of that portion of each fuel cell plant that uses the Santa Clara balance of plant technology or (b) 1% of the total gross revenue from the sale of each fuel cell plant that uses the Santa Clara balance of plant technology. We must also pay Santa Clara 25% of any fees we receive for sublicensing the Santa Clara balance of plant technology.

Electric Power Research Institute. In 1988, we entered into a license agreement with the Electric Power Research Institute (EPRI), granting us an unreserved, non-exclusive, worldwide license to use carbonate fuel cell proprietary data we developed under certain contracts with EPRI. We have agreed to pay EPRI a one-time fee of approximately $50,000 within six months of our first commercial sale of a carbonate fuel cell stack greater than one megawatt in size using the carbonate fuel cell proprietary data we developed under the EPRI contracts and a royalty of 0.5% to 1% of net commercial sales of carbonate fuel cell stacks which use this proprietary data. Our obligation to make royalty payments continues until the later of the expiration of all patents licensed to us by EPRI, or fifteen years from our first commercial sale of a carbonate fuel cell stack which uses EPRI's proprietary data.

Competition

We are competing primarily on the basis of fuel efficiency, environmental considerations and cost. We believe that the carbonate fuel cell enjoys competitive advantages over most other fuel cell designs. These benefits include higher fuel efficiency (which leads to lower fuel cost), significantly lower emissions, scalability and potentially lower operating, maintenance and generation costs because of a less complex balance of plant. We believe that we are more advanced in the development of carbonate fuel cells than other manufacturers.

Several companies in the United States are involved in fuel cell development, although we believe that 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 in our target distributed generation market include PEM fuel cells, phosphoric acid fuel cells and solid oxide fuel cells. Competitors using or developing these technologies include Ballard Power Systems, Inc., UTC Fuel Cells, and Plug Power Inc., in the case of PEM fuel cells; UTC Fuel Cells in the case of phosphoric acid fuel cells; and SiemensWestinghouse Electric Company, Sulzer Hexis, McDermott, GE/Honeywell and Delphi in the case of solid oxide fuel cells. Each of these competitors has the potential to capture market share in our target market.

In Asia, at least three manufacturers have demonstrated varying levels of interest in developing and marketing carbonate fuel cells. Some have larger marketing and sales departments than we do and have a history of producing and selling electric generation equipment. One of these manufacturers has demonstrated extended operation of a 200 kW carbonate fuel cell. Two of these manufacturers have jointly demonstrated extended operation of a 100 kW carbonate fuel cell and recently tested a 1 MW plant. One of these companies is expected to concentrate on 700-800 kW sized modules for distributed generation. We believe that most of these companies use the more complex and less efficient approach of using external fuel processing equipment to produce hydrogen fuel.

In Europe, a company in Italy is actively engaged in carbonate fuel cell development and is a potential competitor. Our licensee in Germany, MTU, and its partners have conducted the most significant activity in Europe.

We must also compete with companies such as Caterpillar, Cummins, and Detroit Diesel, who manufacture more mature combustion equipment, including various engines and turbines, that have more established manufacturing, distribution, operating and cost features. Significant competition also comes from gas turbine companies such as General Electric, Ingersall Rand, Solar Turbines and Kawasaki, that have recently made progress in improving fuel efficiency and reducing pollution in large size combined cycle natural gas fueled generators. Efforts are underway by companies such as these to extend these advantages to smaller sizes. We believe that these smaller gas turbines will not be able to match our fuel efficiency or favorable environmental characteristics.

Our Strategy

Our business objective is to be the leading provider of carbonate fuel cell products for stationary power generation. We plan on being the first to provide high quality, low-cost sub-megawatt and megawatt class fuel cell power plants to the distributed generation market. We plan to manufacture our proprietary fuel cell stack components and to purchase balance of plant equipment from suppliers as modularized packages that will either be delivered to the power plant site for assembly with our fuel cell stack components or be assembled at our manufacturing facility for delivery to the power plant site. We plan on continuing to be an industry leader in carbonate fuel cell technology focused on expanding our proprietary technology and developing future applications, products and markets for that technology, including diesel fueled marine-based and DCF/Turbine applications. To accomplish our objective, we plan to:

Focus on our Direct FuelCell Technology for Stationary Markets. We believe that our Direct FuelCell is the fuel cell technology most suited to stationary power generation based on its highly efficient operating characteristics, co-generation capabilities and the ability to use multiple hydrocarbon fuels such as natural gas, diesel, methanol, biogas, coal gas, coal mine methane and propane. We plan to continue to focus on the distributed generation market where we believe that our technology and our power plant product design afford us a significant competitive advantage. We also plan to develop new products, based on our existing power plant design, for applications in the 10 to 50 MW range, including our DFC/T product, and for marine and stationary applications utilizing diesel fuel.

Near Term Product Strategy. In order to achieve our overall product goals of cost reduction, performance improvement, reliability and serviceability, we will continue to focus on our near term product strategy:

- *Develop standard products* – We've made significant progress towards the development of our standard products, particularly with the development of our DFC300A. Each of our overall product goals is affected by product standardization. In order to continue down this path with our sub-megawatt and megawatt products, we need to:

    - continue the qualification of multiple suppliers of equipment components and materials;
    - initiate new, and complete current, factory acceptance tests of mission critical systems;
    - enhance power plant sub-system design;
    - develop system design of our megawatt-class units and initiate field trial program;
    - incorporate field trial improvements; and
    - receive OEM design support.

- *Increase Volume Production.* We successfully installed and tested the equipment necessary to produce 50 megawatts of fuel cells per year at our manufacturing facility in Torrington, Connecticut. The ability to increase throughput while enhancing product quality and reducing waste is critical for us to achieve our cost reduction goals. We plan to achieve this by:

    - verifying our production capacity for cell production and assembly and testing;
    - continuing to implement process controls to improve quality and enhance productivity;
    - improving product design to increase manufacturability;
    - further development of our parts and service infrastructure; and
    - continued information systems development to improve cost tracking and to safeguard assets.

- *Distribution Network Development*. We have established strong commercial distribution alliances with electric power equipment sales and service companies (OEMs), including Caterpillar, Marubeni, and MTU; energy services and solutions providers (ESCOs) including PPL, Chevron Energy Solutions, and CMS Viron Energy Services; and specialty application developers such as MWH Energy Solutions, Inc., who will focus on the wastewater treatment market. In 2002, the company conducted multiple training sessions for distribution partners that focused on applications, sales, installation and service of DFC power plants. We will continue to focus on developing our distribution network as we enhance our products and develop new applications and new markets.

  We plan to leverage our relationships with our current partners, as well as initiate and establish similar new strategic relationships, to ensure maximum exposure and distribution of our Direct FuelCell products. We further expect these alliances will develop into mutually beneficial relationships where the ability of each party to lower costs of their respective components of the DFC power plant will make competitive pricing more achievable.

Initiate our Field Follow Program. We plan to deliver and commission our current backlog of DFC300A power plants and begin our field follow program with these units. Our field follow program will be used to monitor fleet performance including additional instrumentation, field service, and data gathering, to build operational history (availability, kWh output, etc.), of our DFC300A in order to further enhance our product design to allow for cost reduction, performance improvement, increased reliability and serviceability.

Initiate our Megawatt-Class Field Trial Program for our DFC1500 and DFC3000 Products. We plan to install our one-megawatt, DFC1500 field trial unit, which includes four 250kW stacks in a module, at a municipal wastewater treatment facility in King County, Washington, in the first calendar half of 2003. While final site preparations are being completed at the customer location, the unit will operate on natural gas, grid-connected, at the company's Torrington facility. We've completed the design of our two-megawatt, DFC3000 power plant which includes eight 250 kW stacks in two modules. This plant will also operate initially on natural gas, grid-connected in Torrington, before being delivered to the customer during the second half of calendar year 2003. The balance-of-plant will be installed in Torrington after the DFC1500 testing is complete. As with our DFC300, field trial experience will be incorporated into the design of our megawatt-class products.

Expand Manufacturing. We continued to expand our production capabilities in Danbury and Torrington, and our partner, MTU, expanded their assembly and testing facility in Munich. The Danbury facility was expanded to test and condition 50 megawatts of fuel cell power plants per year. A second tape casting line was installed at the manufacturing plant in Torrington in December 2002, and initial operations have begun. While this brings manufacturing capacity to 50 megawatts, production levels will be determined consistent with market demand. We believe that within our current facility in Torrington, there is space to expand to 150 megawatts of production capacity, annually. We have additional land access surrounding our current facility, for which we could expand, we believe, to 400 megawatts of annual production.

Cost Reduction. As a result of the simple design of our Direct FuelCell, we plan to focus our fuel cell component cost reduction efforts on improving manufacturing processes, reducing purchased material cost through economies of scale and improving the performance of our fuel cells. Our strategy for reducing the balance of plant cost is to develop strategic alliances with equipment suppliers who will recognize the potential mutual benefit of joint cost reduction programs.

Create Brand Awareness. We are working to develop in our target markets the association of our Direct FuelCell name with the highest quality stationary fuel cell products. We are also working to have the design of our Direct FuelCell accepted as the industry standard for stationary fuel cell systems.

Aggressively Protect Intellectual Property. We plan to aggressively protect our intellectual property, through the use of patents, trademarks, trade secret protection, confidentiality procedures and confidentiality agreements. We believe that our intellectual property affords us a distinct competitive advantage, and that protecting our intellectual property is an essential part of preserving this advantage.

Develop Products for the 10 to 50 MW Distributed Generation Markets. We plan to continue our research and development, leveraging our existing technology to develop additional commercial applications for the 10 to 50 MW distributed generation market. In connection with the DOE's Vision 21 program, we are in the process of designing a 40 MW ultra-high efficiency system that will combine our Direct FuelCell and an unfired gas turbine. In the larger 10-50 MW combined-cycle design, the DFC/T is expected to approach the 75 percent electrical efficiency target as specified by the DOE's Vision 21 program while retaining the ultra-low emissions attribute of the company's DFC power plants.

Develop Diesel Fueled Applications for Additional Markets. We plan to continue our research and development related to diesel-fueled applications for our technology. In conjunction with the U.S. Navy, we are developing a fuel processing system to convert diesel fuel into a fuel compatible with our existing fuel cell technology. This product would have significant opportunities for "hotel" power on military and civilian ships as well as for stationary applications on islands that are dependent on diesel as their primary fuel source.

Develop Next Generation Products. We are currently developing and plan to continue developing next generation fuel cell power plant technologies that have the potential to significantly reduce the cost per kWh by increasing the power output and cell life of our power plant products.

Manage Cash for Market Penetration. Our cash requirements depend on numerous factors, including the implementation of our field follow program for our DFC300A products, the initiation of our megawatt class field trial program, and development of our DFC/T and diesel DFC products. We expect to devote substantial capital resources to achieve our overall product goals of cost reduction, performance improvement, reliability and serviceability. We believe that we can achieve these goals through our near term product strategy of developing standard products, increasing volume production and the further development of our distribution network. We expect such activities will be funded from existing cash, cash equivalents, investments and cash from operations. Once we've completed our near term strategy, we believe we will have the financial flexibility to maintain, reduce or accelerate our business activities consistent with market demand.

Cost Reduction Progress

We regularly review and revise our cost reduction plans. Although subject to a number of assumptions and uncertainties, some of which are beyond our control, including the price of fuel, we believe that at volume production of 400 MW we will produce combined heat and power DFC power plants that will generate electricity between 5 and 8 cents per kWh for MW plants. If this cost reduction is achieved, from a cost per kWh standpoint, our Direct FuelCell will be an economically attractive source of energy in many places in the United States. According to the EIA, electricity prices vary substantially depending on the region of the country. For example, in July 2002, industrial electricity prices ranged from as low as 4.9-cents/kWh in Alabama (Huntsville Utilities) to as high as 15.1-cents/kWh in New York (Consolidated Edison) and 15.7-cents/kWh in California (Southern California Edison). In March 2002, commercial electricity prices ranged from as low as 6.6-cents/kWh in Delaware (Connectiv) to as high as 13-cents/kWh in New York (Consolidated Edison) and 13.8-cents per kWh in Massachusetts (Commonwealth Electric Co.). In 2000, average statewide residential electricity prices ranged from a low of 5.13-cents/kWh in Washington to as high as 14.03-cents/kWh in New York, 13.14-cents/kWh in New Hampshire and 12.82-cents/kWh in Vermont. In Japan, industrial electricity prices are in the 10-16 cents/kWh with commercial electricity prices slightly higher at 14-20 cents/kWh. We believe that our Direct FuelCell will be a viable alternative as transmission and distribution costs, as well as losses in efficiency due to transmission and distribution, will be substantially lessened or eliminated with our products.

We believe that the sale of commercial products before achievement of our cost reduction goals is possible to a market of "early adopters." Energy users that are unable to or choose not to site traditional combustion based generation due to environmental or energy efficiency concerns or users that need more reliable electricity sources than that provided by the grid, diesel back-up generators, microturbines and batteries may be willing to pay higher prices per kW to obtain the power that they need. We believe that these "early adopters" will likely be municipalities and commercial and industrial customers in pollution non-attainment zones and customers in grid constrained regions, as well as hospitals, schools or universities. We expect that these "early adopters" will include energy users that are able to take advantage of government subsidies that provide funding for fuel cell installations. We believe that these initial customers will enable us to increase volume and subsequently implement our cost reduction plans. As a result, we believe we eventually will be able to provide a lower cost product and therefore achieve greater market potential with more traditional commercial and industrial customers.

We plan to achieve our cost goals through a combination of factors, including manufacturing process improvements, economies of scale, completion or elimination of first time or one of a kind costs, and through technology maturation that increases power output without additional product cost. These factors are described below:

Manufacturing cost reduction: Manufacturing costs are being reduced by multi-faceted efforts including supplier management, material and labor utilization, vertical integration and engineering for manufacturing efficiencies.

Economies of scale: Volume directly affects purchased material cost and reduces fixed cost allocation. Volume also has a secondary effect on direct labor by providing justification to invest in capital projects for improved productivity.

First time costs: The elimination of first time development and engineering costs is a large and straightforward element of our cost reduction plan. At commercial volumes, power plant installations are expected to be virtually identical. Furthermore, indirect costs associated with developing the initial field trial projects will not exist.

Improved performance: Power plant performance is a critical factor. Power output has a direct impact on capital cost as measured in cost per kW, and efficiency, decay rate and availability all affect the cost of electricity, which is the best measure of the value of our products. Our research and development activities have made and are expected to continue to make substantial progress in these areas. For example, if we are successful in our ongoing research and development efforts, we might expect that stack life could increase from five years for the first stack replacement in a 30 year plant, to between seven and eight years for the last stack replacement, with additional gains in power and efficiency.

Value engineering programs have generated significant cost reductions in the cost of stack hardware. For example, the purchase price for compression packs has been reduced from $32,000 to $3,600 per stack in small quantities. Similarly the price of the manifold retention system has been reduced from $31,000 to $4,500 per stack. In both cases, functionality has been improved.

Manufacturing, Testing and Conditioning

We manufacture fuel cells at our 65,000 square foot facility in Torrington, Connecticut. This facility currently has production capacity of 50 MW per year, on a three-shift basis. We believe that within our current facility in Torrington, there is space to expand to 150 megawatts of production capacity, annually. We have additional land access surrounding our current facility, for which we could expand, we believe, to 400 megawatts of annual production.

Prior to shipment to customer sites, we test and condition MW fuel cell modules and sub-megawatt power plants at our Danbury facility. This facility has the capacity to test and condition 50 MW of fuel cell power plants per year.

Research and Development

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 2002, 2001 and 2000, total research and development expense, including amounts received from the DOE, other government agencies and our customers, and amounts that have been self-funded, was $52.5 million, $22.1 million and $14.4 million respectively.

Principal Government Research and Development Contracts

Since 1975, we have worked on the development of our Direct FuelCell technology with various United States government agencies, including the DOE, the Navy, the Coast Guard, the DOD, the Defense Advance Research Projects Agency and the National Aeronautics and Space Administration. Our revenues have been principally derived from U.S. government and industry research and development contracts. Government funding, principally from the DOE, provided approximately 81%, 78%, and 87% of our revenue for the fiscal years ended 2002, 2001 and 2000, respectively. From the inception of our carbonate fuel cell development program in the mid-1970s to date, approximately $382 million has been invested via DOE and related utility programs to support the development, demonstration and field-testing of our Direct FuelCell technology. This includes funding we have received from the DOE of approximately $232 million. We have complemented the DOE's funding with additional support from a variety of other sources that have contributed approximately $150 million.

We have historically performed our services under government-funded contracts or agreements that usually require performance over a period of one to five years and often require cost share funding as a condition to receiving any amounts allocated under these agreements. However, congressional budget limits could prolong the contracts. Generally, U.S. government contracts are subject to the risk of termination at the convenience of the contracting agency. Furthermore, these contracts, irrespective of the amounts allocated by the contracting agency, are subject to annual congressional appropriations and the results of government or agency sponsored audits of our cost reduction efforts and our cost projections. We can only receive government contract funds after Congress makes them available as a result of the annual appropriations process.

We currently receive the majority of our government funding from the DOE and the Navy. Funded DOE projects include our Cooperative agreement, the Clean Coal and Coal Mine Methane projects and the DFC/T project. The U.S. Navy is funding the DFC marine application, liquid fuel project.

We entered into the original cooperative agreement with the DOE in 1994. This agreement was extended in 2000 for three additional years, through 2003, to provide $40 million of funding over this period, subject to annual approval by the U.S. Congress. Of that amount, approximately $16 million remains to be funded by the DOE. The current aggregate dollar amount of the DOE contract is approximately $213 million, with the DOE providing approximately $135 million in funding. As a condition to receiving any amounts allocated under this agreement, the balance of the funding must be provided by us, our partners or licensees and other private agencies and utilities, including any amounts spent by our customers and other third parties on development, field test and demonstration projects. The U.S. government and the DOE have certain rights relating to our intellectual property as described under "Proprietary Rights." Lastly, under this cooperative agreement, we must pay the DOE 10% of all license and royalty income received from MTU, up to a total of $500,000.

In October 2002, we received a modification to the existing Vision 21 program agreement with the DOE to demonstrate two additional sub-megawatt power plants based on the our DFC/T technology. This modification provides an additional $16 million to the project's budget that will be shared by the DOE and us.

In May 2000, the U.S. Navy selected us for a $16.8 million project ($13.2 million of which will be funded by the Navy) to continue development work under Phase II of this program, leading to a 500 kW land based demonstration at the Philadelphia Navy Yard.

Backlog

The backlog for the Company as of October 31, 2002 was approximately $57 million compared with backlog of approximately $74 million as of October 31, 2001. Backlog refers to the aggregate revenues remaining to be earned at a specified date under contracts held by us. For U.S. government contracts, we include the total contract value including any unfunded portion of the total contract value. The unfunded portion of our contracts amounted to approximately $24 million and $49 million respectively as of October 31, 2002 and 2001. 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.

Proprietary Rights

We rely primarily on a combination of copyright and trademark laws, trade secrets, patents, confidentiality procedures (including, in some instances, the encryption of certain technical information) and confidentiality agreements and inventors' rights agreements with our strategic partners, subcontractors, vendors, suppliers, consultants and employees to protect our proprietary rights. We have obtained patents and will continue to make efforts to obtain patents, when available, in connection with our technologies. We have 40 U.S. and 88 international patents covering our fuel cell technology (in certain cases covering the same technology in multiple jurisdictions). Of the 40 U.S. patents, 37 relate to our Direct FuelCell technology. We also have submitted 8 U.S. and 41 international patent applications. The patents that we have obtained will expire between 2003 and 2021, and the average remaining life of our patents is approximately 9.4 years. Seven new U.S patents were allowed during 2002, and three U.S. patents expired. We also have 19 invention disclosures in process with our patent counsel that may result in additional patent applications. 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. Certain of our intellectual property have been licensed to us on a non-exclusive basis from third parties that may also license such intellectual property to others, including our competitors.

Many of our United States patents are the result of government-funded research and development programs, including the DOE cooperative agreement. Four of our patents that were the result of government-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. Our patents that were the result of government-funded research after January 1988 automatically belong to us because of our "small business" status. We expect to continue to qualify as a "small business" for the remainder of the three-year extension of the DOE cooperative agreement.

Fourteen of our United States patents that we own have resulted from government-funded research 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 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. We believe, however, that the likelihood of the United States 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.

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. We believe that emissions of sulfur dioxide and nitrogen oxide from our fuel cell power plants will be much lower than conventional combustion-based generating stations, and well within existing and proposed regulatory limits. The primary emissions from our

megawatt class DFC power plants, assuming no co-generation application, will be humid flue gas (that will be 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. 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 industrial plants will 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.

Pursuant to the National Environmental Protection Act, since 1991, each local DOE procurement office must file and have approved by the DOE in Washington, D.C., appropriate documentation for environmental, safety and health impacts with respect to procurement contracts entered into by that local office. The costs associated with compliance with environmental regulations are generally recoverable under our cost reimbursable contracts. In certain cases, contract work may be delayed until the approval is received.

Employees

As of October 31, 2002 we had 425 full-time employees, of whom 191 were located at the Torrington, Connecticut manufacturing plant, and 234 were located at the Danbury, Connecticut facility or various field offices.

Executive Officers of the Registrant

The executive officers of the Company and their ages are as follows:

NAME	AGE	POSITION WITH THE COMPANY
Jerry D. Leitman	60	President, Chief Executive Officer and Chairman of the Board
Dr. Hansraj C. Maru	58	Executive Vice President, Chief Technical Officer and Director
Christopher R. Bentley	60	Executive Vice President, Chief Operating Officer and Director
Joseph G. Mahler	50	Senior Vice President, Chief Financial Officer, Treasurer & Corporate Secretary
Herbert T. Nock	53	Senior Vice President of Marketing and Sales

Jerry D. Leitman. Mr. Leitman has been President, Chief Executive Officer and a director since August 1997. In June of 2002, Mr. Leitman was elected to serve as Chairman of the Board. Mr. Leitman was previously President of ABB Asea Brown Boveri's global air pollution control businesses from 1992 to 1995. 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 a member of the Compensation Committee of Esterline Technologies Inc. Mr. Leitman obtained both a BS and MS in Mechanical Engineering from the Georgia Institute of Technology in 1965 and 1967, respectively.

Dr. Hansraj C. Maru. Dr. Maru has been Executive Vice President and a director since December 1992 and was appointed Chief Technology Officer in August 2000. 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 a director since June 1993, Executive Vice President since September 1990 and Chief Operating Officer since August 2000. 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. From 1993 to 1998, Mr. Mahler was Vice President—Chief Financial Officer at Earthgro, Inc. and prior to that, he was a partner at Ernst & Young. 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 College in 1977.

Item 2. PROPERTIES

We currently own and occupy approximately 72,000 square feet in two interconnected single story buildings on 10.8 acres, of which approximately 7.9 acres are currently used, in Danbury, Connecticut.

In December 2001, we signed a ten-year lease agreement for a 65,000 square foot facility in Torrington, Connecticut for our manufacturing operations. The annual lease cost is approximately $448,000 in the first five years and $512,000 for the last five years, in addition to taxes, utilities and operating expenses. We have an option to extend the lease for an additional five years with an annual lease cost of approximately $569,000. We have a term loan facility from the Connecticut Development Authority that was used for the purchase of equipment at this facility. As of October 31, 2002, we had $1,981,000 outstanding under this facility.

In May of 2002, we signed an eighteen-month lease agreement for approximately 38,000 square feet of space in Danbury, Connecticut for additional manufacturing operations. The annual lease cost is approximately $213,000 in the first year and $127,000 for the remaining six months, in addition to taxes, utilities and operating expenses. We have options to extend the lease for two additional five-year periods. The average annual lease cost for option periods one and two would be approximately $242,000 and $280,000, respectively.

Item 3. LEGAL PROCEEDINGS

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

Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

None

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

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. Since June 7, 2000, it has been quoted on the Nasdaq National Market under the symbol "FCEL." On January 22, 2003, there were approximately 619 common stockholders of record.

The following table sets forth the range of high and low prices of our common stock on the Nasdaq National Market.

	High	Low
Year Ended October 31, 2001		
First Quarter	$41.75	$22.63
Second Quarter	36.25	19.25
Third Quarter	46.72	15.50
Fourth Quarter	20.45	10.48
Year Ended October 31, 2002		
First Quarter	$22.80	$13.23
Second Quarter	18.65	15.02
Third Quarter	17.24	6.10
Fourth Quarter	8.24	4.54

We have never paid a cash dividend on our common stock and do not anticipate paying any cash dividends in the foreseeable future. We currently anticipate retaining all of our earnings to finance future growth.

Unregistered Securities

None

Item 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data presented below as of the end of each of the years in the five-year period ended October 31, 2002 have been derived from our audited consolidated financial statements together with the notes thereto included elsewhere in this Report (the "Consolidated Financial Statements"). The data set forth below is qualified by reference to, and should be read in conjunction with, the Consolidated Financial Statements and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Report.

(Dollars in thousands, except for per share amounts)

	2002	2001	2000	1999	1998
Revenues:					
Research and development contracts	$ 33,575	$ 20,882	$ 17,986	$ 18,553	$ 24,318
Product sales and revenues	7,656	5,297	2,729	1,412	—
Total revenues	41,231	26,179	20,715	19,965	24,318
Costs and expenses:					
Cost of research and development contracts	45,664	19,033	12,508	12,690	16,106
Cost of product sales and revenues	32,129	16,214	4,968	1,025	—
Administrative and selling expenses	10,451	9,100	8,055	6,684	6,999
Research and development expenses	6,806	3,108	1,917	1,813	2,258
Loss from operations	(53,819)	(21,276)	(6,733)	(2,247)	(1,045)
License fee income, net	270	270	266	1,527	678
Interest expense	(160)	(116)	(141)	(169)	(269)
Interest and other income, net	4,876	5,684	2,138	195	267
Loss before provision for income taxes	(48,833)	(15,438)	(4,470)	(694)	(369)
Provision for income taxes	7	—	—	291	13
Minority interest	—	—	11	—	—
Net loss	$ (48,840)	$ (15,438)	$ (4,459)	$ (985)	$ (382)
Basic and diluted loss per share:	$ (1.25)	$ (0.45)	$ (0.16)	$ (0.04)	$ (0.02)
Basic and diluted shares outstanding	39,135,256	34,359,320	28,297,594	24,906,856	24,486,108
Working capital	$ 218,334	$ 276,173	$ 71,576	$ 7,204	$ 10,234
Total assets	289,803	334,020	91,028	19,831	26,843
Long – term debt	1,696	1,252	—	1,625	1,944
Total shareholders' equity	271,702	319,716	83,251	14,815	15,870

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

OVERVIEW

We currently obtain our revenues from government and industry funded research and development contracts, demonstration and field trial projects, and license fees. These contracts are generally multi-year, cost reimbursement type contracts. The majority of these are United States Government contracts that are dependent upon the government's continued allocation of funds. We are currently transitioning from a research and development company to a commercial products company.

Under cost-reimbursement contracts, we are reimbursed for reasonable and allocable costs of the materials, subcontracts, direct labor, overhead, general and administrative expenses, independent research and development costs, and bid and proposal preparation costs, provided the total of such costs do not exceed the reimbursement limits set by the contract. In addition, some of these contracts bear a fixed fee or profit. We manage these contracts by charging costs directly, maintaining adequate control of overhead costs and general and administrative expenses so they do not exceed the approved billing rates, and limiting the aggregate reimbursable costs to the allowable amounts set by the contract.

In performance of firm fixed price contracts, we are paid the price that is set in advance without regard to the costs actually incurred in performance, subject to certain excess profit limitations. In a cost sharing type contract, we agree in advance to contribute or cause to be contributed an agreed upon amount of funds, third party services or in-kind services toward fulfilling the objective of the contract. Except for our cost contributions, the contract operates in substantially the same manner as a cost reimbursement type contract. At present, most of our contracts are cost shared and no fee or profit is allowed. The government contracts and agreements provide for a cost-of-money recovery based upon capital investment in facilities employed in contract performance.

Our research and development expenses reflect costs incurred for research and development projects conducted without specific customer-sponsored contracts. These costs consist primarily of labor, overhead, materials to build prototype units, materials for testing, consulting fees and other costs associated with our internal research and development expenses.

Since 1983, when we began to shift our emphasis from fuel cells for military use to commercial applications, our primary focus has been researching and developing carbonate fuel cells. The funding received for this research has represented a substantial portion of our revenues.

We will continue to seek research and development contracts for all of our product lines. To obtain contracts, we must continue to prove the benefits of our technologies and be successful in our competitive bidding. Failure to obtain these contracts could have an adverse effect upon us.

Because we receive a significant portion of our revenues from contracts with the DOE and other government agencies, our future revenues and income could be materially affected by changes in government agency procurement policies, a reduction in expenditures for the services provided by us, and other risks generally associated with government contracts. In general, our government contracts may be terminated, in whole or in part, at the convenience of the government. A reduction or delay in our government funding could have a material adverse effect on our ability to commercialize our fuel cell technology.

In July 2000, the DOE extended the cooperative agreement for three additional years. Approximately $15,534,000 remains to be funded by the DOE for the remaining period, and we anticipate extending this contract until December 2004.

RESULTS OF OPERATIONS

2002 compared to 2001. Total revenues increased 57% to $41,231,000 in the 2002 period from $26,179,000 in the 2001 period. Revenues from research and development contracts increased 61% to $33,575,000 from $20,882,000 in the 2001 period, while product sales increased 45% to $7,656,000 from $5,297,000 in the 2001 period. The additional $12,693,000 of research and development contract revenue was due to activities on King County, Clean Coal, Coal Mine Methane, and Navy Phase II. The additional $2,359,000 of product sales revenue was related to the manufacture of DFC power plants for our distribution partners and sales of fuel cell components to MTU.

Cost of research and development contracts increased to $45,664,000 in the 2002 period from $19,033,000 in the 2001 period. This was due to sales and activities on cost-shared research and development contracts, including King County, Clean Coal, Navy Phase II and Coal Mine Methane.

Cost of product sales and revenues increased 98%, to $32,129,000 in the 2002 period from $16,214,000 in the 2001 period, due to additional sales of fuel cell components to MTU, an overall increase in the procurement for and manufacturing of DFC power plants for our distribution partners, and development costs on our initial field trial units.

Administrative and selling expenses increased 15% to $10,451,000 in the 2002 period from $9,100,000 in the 2001 period. These additional costs were driven by our commercialization efforts and consisted of employment costs of $637,000, professional services costs of $714,000 related to hiring, systems implementation, marketing efforts and other.

Research and development expenses increased to $6,806,000 in the 2002 period from $3,108,000 in the 2001 period. This was due to development costs associated with design improvements of our sub-megawatt products and first article testing and design costs related to our megawatt class products.

Loss from operations increased to $53,819,000 in the 2002 period from $21,276,000 in the 2001 period. The additional losses resulted from activities on our field trials and cost shared contracts, and a higher level of sales and marketing activity.

Interest expense increased to $160,000 in the 2002 period from $116,000 in the 2001 period. This was attributable to additional borrowings in the 2002 period.

Interest and other income, net, decreased to $4,876,000 in the 2002 period from $5,684,000 in the 2001 period. This was due to our lower cash and investments balances and lower interest rates.

We believe that due to our efforts to commercialize our Direct FuelCell 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.

2001 compared to 2000. Revenues increased 26% to $26,179,000 in the 2001 period from $20,715,000 in the 2000 period. This was due to $2,896,000 of additional revenue from our research and development contracts including King County, Navy Phase II, Clean Coal, Vision 21 and Coal Mine Methane, and $2,568,000 of added product sales revenue from the manufacture of DFC power plants for our distribution partners and MTU.

Cost of research and development contracts increased to $19,033,000 in the 2001 period from $12,508,000 in the 2000 period. This was due to an increased number of cost-shared research and development contracts.

Cost of product sales and revenues increased to $16,214,000 in the 2001 period from $4,968,000 in the 2000 period due to an overall increase in the procurement and manufacturing of DFC power plants for our distribution partners and an increase in development costs on our initial field trial units.

Administrative and selling expenses increased 13% to $9,100,000 in the 2001 period from $8,055,000 in the 2000 period. This was driven by sales and marketing efforts including higher employment and other costs of commercialization.

Research and development expenses increased 62% to $3,108,000 in the 2001 period from $1,917,000 in the 2000 period. This was due to the incurring of development costs associated with design improvements of our fuel cells.

Loss from operations increased to $21,276,000 in the 2001 period from $6,733,000 in the 2000 period. The additional losses resulted from activities on our field trials and cost shared contracts, and a higher level of sales and marketing activity.

Interest expense decreased to $116,000 in the 2001 period from $141,000 in the 2000 period. This was attributable to the repayment of indebtedness offset by incurring new indebtedness at lower rates in the second half of the 2001 period.

Interest and other income, net, increased to $5,684,000 in the 2001 period from $2,138,000 in the 2000 period. This was due to the investment of the $241,200,000 net cash proceeds from our equity offering in June 2001, and the $10,000,000 of proceeds from the sale of common stock to our strategic Asian partner, Marubeni, in July 2001.

We believe that due to our efforts to commercialize our Direct FuelCell 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

Our operations are funded primarily through sales of equity, cash generated from operations and borrowings. Cash from operations includes revenue from government contracts and cooperative agreements, field trial projects, sale of fuel cell components primarily to MTU, license fees and interest income.

Our cash requirements depend on numerous factors, including the implementation of our field follow program for our DFC300A products, the initiation of our megawatt class field trial program, and development of our DFC/Turbine and diesel DFC products. We expect to devote substantial capital resources to achieve our overall product goals of cost reduction, performance improvement, reliability and serviceability. We believe that we can achieve these goals through our near term product strategy of developing standard products, increasing volume production and the further development of our distribution network. We expect such activities will be funded from existing cash, cash equivalents, investments and cash from operations. Once we've completed our near term strategy, we believe we will have the financial flexibility to maintain, reduce or accelerate our business activities consistent with market demand.

At October 31, 2002, we had cash, cash equivalents and investments (U.S. Treasuries) of $220,583,000, compared to cash, cash equivalents and investments of $290,533,000 at October 31, 2001. The decrease in cash was attributable to $45,066,000 used to fund the net loss, a net reduction in working capital of $10,891,000, which includes an inventory increase of $7,647,000, capital expenditures of $15,373,000, and by net financing activities of $1,380,000.

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.

In December 1994, we entered into a Cooperative Agreement with the DOE pursuant to which they agreed to provide funding through 1999 to support the continued development and improvement of our commercial product. This agreement was extended for three additional years, through 2003, with funding subject to annual approval by the U.S. Congress. We anticipate extending this agreement through 2004. The current aggregate dollar amount of that contract is $212,679,000 with the DOE providing $134,712,000 in funding. Approximately $15,534,000 remains to be funded by the DOE. The balance of the funding is expected to be provided by us, our partners or licensees, other private agencies and utilities. Approximately 95% of the non-DOE portion has been committed or credited to the project in the form of in-kind or direct cost share from non-U.S. government sources.

In addition to the DOE Cooperative Agreement, we have received a $19,356,000 39% cost-shared contract under the Vision 21 program to demonstrate Direct FuelCell/turbine power plants, a $34,573,000, 50% cost shared contract from the DOE to demonstrate a 2 MW fuel cell power plant operating on coal-derived gas, a $16,806,000, 21% cost-shared contract from the U.S. Navy to demonstrate a marine fuel cell power plant operating on diesel fuel and a $5,362,000, 50% cost-shared contract with the DOE to develop a Direct FuelCell utilizing coal methane gas. As of October 31, 2002, there was approximately $26,979,000 of backlog related to these contracts, of which approximately $18,703,000 was funded and $8,276,000 was unfunded.

Recent Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board (FASB) issued SFAS No. 141, "*Business Combinations"*, and SFAS No. 142, "*Goodwill and Other Intangible Assets"*. SFAS No. 141 revises the guidance for business combinations and eliminates the pooling method. SFAS No. 142 eliminates the amortization requirement for goodwill and certain other intangible assets and requires that such assets be reviewed periodically for impairment. We adopted SFAS No. 141 upon its issuance with no impact on our financial condition or results of operations. We are required to adopt SFAS No. 142 effective November 1, 2002 and this adoption is not anticipated to have a significant impact on our financial condition, results from operations or cash flows upon adoption.

In August 2001, the FASB issued SFAS No. 143, "*Accounting for Asset Retirement Obligations"*, which addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The standard applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, and development and (or) normal use of the asset. We are required to adopt the provisions of SFAS No. 143 effective November 1, 2002. To accomplish this, we must identify all legal obligations for asset retirements, if any, and determine the fair value of these obligations on the date of adoption. The adoption of SFAS No. 143 is not anticipated to have a significant impact on our financial condition, results from operations or cash flows.

In October 2001, the FASB issued SFAS No. 144 "Accounting for Impairment or Disposal of Long-Lived Assets". SFAS No. 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This statement also extends the reporting requirements to report separately, as discontinued operations, components of an entity that have either been disposed of or are classified as held-for-sale. We are required to adopt the provisions of SFAS No. 144 effective November 1, 2002. The adoption of SFAS No. 144 is not anticipated to have a significant impact on our financial condition or results from operations or cash flows.

In April 2002, the FASB issued SFAS No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections,". Under SFAS No. 145, among other things, gains and losses related to the extinguishment of debt should no longer be segregated on the income statement as extraordinary items. Instead, such gains and losses should be included as a component of income from continuing operations. The provisions of SFAS No. 145 are effective for us on November 1, 2002. The adoption of SFAS No. 145 is not anticipated to have a significant impact on our financial position, results of operations or cash flows.

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," was issued. This statement nullifies Emerging Issues Task Force (EITF) Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)." SFAS No. 146 requires that a liability for the fair value of the costs associated with an exit or disposal activity be recognized when the liability is incurred. The provisions of SFAS No. 146 are effective for exit or disposal activities initiated after December 31, 2002 and thus will become effective for us as of January 1, 2003. The adoption of SFAS No. 146 is currently not expected to have a material impact on our financial position, results of operations or cash flows upon adoption.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." Interpretation No. 45 requires the guarantor to recognize a liability for the non-contingent component of a guarantee; that is, the obligation to stand ready to perform in the event that specified triggering events or conditions occur. The initial measurement of this liability is the fair value of the guarantee at inception. The recognition of the liability is required even if it is not probable that payments will be required under the guarantee or if the guarantee was issued with a premium payment or as part of a transaction with multiple elements. Interpretation No. 45 also requires additional disclosures related to guarantees. We are required to adopt the disclosure provisions of the Interpretation beginning in the first quarter

of fiscal 2003. Additionally, the recognition and measurement provisions of Interpretation No. 45 are effective for all guarantees entered into or modified after December 31, 2002. We are in the process of evaluating the effect of this Interpretation on its financial statements and disclosures.

In December 2001, the American Institute of Certified Public Accountants (AICPA) issued Statement of Position (SOP) 01-6, "Accounting by Certain Entities (Including Entities with Trade Receivables) That Lend to or Finance the Activities of Others". The SOP applies to any entity that lends to or finances the activities of others, and specifies accounting and disclosure requirements for entities that extend trade credit to customers and also provides specific guidance for other types of transactions specific to certain financial institutions. The SOP is effective for the Company beginning November 1, 2002 and we do not believe the recognition and measurement provisions within this SOP will result in a change in practice for its trade receivables or any other activities of the Company. The SOP also provides certain presentation and disclosure changes for entities with trade receivables as part of the objective of requiring consistent accounting and reporting for like transactions, which will be incorporated into the Company's disclosures upon adoption.

Critical Accounting Policies

Revenue Recognition

Revenues represent reimbursement by commercial and government entities for all or a portion of the research and development costs we incur on long-term contracts. We recognize our revenues on long-term contracts on a method similar to the percentage of completion method. Revenues are recognized proportionally as research and development costs are incurred and compared to the estimated total research and development costs for each contract or field trial. Costs are considered research and development in nature as the benefit to be obtained from incurring such costs may represent the design, development, manufacture, and the conditioning and testing of our fuel cell stacks. In many cases, the amount we are reimbursed is exceeded by the costs incurred or to be incurred on a contract.

As we commercialize, our fuel cell technology costs will relate entirely to the fulfillment of individual contracts with customers. At the point that our fuel cells are commercialized, estimated costs to complete an individual contract in excess of revenue will be accrued immediately.

Inventories

As discussed above, we recognize research and development costs for contracts as incurred. When we incur costs for material, labor and overhead to build fuel stacks which have not yet been dedicated to a particular contract, we include them in WIP inventory to the extent we estimate them to be recoverable based on anticipated use of the fuel stacks and anticipated cost reimbursement on these anticipated contracts. At October 31, 2002, there was $3,767,000 in WIP inventory related to such costs. During the normal course of business, we will dedicate the fuel stacks in WIP inventory to a contract, at which point in time the inventory costs are charged to cost of research and development contracts or cost of product sales and revenues, and when appropriate, revenue will be recognized on these costs.

As we increase our commercial activities, we anticipate that our assessment of recoverability of inventory costs will become increasingly dependent upon the amount we believe we can sell the fuel stacks in the commercial market, and less on the extent to which costs are reimbursed pursuant to government contracts.

Item 7A. 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, 2002, including all interest rate sensitive instruments, a near-term change in interest rate movements of 1% would affect our consolidated results of operations by approximately $1,000,000 annually, based on the investment of our cash and cash equivalents and outstanding debt at October 31, 2002.

Currency Rate Exposure

Our functional currency is the U.S. dollar. To the extent we expand our international operations, we will be exposed to increased risk of currency fluctuation. In fiscal 2003 and beyond, we have or will be purchasing materials for various projects in foreign countries. Many of these purchases will be denominated in the currency of the related region. In order to protect the purchase price from currency fluctuations, we may, from time to time, enter into forward contracts to purchase foreign currency. It is expected that changes in the market value of the futures contracts will be included as part of the acquisition price of the materials inventory and realized when the project is ultimately completed, along with the offsetting foreign currency gains or losses.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements and Supplementary Data are listed under Part IV, Item 14, in this report.

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

None.

PART III

Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information required by this item is contained in part under the caption “Executive Officers of the Company” contained in Part I hereof and the remainder is incorporated herein by reference to “Election of Directors” in our Proxy Statement for our Annual Meeting of Shareholders to be held on March 25, 2003 (the “2003 Proxy Statement”) to be filed with the SEC within 120 days from the fiscal year end.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the Section captioned "Executive Compensation " to be contained in the 2003 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this item is incorporated herein by reference to the Section captioned "Security Ownership of Certain Beneficial Owners and Management" to be contained in the 2003 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this item is incorporated herein by reference to the Section captioned "Certain Relationships and Related Transactions" to be contained in the 2003 Proxy Statement to be filed with the SEC within 120 days from fiscal year end.

Item 14. CONTROLS AND PROCEDURES

Within 90 days prior to the date of this report, we carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures are effective in timely alerting them to material information required to be included in our periodic SEC reports. It should be noted that the design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote.

In addition, we reviewed our internal controls, and there have been no significant changes in our internal controls or in other factors that could significantly affect those controls subsequent to the date of their last evaluation.

PART IV

Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(A) (1) FINANCIAL STATEMENTS

1) Independent Auditors' Report

   KPMG LLP (See page F-2, hereof.)

2) Consolidated Balance Sheets as of October 31, 2002 and 2001 (See page F-3 hereof.)

3) Consolidated Statements of Loss for the Years Ended October 31, 2002, 2001, and 2000 (See page F-4, hereof.)

4) Consolidated Statements of Changes in Shareholders' Equity for the Years Ended October 31, 2002, 2001 and 2000 (See page F-5, hereof.)

5) Consolidated Statements of Cash Flows for the Years Ended October 31, 2002, 2001 and 2000 (See page F-6, hereof.)

6) Notes to Consolidated Financial Statements

(A) (2) FINANCIAL STATEMENT SCHEDULES

Supplement schedules are not provided because of the absence of conditions under which they are required or because the required information is given in the financial statements or notes thereto.

Table of Contents

Independent Auditors' Report

The Board of Directors of
FuelCell Energy, Inc.:

We have audited the accompanying consolidated balance sheets of FuelCell Energy, Inc. and subsidiary as of October 31, 2002 and 2001, and the related consolidated statements of loss, changes in shareholders' equity and cash flows for each of the years in the three-year period ended October 31, 2002. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of FuelCell Energy, Inc. as of October 31, 2002 and 2001, and the results of their operations and their cash flows for the each of the years in the three-year period ended October 31, 2002 in conformity with accounting principles generally accepted in the United States of America.

KPMG LLP

Hartford, CT
December 9, 2002

FUELCELL ENERGY, INC.
Consolidated Balance Sheets
October 31, 2002 and 2001
(Dollars in thousands, except per share amounts)

	2002	2001
ASSETS		
Current assets:		
Cash and cash equivalents	$ 102,495	$ 256,870
Investments: U.S. Treasury securities	103,501	17,890
Accounts receivable, net	10,438	7,110
Inventories	13,981	6,334
Deferred income taxes	—	25
Other current assets	4,324	996
Total current assets	234,739	289,225
Property, plant and equipment, net	38,710	27,188
Investments: U.S. Treasury securities	14,587	15,773
Deferred income taxes	—	266
Other assets, net	1,767	1,568
Total assets	$ 289,803	$ 334,020
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 285	$ 175
Accounts payable	4,712	4,679
Accrued liabilities	7,904	6,763
Deferred license fee income	38	37
Customer advances	3,466	1,398
Total current liabilities	16,405	13,052
Long-term debt	1,696	1,252
Total liabilities	18,101	14,304
Commitments and contingencies	—	—
Shareholders' equity:		
Common stock ($.0001 par value); 150,000,000 shares authorized at October 31, 2002 and October 31, 2001 respectively: 39,228,828 and 38,998,788 shares issued and outstanding at October 31, 2002 and October 31, 2001, respectively	4	4
Additional paid-in capital	339,762	338,936
Accumulated deficit	(68,064)	(19,224)
Total shareholders' equity	271,702	319,716
Total liabilities and shareholders' equity	$ 289,803	$ 334,020

The accompanying footnotes are an integral part of the consolidated financial statements.

FUELCELL ENERGY, INC.
Consolidated Statements of Loss
October 31, 2002, 2001 and 2000
(Dollars in thousands, except per share amounts)

	2002	2001	2000
Revenues:			
Research and development contracts	$ 33,575	$ 20,882	$ 17,986
Product sales and revenue	7,656	5,297	2,729
Total revenues	41,231	26,179	20,715
Costs and expenses:			
Cost of research and development contracts	45,664	19,033	12,508
Cost of product sales and revenues	32,129	16,214	4,968
Administrative and selling expenses	10,451	9,100	8,055
Research and development costs	6,806	3,108	1,917
Total costs and expenses	95,050	47,455	27,448
Loss from operations	(53,819)	(21,276)	(6,733)
License fee income, net	270	270	266
Interest expense	(160)	(116)	(141)
Interest and other income, net	4,876	5,684	2,138
Loss before provision for Income taxes	(48,833)	(15,438)	(4,470)
Provision for income taxes	7	—	—
Minority interest	—	—	11
Net loss	$ (48,840)	$ (15,438)	$ (4,459)
Loss per share:			
Basic and diluted loss per share	$ (1.25)	$ (0.45)	$ (0.16)
Basic and diluted shares outstanding	39,135,256	34,359,320	28,297,594

The accompanying footnotes are an integral part of the consolidated financial statements.

FUELCELL ENERGY, INC.
Statements of Changes in Shareholders' Equity
October 31, 2002, 2001, and 2000
(Dollars in thousands, except per share amounts)

	Shares Of Common Stock	Common Stock	Additional Paid-In Capital	Retained Earnings (Deficit)	Total Shareholders' Equity
Balance at October 31, 1999	25,303,488	$ 2	$ 14,140	$ 673	$ 14,815
Compensation for stock options granted			134		134
Issuance of common stock under benefit plans	17,896		59		59
Issuance of common stock for follow-on offering in April 2000	5,200,000	1	61,099		61,100
Issuance of common stock	585,796		15,000		15,000
Common stock retired for cashless exercise of options	(20,844)		(258)		(258)
Stock options exercised	375,084		394		394
Common stock costs			(3,534)		(3,534)
Net loss				(4,459)	(4,459)
Balance at October 31, 2000	31,461,420	$ 3	$ 87,034	$ (3,786)	$ 83,251
Compensation for stock options granted			100		100
Issuance of common stock under benefit plans	16,414		213		213
Issuance of common stock for follow-on offering in June 2001	6,900,000	1	241,500		241,501
Issuance of common stock	268,114		10,000		10,000
Stock options exercised	354,382		1,110		1,110
Common stock retired for cashless exercise of options	(1,542)		(60)		(60)
Common stock and equity investment costs			(708)		(708)
Deconsolidation of Xiamen Joint Venture			(253)		(253)
Net loss				(15,438)	(15,438)
Balance at October 31, 2001	38,998,788	$ 4	$ 338,936	$ (19,224)	$ 319,716
Issuance of common stock under benefit plans	16,324		219		219
Stock options exercised	213,716		307		307
Common stock and equity investment costs			300		300
Net loss				(48,840)	(48,840)
Balance at October 31, 2002	39,228,828	$ 4	$ 339,762	$ (68,064)	$ 271,702

The accompanying footnotes are an integral part of the consolidated financial statements.

FUELCELL ENERGY, INC.
Consolidated Statements of Cash Flows
October 31, 2002, 2001 and 2000
(Dollars in thousands, except per share amounts)

	2002	2001	2000
Cash flows from operating activities:			
Net loss	$ (48,840)	$ (15,438)	$ (4,459)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Compensation for options granted	—	100	134
Depreciation and amortization	3,420	2,034	1,880
Amortization of treasury note premium	363	—	—
Deferred income taxes	291	—	—
(Gain) loss on disposal of property	63	(4)	82
Minority interest	—	—	(11)
(Increase) decrease in operating assets:			
Accounts receivable	(3,328)	(3,651)	(1,127)
Inventories	(7,647)	(6,029)	899
Other current assets	(3,159)	(400)	(191)
Increase (decrease) in operating liabilities:			
Accounts payable	33	3,053	1,142
Accrued liabilities	1,141	3,216	1,770
Customer advances	2,068	656	192
Deferred license fee income and other	1	48	9
Net cash (used in) provided by operating activities	(55,594)	(16,415)	320
Cash flows from investing activities:			
Capital expenditures	(15,373)	(19,094)	(4,155)
Treasury notes matured	82,500	—	—
Treasury notes purchased	(167,288)	(33,663)	—
Payments on other assets	—	—	6
Net cash used in investing activities	(100,161)	(52,757)	(4,149)
Cash flows from financing activities:			
Long term debt borrowings	787	1,427	—
Repayment on long-term debt	(233)	(1,625)	(341)
Sales of common stock	—	251,501	76,100
Deconsolidation of Xiamen Joint Venture	—	(570)	—
Common stock and equity investment costs	300	(708)	(3,534)
Common stock issued for Option and Stock Purchase Plans	526	1,263	195
Net cash provided by financing activities	1,380	251,288	72,420
Net (decrease) increase in cash and cash equivalents	(154,375)	182,116	68,591
Cash and cash equivalents-beginning of year	256,870	74,754	6,163
Cash and cash equivalents-end of year	$ 102,495	$ 256,870	$ 74,754
Cash paid during the period for:			
Interest	$ 160	$ 116	$ 129
Income taxes	218	135	210

The accompanying footnotes are an integral part of the consolidated financial statements.

(1) Summary of Significant Accounting Policies

Nature of Business

FuelCell Energy, Inc. is engaged in the development and commercialization of carbonate fuel cell technology for stationary power generation. We manufacture carbonate fuel cells, generally on a contract basis. We are currently in the process of commercializing our Direct FuelCell technology and expect to incur losses as we expand our product development, commercialization program and manufacturing operations.

Our revenue is primarily generated from agencies of the U.S. government and customers located throughout the United States, Europe and Asia. We generally require a down payment with the acceptance of a purchase order with a customer.

Principles of Consolidation

The accompanying financial statements as of and for the years ended October 31, 2002 and 2001 include only our accounts. Prior to October 31, 2000, the accounts of our former subsidiary, Xiamen-ERC High Technology Joint Venture, Inc. (the "Joint Venture"), a joint venture formed between the City of Xiamen, Peoples Republic of China, and us, were included. In October of 2000, we transferred 42.17% of our 66.67% ownership to Evercel, Inc. Our remaining 24.5% ownership in the Xiamen joint venture has been accounted for under the equity method since that transfer.

Certain reclassifications have been made to our prior year financial statements to conform to the 2002 presentation.

Cash and Cash Equivalents

Cash equivalents consist primarily of investments in money market funds and United States Treasury securities with original maturities averaging three months or less at date of acquisition. We place our temporary cash investments with high credit quality financial institutions.

Investments

Investments consist of United States Treasury securities with original maturities of greater than three months at the date of acquisition. The notes are classified as held to maturity since we have the ability and intention to hold them until maturity. The notes are being carried at amortized cost, which is par value, plus or minus unamortized premium or discount. Such notes are classified as current assets when remaining maturities are one year or less, and as non-current assets when remaining maturities are greater than one year.

Inventories

Inventories consist principally of raw materials and work-in-process and are stated at the lower of cost or market.

Raw materials consist mainly of various nickel powders and steels, and various other components used in producing cell stacks.

Work-in-process inventory is comprised of material, labor, and overhead costs incurred by us to build fuel cell stacks, which are subcomponents of power generation systems, which have not yet been dedicated to a particular research and development contract, field trial, or commercial customer, (collectively the "end users"), and which are estimated to be fully recovered from the end users. In instances where costs incurred exceed anticipated recovery, those excess costs are charged to cost of product sales and revenues as incurred.

Property, Plant and Equipment

Property, plant and equipment are stated at cost, less accumulated depreciation provided on the straight-line method over the estimated useful lives of the respective assets. Leasehold improvements are amortized on the straight-line method over the shorter of the estimated useful lives of the assets or the term of the lease.

When property is sold or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in operations for the period.

Intellectual Property

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

Impairment of Long Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. If events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable, we compare the carrying amount of the assets to future undiscounted net cash flows, excluding interest costs, expected to be generated by the assets and their ultimate disposition. If the sum of the undiscounted cash flows is less than the carrying value, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value, less costs to sell.

Revenue/License Fee Revenue Recognition

Revenues and fees on long-term contracts are recognized on a method similar to the percentage-of-completion method. Percentage-of-completion is measured by costs incurred and accrued to date as compared with the estimated total costs for each contract or field trial. Costs are considered research and development in nature as the benefit to be obtained may represent the design, development, manufacture, conditioning and testing of our fuel cell stacks. In many cases, we are reimbursed only a portion of the costs incurred or to be incurred on the contract. As we commercialize our fuel cell technology, costs will relate entirely to the delivery of fuel cell products to customers. At the point that our fuel cells are commercialized, estimated costs to complete an individual contract in excess of revenue will be accrued immediately.

Contracts typically extend over a period of one or more years. In accordance with industry practice, accounts receivable include amounts relating to contracts and programs having production cycles longer than one year and a portion thereof will not be realized within one year. We recognized approximately $7,267, $3,427, and $469, of long-term contract revenues from customers who are also corporate shareholders during fiscal years ended October 31, 2002, 2001 and 2000, respectively.

License fee income arises from an agreement with MTU-Friedrichshafen GmbH (“MTU”), a division of DaimlerChrysler, our European partner, in which we granted MTU an exclusive license to use our Direct FuelCell patent rights and know-how in Europe and the Middle East, and a non-exclusive license in South America and Africa, subject to certain rights of others and us, in each case for a royalty. Amounts received are deferred and recognized ratably over the term of the agreement. We recognized approximately $300, $300, and $292 of license fee income during each of the fiscal years ended October 31, 2002, 2001 and 2000. We have also agreed to sell our Direct FuelCell components and stacks to MTU at cost, plus a modest fee. Revenues recognized for such sales totaled $4,183, $2,179, and $469 for the fiscal years ended October 31, 2002, 2001, and 2000, respectively. This agreement continues through December 2004.

Revenues from the U.S. Government and its agencies directly and through primary contractors were $33,575, $20,837, and $17,961 for the years ended October 31, 2002, 2001 and 2000, respectively.

Warrant Value Recognition

Warrants have been issued as sales incentives to certain of our business partners. 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.

Research and Development

Our cost of research and development contracts reflects costs incurred under specific customer-sponsored research and development contracts. These costs consist of both manufacturing and engineering labor, including applicable overhead expenses, materials to build prototype units, materials for testing, and other costs associated with our research and development contracts.

Our research and development expenses reflect costs incurred for internal research and development projects conducted without specific customer-sponsored contracts. These costs consist primarily of labor, overhead, materials to build prototype units, materials for testing, consulting fees and other costs associated with our internal research and development expenses.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is recorded against deferred tax assets if it is unlikely that some or all of the deferred tax assets will be realized.

Stock Option Plan

Statement of Financial Accounting Standard ("SFAS") No. 123, "Accounting for Stock-Based Compensation," encourages entities to recognize as expense over the vesting period the fair value of all stock-based awards on the date of grant. Alternatively, SFAS No. 123 also allows entities to continue to apply the provisions of APB Opinion No. 25 and provide pro forma net income and pro forma earnings per share disclosures for employee stock option grants as if the fair-value-based method defined in SFAS No. 123 had been applied. We apply the recognition provisions of APB Opinion No. 25 and provide the pro forma disclosure provisions of SFAS No. 123, and therefore record no compensation expense in our financial statements.

In accordance with APB No. 25, compensation expense is recorded over the respective service period to the extent that the market price of the underlying stock on the measurement date exceeds the exercise price.

Earnings Per Share (EPS)

Basic EPS is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding during the period. The computation of diluted EPS is similar to the computation of basic EPS except that it gives effect to all potentially dilutive instruments that were outstanding during the period. In 2002, 2001 and 2000, we computed diluted EPS without consideration to potentially dilutive instruments due to the fact that the losses incurred by us made them antidilutive. All per share data and the number of shares of common stock in this report have been retroactively adjusted to reflect the three-for-two stock dividend, which became effective November 16, 1999, the two-for-one stock dividend, which became effective September 13, 2000, and the two-for-one stock dividend, which became effective June 19, 2001.

Use of Estimates

Management has made a number of estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with generally accepted accounting principles. Actual results could differ from those estimates.

Recent Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board (FASB) issued SFAS No. 141, "*Business Combinations"*, and SFAS No. 142, "*Goodwill and Other Intangible Assets"*. SFAS No. 141 revises the guidance for business combinations and eliminates the pooling method. SFAS No. 142 eliminates the amortization requirement for goodwill and certain other intangible assets and requires that such assets be reviewed periodically for impairment. We adopted SFAS No. 141 upon its issuance with no impact on our financial condition or results of operations. We are required to adopt SFAS No. 142 effective November 1, 2002 and this adoption is not anticipated to have a significant impact on our financial condition, results from operations or cash flows upon adoption.

In August 2001, the FASB issued SFAS No. 143, "*Accounting for Asset Retirement Obligations"*, which addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. The standard applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, and development and (or) normal use of the asset. We are required to adopt the provisions of SFAS No. 143 effective November 1, 2002. To accomplish this, we must identify all legal obligations for asset retirements, if any, and determine the fair value of these obligations on the date of adoption. The adoption of SFAS No. 143 is not anticipated to have a significant impact on our financial condition, results from operations or cash flows.

In October 2001, the FASB issued SFAS No. 144 "Accounting for Impairment or Disposal of Long-Lived Assets". SFAS No. 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This statement also extends the reporting requirements to report separately, as discontinued operations, components of an entity that have either been disposed of or are classified as held-for-sale. We are required to adopt the provisions of SFAS No. 144 effective November 1, 2002. The adoption of SFAS No. 144 is not anticipated to have a significant impact on our financial condition or results from operations or cash flows.

In April 2002, the FASB issued SFAS No. 145, "Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections," Under SFAS No. 145, among other things, gains and losses related to the extinguishment of debt should no longer be segregated on the income statement as extraordinary items. Instead, such gains and losses should be included as a component of income from continuing operations. The provisions of SFAS No. 145 are effective for us on November 1, 2002. The adoption of SFAS No. 145 is not anticipated to have a significant impact on our financial position, results of operations or cash flows.

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities," was issued. This statement nullifies Emerging Issues Task Force (EITF) Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)." SFAS No. 146 requires that a liability for the fair value of the costs associated with an exit or disposal activity be recognized when the liability is incurred. The provisions of SFAS No. 146 are effective for exit or disposal activities initiated after December 31, 2002 and thus will become effective for us as of January 1, 2003. The adoption of SFAS No. 146 is currently not expected to have a material impact on our financial position, results of operations or cash flows upon adoption.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." Interpretation No. 45 requires the guarantor to recognize a liability for the non-contingent component of a guarantee; that is, the obligation to stand ready to perform in the event that specified triggering events or conditions occur. The initial measurement of this liability is the fair value of the guarantee at inception. The recognition of the liability is required even if it is not probable that payments will be required under the guarantee or if the

guarantee was issued with a premium payment or as part of a transaction with multiple elements. Interpretation No. 45 also requires additional disclosures related to guarantees. We are required to adopt the disclosure provisions of the Interpretation beginning in the first quarter of fiscal 2003. Additionally, the recognition and measurement provisions of Interpretation No. 45 are effective for all guarantees entered into or modified after December 31, 2002. We are in the process of evaluating the effect of this Interpretation on its financial statements and disclosures.

In December 2001, the American Institute of Certified Public Accountants (AICPA) issued Statement of Position (SOP) 01-6, "Accounting by Certain Entities (Including Entities with Trade Receivables) That Lend to or Finance the Activities of Others". The SOP applies to any entity that lends to or finances the activities of others, and specifies accounting and disclosure requirements for entities that extend trade credit to customers and also provides specific guidance for other types of transactions specific to certain financial institutions. The SOP is effective for the Company beginning November 1, 2002 and we do not believe the recognition and measurement provisions within this SOP will result in a change in practice for its trade receivables or any other activities of the Company. The SOP also provides certain presentation and disclosure changes for entities with trade receivables as part of the objective of requiring consistent accounting and reporting for like transactions, which will be incorporated into the Company's disclosures upon adoption.

(2) Depreciation

Depreciation is calculated using the straight-line method. Buildings and improvements are depreciated over periods from 10 to 30 years, machinery and equipment from 3 to 8 years and furniture and fixtures from 6 to 10 years. Depreciation expense was $3,131, $1,693 and $1,473 at October 31, 2002, 2001 and 2000, respectively.

(3) Investments

Investments consist of United States Treasury Securities.

Short-term investments:

These securities have maturity dates ranging from November 30, 2002 to August 31, 2003, and estimated yields ranging from 3.567% to 5.625%. As of October 31, 2002, the aggregate fair value of these securities was $103,811, the gross unrealized holding gains were $310, and the gross unrealized holding losses were zero. As of October 31 2001, the aggregate fair value of these securities was $17,918, the gross unrealized holding gains were $43, and the gross unrealized holding losses were $15.

***Long-term investments*:**

These securities have maturity dates ranging from December 31, 2003 to April 30, 2004, and estimated yields ranging from 3.000% to 3.375%. As of October 31, 2002, the aggregate fair value of these securities was $14,670, the gross unrealized holding gains were $86 and the gross unrealized holding losses were $3. As of October 31 2001, the aggregate fair value of these securities was $16,010, the gross unrealized holding gains were $237, and the gross unrealized holding losses were zero.

(4) Inventories

The components of inventory at October 31, 2002 and October 31, 2001 consisted of the following:

		2002		2001
Raw materials	$	10,214	$	3,519
Work-in-process		3,767		2,815
Total	$	13,981	$	6,334

(5) Accounts Receivable

Accounts receivable at October 31, 2002 and 2001 consisted of the following:

	2002	2001
U.S. Government:		
Amount billed	$ 6,151	$ 2,601
Unbilled recoverable costs	2,427	-
Retainage	679	239
	9,257	2,840
Commercial Customers:		
Amount billed	39	2,505
Unbilled recoverable costs	1,141	1,764
Retainage	1	1
	1,181	4,270
	$ 10,438	$ 7,110

Retainage represents amounts billed but not paid by customers pursuant to retainage provisions in the contracts that will be due upon completion of the contracts and acceptance by the customer and that may be collected over more than one year.

Unbilled recoverable costs represent amounts of revenue recognized on costs incurred on contracts in progress that will be billed within the next 30 days.

(6) Other Current Assets, Net

The components of other current assets at October 31, 2002 and October 31, 2001 consisted of the following:

	2002	2001
Advance payments to vendors	$ 2,902	$ 362
Prepaid expenses and other	1,422	634
Total	$ 4,324	$ 996

(7) Property, Plant and Equipment

Property, plant and equipment at October 31, 2002 and 2001 consisted of the following:

	2002	2001	Estimated Useful Life
Land	$ 524	$ 524	—
Building and improvements	4,842	4,811	10-30 years
Machinery and equipment	37,785	16,717	3-8 years
Furniture and fixtures	1,750	1,304	6-10 years
Construction in progress	8,110	15,300	
	$ 53,011	$ 38,656	
Less, accumulated depreciation and amortization	(14,301)	(11,468)	
Total	$ 38,710	$ 27,188	

(8) Other Assets

Other assets at October 31, 2002 and 2001 consisted of the following:

	2002	2001
Power Plant License	$ 1,087	$ 1,370
Other	680	198
Total	$ 1,767	$ 1,568

The Power Plant License is being amortized over 10 years on a straight-line basis. Accumulated amortization was $1,748 and $1,465 at October 31, 2002 and 2001, respectively.

(9) Accrued Liabilities

Accrued liabilities at October 31, 2002 and 2001 consisted of the following:

	2002	2001
Accrued payroll and employee benefits	$ 3,250	$ 2,026
Accrued contract and operating costs	4,263	4,080
Accrued taxes and other	391	657
Total	$ 7,904	$ 6,763

(10) Long-Term Debt

Long-term debt at October 31, 2002 and 2001 consisted of the following:

	2002	2001
Note payable	$ 1,981	$ 1,427
Less – current portion	(285)	(175)
Long-term debt, less current portion	$ 1,696	$ 1,252

On June 29, 2000, we entered into a loan agreement, secured by machinery and equipment, and have borrowed an aggregate of $2,214. 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%. Our current interest rates at October 31, 2002 and October 31, 2001 were 7.6% and 7.9%, respectively. Our weighted-average interest rates at October 31, 2002 and October 31, 2001 were 7.8% and 7.9%, respectively.

(11) Commitments and Contingencies

We lease certain computer and office equipment, the Torrington, CT manufacturing facility, additional manufacturing space in Danbury, CT, and office space in Pasadena, CA, under operating leases expiring on various dates through 2005. Rent expense was $984, $807, and $611 for the fiscal years ended October 31, 2002, 2001 and 2000, respectively. Aggregate minimum annual payments under the lease agreements for the five years subsequent to October 31, 2002 are: 2003, $791; 2004, $652; 2005, $455; 2006, $502 and 2007, $512.

We have royalty agreements with MTU, Santa Clara, Electric Power Research Institute (EPRI) and LADWP pursuant to which we have agreed to pay royalties based upon certain milestones or events relating to the sale of carbonate fuel cells. Through October 31, 2002, we have not paid any royalties. In connection with certain contracts and grants from the United States Department of Energy (DOE), we have agreed to pay DOE 10% of the annual license income received from MTU, up to $500 in total. Through 2002, we have paid to the DOE a total of $340.

(12) Shareholders' Equity

At October 31, 2002, 6,179,172 shares of common stock have been reserved for issuance pursuant to our stock option plans and our Section 423 Stock Purchase Plan.

We have issued warrants enabling Caterpillar to purchase up to 1,500,000 shares of our common stock, with exercise prices ranging from $17 to $23 per share. The warrants will be earned on a graduated scale contingent upon the first 45 MW of order commitments to purchase our products. For accounting purposes, the fair value of these warrants will be netted against the revenues attributable to the purchase of our products by Caterpillar.

We have issued warrants enabling Marubeni to purchase up to 1,140,000 shares of our common stock, with exercise prices ranging from approximately $37 to $48 per share. The warrants will only be exercisable if Marubeni purchases at least 45 MW of our products by September 2003. For accounting purposes, the fair value of these warrants will be netted against the revenues attributable to the purchase of our products by Marubeni.

In June 2001, Marubeni invested $10 million in FuelCell Energy through the purchase of 268,114 shares of our common stock. In September 2000, PPL EnergyPlus LLC (PPL), an affiliate of PPL Corporation, purchased 425,216 shares of our common stock for $10 million and others purchased 160,580 for $5 million.

(13) Stock Option Plan

The Board has adopted 1988 and 1998 Stock Option Plans (collectively the Plans). Under the terms of the Plans, options to purchase up to 8,706,000 shares of common stock may be granted to our officers, key employees and directors. Pursuant to the Plans, the Board is authorized to grant incentive stock options or nonqualified options and stock appreciation rights to our officers and key employees and may grant nonqualified options and stock appreciation rights to our directors. Stock options and stock appreciation rights have restrictions as to transferability. The option exercise price shall be fixed by the Board but in the case of incentive stock options, shall not be granted at an exercise price less than 100% of the fair market value of the shares subject to the option on the date the option is granted. Stock appreciation rights may be granted in conjunction with options granted under the Plans. Stock options that have been granted are exercisable commencing one year after grant at the rate of 25% of such shares in each succeeding year. There were no stock appreciation rights outstanding at October 31, 2002 and 2001. Costs for fixed awards with pro-rata vesting are recognized on a straight-line basis.

The per share weighted-average fair value of stock options granted in 2002, 2001 and 2000 was $10.24, $17.75 and $5.91, respectively, on the date of grant using the Black Scholes option-pricing model with the following weighted-average assumptions:

Year	Dividend rate	Risk free Interest rate range	Expected life	Volatility Factor
2002	0%	3.22 – 5.28%	7.5 years	.8760
2001	0%	3.85 – 5.76%	7.5 years	.7554
2000	0%	5.79 – 6.80%	7.7 years	.6884

The following table summarizes the Plan's activity for the years ended October 31, 2002, 2001 and 2000:

	Number of shares	Weighted average option price
Outstanding at October 31, 1999	3,006,012	$1.57
Granted	1,076,006	$16.82
Exercised	(375,084)	$1.05
Cancelled	(12,000)	$6.60
Outstanding at October 31, 2000	3,694,934	$6.04
Granted	869,250	$23.83
Exercised	(354,382)	$3.14
Cancelled	(53,000)	$37.23
Outstanding at October 31, 2001	4,156,802	$9.62
Granted	1,283,250	$12.70
Exercised	(213,716)	$1.55
Cancelled	(92,750)	$17.94
Outstanding at October 31, 2002	5,133,586	$10.57

The following table summarizes information about stock options outstanding and exercisable at October 31, 2002:

	Options Outstanding			Options Exercisable	
Range of exercise price	Numbers outstanding	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable	Weighted average exercise price
$ 1.00 – 10.00	2,563,718	5.6	$ 2.62	2,094,718	$ 1.92
10.01 – 20.00	1,846,618	8.6	15.10	454,930	16.68
20.01 – 30.00	659,250	8.3	26.09	174,000	25.98
30.01 – 40.00	60,000	7.9	38.00	30,000	38.00
40.01 – 46.00	4,000	8.0	45.97	2,000	45.97
$ 1.00 – 46.00	5,133,586	7.1	$ 10.57	2,755,648	$ 6.30

Employee Stock Purchase Plan

Our shareholders adopted a Section 423 Stock Purchase Plan (the “ESPP”) on April 30, 1993, and the plan was last amended on October 6, 1999. The total shares allocated to the Plan are 900,000. Under the ESPP, our eligible employees have the right to subscribe to purchase shares of common stock at the lesser of 85% of the mean between the high and low market prices on the first day of the purchase period or the last day of the purchase period. An employee may elect to have up to 25% of annual base pay withheld in equal installments throughout the designated payroll-deduction period for the purchase of shares. The value of the employee’s subscription may not exceed $25,000 or 1,800 shares in any one calendar year. An employee may not participate in the ESPP if such employee, immediately after the option is granted, owns stock possessing 5% or more of the total combined voting power or value of our capital stock. As of October 31, 2002, there were 499,464 shares of Common Stock reserved for issuance under the ESPP. These shares may be adjusted for any future stock splits. The ESPP will terminate when all shares reserved have been subscribed for and purchased, unless terminated earlier or extended by the Board of Directors. The Compensation Committee of the Board of Directors administers the ESPP. As of October 31, 2002, the number of employees enrolled and participating in the ESPP was 63 and the total number of shares

purchased under the ESPP was 400,536. For purposes of the pro-forma calculation, compensation cost is recognized for the fair value of the employee's purchase rights, which was estimated using the Black Scholes option pricing model with the following assumptions for subscription periods beginning in fiscal 2002, 2001 and 2000:

Year	Dividend Rate	Risk free interest rate	Expected Life	Volatility factor
2002	0%	2.93%	6 months	89.2%
2001	0%	6.29%	6 months	69.8%
2000	0%	4.77%	6 months	62.5%

The weighted average fair value of those purchase rights granted in 2002, 2001 and 2000 was $8.41, $9.16 and $.79, respectively.

Plan activity for the years ended October 31, 2002, 2001 and 2000, was as follows:

	Number of Shares
Balance at October 31, 1999	550,098
Issued @ $7.28	(17,896)
Balance at October 31, 2000	532,202
Issued @ $8.57	(12,904)
Issued @ $29.28	(3,510)
Balance at October 31, 2001	515,788
Issued @ $13.29	(6,338)
Issued @ $13.47	(9,986)
Balance at October 31, 2002	499,464

No compensation cost has been recognized for stock options and employee stock purchase rights in the consolidated statements of loss. Had we determined compensation cost based on the fair value at the grant date for the stock options and employee stock purchase rights in the ESPP, our net loss and loss per share would have been the pro forma amounts indicated below:

			2002	2001	2000
Net loss:	As reported	$	(48,840)	(15,438)	(4,459)
	Pro forma	$	(51,518)	(18,121)	(5,564)
Loss per share:	As reported – Basic & Diluted	$	(1.25)	(0.45)	(0.16)
	Pro forma – Basic & Diluted	$	(1.32)	(0.53)	(0.20)

(14) Employee Benefits

The Capital Accumulation Plan for employees of FuelCell Energy, Inc. was established by us on January 19, 1987 and was last amended on June 15, 1999. A three-member pension committee administers the Plan. The plan is a 401(k) plan covering our full time employees who have completed one year of service. We contribute a cash amount equal to 5% of each participant's W-2 compensation to the plan on a monthly basis. Participants are required to contribute a minimum of 3% in order to be eligible to participate and receive a company match. An employee may then choose to make voluntary contributions up to an additional 12% of W-2 compensation out of pretax earnings. Effective June 1, 1997, participants may make voluntary contributions up to an additional 6% of W-2 compensation out of after-tax earnings. Under the plan, there is no option available to the employee to receive or purchase our common stock. We charged $568, $402, and $328 to expense during the years ended October 31, 2002, 2001 and 2000, respectively.

The FuelCell Energy, Inc. Money Purchase Plan, a defined contribution plan was established by us on May 10, 1976 and was last amended on June 1, 1997. The Plan covers our full-time employees who have completed one year of service. We contribute a cash amount equal to 4% of each participant's W-2 compensation to the plan on a monthly basis. There is no option available to receive or purchase our common stock. We charged $478, $340, and $264 to expense during the years ended October 31, 2002, 2001 and 2000, respectively.

Effective February 1, 2003, the Money Purchase Plan will cease and all funds will be merged into the Capital Accumulation Plan. The balance in each participant's Money Purchase Plan will be transferred to the Capital Accumulation Plan investment fund as currently elected. Under the new consolidated plan, the company match will increase to a maximum of 6% and the vesting period will be adjusted to five years.

(15) Income Taxes

The components of Federal income tax expense (benefit) were as follows for the years ended October 31, 2002, 2001 and 2000:

	2002	2001	2000
Current:			
Federal	$ (284)	$ -	$ -
Foreign	-	-	-
	(284)	-	-
Deferred:			
Federal	291	-	-
Foreign	-	-	-
	291	-	-
Total income tax expense	$ 7	$ -	$ -

State income tax expense (income), which is included in administrative and selling expenses, was $(130), $210, and $180, for the years ended October 31, 2002, 2001 and 2000, respectively.

The reconciliation of the federal statutory income tax rate to our effective income tax rate for the years ended October 31, 2002, 2001 and 2000 was as follows:

	2002	2001	2000
Statutory Federal income tax rate	(34.0%)	(34.0%)	(34.0%)
Nondeductible expenditures	-	-	-
Other, net	-	-	-
Valuation Allowance	34.0%	34.0%	34.0%
Effective income tax rate	0.0%	0.0%	0.0%

Our federal and state deferred tax assets and liabilities consisted of the following at October 31, 2002, 2001, and 2000:

	2002	2001	2000
Deferred tax assets:			
Compensation and benefit accruals	$ 348	$ 767	$ 495
Bad debt and other reserves	361	300	257
Capital loss and tax credit carryforwards	140	319	321
Net Operating Loss	26,328	8,842	1,666
Inventory reserve	3,069	28	-
Other	-	78	64
Gross deferred tax assets	30,246	10,334	2,803
Valuation allowance	(28,811)	(9,452)	(2,244)
Deferred tax assets after valuation allowance	1,435	882	559
Deferred tax liability:			
Accumulated depreciation	(1,435)	(591)	(268)
Gross deferred tax liability	(1,435)	(591)	(268)
Net deferred tax assets (State and Federal)	$ -	$ 291	$ 291

The valuation allowance increased approximately $19,400 for the year ended October 31, 2002. This increase relates primarily to the current year net operating loss. Approximately $1,500 of the valuation allowance will reduce additional paid in capital upon subsequent recognition of any related tax benefits.

We continually evaluate our deferred tax asset as to whether it is "more likely than not" that the deferred tax assets will be realized. In assessing the realizability of its deferred tax assets, management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies. Based on the projections for future taxable income over the periods in which the deferred tax assets are realizable, management believes that significant uncertainty exists surrounding the recoverability of the deferred tax assets. As a result, we recorded a full valuation allowance against our net deferred tax assets.

At October 31, 2002, we had available, for federal and state income tax purposes, net operating loss carry-forwards of approximately $68,000 and $64,000, respectively, expiring in varying amounts from 2020 through 2022.

(16) Earnings Per Share

Basic and diluted earnings per share are calculated using the following data:

	2002	2001	2000
Weighted average basic Common shares	39,135,256	34,359,320	28,297,594
Effect of dilutive securities	-	-	-
Weighted average basic Common shares adjusted for diluted calculations	39,135,256	34,359,320	28,297,594

The computation of diluted loss per share for fiscal years 2002, 2001 and 2000 follows the basic calculation since common stock equivalents were antidilutive. The weighted average shares of dilutive securities that would have been used to calculate diluted EPS had their effect not been antidilutive would have been 4,965,118, 3,982,456 and 3,497,126, in 2002, 2001 and 2000 respectively.

(17) Selected Quarterly Financial Data (unaudited)

	Revenues	Net income (loss)	Earnings per share Basic and diluted
Year Ended 10/31/2002			
First quarter	$ 7,001	$ (6,027)	$ (0.15)
Second quarter	8,565	(8,877)	(0.23)
Third quarter	11,962	(13,190)	(0.34)
Fourth quarter	13,703	(20,746)	(0.53)

	Revenues	Net income (loss)	Earnings per share Basic and diluted
Year Ended 10/31/2001			
First quarter	$ 5,333	$ (2,792)	$ (0.09)
Second quarter	6,493	(5,073)	(0.16)
Third quarter	7,622	(2,765)	(0.08)
Fourth quarter	6,731	(4,808)	(0.12)

SHAREHOLDER INFORMATION

Corporate Offices, Research and Development

FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06813-1305
203 825.6000

Manufacturing

539 Technology Park Drive
Torrington, CT 06790-0538

Form 10-K

A portion of the Form 10-K is included as part of this report. The full Form 10-K, as filed with the Securities and Exchange Commission, can be accessed on our website at www.fuelcellenergy.com.

Registrar and Transfer Agent

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

Continental Stock Transfer & Trust Company
17 Battery Place, 8th Floor
New York, NY 10004
Shareholder Relations: 212 509.4000
www.continentalstock.com

Auditors

KPMG LLP

Legal Counsel

Robinson & Cole LLP

Annual Meeting

The Annual Meeting of Shareholders will be held Tuesday, March 25, 2003, at 10:00 a.m. at The Sheraton Danbury Hotel, 18 Old Ridgebury Road, Danbury, CT.

Common Stock Listing

Nasdaq National Market
Symbol: FCEL

Company Contacts

For additional information about FuelCell Energy, Inc. contact:

Investor Relations & Communications
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06813-1305
E-Mail: moreinfo@fce.com

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www.fuelcellenergy.com

Stock Price Information

The Company's Common Stock trades on the Nasdaq National Market under the symbol FCEL. The following table sets forth the range of high and low sales prices, as reported by the Nasdaq National Market.

Common Stock	High	Low
Year Ended 10/31/02		
First Quarter	$ 22.80	$ 13.23
Second Quarter	18.65	15.02
Third Quarter	17.24	6.10
Fourth Quarter	8.24	4.54
Year Ended 10/31/01		
First Quarter	$ 41.75	$ 22.63
Second Quarter	36.25	19.25
Third Quarter	46.72	15.50
Fourth Quarter	20.45	10.48

Dividend Policy

No cash dividends have been declared or paid by the Company since its inception. It is the current policy of the Company to retain future earnings for business expansion.

Statements in this report relating to matters not historical are forward-looking statements that involve important factors that could cause actual results to differ materially from those anticipated. Cautionary statements identifying such important factors are described in reports, including the Form 10-K for the fiscal year ended October 31, 2002, filed by FuelCell Energy, Inc. with the Securities and Exchange Commission.

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FuelCell Energy

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