

PROTON ENERGY SYSTEMS INC

Form 10-K

March 25, 2003

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SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS

PURSUANT TO SECTIONS 13 OR 15(d) OF THE

SECURITIES EXCHANGE ACT OF 1934

(Mark One)

FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 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 000-31533

PROTON ENERGY SYSTEMS, INC.

(Exact name of Registrant as specified in its charter)

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Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

06-1461988
(I.R.S. Employer Identification No.)

10 TECHNOLOGY DRIVE, WALLINGFORD, CT 06492

(Address of principal executive offices)

Registrant's telephone number, including area code (203) 678-2000

Securities registered pursuant to Section 12(b) of the Act:

None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, \$.01 par value

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

Indicate by check mark 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 the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registration is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting stock held by non-affiliates of the Registrant on June 28, 2002 was approximately \$83 million based on the price of the last reported sale as reported by The Nasdaq Stock Market on June 28, 2002. The number of shares outstanding of the Registrant's Common Stock on March 11, 2003 was 33,458,036.

DOCUMENTS INCORPORATED BY REFERENCE

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Portions of the registrant's definitive proxy statement in connection with the annual meeting of the stockholders to be held on June 3, 2003 are incorporated by reference in Part III hereof.

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This report contains forward-looking statements for purposes of the safe harbor provisions under The Private Securities Litigation Reform Act of 1995. Statements contained herein that are not statements of historical fact may be deemed to be forward-looking information. Without limiting the foregoing, words such as anticipates, believes, could, estimate, expect, intend, may, might, should, will, and words of these words or similar words are intended to identify forward-looking information. You should read these statements carefully, because Proton's actual results may differ materially from those indicated by these forward-looking statements as a result of various important factors. We disclaim any obligation to update these forward-looking statements. Our actual results could differ significantly from those anticipated in these forward looking statements as a result of certain factors, including those set forth below under Legal Proceedings, Management's Discussion and Analysis of Financial Condition and Results of Operations - Certain Factors That May Affect Future Results, and critical accounting policies set forth below under Management's Discussion and Analysis of Financial Condition and Results of Operations - Critical Accounting Policies. You should also carefully review the risks outlined in other documents that we file from time to time with the Securities and Exchange Commission, including our Quarterly Reports on Form 10-Q that we file in 2003.

PROTON®, HOGEN®, UNIGEN®, FUELGEN, HIPRESS and TRANSFORMING ENERGY are trademarks or registered trademarks of Proton Energy Systems, Inc. Other trademarks or service marks appearing in this report are the property of their respective holders.

ITEM 1. Business

General

The Company's annual report on Form 10-K, quarterly reports on Form 10-Q, and other periodic filings are available free of charge through the Investors section of the Company's Internet website (<http://www.protonenergy.com>) as soon as practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission.

The Company

We were founded in 1996 to design, develop and manufacture proton exchange membrane, or PEM, electrochemical products. Our proprietary PEM technology is embodied in two families of products: hydrogen generators and regenerative fuel cell systems. Our hydrogen generators produce hydrogen from electricity and water in a clean and efficient process. We are currently manufacturing and delivering models of our hydrogen generators to customers for use in commercial applications. Our regenerative fuel cell systems, which we are currently developing, will combine our hydrogen generation technology with a fuel cell power generator to create an energy device that is able to produce and store the hydrogen fuel it can later use to generate electricity. By providing the hydrogen fuel used by fuel cells, our core PEM electrolysis technology can enable fuel cells to function not only as power generating devices, but also as energy storage devices.

We are designing our products to meet the needs of attractive near-term and longer-term markets. Our hydrogen generators have been designed to address the existing demand for industrial hydrogen in a variety of manufacturing and laboratory applications, which we believe is more cost effective and safely served with an on-site generator as opposed to conventionally delivered hydrogen. In the longer term, as fuel cell markets develop, we believe our hydrogen generators can be a key component of the hydrogen supply infrastructure that will be needed to provide the hydrogen used by fuel cells in transportation, stationary power generation and portable power generation applications. We are developing our regenerative fuel cell systems to address the demand for highly reliable backup power systems. In particular, the increased use of computers, computer networks and communications networks are all creating an increase in the demand for highly reliable backup power to avoid the costs and lost revenue associated with power disruptions. In addition, we believe that in the longer term our regenerative fuel cell systems may enable renewable energy solutions by facilitating the storage of energy produced by non-depleting, non-polluting energy sources, such as solar, wind

and hydroelectric power.

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We believe we are among the first companies to manufacture and deliver systems incorporating PEM technology for use in commercial applications. We have delivered HOGEN 40 series hydrogen generators to domestic and international customers for use in industrial and research applications. Our cell stacks, an important component of our generators, have in many cases suffered from limited life and reliability problems and have required replacement in the field. Our plan for 2003 is to improve our stack design and manufacturing processes to increase the longevity and reliability of our cell stacks and replace all customer cell stacks in the field. After we complete cell stack replacement for our customers in the field and verify the longevity and reliability of our cell stack, we plan to expand production of HOGEN 40 series hydrogen generators and deliver additional units to domestic and international customers.

We have delivered several late-stage development HOGEN 380 series hydrogen generators for use in industrial applications requiring higher hydrogen output. We intend to continue development of this product in 2003 and deliver additional units for demonstrations. We may also vary the output size to meet market needs.

We have delivered hydrogen generator units for use in laboratory applications under an exclusive agreement with Matheson Tri-Gas, Inc., a leading supplier of laboratory gas. Effective January 1, 2003, this agreement was terminated. In connection with this termination, we agreed to:

sell an additional 55 laboratory hydrogen generators to Matheson

continue to support units under warranty

provide spare parts for five years

discontinue the use of Matheson Tri-Gas trade dress for the laboratory hydrogen generator

not sell or market Proton's laboratory generators under Proton's or any other brand name before June 30, 2003.

We believe that a viable market may exist for laboratory hydrogen generators and we may introduce a new version of the product under our own brand name and trade dress after June 30, 2003.

In the longer term, we believe our PEM hydrogen generation technology will be an important part of the infrastructure needed to provide hydrogen for fuel cell vehicles. Our research and product development efforts include the development of our FUELGEN high-pressure hydrogen generator, capable of providing hydrogen for a fuel cell vehicle. This product will be based on our industrial hydrogen generator platform and we anticipate the majority of product development funding to come from government or third party sources. In December 2001, we reached an agreement for a joint test and evaluation program with the TH!NK Group, an enterprise of Ford Motor Company. Our plans for 2003 are to deliver a demonstration FUELGEN unit to the TH!NK Group for test and evaluation and to continue product development.

We also intend to further develop applications for our UNIGEN regenerative fuel cell technology. We have built regenerative fuel cell systems for NASA and the Naval Research Laboratory as well as for internal research and product development programs. Our goal for 2003 is to manufacture multiple demonstration regenerative fuel cell systems and to deliver them to domestic and international customers for evaluation.

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These systems are being designed to have the scale and technical attributes necessary to serve a broad range of commercial applications.

Government and private development contracts have supported the development and commercialization of our hydrogen generators and regenerative fuel cell systems. It is our intention to continue to seek government and third party support to fund the majority of our UNIGEN design and product development work. We have ongoing development contracts in 2003 with the Naval Research Laboratory, the Connecticut Clean Energy Fund, and the Department of Energy.

We have moved our Company and its operations to a newly constructed 100,000 square foot facility in Wallingford, CT to accommodate the projected growth of our business over the next several years. This building consolidates all of our corporate headquarters, research, product development, and manufacturing activities.

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Products

Hydrogen Generators

Our HOGEN hydrogen generators convert water and electricity into high purity, pressurized hydrogen gas, using PEM electrolysis. PEM electrolysis is a process in which water is divided into its component elements to produce pure hydrogen gas, with oxygen and heat as the only by-products. Many users can connect our hydrogen generators directly to existing water and electrical sources, allowing them to be installed and used in a wide range of locations.

We have shipped commercial models of our HOGEN 40 series hydrogen generators with 20 and 40 cubic feet per hour hydrogen production capacities, and delivered HOGEN 380 cubic feet per hour capacity units for demonstration. Our HOGEN 40 units are freestanding, roughly the size of a household washing machine, and are intended for indoor placement. Our HOGEN 380 is a larger freestanding unit with a weatherized design for outdoor use. We intend to increase production of our commercial HOGEN 40 series hydrogen generators in 2003 after we complete our cell stack replacement program with our customers. We also intend to deliver additional HOGEN 380 units for demonstration in 2003 and we anticipate expanding our family of hydrogen generation products into different output capacities to better serve customer and application requirements.

We have manufactured commercial laboratory hydrogen generators, for use in laboratory applications. These units are compact, about the size of a personal computer, and designed to sit on a countertop for use in laboratory applications. We believe a viable market may exist for laboratory hydrogen generators and we may introduce a new version of the product under our own brand name and trade dress after June 30, 2003.

In 2001, we signed a 10-year agreement with STM Power Inc. for the exclusive supply of high-pressure hydrogen replenishment systems for Stirling Cycle Engines. These units are being developed to maintain the Stirling engine's internal hydrogen working fluid at pressures greater than 2000 psi. In 2002, Proton completed delivery of 57 beta units to STM for incorporation into their Stirling Cycle Engines. STM is currently testing and evaluating these systems. Because of the difficult cost challenges associated with this project, additional orders are not likely and would depend upon, among other things, the cost and performance of the beta units and the market demand for STM's products.

We are currently developing our FUELGEN high-pressure hydrogen generation systems capable of supplying the hydrogen fueling needs of fuel cell vehicles and other hydrogen power applications. We anticipate the FUELGEN to be largely based on the designs of our industrial hydrogen generators. These generators will be appropriately scaled and designed to operate at typical gas station locations using ordinary water and electricity. Proton has completed the initial assembly of its first full scale FuelGen system and plans to continue development and testing of this product in 2003. We expect to deliver a prototype FuelGen unit to the THINK Group, an enterprise of Ford Motor Company, for evaluation and testing in 2003. We also plan to continue research and product development of this product as market conditions warrant and to seek government and third party sources to fund the majority of this development.

An important feature of our hydrogen production technology is the ability to produce hydrogen at pressure without mechanical compression. Our current commercial products produce hydrogen at pressures between 150-200 psi. Proton's prototype HIPRESS PEM cell stack designs have produced high-purity hydrogen at pressures up to 3,000 psi without mechanical compression using solid state compression within the electrochemical cell stack. We plan to continue our research and development of high-pressure cell stack technology for potential use in current and future products as market conditions dictate.

The cost of manufacturing our PEM cell stacks and our hydrogen generators is still relatively high and we expect to continue to invest in internal research and product development to reduce our costs. We currently sell our commercial units into high value applications requiring industrial hydrogen. We believe higher volumes, cheaper materials, more refined production processes, as well as other potential technologies, will enable us to

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reduce the cost of our cell stack and hydrogen generators. As we reduce our costs, we believe our products will become competitive in additional applications and markets.

Regenerative Fuel Cell Systems

The UNIGEN regenerative fuel cell systems we are developing will integrate our core PEM hydrogen generation technology with PEM fuel cell technology to create a power quality device that produces hydrogen from water and electricity, stores the hydrogen, and later uses the hydrogen as fuel for the production of electricity. In the hydrogen generation or electrolysis mode, the regenerative fuel cell works like a hydrogen generator, producing hydrogen, which is stored. In the power generation or fuel cell mode, the process is reversed and the stored hydrogen is combined with air to produce electricity efficiently and without any harmful by-products. Our regenerative fuel cell architecture is capable of using fuel cells produced by other developers and manufacturers to enable their fuel cells to become energy storage devices.

In 2002, we signed a 3-year joint development agreement with the Sumitomo Corporation to develop, sell and service PEM-based regenerative fuel cell and hydrogen generation systems for the Japanese market, including backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage applications.

We have several development and demonstration programs with potential customers including Marconi Communications and the Connecticut Clean Energy Fund to show the potential applications of the UNIGEN product. We believe early applications for this product will be in remote and high value backup power applications. The success of this product will depend, among other things, upon continued development and cost reduction by Proton and other fuel cell developers. We expect to continue our research and product development of these systems and will seek to have government and third party sources fund the majority of the development.

We currently have ongoing research and financial assistance programs related to our regenerative fuel cell systems and our hydrogen generation systems with the United States Department of Energy (DOE), Naval Research Laboratory (NRL), and the Connecticut Clean Energy Fund for use in ongoing research and development programs. The DOE program is focused on hydrogen generation and storage from renewable energy sources. The NRL program is concentrated on fuel cell technology developments for use in advanced space propulsion and energy systems. Funds provided by the Connecticut Clean Energy Fund are being used to accelerate the commercialization of UNIGEN regenerative fuel cell products for application in power quality markets. For those research and development programs that require the Company to meet specific obligations as defined in the agreements (including delivery and acceptance of units), amounts advanced pursuant to contracts are recognized as liabilities until such obligations are met. Once the obligations are met, the amounts are recognized as contract revenue. For those research and development programs which do not require the Company to meet specific obligations, the Company recognizes customer funding as contract revenue utilizing the percentage of completion method by the relationship of costs incurred to total estimated program costs.

Our Strategy

Our objective is to be a leader in harnessing PEM electrolysis technology for a number of commercial applications. Our strategy for achieving this objective includes the following elements:

Leverage Technological Position

In developing PEM technology, we have focused on two key areas: the development of PEM hydrogen generators and the development of regenerative fuel cell systems. We believe these technologies provide us with the opportunity to develop innovative products that address attractive markets. In addition, our technology is complementary to other fuel cell technologies and could enable the commercial use of other fuel cell products, such as vehicular fuel cells, by providing a hydrogen delivery infrastructure. For example, our hydrogen generators could be deployed at refueling sites to provide hydrogen for fuel cell vehicle fleets. As a result, we

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believe we are also well positioned to benefit from further developments by other fuel cell developers and from increases in demand for their fuel cell products. We intend to maintain our technology leadership in PEM-based hydrogen generation and regenerative fuel cell system technology by continuing to develop our core technology and commercial manufacturing processes, reduce product cost, and improve the design and features of our products.

Focus on Near-Term Market Opportunities

We believe we are among the first companies to manufacture and deliver systems incorporating PEM technology for use in commercial applications. We intend to focus on designing and marketing our hydrogen generation products for near-term industrial applications. We believe the industrial gas market is an attractive market for us because it is well developed and our hydrogen generator products offer cost, security, and safety advantages to users that currently rely on conventionally delivered hydrogen. Our focus on near-term market opportunities will continue to reinforce our emphasis on the commercial application of PEM technology.

We will also focus on demonstration and research opportunities from interested third party and government sources for our regenerative fuel cells and FuelGen hydrogen generators. These opportunities help advance our technology and, in some cases, provide field test experience.

Continue Focus on Cost Reduction and Cell Stack Durability

Given our focus on commercial applications for PEM technology, design and manufacturing improvements are a critical element of our product development efforts. The cost of manufacturing our PEM cell stacks and our hydrogen generators is still relatively high. We intend to continue to focus on reducing the cost of manufacturing our products through the simplification of our product designs, identification and use of lower cost materials and components, development of long-term relationships with third-party component and raw material suppliers, use of new technologies and processes, and lean manufacturing processes and techniques.

The durability and longevity of our cell stacks are also critical success factors. Our cell stacks have in many cases suffered from limited life and reliability problems and have required replacement in the field. We plan to focus on improving our cell stack designs and manufacturing processes to increase the endurance and reliability of our commercial hydrogen generators.

Develop Key Strategic Relationships

We are beginning to establish strategic relationships with leading companies in our target markets. The strategic relationships we develop may include joint development efforts and sales and marketing agreements. At present, we are in preliminary discussions with potential partners, including industrial gas suppliers and distributors, energy producers, backup power providers and renewable energy companies. In seeking to develop strategic relationships, we will focus on partners that can provide us with distribution channels for our products and assist us in the design, development and manufacture of new products. We believe that our demonstrated capabilities in PEM technology and our focus on creating commercial applications make us an attractive potential partner for many established companies seeking to gain access to PEM related technology.

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In 2001 we have also reached an agreement for a joint test and evaluation program with Ford's TH!NK Group. Under this agreement, Proton plans to deliver a FuelGen high-pressure hydrogen refueling system to TH!NK in 2003. The FuelGen system is designed to provide fuel for Ford's hydrogen-fueled fuel cell and internal combustion vehicles. Proton will also assist TH!NK in the installation, support and testing of the system.

In 2002, we signed a three year joint development agreement with the Sumitomo Corporation to develop, sell and service PEM-based regenerative fuel cell and hydrogen generation systems for the Japanese market, including backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage applications.

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Position Our Technology for Longer-Term Opportunities

We believe we are well positioned to take advantage of growth in the markets for fuel cell applications and renewable energy technologies. If fuel cell applications achieve commercial acceptance, our hydrogen generators can be a key component of the hydrogen supply infrastructure that will be required. We intend to work with leading energy and power companies to position our hydrogen generators for automotive refueling applications. With respect to renewable power, as developers of renewable technologies, especially wind and solar power, achieve cost and performance improvements, the need to overcome the inherent intermittent nature of renewable power will become even more important. Accordingly, we plan to work with renewable energy companies to explore and develop energy storage applications using our regenerative fuel cell architecture. We have also modified several demonstration units of our HOGEN generators to operate using intermittent electricity from renewable energy sources and we believe this will position us for future renewable/sustainable power markets.

Our Technology

PEM-Based Hydrogen Generators

Our hydrogen generators are electrochemical devices that convert water and electricity into hydrogen gas using a process known as PEM electrolysis. The core of a hydrogen generator is an electrolysis cell consisting of a solid electrolyte proton exchange membrane. Catalyst material is bonded to both sides of the membrane, forming two electrodes. To generate hydrogen, water is introduced to one side of the membrane and voltage is applied to the electrodes. This process divides the water into protons, electrons and oxygen. The protons are drawn through the proton exchange membrane and recombined with the electrons at the opposite side of the membrane to form hydrogen. The oxygen is removed from the cells with the excess water flow. This process produces hydrogen with a high level of purity and at significant pressures.

A single electrolysis cell is typically integrated into a complete cell assembly that includes flow field structures that provide mechanical support, conduct current and provide a means to introduce water and remove gases. These cell assemblies are stacked and compressed between two end plates along with other support components to form a complete cell stack. The hydrogen production capability of a cell stack is approximately proportional to the area of each cell, the number of cells in the stack and the electric current supplied.

PEM-Based Fuel Cell Power Generators

In our PEM fuel cell, which is very similar to our PEM electrolysis cell, the opposite reactions occur. To generate electricity, hydrogen and air, or oxygen, are introduced to opposite sides of the cell. The hydrogen passes over an electrode structure adjacent to the proton exchange membrane, where it is divided into its component protons and electrons. When the electrons are separated from the protons, the electrons are conducted in the form of a usable electric current. The protons travel through the proton exchange membrane and recombine with the electrons and oxygen to produce water.

To form a complete fuel cell stack, individual PEM fuel cells are stacked and compressed between two end plates. The electrical power production capability of a cell stack is approximately proportional to the area of each cell and the number of cells in the stack.

Our regenerative fuel cell systems incorporate the ability to support both an electrolysis reaction and a fuel cell reaction. Our proprietary design operates in the electrolysis mode by using water and electricity to generate hydrogen at elevated pressure and then reverses the process and consumes the hydrogen with air to generate electricity. The resulting product functions like a rechargeable battery in which hydrogen is produced through electrolysis, stored and then used for power generation. Because our regenerative fuel cell systems use hydrogen produced through electrolysis rather than extracted from hydrocarbon fuels, electricity can be produced at room temperature, without lengthy start-up times or carbon-based emissions and in areas where fossil fuels such as natural gas, propane or gasoline are not available.

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Our regenerative fuel cell systems can be configured using one or two PEM stacks. The one-stack approach uses our proprietary design, which allows a single cell to operate in both the electrolysis mode and the fuel cell mode. These reversible fuel cells are under development by Proton and may have cost and weight advantages. Our two-stack regenerative fuel cell system is configured by using separate cell stacks for the electrolysis and fuel cell reaction. Proton currently manufactures its own electrolysis stacks for testing in these systems. We are testing fuel cell stacks from other fuel cell developers for potential incorporation into our regenerative systems. We are also developing our own proprietary fuel cell stack, which we may incorporate into these systems.

Proprietary Technology

We have developed proprietary technology relating to various aspects of our electrolysis cells, regenerative fuel cell systems and related systems. These include:

membrane processing technology

electrolysis catalytic electrode formulation

reversible fuel cells

fuel cell stack designs

high-pressure cell structures that simplify overall system implementation

integrated system designs for both hydrogen generators and regenerative fuel cell systems

electrical interface to renewable technologies for our hydrogen generators

Distribution and Marketing

We plan to sell our hydrogen generators primarily through a combination of distribution arrangements with third parties and direct sales. Because small and medium-volume hydrogen users generally buy hydrogen from industrial gas suppliers and distributors, we intend to focus our sales and marketing efforts in these areas. By focusing on industrial gas suppliers and industrial gas equipment distributors, we intend to maximize our sales by leveraging their established marketing, distribution and service channels. We have distribution agreements with Diamond Lite S.A., Products of Technology LTD, and GAN Industrial for distribution of our hydrogen generators in western and central Europe, the UK, Ireland and Northern and Central Mexico, and an arrangement with Fig Tree Marketing for distribution of our hydrogen generators in the specialized field of meteorology. We intend to establish additional sales and distribution arrangements with industrial gas suppliers and distributors, as well as meteorology equipment providers and original equipment manufacturers.

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As the market to supply hydrogen fuel for fuel cell vehicles develops, we also plan, where possible, to leverage existing distribution channels. We believe that existing energy suppliers will need to begin supplying new forms of automotive fuel as fuel cell vehicles (FCV s) come to market. Accordingly, we intend to establish relationships with major energy companies to explore ways of supplying our hydrogen generators for installation at local service stations. In addition, we believe that automobile manufacturers providing introductory and fleet FCV s will be interested in our refueling technology and therefore we will seek to establish relationships with these manufacturers.

Currently, backup power equipment is sold by a few large manufacturers to commercial end users through diverse reseller networks, including integrators and qualified resellers. In the future, we plan to sell our backup power products to these existing manufacturers, integrators and qualified resellers.

Manufacturing

We are currently manufacturing hydrogen generators at our facility in Wallingford, Connecticut. During a portion of the first quarter of 2003, certain manufacturing processes continued at our Rocky Hill facility. Key

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aspects of this process include formulation of our proprietary catalysts, deposition of the catalyst on the proton exchange membrane and fabrication of cells into cell stacks. The balance of the manufacturing process consists of integrating cell stacks into systems that perform fluids and electrical management of the electrochemical process.

We purchase raw proton exchange membrane material from Dupont, although we have identified other companies we believe are capable of providing suitable membrane material. We purchase the other components used in our systems from third-party suppliers. We regularly consult with our suppliers to evaluate ways to lower the cost of other components or subassemblies while meeting the performance needs of our products. In this regard, we have considered and will continue to evaluate the option of having subassemblies that we currently produce in-house produced to our specifications by others if lower costs can be achieved.

In 2002, we successfully completed our annual ISO9001 audit and remain registered. We believe that this registration, a quality assurance model for companies that design, produce, install and service items as part of their business will provide us with an advantage over competitors that are not ISO9001 registered. In some cases, this registration is a condition of doing business with our customers.

Intellectual Property

We seek to maintain our technology leadership position by aggressively protecting our intellectual property assets using patent, trade secret, trademark and copyright law. Our protection of these assets has continued to accelerate and we currently have been issued 11 U.S. patents and two European patents, covering aspects of our hydrogen generation equipment and electrolysis cell designs. We have over 121 U.S. and international patents pending, covering not only our current electrolysis products, but also technologies we have developed related to fuel cells, backup and renewable power systems and hydrogen fueling systems.

In addition to our patented assets, our intellectual property position has also grown to include manufacturing processes and know-how, which are enhancing our next generation products and cost reduction efforts. We also seek to protect our proprietary intellectual property in part through confidentiality agreements with our strategic partners and employees. We cannot ensure that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

Competition

Our hydrogen generators will compete with current suppliers of delivered hydrogen, and with other manufacturers of on-site hydrogen generators. Competitors in the delivered hydrogen market include Airgas, Air Liquide, Air Products and Chemicals, Linde and Praxair. Our hydrogen generators will also compete with older generations of electrolysis-based hydrogen generation equipment sold by Stuart Energy Systems, Norsk Hydro, Teledyne-Brown and other companies. These systems are generally larger in size, require manual operation and supervision, contain hazardous liquid electrolyte and require the assistance of mechanical compressors to produce hydrogen at pressure.

There are a number of companies located in the United States, Canada and abroad that are developing PEM fuel cell technology. These companies include Avista Labs, Ballard Power Systems, General Motors, Giner, Idatech, Nuvera, Plug Power, Toyota and UT Fuel Cells. Although we believe these companies are currently primarily targeting vehicular and residential applications, they could decide to enter the hydrogen generation and backup power markets we intend to address. We may also encounter competition from companies that have developed

or are developing fuel cells based on non-PEM technology, as well as other distributed generation technologies.

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Many of our competitors have substantially greater financial, research and development and marketing capabilities than we do. In addition, as the backup power and hydrogen fuel markets develop, other large industrial companies may enter these fields and compete with us.

Employees

As of December 31, 2002, we had a total staff of approximately 135 employees, of which approximately 75 were engineers, scientists, and other degreed professionals. We consider our relations with our employees to be excellent.

ITEM 2. *Properties*

In 2001, we purchased approximately 44 acres of land located in Wallingford, CT to build our new facility. In December 2001, Technology Drive LLC, a limited liability company wholly owned by us, entered into a \$6,975,000 loan agreement with a major financial institution in connection with the construction of the facility. Under the terms of the loan, the business assets of Technology Drive LLC, including the land and building, are subject to lien.

In 2002, we completed the construction of the new facility and the relocation of our corporate offices. In the first half of 2003, we expect to complete the consolidation of our operations by relocating the remainder of our research and development and manufacturing functions from our leased Rocky Hill, CT facility to the new 100,000 square foot facility. We currently lease one facility in Rocky Hill, CT totaling approximately 20,000 square feet.

ITEM 3. *Legal Proceedings*

Between July 3, 2001 and August 29, 2001, four purported class action lawsuits were filed in the United States District Court for the Southern District of New York against the Company and several of its officers and directors as well as against the underwriters who handled the September 28, 2000 initial public offering (IPO) of common stock. All of the complaints were filed allegedly on behalf of persons who purchased the Company's common stock from September 28, 2000 through and including December 6, 2000. The complaints are similar, and allege that the Company's IPO registration statement and final prospectus contained material misrepresentations and/or omissions related, in part, to excessive and undisclosed commissions allegedly received by the underwriters from investors to whom the underwriters allegedly allocated shares of the IPO. On April 19, 2002, a single Consolidated Amended Complaint was filed, reiterating in one pleading the allegations contained in the previously filed separate actions, including the alleged Class Period of September 28, 2000 through and including December 6, 2000. On July 15, 2002 the Company joined in an omnibus motion to dismiss the lawsuits filed by all issuer defendants named in similar actions which challenges the legal sufficiency of the plaintiffs' claims, including those in the consolidated amended complaint. Plaintiffs opposed the motion and the Court heard oral argument on the motion in November 2002. On February 19, 2003, the Court issued an Opinion and Order, granting in part and denying in part the motion to dismiss as to the Company. In addition, in August 2002, the plaintiffs agreed to dismiss without prejudice all of the individual defendants from the consolidated complaint. An order to that effect was entered by the Court in October 2002.

The Company believes it has meritorious defenses to the claims made in the complaints and intends to contest the lawsuits vigorously. However, there can be no assurance that we will be successful, and an adverse resolution of the lawsuits could have a material adverse effect on our

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financial position and results of operation in the period in which the lawsuits are resolved. The Company is not presently able to reasonably estimate potential losses, if any, related to the lawsuits. In addition, the costs to us of defending any litigation or other proceeding, even if resolved in our favor, could be substantial.

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Not applicable.

Executive Officers and Directors

Our executive officers and directors, and their ages as of December 31, 2002, are as follows:

<u>Name</u>	<u>Age</u>	<u>Title</u>
Walter W. Schroeder	54	President, chief executive officer and director
Larry M. Sweet	54	Chief operating officer and director
Terry V. Derrico	47	Senior vice president of sales and marketing
Robert J. Friedland	37	Senior vice president of products and manufacturing
Trent M. Molter	40	Senior vice president of technology and new business
John A. Glidden	39	Vice president of finance
Robert W. Shaw, Jr.	61	Chairman of the board of directors
Richard A. Aube	34	Director
Gerald B. Ostroski	61	Director
Philip R. Sharp	60	Director
Michael J. Cudahy	79	Director
James H. Ozanne	59	Director

Walter W. Schroeder, one of our founders, has served as our president and chief executive officer, and as a director, since our founding in August 1996. From 1991 to August 1996, Mr. Schroeder served as an officer of AES Corp., an independent power company. From 1986 to 1991, Mr. Schroeder was a vice president in the investment banking division of Goldman Sachs & Co. Mr. Schroeder holds BS and MS degrees from Massachusetts Institute of Technology.

Larry M. Sweet has served as our chief operating officer since May 2002. From 1998 to 2001 Dr. Sweet was President of Carrier Corporation's component operations and served as Vice President of Operations from 1996 to 1998. From 1991 to 1995 Dr. Sweet was Senior Vice President, Technology of ABB ASEA Brown Boveri, Ltd., Zurich, Switzerland. From 1981 to 1991 Dr. Sweet held technical, sales and general management positions at General Electric Company and from 1974 to 1981, he was a tenured faculty member at Princeton University. Dr. Sweet received his Ph.D. and MS from the Massachusetts Institute of Technology, and a BS from the University of California, Berkeley, all in Mechanical Engineering.

Terry V. Derrico has served as our senior vice president of sales and marketing since September 2002. From 1999 to 2001 Mr. Derrico was president and CEO of SIG Combibloc, and president of SIG Pack Systems, North America, both divisions of SIG Holding Inc, a global packaging company. From 1997 to 1999 Mr. Derrico served as vice president of sales and marketing as well as chief operating officer of TMC, a division of IPS Automation, a capital equipment manufacturer. Mr. Derrico also held various management positions in sales and marketing at General Electric/Fanuc Automation, North America from 1987 to 1997. Mr. Derrico holds a BA in Business Management from National-Louis University.

Robert J. Friedland, one of our founders, has served as our senior vice president of products and manufacturing since September 2001. From our founding in August 1996 through September 2001, Mr. Friedland served as our vice president of operations. From 1995 to August 1996, Mr. Friedland served as a

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program operations manager for United Technologies Corporation, a diversified aerospace and building systems company. Mr. Friedland holds a BS in mechanical engineering from Syracuse University and an MBA from Rensselaer Polytechnic Institute.

Trent M. Molter, one of our founders, has served as our senior vice president of technology and new business since September 2001 and as a director from 1997 to 2002. From our founding in August 1996 through September 2001, Mr. Molter served as our vice president of engineering and technology. From 1984 to August 1996, Mr. Molter served as an advanced technology engineer and a project manager in PEM products for United Technologies. Mr. Molter holds a BS in chemical engineering from Clarkson University and an MS in metallurgy from Rensselaer Polytechnic Institute.

John A. Glidden has served as our vice president of finance since November 1997. From July 1996 to November 1997, Mr. Glidden served as a financial manager for United Technologies. From 1987 to July 1996, Mr. Glidden served as a senior financial planning analyst for United Technologies. Mr. Glidden holds a BS in business administration from Central Connecticut State University and an MS in international management from Rensselaer Polytechnic Institute.

Robert W. Shaw, Jr. has served as our chairman of the board of directors since our founding in August 1996. Dr. Shaw has served as president of Arete Corporation, a private investment firm, since March 1997. From 1983 to 1997, Dr. Shaw served as president of Arete Ventures, Inc., a private investment firm he founded to invest in the fields of modular/dispersed power generation, renewable power generation and specialty materials. Prior to that time, Dr. Shaw was a senior vice president and director of Booz Allen & Hamilton, a consulting firm, where he founded the firm's energy division. Dr. Shaw holds BEP and MS degrees from Cornell University, an MPA from American University and a PhD in applied physics from Stanford University. He serves as a director of Evergreen Solar, Inc., a public company which makes photovoltaic products, and of CellTech Power, Inc., H2Gen Innovations, Inc. and Northern Power Systems, Inc., each a private power technology company.

Richard A. Aube has served as a director since April 2000. Mr. Aube is currently a Principal at J.P. Morgan Partners. Prior to that time, Mr. Aube was an investment banker in the Natural Resources Group at Morgan Stanley & Co. Incorporated. In addition to his role at J.P. Morgan Partners, Mr. Aube is a co-manager of The Beacon Group Energy Funds. Mr. Aube holds a BA from Dartmouth College. He is currently a director of Capstone Turbine Corporation, a public company which makes microturbine generation systems, Latigo Petroleum and STM Power Inc.

Gerald B. Ostroski has served as a director since February 1999. Mr. Ostroski has served as vice president of Minnesota Power, Inc. since January 1982 until his retirement from that firm as Vice President, Emerging Technology Investments in July of 2002. During his tenure at Minnesota Power, Mr. Ostroski also served as president of Minnesota Power's Synertec subsidiary and served as a director or officer of several other Minnesota Power subsidiaries. He also served on the Board of Directors of the Minnesota High Technology Association, and serves on and chaired the University of Minnesota's Natural Resources Research Institute Industry Advisory Board. Mr. Ostroski is a registered professional engineer, licensed in Minnesota. Mr. Ostroski holds a BSEE from the University of Wisconsin.

Philip R. Sharp has served as a director since March 1999. Dr. Sharp has served as a lecturer at the John F. Kennedy School of Government of Harvard University since February 1995. From July 1995 to February 1998, Dr. Sharp also served as director of Harvard University's Institute of Politics, and is currently a member of the Institute's senior advisory board. From 1975 to 1995, Dr. Sharp served as a member of the United States House of Representatives, representing the second district of Indiana. He was a member of the House Energy and Commerce Committee and the Interior Committee. Dr. Sharp also chaired the Subcommittee on Fossil and Synthetic Fuels and the Energy and Power Subcommittee. Dr. Sharp holds a BSFS in foreign service and a PhD in government from Georgetown University. He serves as a director of Cinergy Corp. and New England Power Co.

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Michael J. Cudahy has served as a director since September 2002. Mr. Cudahy co-founded and, prior to its sale to General Electric Company in 1998, served from 1965 to 1998 as Chairman of the Board, and from 1965 to 1997 as Chief Executive Officer, of Marquette Medical Systems, Inc. Mr. Cudahy serves on the boards of Molecular OptoElectronics Corp., Nextec Applications, Inc. and Cyclics Corporation. Mr. Cudahy is also a former board member of Plug Power Inc.

James H. Ozanne has served as a director since September 2002. Mr. Ozanne is chairman of Greenrange Partners, a venture capital investment company. He was previously chairman of Nations Financial Holdings Corporation, president and chief executive officer of US West Capital Corporation and executive vice president of General Electric Capital Corporation. He became a director of FSA Holdings in January 1990 and was vice chairman from May 1998 to July 2000. Mr. Ozanne also serves as director of Fairbanks Capital and Acquisitor Holdings.

Each executive officer serves at the discretion of the board of directors and holds office until his successor is elected and qualified or until his earlier resignation or removal. There are no family relationships among any of our directors or executive officers.

PART II**ITEM 5. Market for Registrant's Common Stock and Related Stockholder Matters**

The range of high and low sales prices per share of our Common Stock as reported on The NASDAQ National Market under the symbol PRTN for 2002 and 2001 is shown below:

<u>Year and Quarter</u>	<u>High</u>	<u>Low</u>
2002		
First Quarter	\$ 9.40	\$ 5.05
Second Quarter	7.11	3.08
Third Quarter	3.48	2.04
Fourth Quarter	3.34	1.92
2001		
First Quarter	\$ 16.50	\$ 6.13
Second Quarter	15.12	6.67
Third Quarter	11.98	4.39
Fourth Quarter	9.00	4.00

We have never declared or paid any cash dividends on our common stock and currently intend to retain any future earnings for the future operation and expansion of our business.

As of March 11, 2003 there were approximately 10,800 stockholders of record.

Use of Proceeds

The effective date of the Securities Act registration statement for which the use of proceeds information is being disclosed was September 28, 2000, and the Commission file number assigned to the registration statement is 333-39748. After deducting underwriting discounts and commissions and offering expenses, our net proceeds from the offering were approximately \$125.8 million. The net proceeds have been allocated for general corporate purposes and capital expenditures, including purchase of equipment for and leasehold improvements to our manufacturing facility, and the possible acquisition of businesses, products or technologies that are complementary to our business. As of December 31, 2002, approximately \$31.9 million of the net proceeds of

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the offering had been used to fund operations and purchase fixed assets. The remaining net proceeds are invested in U.S. Government and Agency securities. In October 2001, we loaned \$275,000 of the proceeds to Mr. Schroeder, who is president and a director of the company. In July 2002, the loan was paid in full. No other portion of the proceeds were paid directly or indirectly to any director, officer or general partner of us or our associates, persons owning ten percent or more of any class of our equity securities, or an affiliate of us.

The data set forth below should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and notes thereto included elsewhere in this report.

ITEM 6. Selected Financial Data

The data set forth below should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and notes thereto included elsewhere in this report.

	Year Ended December 31,				
	2002	2001	2000	1999	1998
	(in thousands, except per share data)				
Statement of Operations Data:					
Revenue:					
Contract revenue	\$ 3,445	\$ 1,215	\$ 644	\$ 934	\$
Product revenue	1,269	1,753	56		
Total revenue	4,714	2,968	700	934	
Costs and expenses:					
Costs of contract revenue	2,355	1,001	396	355	377
Costs of production	4,995	2,534	248	154	
Research and development	8,793	6,500	3,227	2,182	1,323
General and administrative	7,877	6,950	4,518	1,705	950
	24,020	16,985	8,389	4,396	2,650
Loss from operations	(19,306)	(14,017)	(7,689)	(3,462)	(2,650)
Interest income (expense), net	5,802	8,950	4,199	172	(31)
Gain on sale of marketable securities	24	113			
Net loss	(13,480)	(4,954)	(3,490)	(3,290)	(2,681)
Deemed preferred dividends and accretion			(52,691)	(899)	(441)
Net loss attributable to common stockholders	\$ (13,480)	\$ (4,954)	\$ (56,181)	\$ (4,189)	\$ (3,122)
Basic and diluted net loss per share attributable to common stockholders	\$ (0.40)	\$ (0.15)	\$ (5.92)	\$ (2.20)	\$ (1.64)
Shares used in computing basic and diluted net loss per share attributable to common stockholders	33,347	33,161	9,484	1,900	1,900

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Balance Sheet Data:

Cash, cash equivalents and marketable securities	\$ 150,359	\$ 167,220	\$ 174,749	\$ 3,131	\$ 3,228
Working capital	151,519	169,253	176,856	3,225	3,274
Total assets	176,502	181,868	180,752	5,000	4,870
Current liabilities	7,774	4,675	2,445	921	792
Long-term liabilities	6,441	1,166			
Mandatorily redeemable convertible preferred stock				13,136	9,237
Total stockholders' equity (deficit)	162,287	176,027	178,307	(9,057)	(5,159)

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ITEM 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

You should read the following discussion and analysis in conjunction with our financial statements and the related notes included elsewhere in this report. This discussion and analysis contains forward-looking statements that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of several factors, including, but not limited to, those set forth under **Certain Factors That May Affect Future Results** and elsewhere in this report.

Overview

We were founded in 1996 to design, develop and manufacture PEM electrochemical products for commercial applications. Our proprietary PEM technology is incorporated in two families of products: hydrogen generators, of which we are currently manufacturing and delivering commercial models to customers, and regenerative fuel cell systems, which we are currently developing. Since our inception, we have funded our operations through private financings that raised approximately \$61.6 million, including \$50.1 million raised in a private financing in April 2000, and an initial public offering in October 2000 which raised net proceeds of approximately \$125.8 million.

We have generated cumulative losses since our inception, and as of December 31, 2002 our accumulated deficit was \$80.5 million, of which \$50.7 million is attributable to deemed preferred dividends and accretion and \$29.8 million is attributable to net losses since inception. We expect to continue to make significant investments in new product design and development for the foreseeable future. We believe that our success is dependent on increasing our customer base, developing products that leverage our proprietary technology, and maintaining a proper alignment between our cost structure and our revenue goals. We expect to incur operating losses in 2003 and for the next several years and cannot predict when we will become profitable, if ever.

The following significant events occurred in 2002:

We strengthened Proton's intellectual property position by bringing our total U.S. and foreign patent filings to 121. Proton holds 11 issued U.S. patents and two issued European patents.

We substantially completed the construction of our new 100,000 square foot facility in Wallingford, CT and the relocation of our corporate offices. In the first half of 2003, we expect to complete the consolidation of our operations by relocating the remainder of our research and development and manufacturing functions.

In 2002, we signed a three-year joint development agreement with the Sumitomo Corporation to develop, sell and service PEM-based regenerative fuel cell and hydrogen generation systems for the Japanese market, including backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage applications.

In October 2002, we reduced our workforce by approximately 10% as part of an ongoing effort to increase the efficiency of operations and reduce costs. In connection with the reduction in workforce, the Company recognized a charge in the fourth quarter of 2002 of approximately \$130,000.

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In October 2002, we learned of problems with sensor modules in our HOGEN 40 series units at customer locations that might have been affected by moisture blockage thereby impairing the sensor's ability to detect the presence of hydrogen in the oxygen gas stream. Further investigation of these units revealed the presence of pinholes in the cell membranes, resulting in hydrogen leakage and cell failure. To address these problems, we have contacted all of our HOGEN 40 series customers to arrange appropriate sensor testing and modifications. Additionally, we intend to replace defective cell stacks that are experiencing leakage. We are taking the approach that all HOGEN 40 series sensor and cell stack components in the field may need to be replaced. For the year ended December 31, 2002 we recorded a total of \$2,462,000 for these service costs. We are also working to develop and implement design improvements to extend cell lifetime.

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We completed a contract with NASA for an advanced, solid-state 1 kW capable UNIGEN Unitized Regenerative Fuel Cell, or URFC, system.

We received an order for up to 10 HOGEN 20 hydrogen generators from the U.S. National Oceanic and Atmospheric Administration, or NOAA. The total value of this contract, including options, is approximately \$605,000.

We delivered a renewable energy-based HOGEN hydrogen generator to Birka Enerji, in conjunction with Asea Brown Boveri, to fuel an environmental information center.

Subsequent Events:

We installed a HOGEN 380 hydrogen generator for a hydrogen fuel cell bus program in Barth, Germany.

We reached agreement to end our Development, Marketing and Distribution Agreement for small laboratory hydrogen generators with Matheson Tri-Gas.

We successfully tested our HIPRESS™ high-pressure cell stack modules thereby achieving a key milestone in our Naval Research Laboratory contract funded by the Defense Advance Research Projects Agency.

We received a contract to develop a 1 kW regenerative solar/Proton Exchange Membrane fuel cell demonstration systems from Jacobs Sverdrup Technology, Inc, a subcontractor to the U.S. Navy for testing at the Naval Air Weapons Station at China Lake, California.

Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared by us in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and disclosure of contingent assets and liabilities. Our estimates include those related to revenue recognition, warranty reserves, inventory reserves, stock-based compensation, investments, income taxes, depreciable lives of equipment, and contingency accruals. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates. For a complete description of our accounting policies, see Note 2 to our consolidated financial statements included in this Form 10-K.

Our critical accounting policies include the following:

Revenue Recognition Product Revenue

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We began delivering late-stage development models of our hydrogen generators to customers in 1999; revenue on such transactions had generally been deferred until the expiration of the product warranty period due to the newness of the product and the absence of a large volume of relatively homogeneous transactions to make a reasonable estimate of future warranty expenses. In the fourth quarter of 2001, we determined that we had adequate product warranty information and experience to begin recognizing product revenue related to sales of HOGEN 40 units upon shipment. As a result, we recognized previously deferred HOGEN 40 series revenue of \$754,000 in the fourth quarter 2001. The Company will continue to defer revenue on shipments of its Chrysalis and HOGEN 380 hydrogen products until such units are past the product warranty period or until the Company has adequate warranty history.

In the fourth quarter of 2002, the Company discovered performance issues relating to the operation of cell stacks and associated sensors in its HOGEN 40 series units. The Company's investigation of these issues revealed the presence of previously unknown pinholes in cell membranes in the field that resulted in hydrogen leakage and cell failure. As a result, the Company determined that recognizing revenue on shipment of its HOGEN 40 series units was no longer appropriate because of significant uncertainty surrounding the reliability

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of the existing design of the PEM electrolyzer (cell stack) within our HOGEN 40 series generators. The Company is making modifications to the existing cell stack design to improve its performance and anticipates deferring product revenue until it has compiled sufficient warranty history on units containing modified cell stacks. For this reason, product revenue from HOGEN 40 series shipments deferred until the expiration of the product warranty period. As of December 31, 2002, we have deferred revenue of approximately \$2.7 million related to hydrogen generators we have delivered. In the future, we expect to derive the majority of our revenue from the sale of the hydrogen generators and regenerative fuel cell systems products that we may develop.

Revenue Recognition Contract Revenue

We derive contract revenue from government and customer-sponsored research and development contracts related to our PEM technology. For those contracts which do not require us to meet specific obligations, we recognize contract revenue utilizing the percentage-of-completion method, which is based on the relationship of costs incurred to total estimated contract costs. For those research and development contracts which require us to meet specified obligations, including delivery and acceptance obligations, amounts advanced to us pursuant to the contracts are recognized as contract liabilities until such obligations are met. Once the obligations are met, the amounts are recognized as contract revenue. From inception through December 31, 2002, we have recognized approximately \$6.2 million in contract revenue from research and development funding under arrangements with both government and private sources. Under these contracts, we have delivered HOGEN hydrogen generators and demonstration regenerative fuel cell systems.

Warranty Costs

The Company's warranty policy is limited to replacement parts and services and expires one year from date of shipment. Estimated warranty obligations are provided for as costs of production in the period in which the related revenue is recognized. The Company quantifies and records an estimate for warranty related costs based on the Company's actual historical failure rates and the current repair costs. Adjustments are made to accruals as warranty claim data and historical experience warrant. We continually monitor the level of our warranty expenses. Our warranty obligation may be materially affected by product failure rates and other costs incurred in correcting a product failure. Should actual product failure rates or other related costs differ from our estimates, revisions to the estimated warranty liability would be required.

Inventory

Inventory is recorded at the lower of cost or market value. Cost is determined by the first-in, first-out method. This requires us to write-down our inventory for the difference between the cost of inventory and the estimated market value to reflect assumptions about future demand and market conditions. If future demand and market conditions are less favorable than anticipated, additional inventory write-downs may be required.

Stock-Based Compensation

Statement of Financial Accounting Standards (SFAS) No. 123, Accounting for Stock-Based Compensation, as amended by SFAS No. 148, Accounting for Stock-Based Compensation Transition and Disclosure, prescribes accounting and reporting standards for all stock-based compensation plans, including employee stock option plans. As allowed by SFAS No. 123, the Company has elected to continue to account for stock-based compensation issued to employees using the intrinsic value method in accordance with Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees, and related Interpretations. Under APB 25, compensation expense is computed to the extent

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that the fair market value of the underlying stock on the date of grant exceeds the exercise price of the employee stock option or stock award. Compensation so computed is then recognized over the vesting period.

We account for stock based compensation issued to non-employees in accordance with SFAS 123 and the consensus in Emerging Issues Task Force (EITF) 96-18. These pronouncements require the fair value of equity

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instruments given as consideration for services rendered be recognized as a non-cash charge to income over the shorter of the vesting or service period. The equity instruments must be revalued on each subsequent reporting date until performance is complete with a cumulative catch-up adjustment recognized for any changes in their fair value. In the event that we are required to record compensation expense that is currently only being disclosed under SFAS 123, an adjustment to decrease net income in such period would result.

Results of Operations

Comparison of Years 2002 and 2001

Contract revenue. Contract revenue increased from \$1.2 million in 2001 to \$3.4 million in 2002. This increase was due primarily to research and development activity under the NRL contract entered into in the fourth quarter of 2001. Revenue for 2002 under the NRL contract was \$3.1 million as compared to \$0.4 million for 2001. In the future, we expect to continue to generate revenue from government sponsored research and development contracts to supplement our research and development efforts.

Product revenue. Product revenue decreased from \$1.8 million in 2001 to \$1.3 million in 2002. In the fourth quarter of 2001, HOGEN 40 product revenues began to be recognized upon shipment. Accordingly, the revenue in 2001 represents previously deferred HOGEN 40 revenue within the warranty period, fourth quarter HOGEN 40 revenue, product rental revenue, and spare parts revenue. Included in 2002 product revenue is HOGEN 40 product revenue of \$999,000, laboratory hydrogen generator revenue of \$237,000, and spare part sales and other revenue of \$62,000.

In the fourth quarter of 2002, the Company discovered performance issues relating to the operation of cell stacks and associated sensors in its HOGEN 40 series units. The Company's investigation of these revealed the presence of previously unknown pinholes in cell membranes in the field that resulted in hydrogen leakage and cell failure. As a result, we determined that recognizing revenue on shipment of its HOGEN 40 series units was no longer appropriate because of significant uncertainty surrounding the reliability of the existing design of the PEM electrolyzer (cell stack) within our HOGEN 40 series generators. We are making modifications to the existing cell stack design to improve its performance and anticipate deferring product revenue until it has compiled sufficient warranty history on units containing modified cell stacks. For this reason, product revenue from HOGEN 40 series shipments made in the fourth quarter is deferred until the expiration of the product warranty period.

Costs of contract revenue. Costs of contract revenue increased from \$1.0 million in 2001 to \$2.4 million in 2002. The increase in 2002 reflects increased costs incurred under the NRL contract. Additionally, cost of contract revenue includes \$196,000 of charges related to cost overruns on our STM contract and \$127,000 for warranty claims on the units delivered under our STM contract.

Costs of production. Costs of production increased from \$2.5 million in 2001 to \$5.0 million in 2002. The amounts in 2001 and 2002 reflect costs associated with manufacturing, refining and delivering our hydrogen generators as well as warranty costs on units in the field. Included within costs of production for 2002 is \$2.5 million to address performance problems relating to the operation of cell stacks and associated sensors in our HOGEN 40 series units. In 2001, cost of production also includes approximately \$1.7 million of previously deferred cost recognized concurrent with the recognition of revenue. Cost of production could increase if warranty experience deteriorates.

In January 2003, the exclusive distribution agreement with Matheson Tri-Gas, Inc., was jointly terminated by agreement with Matheson Tri-Gas. Under the terms of the settlement agreement we agreed to continue to support units under warranty, provide spare parts for five years, sell an

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additional 55 laboratory hydrogen generators to Matheson Tri-Gas, and not sell or market laboratory hydrogen generators before June 30, 2003. To date, under our agreement with Matheson Tri-Gas, Inc., we have recognized costs in excess of our contracted sales price in the amount of \$752,000.

Research and development expenses. Research and development expenses increased from \$6.5 million in 2001 to \$8.8 million in 2002. The increase was due to an increase in our research and development activities related to our PEM technology in our regenerative fuel cell systems and our hydrogen generators. These research

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and development activities primarily related to increased material purchases and salaries and benefits for our research and development staff. We expect our research and development expenses to remain level or decrease for the next twelve months.

General and administrative expenses. General and administrative expenses increased from \$7.0 million in 2001 to \$7.9 million in 2002. This increase reflects an increase in salaries and benefits of \$1.1 million, as a result of an increase in the number of employees, an increase in facility related costs of \$0.1 million, offset by decreases of \$0.3 million in accounting, legal, and investor relations expenses, a decrease in Connecticut Clean Energy Fund expenses of \$0.2 million, and a decrease in non-cash compensation of \$0.1 million.

Interest income (expense), net. Interest income decreased from \$8.9 million in 2001 to \$5.8 million in 2002. The decrease resulted from decreased cash and marketable securities balances as well as lower average interest rates.

Results of Operations

Comparison of Years 2001 and 2000

Contract revenue. Contract revenue increased from \$644,000 in 2000 to \$1.2 million in 2001. This increase was due to research and development activity related to regenerative fuel cell systems under the DOE contract, as well as activity under the NRL contract entered into in the fourth quarter of 2001. In the future, we expect contract revenue from government sponsored research and development contracts to decrease as a percentage of total revenues.

Product revenue. Product revenue increased from \$56,000 in 2000 to \$1.8 million in 2001. In 2000, product revenue was recognized only upon expiration of the product warranty and includes revenue for product rentals. In the fourth quarter of 2001, HOGEN 40 product revenues began to be recognized upon shipment. The revenue in 2001 accordingly represents previously deferred HOGEN 40 revenue within the warranty period, fourth quarter HOGEN 40 revenue, product rental revenue, and spare parts revenue.

Costs of contract revenue. Costs of contract revenue increased from \$396,000 in 2000 to \$1.0 million in 2001. The increase in 2001 reflects increased costs incurred under our DOE contract compared with 2000 as well as costs incurred under the new NRL contract.

Costs of production. Costs of production increased from \$248,000 in 2000 to \$2.5 million in 2001. The amounts in 2000 and 2001 reflect costs associated with manufacturing and delivering our hydrogen generators in excess of the corresponding sales price as well as warranty costs on units in the field. Cost of production could increase if warranty experience deteriorates. In addition, in 2001, cost of production also includes approximately \$1.7 million of previously deferred cost recognized concurrent with the recognition of revenue.

Research and development expenses. Research and development expenses increased from \$3.2 million in 2000 to \$6.5 million in 2001. The increase was due to an increase in our research and development activities related to our PEM technology in our regenerative fuel cell systems and our hydrogen generators. These research and development activities primarily related to increased salaries and benefits for our growing research and development staff.

General and administrative expenses. General and administrative expenses increased from \$4.5 million in 2000 to \$7.0 million in 2001. This increase reflects an increase in salaries and benefits of \$731,000, as a result of an increase in the number of employees, an increase in accounting and legal expenses of \$400,000, an increase of \$346,000 in investor relations expenses, an increase of \$142,000 in educational and training related expenses, and an increase of \$110,000 for non-cash compensation expense associated with stock option grants.

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Interest income (expense), net. Interest income increased from \$4.2 million in 2000 to \$8.9 million in 2001. The increase was driven by higher average cash and marketable securities balances during 2001 resulting from the proceeds of the issuance of our series C convertible preferred stock in April 2000 and initial public offering in October 2000.

Liquidity and Capital Resources

Since our inception in August 1996 through December 2002, we have financed our operations through the series A, A-1, B, B-1 and C convertible preferred stock issuances and our initial public offering that, in total, raised approximately \$187.4 million. As of December 31, 2002, we had \$150.4 million in cash, cash equivalents and marketable securities.

In December 2001, Technology Drive LLC, a limited liability company wholly owned by us, entered into a \$6,975,000 loan agreement with a major financial institution, in connection with the construction of the Company's new facility in Wallingford, Connecticut. As of December 31, 2002, \$6,776,000 was outstanding under this agreement. Under the terms of the loan, the business assets of Technology Drive LLC, including the land and building, are subject to lien. The loan agreement was structured as a one-year construction loan with monthly payments of interest only until December 2002 at which time the loan converted to a seven-year term note. The term note amortizes based upon a fifteen-year schedule with a final lump sum payment due at the maturity date of December 31, 2009. The note is guaranteed by us and bears interest at the one month LIBOR plus 2.375% (3.76% at December 31, 2002). In connection with the construction of our new Wallingford facility, we entered into a sales and use tax exemption program with the Connecticut Development Authority. As part of that program, we have approximately \$427,000 of restricted cash in escrow. Maturities under the debt at December 31, 2002 are as follows: 2003 \$335,400; 2004 \$350,400; 2005 \$366,600; 2006 \$382,800; 2007 \$400,200; 2008 and thereafter \$4,940,632

At December 31, 2002, we were committed under operating leases for our facilities extending through June 2004. Minimum lease payments under the noncancelable leases at December 31, 2002 are as follows: 2003: \$233,221; and 2004: \$116,611.

Cash used in operating activities was \$9.9 million for the year ended December 31, 2002 and was primarily attributable to our net loss and increases in inventory, offset by increases in deferred revenue. Cash used in operating activities was \$3.0 million for the year ended December 31, 2001 and was primarily attributable to our net loss and increases in inventory, offset by increases in accounts payable and accrued expenses.

Cash provided by investing activities was \$18.8 million for the year ended December 31, 2002 and was primarily attributable to proceeds from the maturity of marketable securities offset by purchases of marketable securities and fixed assets. Purchases included approximately \$10.6 million for the land, building, furniture, and equipment associated with our Wallingford facility. Cash provided by investing activities was \$2.4 million for the year ended December 31, 2001 and was primarily attributable to proceeds from the maturity of marketable securities offset by purchases of marketable securities and fixed assets.

Cash provided by financing activities was \$5.7 million for the year ended December 31, 2002 and was primarily attributable to borrowings under our construction loan. Cash provided by financing activities was \$1.1 million for the year ended December 31, 2001 and was primarily attributable to borrowings under our construction loan.

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We anticipate that our cash and marketable securities on hand as of December 31, 2002 will be adequate to fund our operations, working capital and capital expenditure requirements for at least the next 12 months. Over the next 12 months, we expect to continue to fund the production of our hydrogen generators and to continue our research and development activities on our regenerative fuel cell systems. We cannot ensure you that we will not require additional financing to fund our operations or that, if required, any further financing will be available to

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us on acceptable terms, or at all. If sufficient funds are not available, we may be required to delay, reduce or eliminate some of our research and development or manufacturing programs. The terms of any additional financing may require us to relinquish rights to our technologies or potential products or other assets.

Certain Factors That May Affect Future Results

The following important factors, among others, could cause actual results to differ materially from those indicated by forward-looking statements made in this Annual Report on Form 10-K and presented elsewhere by management from time to time.

Our future success is uncertain because we have a limited operating history.

We face many risks and uncertainties. If we are unsuccessful in addressing these risks and uncertainties, we may be unable to generate revenue and grow our company. We were formed in 1996 to research and develop PEM electrochemical products. We began shipping late-stage development models of our hydrogen generators in 1999 and have not yet manufactured commercial regenerative fuel cell systems. Accordingly, there is only a limited basis upon which you can evaluate our business and prospects and our future success is uncertain. You should consider the challenges, expenses, delays and other difficulties typically involved in the establishment of a new business, including the continued development of our products, development of fully functioning manufacturing operations, refinement of processes and components for our commercial products, recruitment of qualified personnel, ability to manufacture a product which meets cost, reliability and efficiency needs, and achievement of market acceptance for our products.

We have incurred, and expect to continue to incur, substantial losses, and we may never become profitable.

We have incurred substantial losses since we were founded and we anticipate we will continue to incur substantial losses in the future. As of December 31, 2002, we had an accumulated deficit of approximately \$80.5 million. In 2002, we experienced increased cash burn and increased our headcount. We cannot predict when we will operate profitably, if ever. We expect to continue to incur expenses related to research and development activities, expansion of our manufacturing facilities and general administrative functions. As a result, we anticipate that we will continue to incur losses until we can cost-effectively produce and sell our hydrogen generators. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

We have experienced performance problems with our hydrogen generators

We have experienced performance problems with certain components of our hydrogen generators, specifically hydrogen sensor modules and cell stacks, which require component replacement. We cannot be certain that further problems related to these or other components will not occur and require replacement. If we are unable to solve these problems, potential purchasers of our products may decline to purchase them. In addition, if our hydrogen generators fail after purchases our warranty exposure would increase resulting in higher costs to us.

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If we fail to retain our key personnel and attract and retain additional qualified personnel, we may be unable to develop our products and generate revenue.

Our success depends upon the continued service of our executive officers and other key employees such as manufacturing and research and development personnel. The loss of any of our executive officers or key employees, especially Walter W. Schroeder, president and chief executive officer, Larry M. Sweet, Chief Operating Officer, Trent M. Molter, senior vice president of technology and new business, Robert J. Friedland, senior vice president of products and manufacturing, and Terry V. Derrico, senior vice president of sales and marketing, could impair our ability to pursue our growth strategy and slow our product development processes.

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We do not have employment agreements with any of our key executives. We may not be able to attract, assimilate or retain additional highly qualified personnel in the future.

We may not be able to generate revenue in the future if we do not complete the development of our regenerative fuel cell systems.

Our regenerative fuel cell systems are still in the development stage. We do not know when or whether we will successfully complete research and development of commercial regenerative fuel cell systems. If we are unable to develop commercial regenerative fuel cell systems, we may not be able to generate future revenue and we may not recover the losses we have incurred in attempting to develop these products. If we experience delays in meeting our development milestones or if our regenerative fuel cell systems exhibit technical defects or cannot meet cost or performance goals, including output, useful life and reliability goals, potential purchasers of our products may decline to purchase them or choose alternative technologies. We may be unable to make the substantial technological advances necessary to produce commercial regenerative fuel cell systems that provide the features and performance specifications required by customers at a competitive price. For example, we must identify improved hydrogen storage technologies and fuel cell module structures. If we are unable to successfully complete these development activities, we may be unable to commercially market our products. In some cases, we are attempting to expedite our development efforts by utilizing third parties for important engineering work. These third parties include vendors of hydrogen storage, purification systems, power supply and control components. If these third parties are unable to successfully complete their development activities on our behalf, we may be unable to commercially market our products.

We will not be able to grow our business if we do not achieve widespread commercial acceptance of our hydrogen generators in the market for delivered hydrogen.

We intend to market our hydrogen generators to small- and medium-volume users of delivered hydrogen. Our business depends on the widespread commercial acceptance of our hydrogen generators and we may be unable to grow our business if our targeted customers do not purchase substantial numbers of our hydrogen generators. Our targeted customers, or the distributors who we intend to use to market to these customers, may not purchase our hydrogen generators at all or in sufficient quantities to support the growth of our business. Our hydrogen generators will require our target customers to make a substantial initial investment, currently ranging from approximately \$40,000 to \$200,000 per unit for our HOGEN models. Our method of supplying hydrogen by producing it on-site using PEM electrolysis represents a significant departure from conventional means of supplying hydrogen to end users. PEM electrolysis is a new and unproven technology in the markets we are targeting, and we do not know if our targeted customers will accept our product. We are also working to develop and implement design improvements to extend the life of our cell stack components. If we are unable to successfully complete these activities, sales of our hydrogen generators may be reduced.

The success of our hydrogen generators as a fuel source for PEM fuel cells depends upon the development of a mass market for PEM fuel cells, and we may not be able to generate revenue in the future if this market does not develop.

We also intend to market our hydrogen generators for use as fuel generators for PEM fuel cells in a variety of applications, in particular fuel cell vehicles. If a mass market for PEM fuel cells fails to develop or develops more slowly than we anticipate, we may be unable to generate revenue in the future and recover the losses we will have incurred in the development of our hydrogen generators. PEM fuel cells represent an emerging commercial market, and we do not know whether end-users will want to use them. The development of a mass market for PEM fuel cells may be affected by many factors outside of our control, including

the emergence of newer, more competitive technologies;

the cost competitiveness of PEM fuel cells compared to existing and new technologies

the future cost of hydrogen;

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regulatory requirements;

consumer perceptions of the safety, reliability and functionality of PEM fuel cells; and

consumer willingness to try a new product.

In addition, the sole market for vehicular PEM fuel cells is and will continue to be car, bus and other vehicle manufacturers. Automobile manufacturers' interest in vehicular PEM fuel cells has been driven in large part by environmental laws and regulations concerning vehicle emission requirements that have been enacted in California and some northeastern states. If these laws and regulations are not kept in force or do not become widely adopted, the demand for vehicular PEM fuel cells may be limited. Further, automobile manufacturers may be able to use other technologies to meet their regulatory requirements, such as batteries, low emission internal combustion engines and hybrid internal combustion/battery engines. Even if automobile manufacturers decide to develop vehicles powered by PEM fuel cells, it may be many years before substantial numbers of vehicles powered by PEM fuel cell systems are manufactured. Further, there are several other technologies that may be used to generate hydrogen, such as hydrocarbon reforming, and there remains a strong possibility that our means of generating hydrogen will not be used to supply fuel to fuel cells.

We may be unable to increase our revenue in the future if the use of renewable energy does not increase.

We anticipate that one of the primary uses of our regenerative fuel cell systems will be for storing energy produced by renewable power sources, such as solar, wind and hydroelectric power. If the demand for renewable energy develops more slowly than we anticipate, our ability to sell our regenerative fuel cell systems could be impaired and we may be unable to grow our business. The market for renewable energy is still in an early stage of development and the demand for renewable energy will remain limited until the cost of producing energy from renewable sources is substantially reduced. Power from renewable energy sources currently costs significantly more than power derived from nonrenewable sources, such as coal and oil. The growth of the renewable energy market will be dependent on many factors that are outside of our control, such as the emergence of new, more cost-effective power technologies and products, and domestic and international regulatory requirements.

We expect to incur significant expenses in expanding our manufacturing facilities and production and we may not be successful in these efforts.

We have expanded our manufacturing facilities in anticipation of increased demand for our products. If this demand does not materialize, we will not generate sufficient revenue to offset the costs of maintaining and operating these facilities, which could increase our losses and prevent us from growing our business. We expect to expand our production and may experience delays or problems in our expected expansion that could compromise our ability to increase our sales and grow our business. Factors that could delay or prevent our expected production expansion include:

the inability to purchase parts or components in adequate quantities or sufficient quality;

the cost of raw materials;

the failure to increase our assembly and test operations;

the failure to hire and train additional manufacturing personnel; and

the failure to develop and implement manufacturing processes and equipment.

If we fail to successfully manufacture our products in commercial quantities, we may not be able to increase our revenue.

To be financially successful, we will have to manufacture our products in commercial quantities at acceptable costs while also preserving the quality levels achieved in manufacturing these products in limited

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quantities. This presents a number of technological and engineering challenges for us. We may not be successful in developing product designs and manufacturing processes that permit us to manufacture our hydrogen generators and regenerative fuel cell systems in commercial quantities at commercially acceptable costs while preserving quality. Currently, we sell some of our products for less than it costs us to produce them. In addition, we will incur significant start-up costs and may experience unforeseen delays and expenses in our product design and manufacturing efforts. If the commercialization of our products is delayed, potential purchasers may also decline to purchase them or choose alternative technologies, both of which could impair our ability to generate revenue in the future.

If our suppliers do not supply us with a sufficient amount and quality of components at acceptable prices, we may not be able to manufacture our products commercially.

Although we generally attempt to use standard components for our products, the proton exchange membrane material and hydrogen purification system used in our products are currently available only from limited sources. Also, we may be unable to purchase components of adequate quality or that meet our cost requirements. In addition, to the extent these components are proprietary products of our suppliers, or the processes used by our suppliers to manufacture these components are proprietary, we may be unable to obtain comparable components from alternative suppliers. We may experience delays in production of our products and our business and financial results would suffer if we fail to identify alternate suppliers, or if our supply is interrupted or reduced or there is a significant increase in cost.

In addition, platinum is a key component of our PEM fuel cells. Platinum is a scarce natural resource and we are dependent upon a sufficient supply of this commodity. We may not be able to produce commercial products, or the cost of producing our products may significantly increase, if there are any shortages in the supply of platinum.

We may be unable to sell our products and generate revenue if we fail to establish distribution relationships.

Because we intend to sell some of our products through third-party distributors, the financial benefits to us of commercializing our products will be dependent on the efforts of others. We intend to enter into additional distribution agreements or other collaborative relationships to market and sell our products. If we are unable to enter into additional distribution agreements, or if our third-party distributors do not successfully market and sell our products, we may be unable to generate revenue and grow our business. We may seek to establish relationships with third-party distributors who also indirectly compete with us. For example, we have targeted industrial gas suppliers as potential distributors of our hydrogen generators. Because industrial gas suppliers currently sell hydrogen in delivered form, adoption by their customers of our hydrogen generation products could cause them to experience declining demand for delivered hydrogen. For this reason, industrial gas suppliers may be reluctant to become distributors of our hydrogen generators. In addition, our third-party distributors may require us to provide volume price discounts and other allowances, or customize our products, either of which could reduce the potential profitability of these relationships.

We have historically focused on research and development activities and have limited experience in marketing, selling and servicing our products.

We have primarily focused on the research and development of our hydrogen generators and regenerative fuel cell systems. Consequently, our management team has limited experience directing the commercialization efforts that are essential to our future success. To date, we only have limited experience marketing, selling and servicing our hydrogen generators, and no experience marketing, selling or servicing our regenerative fuel cell systems. Furthermore, there are very few people anywhere who have significant experience marketing, selling or servicing PEM electrochemical products. We will have to expand our marketing and sales organization as well as

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our maintenance and support capability. We may not be successful in our efforts to market and service our products, which would compromise our ability to increase our revenue.

Our plans to market, distribute and service our products internationally subject our business to additional risks, which could prevent us from growing our business.

We intend to market, distribute and service our products internationally and we may derive a significant portion of our revenue from international sales. If we fail to successfully sell our products internationally, our ability to increase our future revenue and grow our business would be impaired. We have limited experience developing, and limited experience manufacturing, our products to comply with the commercial and legal requirements of international markets. Our success in those markets will depend on our ability to secure relationships with foreign resellers and our ability to manufacture products that meet foreign regulatory and commercial requirements. In addition, our planned international operations may be subject to a variety of additional risks, including:

difficulties in collecting international accounts receivable;

increased costs associated with maintaining international marketing efforts;

compliance with U.S. Department of Commerce export controls;

increases in duty rates;

the introduction of non-tariff trade barriers;

fluctuations in currency exchange rates;

political and economic instability; and

difficulties in enforcing intellectual property rights.

We currently face and will continue to face significant competition, which could cause us to lose sales or render our products uncompetitive or obsolete.

The markets for delivered hydrogen and reliable backup power are highly competitive. There are a number of companies located in the United States, Canada and abroad that deliver hydrogen, sell hydrogen generation equipment or are developing PEM fuel cell technology. Many of these companies have substantially greater resources than we do. Each of these companies has the potential to capture market share in the markets we intend to address, which could cause us to lose sales and prevent us from growing our business. New developments in technology may also delay or prevent the development or sale of some or all of our products or make our products uncompetitive or obsolete. If this were to occur, we would not be able to generate sufficient revenue to offset the cost of developing our hydrogen generators and regenerative fuel cell

systems.

Our regenerative fuel cell systems are one of a number of power technology products being developed today to provide high quality, highly reliable backup power to the existing electric transmission system, or grid. These products include advanced batteries, ultracapacitors, microturbines, flywheels, internal combustion generator sets, superconducting magnetic energy storage devices and other fuel cells using alternative hydrogen supply applications. Improvements are also being made to the existing electric grid. Technological advances in power technology products and improvements in the electric grid may reduce the attractiveness of our regenerative fuel cell systems.

As the markets for PEM fuel-cell related products, on-site hydrogen generation and backup power develop, other large industrial companies may enter these fields and compete with us. These large industrial companies may have the research and development, manufacturing, marketing and sales resources necessary to commercialize hydrogen generators and regenerative fuel cell systems more quickly and effectively than we do.

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We depend on our intellectual property and our failure to protect it could enable competitors to market products with similar features that may reduce demand for our products.

If we are unable to protect our intellectual property, our competitors could use our intellectual property to market products similar to our products, which could reduce demand for our products. Our success depends substantially upon the internally developed technology that is incorporated in our products. We may be unable to prevent unauthorized parties from attempting to copy or otherwise obtain and use our products or technology. Policing unauthorized use of our technology is difficult, and we may not be able to prevent misappropriation of our technology, particularly in foreign countries where the laws may not protect our intellectual property as fully as those in the United States. Others may circumvent the trade secrets, trademarks and copyrights that we own and any of the U.S. patents or foreign patents owned by us or subsequently issued to us may be invalidated, circumvented, challenged or rendered unenforceable. In addition, we may not be issued any patents as a result of our pending and future patent applications, and any patents we are issued may not have the breadth of claim coverage sought by us.

Most of our intellectual property is not covered by any patent or patent application. We seek to protect this proprietary intellectual property, which includes intellectual property that may not be patented or patentable, in part by confidentiality agreements with our distributors and employees. These agreements afford only limited protection and may not provide us with adequate remedies for any breach or prevent other persons or institutions from asserting rights to intellectual property arising out of these relationships.

We could incur substantial costs defending our intellectual property from infringement by others.

Unauthorized parties may attempt to copy aspects of our products or to obtain and use our proprietary information. Litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets and to determine the validity and scope of the proprietary rights of others. Any litigation could result in substantial costs and diversion of resources with no assurance of success.

We could incur substantial costs defending against claims that our products infringe on the proprietary rights of others.

The patent situation in the field of PEM fuel cell technology is complex. A large number of patents, including overlapping patents, relating to this technology have been granted worldwide. We are aware of patents in the fuel cell architecture field held by potential competitors and other third parties, including Ballard Power Systems, General Motors, Giner, H-Power, Oronzio deNora Impianti Electrochemical, Packard Instrument, Plug Power, Shinko Pantec, Siemens, Toyota, United Technologies and Whatman. Third parties could claim infringement by us with respect to these patents or other patents or proprietary rights, and we cannot assure you that we would prevail in any such proceeding.

In addition, some of our employees are parties to assignment of invention and nondisclosure agreements with their former employers. These agreements generally grant the former employer rights to technology developed by the employee while employed by the former employer and prohibit disclosure of that technology or other employer information to third parties. We cannot assure you that such employers will not assert claims against us or our employees alleging a breach of those agreements or other violations of their proprietary rights or alleging rights to inventions by our employees, or that we would prevail in any such proceeding.

Any infringement claim against us, whether meritorious or not, could:

be time-consuming;

result in costly litigation or arbitration and diversion of technical and management personnel; or

require us to develop non-infringing technology or to enter into royalty or licensing agreements.

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We might not be successful in developing non-infringing technologies. Royalty or licensing agreements, if required, may not be available on terms acceptable to us, or at all, and could significantly harm our business and operating results. A successful claim of infringement against us or our failure or inability to license the infringed or similar technology could require us to pay substantial damages and could harm our business because we would not be able to sell the affected product without redeveloping it or incurring significant additional expense. In addition, to the extent we agree to indemnify customers or other third parties against infringement of the intellectual property rights of others, a claim of infringement could require us to incur substantial time, effort and expense to indemnify these customers and third parties and could disrupt or terminate their ability to use, market or sell our products.

We may be exposed to lawsuits and other claims if our products malfunction, which could increase our expenses, harm our reputation and prevent us from growing our business.

Any liability for damages resulting from malfunctions of our products could be substantial and could increase our expenses and prevent us from growing our business. In particular, hydrogen is a flammable gas and can pose safety risks if not handled properly. We have an instance with one of our products where hydrogen appears to have leaked into the ambient oxygen stream resulting in a flame that burned several components in the system. Further investigation of this unit revealed the presence of pinholes in the cell membranes, resulting in hydrogen leakage and cell failure. Although we have taken steps to improve safety and reliability in our products, we cannot be certain that future similar instances will not occur. In addition, our products may require modifications to operate properly under extreme temperatures. Potential customers will also rely upon our products for critical needs, such as backup power. A malfunction of our products could result in tort or warranty claims. In addition, a well-publicized actual or perceived problem could adversely affect the market's perception of our products. This could result in a decline in demand for our products, which would reduce our revenue and harm our business.

Future government regulation may impair our ability to market and sell our products.

Our products are potentially subject to federal, local and foreign laws and regulations governing, among other things, emissions to air as well as laws relating to occupational health and safety. We may incur substantial costs or liabilities in complying with governmental regulations. Our potential customers must also comply with numerous laws and regulations, which could affect their interest in our products. We could incur potentially significant expenditures in complying with environmental and health and safety laws, regulations and requirements that may be adopted or imposed in the future.

We anticipate undergoing a period of rapid growth and our failure to manage this growth could harm our business.

We anticipate undergoing a period of rapid growth in the number of our employees and the scope of our operations. We intend to introduce new products, increase our production capacity and develop additional distributor relationships. Rapid expansion would likely place a significant strain on our senior management team and other resources. In addition, we may be required to hire additional senior management personnel. Our ability to manage growth will depend in part on our ability to continue to enhance our operating, financial and management information systems. Our personnel, systems and controls may be unable to support our growth.

We may not be able to obtain sufficient funds to grow our business.

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We have regularly needed to raise funds in order to operate our business and believe we may need to raise additional funds to achieve full commercialization of some or all of our products. If we are unable to raise additional funds when needed, our ability to operate and grow our business could be impaired. We do not know whether we will be able to secure additional funding or funding on terms acceptable to us. Our ability to obtain additional funding will be subject to a number of factors, including market conditions, our operating performance

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and investor sentiment. These factors may make the timing, amount, terms and conditions of additional funding unattractive to us. If we issue additional equity securities, existing stockholders may experience dilution or be subordinated to any rights, preferences or privileges granted to the new equity holders.

Our revenue and operating results may fluctuate significantly as a result of factors outside of our control, which could cause the market price of our common stock to decline.

We expect our revenue and operating results to vary significantly from quarter to quarter. As a result, quarterly comparisons of our financial results are not necessarily meaningful and you should not rely on them as an indication of our future performance. In addition, due to our stage of development, we cannot predict our future revenue or results of operations accurately. As a consequence, our operating results may fall below the expectations of securities analysts and investors, which could cause the price of our common stock to decline. Factors that may affect our operating results include:

the status of development of our technology, products and manufacturing capabilities;

the cost of our raw materials and key components;

warranty and service cost for products in the field;

the introduction, timing and market acceptance of new products introduced by us or our competitors;

the development of our strategic relationships and distribution channels;

general economic conditions, which can affect our customers' capital investments and the length of our sales cycle;

the development of vehicular PEM fuel cells and renewable energy markets; and

government regulation.

We expect to make significant investments in all areas of our business, particularly in research and product development and in expanding our manufacturing capability. Because the investments associated with these activities are relatively fixed in the short-term, we may be unable to adjust our spending quickly enough to offset any unexpected shortfall in our revenue growth. In addition, because we are in the very early stages of selling our products and have a limited number of customers, we expect our order flow to be uneven from period to period.

Our stock price is likely to be highly volatile and may result in substantial losses for investors purchasing shares.

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The market price of our common stock is likely to be highly volatile. The stock market in general, and the market for technology-related stocks in particular, has been highly volatile. As a result, investors in our common stock may experience a decrease in the value of their common stock regardless of our operating performance or prospects. Our common stock may not trade at the same levels as other technology-related stocks and technology-related stocks in general may not sustain their current market prices. In addition, an active public market for our securities may not be sustained.

The trading price of our common stock could be subject to wide fluctuations in response to:

our perceived prospects;

variations in our operating results and achievement of key business targets;

changes in securities analysts' recommendations or earnings estimates;

differences between our reported results and those expected by investors and securities analysts;

announcements of new products by us or our competitors;

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market reaction to any acquisition, joint venture or strategic investments announced by us or our competitors; and

general economic or stock market conditions unrelated to our operating performance.

In the past, securities class action litigation has often been instituted against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and divert our management's attention and resources.

Our executive officers, directors and their affiliates hold a large percentage of our stock and their interests may differ from other stockholders.

Our directors, executive officers and individuals or entities affiliated with our directors as a group beneficially own, as of December 31, 2002, approximately 25% of our outstanding common stock. If these stockholders choose to act or vote together, they will have the power to significantly influence the election of our directors, and the approval of any other action requiring the approval of our stockholders, including any amendments to our certificate of incorporation and mergers or sales of substantially all of our assets. In addition, without the consent of these stockholders, we could be prevented from entering into transactions that could be beneficial to us or our other stockholders. Also, third parties could be discouraged from making a tender offer or bid to acquire us at a price per share that is above the then-current market price.

The provisions of our charter documents and Delaware law could inhibit a takeover that stockholders may consider favorable and diminish the voting rights of the holders of our common stock.

There are provisions in our certificate of incorporation and by-laws that make it more difficult for a third party to acquire, or attempt to acquire, control of Proton, even if a change in control was considered favorable by our stockholders. For example, our board of directors has the authority to issue up to 5,000,000 shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change in control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. The issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents contain other provisions that could have an anti-takeover effect, including:

only one of the three classes of directors is elected each year;

stockholders have limited ability to remove directors;

stockholders cannot take actions by written consent;

stockholders cannot call a special meeting of stockholders; and

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stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions. These provisions could discourage potential acquisition proposals and could delay or prevent a change in control transaction. They could also have the effect of discouraging others from making tender offers for our common stock. These provisions may also prevent changes in our management.

ITEM 7A. *Quantitative and Qualitative Disclosures About Market Risk*

We invest in marketable securities consisting of U.S. government and agency securities that are held by two major banking institutions. Our marketable securities portfolio of approximately \$133.9 million includes five

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callable agency securities with a fair market value totaling approximately \$37.1 million. These securities generate a higher relative rate of interest for the Company; in return, the embedded call option gives the issuer the right to buy back the security. Interest rate risk is the major price risk facing our investment portfolio. Such exposure can subject us to economic losses due to changes in the level or volatility of interest rates. Generally, as interest rates rise, prices for fixed income instruments will fall. As rates decline the inverse is true. We attempt to mitigate this risk by investing in high quality issues of short duration. We do not expect any material loss from our marketable securities investments and believe that our potential interest rate exposure is not material.

The following table provides information about the Company's financial instruments that are sensitive to changes in interest rates:

	Fair Value of Investments		
	At Expected Maturity Date		
	2003	2004	Total
Investments			
Fixed Rate Investments	\$ 113,546,928	\$ 20,397,106	\$ 133,944,034
Average Interest	3.88%	3.35%	3.80%

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ITEM 8. *Financial Statements and Supplementary Data*

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and

Stockholders of Proton Energy Systems, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Proton Energy Systems, Inc. and its subsidiary at December 31, 2002 and 2001 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2002 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America, which 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PRICEWATERHOUSECOOPERS LLP

Hartford, Connecticut

February 19, 2003

Table of Contents**Part II FINANCIAL INFORMATION****ITEM 1.****FINANCIAL STATEMENTS****PROTON ENERGY SYSTEMS, INC.****CONSOLIDATED BALANCE SHEETS**

	December 31, 2002	December 31, 2001
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 16,415,337	\$ 1,836,899
Marketable securities (Note 3)	133,944,034	165,383,001
Accounts receivable	874,579	1,011,259
Inventories and deferred costs (Note 4)	5,894,634	3,143,164
Related party note receivable (Note 12)		110,801
Other current assets	2,164,128	2,442,530
Total current assets	159,292,712	173,927,654
Fixed assets, net (Note 5)		
Related party note receivable, long term portion (Note 12)	16,553,182	7,152,156
Other assets, net	655,767	133,475
Total assets	\$ 176,501,661	\$ 181,868,242
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Current portion of long-term debt (Note 7)	\$ 335,400	\$
Accounts payable	674,069	718,112
Accrued expenses	1,054,636	565,290
Accrued construction costs	473,669	1,603,640
Accrued compensation	386,210	393,802
Accrued service costs (Note 10)	2,093,046	
Deferred revenue (Note 6)	2,704,015	884,248
Customer advances	53,078	509,973
Total current liabilities	7,774,123	4,675,065
Long term liabilities:		
Long-term debt (Note 7)	6,440,632	1,166,000

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Total liabilities	14,214,755	5,841,065
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Commitments and contingencies (Note 10)		
Stockholders' equity (Note 8):		
Preferred stock, undesignated, \$.01 par value per share; 5,000,000 shares authorized, no shares issued or outstanding		
Common stock, \$.01 par value; 100,000,000 shares authorized; 33,451,084 and 33,228,495 shares issued and outstanding, respectively	334,511	332,285
Additional paid-in capital	242,025,701	242,034,880
Unearned compensation	(660,166)	(1,447,629)
Accumulated other comprehensive income (Note 3)	1,052,009	2,092,949
Accumulated deficit	(80,465,149)	(66,985,308)
<hr/>		
Total stockholders' equity	162,286,906	176,027,177
<hr/>		
Total liabilities and stockholders' equity	\$ 176,501,661	\$ 181,868,242
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The accompanying notes are an integral part of the financial statements

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	Year Ended December 31,		
	2002	2001	2000
Contract revenue	\$ 3,444,546	\$ 1,215,465	\$ 644,253
Product revenue	1,269,500	1,752,556	55,950
Total revenues	4,714,046	2,968,021	700,203
Costs and expenses:			
Costs of contract revenue	2,355,091	1,001,306	396,169
Costs of production	4,995,201	2,533,841	247,692
Research and development	8,792,735	6,500,129	3,227,421
General and administrative	7,877,165	6,950,296	4,517,511
Total costs and expenses	24,020,192	16,985,572	8,388,793
Loss from operations	(19,306,146)	(14,017,551)	(7,688,590)
Interest income, net	5,802,546	8,949,996	4,198,865
Gain on sale of marketable securities	23,759	113,470	
Net loss	(13,479,841)	(4,954,085)	(3,489,725)
Deemed preferred dividends and accretion			(52,691,154)
Net loss attributable to common stockholders	\$ (13,479,841)	\$ (4,954,085)	\$ (56,180,879)
Basic and diluted net loss per share attributable to common stockholders	\$ (0.40)	\$ (0.15)	\$ (5.92)
Shares used in computing basic and diluted net loss per share attributable to common stockholders	33,346,794	33,161,301	9,483,738

The accompanying notes are an integral part of the financial statements.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS EQUITY (DEFICIT)**

	<u>Common Stock</u>		<u>Additional Paid-In Capital</u>	<u>Unearned Compensation</u>	<u>Accumulated Other Comprehensive Income</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders Equity (Deficit)</u>
	<u>Shares</u>	<u>Amount</u>					
Balance at December 31, 1999	1,900,000	\$ 19,000	\$ 200,281	\$ (808,821)	\$	\$ (8,467,344)	\$ (9,056,884)
Issuance of common stock	8,051,950	80,519	125,768,765				125,849,284
Conversion of preferred stock into common stock	22,659,093	226,591	65,862,596				66,089,187
Issuance of common stock upon exercise of warrants	424,689	4,247	586,111				590,358
Issuance of common stock upon exercises of stock options	52,311	523	8,483				9,006
Unearned compensation related to stock option grants			2,161,427	(2,161,427)			
Amortization of unearned Compensation				595,887			595,887
Deemed preferred dividends and accretion			47,457,155			(50,074,154)	(2,616,999)
Issuance of stock option awards			47,925				47,925
Change in unrealized gain on marketable securities (Note 3)					289,000		289,000
Net loss						(3,489,725)	(3,489,725)
Balance at December 31, 2000	33,088,043	330,880	242,092,743	(2,374,361)	289,000	(62,031,223)	178,307,039
Issuance of common stock	13,829	138	67,397				67,535
Issuance of common stock upon exercises of stock options	126,623	1,267	25,142				26,409
Unearned compensation related to stock option grants			(172,452)	172,452			
Amortization of unearned compensation				754,280			754,280
Issuance of stock option awards			22,050				22,050
Change in unrealized gain on marketable securities (Note 3)					1,803,949		1,803,949
Net loss						(4,954,085)	(4,954,085)
Balance at December 31, 2001	33,228,495	332,285	242,034,880	(1,447,629)	2,092,949	(66,985,308)	176,027,177
Issuance of common stock	32,571	326	74,183				74,509
Issuance of common stock upon exercises of stock options	190,018	1,900	45,689				47,589
Unearned compensation related to stock option grants			(129,051)	129,051			
Amortization of unearned compensation				658,412			658,412
Issuance of stock option awards							
Change in unrealized gain on marketable securities (Note 3)					(1,040,940)		(1,040,940)

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Net loss						(13,479,841)	(13,479,841)
Balance at December 31, 2002	33,451,084	\$ 334,511	\$ 242,025,701	\$ (660,166)	\$ 1,052,009	\$ (80,465,149)	\$ 162,286,906

The accompanying notes are an integral part of the financial statements.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31,		
	2002	2001	2000
Cash flows from operating activities:			
Net loss	\$ (13,479,841)	\$ (4,954,085)	\$ (3,489,725)
Adjustments to reconcile net loss to net cash used in operations:			
Depreciation and amortization	987,340	541,472	296,292
Amortization of premiums (discounts) on securities	1,329,041	691,935	(251,000)
Non-cash stock-based expense	658,412	776,330	791,924
Loss on disposal of assets	187,467	54,879	
Gain from sale of marketable securities	(23,759)	(113,470)	
Changes in operating assets and liabilities:			
Accounts receivable	136,680	(721,443)	(277,299)
Inventories and deferred costs	(2,751,470)	(1,493,490)	(707,447)
Other current assets	278,402	170,080	(2,551,462)
Other assets	(16,950)	(203,904)	(240,590)
Accounts payable and accrued expenses	1,400,786	2,152,263	845,822
Income taxes payable		(125,000)	125,000
Deferred revenue and contract advances	1,362,872	202,370	703,369
Net cash used in operating activities	(9,931,020)	(3,022,063)	(4,755,116)
Cash flows from investing activities:			
Purchases of fixed assets	(10,564,827)	(6,542,005)	(653,271)
Proceeds from the sale of fixed assets	15,058		
Purchases of marketable securities	(104,965,136)	(189,599,533)	(179,210,023)
Proceeds from maturities and sales of marketable securities	134,057,881	198,831,018	8,911,021
Issuance of related party note		(275,000)	
Proceeds from repayment of related party note	244,276	30,724	
Net cash provided by (used in) investing activities	18,787,252	2,445,204	(170,952,273)
Cash flows from financing activities:			
Borrowings from long term debt	5,610,032	1,166,000	
Payment of long term debt origination costs	(9,924)	(206,313)	
Proceeds from sale of common stock, net	74,509	67,535	125,849,284
Proceeds from exercise of stock options	47,589	26,409	9,006
Proceeds from exercise of warrants			590,358
Proceeds from issuance of mandatorily redeemable convertible preferred stock and warrants			50,038,159
Net cash provided by financing activities	5,722,206	1,053,631	176,486,807
Net increase in cash	14,578,438	476,772	779,418
Cash and cash equivalents at beginning of year	1,836,899	1,360,127	580,709

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Cash and cash equivalents at end of year	\$ 16,415,337	\$ 1,836,899	\$ 1,360,127
Cash paid during the period for interest	\$ 171,466	\$	\$

The accompanying notes are an integral part of the financial statements.

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. FORMATION AND OPERATIONS OF THE COMPANY

Proton Energy Systems, Inc. (the Company) was incorporated in Delaware on August 16, 1996 to design, develop and manufacture proton exchange membrane (PEM) electrochemical products. The Company employs PEM electrochemical products in hydrogen generation and power generating and storage devices for use in a variety of commercial applications. The Company manufactures products for the domestic and international industrial gas market and operates in a single segment. Through 2000, the Company was considered a development stage company, as defined in Statement of Financial Accounting Standards (SFAS) No. 7, Accounting and Reporting by Development Stage Enterprises . During 2001, the Company began to generate significant revenue from its principal operations. As a result, the Company is no longer considered to be a development stage enterprise.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Significant accounting policies followed in the preparation of these financial statements are as follows:

Principles of Consolidation

The consolidated financial statements include the accounts of Proton Energy Systems, Inc. and its wholly owned limited liability company, Technology Drive LLC, after elimination of significant intercompany transactions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue Recognition

The Company generates revenue from two principal sources: product sales and long-term contracts. For product sales, we record revenue when a firm sales agreement is in place, delivery has occurred, sales price is fixed or determinable, and collectibility is reasonably assured. If customer acceptance of products is not assured, revenue is recorded only upon formal customer acceptance. For new generation products, revenue and

cost on such delivered products will be deferred until the expiration of the product warranty period, unless such warranty costs are estimable at the time of delivery.

The Company receives payments under customer-sponsored research and development contracts related to our PEM technology and regenerative fuel cell systems development. For those research and development contracts that require the Company to meet specific obligations as defined in the agreements (including delivery and acceptance of units), amounts advanced pursuant to the contracts are recognized as liabilities until such obligations are met. Once the obligations are met, the amounts are recognized as contract revenue. For those research and development contracts which do not require the Company to meet specific obligations, the Company recognizes contract revenue utilizing the percentage-of-completion method, which is based on the relationship of costs incurred to total estimated contract costs. As of December 31, 2002, three research and development contracts were in place. As of December 31, 2001, the Company had received \$509,973 of such advances under four contracts.

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Shipping and Handling Costs

Costs incurred in the shipping and handling of customers' goods are included in general and administrative expenses.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturity dates of three months or less as of the purchase date to be cash equivalents. The Company invests excess cash primarily in a money market account at a major banking institution, which is subject to credit and market risk.

Restricted Cash

In connection with the construction of its new Wallingford facility, the Company entered into a sales and use tax exemption program with the Connecticut Development Authority. As part of that program, the Company was required to place \$427,000 of cash in escrow. This restricted cash is classified in the balance sheet under other assets.

Marketable Securities

The Company classifies its entire investment portfolio as available for sale as defined in SFAS No. 115, Accounting for Certain Investments in Debt and Equity Securities. At December 31, 2002 and 2001 the Company's investment portfolio consisted of U.S. government and agency securities that are held by two major banking institutions.

Securities are carried at fair value with the unrealized gains and losses reported as a separate component of stockholders' equity. The specific identification method was used to determine cost in computing the unrealized gain or loss.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as changes in equity other than transactions resulting from investments by owners and distributions to owners. The Company's comprehensive loss for the years ended December 31, 2002, December 31, 2001 and December 31, 2000 consisted of reported net loss and unrealized gains and losses on marketable securities and totaled \$14,520,781, \$3,150,136 and \$55,891,879, respectively.

Inventory

Inventory is recorded at the lower of cost or market value. Cost is determined by the first-in, first-out method.

Fixed Assets

Fixed assets are stated at cost and are depreciated using the straight-line method over the following estimated useful lives by asset category:

<u>Asset Category</u>	<u>Estimated Useful Life</u>
Buildings	30 years
Machinery and equipment	7 years
Leasehold improvements	Shorter of remaining life of lease or 7 years
Office furniture, fixtures and equipment	3-7 years

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

When assets are sold or retired, the related cost and accumulated depreciation are removed from their respective accounts and any resulting gain or loss is included in income. The Company periodically reviews the carrying value of its fixed assets to assess recoverability based upon the expectation of non-discounted future cash flows.

Research and Development

Research and development costs are expensed as incurred.

Warranty Costs

The Company's warranty policy is limited to replacement parts and services and expires one year from date of shipment. Estimated warranty obligations are recorded in costs of production in the period in which the related revenue is recognized. The Company quantifies and records an estimate for warranty related costs based on the Company's actual historical warranty experience and the current repair costs. Adjustments are made to accruals as warranty claim data and historical experience warrant. Should the company experience actual return and repair costs that are higher than the estimated return and repair costs used to calculate the provision, the Company's operating results for the period or periods in which such returns or additional costs materialize will be adversely impacted.

The changes in accrued product warranties for the year-ended December 31, 2002 are as follows:

Balances as of January 1, 2002	\$	102,866
Warranties issued and adjustments to provision		2,614,900
Warranty claims		(538,831)
Balance as of December 31, 2002	\$	2,178,935

Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the carrying amounts and the tax basis of assets and liabilities. A valuation allowance is established against net deferred tax assets if, based on the weight of available evidence, it is more likely than not that some or all of the net deferred tax assets will not be realized.

Concentration of Risks

Concentration of credit risk exists with respect to cash and cash equivalents, investments and vendors. The Company maintains its cash and cash equivalents and investments with high quality financial institutions. In addition, certain critical product components are only available from one source for which the source maintains proprietary rights.

For the years ended December 31, 2002 and 2001, contract revenue from government-sponsored agencies accounted for approximately 73% and 41% of total revenue, respectively. At December 31, 2002 and 2001, accounts receivable from government-sponsored agencies accounted for approximately 60% and 45% of total accounts receivable, respectively.

For the year ended December 31, 2002, six customers comprised 59% of product revenue.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)***Loss per Share*

Basic EPS is calculated by dividing income or loss attributable to common stockholders by the weighted average common shares outstanding. Diluted EPS is calculated by adjusting weighted average common shares outstanding by assuming conversion of all potentially dilutive shares. In periods of net loss as recorded, no effect is given to potentially dilutive securities, since the effect would be antidilutive.

Stock-Based Compensation

Statement of Financial Accounting Standards (SFAS) No. 123, Accounting for Stock-Based Compensation, as amended by SFAS No. 148, Accounting for Stock-Based Compensation Transition and Disclosure, prescribes accounting and reporting standards for all stock-based compensation plans, including employee stock option plans. As allowed by SFAS No. 123, the Company has elected to continue to account for stock based compensation issued to employees using the intrinsic value method in accordance with Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees, and related Interpretations. Under APB 25, compensation expense is computed to the extent that the fair market value of the underlying stock on the date of grant exceeds the exercise price of the employee stock option or stock award. Compensation so computed is then recognized over the vesting period.

We account for stock based compensation issued to non-employees in accordance with SFAS 123 and the consensus in Emerging Issues Task Force (EITF) 96-18. These pronouncements require the fair value of equity instruments given as consideration for services rendered be recognized as a non-cash charge to income over the shorter of the vesting or service period. The equity instruments must be revalued on each subsequent reporting date until performance is complete with a cumulative catch-up adjustment recognized for any changes in their fair value.

In the event that we are required to record compensation expense that is currently only being disclosed under SFAS 123, an adjustment to increase net loss in such period would result. The following table illustrates the effect on net loss and loss per share had compensation costs for the stock-based compensation plan been determined based on grant date fair values of awards under the provisions of SFAS No. 123, for the years ended December 31 (in thousands, except per share data):

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Net loss attributable to common stockholders:			
As reported	\$ (13,479,841)	\$ (4,954,085)	\$ (56,180,879)
Less total stock-based employee compensation expense determined under fair value-based method for all awards	(6,299,739)	(4,826,621)	(1,407,702)

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Pro forma	\$ (19,779,580)	\$ (9,780,706)	\$ (57,588,581)
Net loss per share applicable to common stockholders, basic and diluted			
As reported	\$ (.40)	\$ (.15)	\$ (5.92)
Pro forma	\$ (.59)	\$ (.29)	\$ (6.07)

Recent Accounting Pronouncements

In June 2001, the Financial Accounting Standards Board issued SFAS 143, Accounting for Asset Retirement Obligations (SFAS 143). SFAS 143 addresses financial accounting and reporting obligations

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

associated with the retirement of tangible long-lived assets and the associated asset retirement costs. SFAS 143 is effective for fiscal years beginning after June 15, 2002. The adoption of this standard in 2003 is not expected to have an impact on the Company's financial condition or results of operations.

In September 2002, SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities* was issued. This statement provides guidance on the recognition and measurement of liabilities associated with exit or disposal activities and requires that such liabilities be recognized when incurred. This statement is effective for exit or disposal activities initiated on or after January 1, 2003. Adoption of this standard is not expected to impact the timing of recognition of costs associated with future exit and disposal activities.

In November 2002, the FASB issued FASB Interpretation No. 45 (FIN 45), *Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others*, an interpretation of FASB Statements No. 5, 57 and 107 and Rescission of FASB Interpretation No. 34. FIN 45 clarifies the requirements of FASB Statement No. 5, *Accounting for Contingencies* (FAS 5), relating to the guarantor's accounting for, and disclosure of, the issuance of certain types of guarantees. The disclosure requirements of FIN 45, which are effective for the year ended December 31, 2002, are included in note 2 to the consolidated financial statements, which discusses the Company's disclosures relative to warranty costs.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure* an amendment of FAS 123 (SFAS 148). SFAS 148 provides alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation, in addition to certain new disclosure requirements. The disclosure provisions of SFAS 148 are included in the accompanying Notes to the Consolidated Financial Statements.

Reclassifications

Certain reclassifications have been made to the 2001 financial statements to conform to the 2002 presentation.

3. MARKETABLE SECURITIES

The following tables summarize investments:

Amortized	Gross	Gross	<u>Fair Value</u>
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	<u>Cost</u>	<u>Unrealized Gains</u>	<u>Unrealized Losses</u>	
December 31, 2001				
U.S. government securities	\$ 132,892,025	\$ 1,052,009	\$	\$ 133,944,034
	<u>\$ 132,892,025</u>	<u>\$ 1,052,009</u>	<u>\$</u>	<u>\$ 133,944,034</u>

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
December 31, 2001				
U.S. government securities	\$ 163,290,052	\$ 2,129,649	\$ (36,700)	\$ 165,383,001
	<u>\$ 163,290,052</u>	<u>\$ 2,129,649</u>	<u>\$ (36,700)</u>	<u>\$ 165,383,001</u>

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

As of December 31, 2002 and 2001, the approximate fair values of marketable securities by maturity date are as follows:

	<u>2002</u>	<u>2001</u>
Less than one year	\$ 113,546,928	\$ 88,839,638
One to five years	20,397,106	76,543,363
	<u>\$ 133,944,034</u>	<u>\$ 165,383,001</u>

Securities are carried at fair value with the unrealized gains/losses reported as a separate component of stockholders' equity. Proceeds from the sale of securities in 2002 and 2001 totaled \$1,028,675 and \$15,546,432, respectively. The cost was determined using the specific identification method and the resulting realized gains were \$23,759 and \$113,470, respectively. The unrealized gain from marketable securities was \$1,052,009 and \$2,092,949 at December 31, 2002 and 2001, respectively. At December 31, 2002, the Company had five callable agency securities with a fair market value totaling approximately \$37.1 million. Additionally, four investments approximating \$20.4 million were called at par in 2002. These securities generate a higher relative rate of interest for the Company, in return for the issuer's right to call, at par value, the security before its maturity date.

4. INVENTORIES AND DEFERRED COSTS

Inventories and deferred costs are as follows:

	<u>December 31,</u>	
	<u>2002</u>	<u>2001</u>
Raw materials	\$ 1,542,813	\$ 1,177,126
Work in process	2,449,715	534,809
Finished goods	1,902,106	1,431,229
	<u>\$ 5,894,634</u>	<u>\$ 3,143,164</u>

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Deferred costs of \$1,613,546 and \$716,358 are included in finished goods as of December 31, 2002 and 2001 respectively. These costs of production, which relate to units shipped to customers have been deferred until the Company recognizes the related deferred product revenue. In addition, costs incurred under our contract with STM of \$1,154,198 and \$214,592 are included in work in process as of December 31, 2002 and 2001 respectively.

5. FIXED ASSETS

	December 31,	
	2002	2001
Land	\$ 2,243,586	\$
Building	10,478,611	
Machinery and equipment	2,493,214	1,046,546
Leasehold improvements	368,225	368,225
Office furniture, fixtures and equipment	2,668,705	1,376,101
Construction in process	296,842	5,450,275
	18,549,183	8,241,147
Less: accumulated depreciation	(1,996,001)	(1,088,991)
	\$ 16,553,182	\$ 7,152,156

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Construction in process at December 31, 2001 is primarily comprised of the land purchased for construction of the new facility, costs to prepare the land for construction, and building construction costs. Depreciation expense was \$961,276, \$539,323, and \$296,292 for the years ended December 31 2002, 2001 and 2000, respectively.

6. DEFERRED REVENUE

In 1999, the Company began delivering HOGEN 40 series hydrogen generators under commercial agreements. Revenue and costs on such delivered units were deferred until the expiration of the product warranty period. In the fourth quarter of 2001, the Company determined that it had adequate product warranty information and experience to begin recognizing product revenue related to sales of HOGEN 40 units upon shipment. As a result, the Company recognized previously deferred revenue of \$754,000.

In the fourth quarter of 2002, the Company discovered performance issues relating to the operation of cell stacks and associated sensors in its HOGEN 40 series units. The Company's investigation of these issues revealed the presence of previously unknown pinholes in cell membranes in the field that resulted in hydrogen leakage and cell failure. As a result the Company determined that recognizing revenue on shipment of its HOGEN 40 series units was no longer appropriate because of the significant uncertainty surrounding the reliability of the existing design of the PEM electrolyzer (cell stack) within it HOGEN 40 series generators. The Company is making modifications to the existing cell stack design to improve its performance and anticipates deferring product revenue until either the expiration of the warranty period or it has compiled sufficient warranty history to estimate the warranty costs. As such, product revenue from HOGEN 40 series shipments made in the fourth quarter is deferred until the expiration of the product warranty period. Additionally, the Company continues to defer revenue on shipments of its laboratory generators and HOGEN 380 hydrogen products until such units are past the product warranty period or until the Company has adequate warranty history. The Company had deferred product revenue of \$2,704,015 and \$884,248 as of December 31, 2002 and 2001 respectively.

7. DEBT

In December 2001, Technology Drive LLC, a limited liability company, wholly owned by us, entered into a \$6,975,000 loan agreement with a major financial institution, in connection with the construction of the Company's new facility in Wallingford, Connecticut. Under the terms of the loan, the business assets of Technology Drive LLC, including the land and building, are subject to lien. The loan agreement was structured as a one-year construction loan with monthly payments of interest only until December 2002 at which time the loan converted to a seven-year term note. The term note amortizes based upon a fifteen-year schedule with a final lump sum payment due at the maturity date of December 31, 2009. The note is guaranteed by Proton Energy Systems, Inc., the managing member of Technology Drive LLC and bears interest at the one month LIBOR plus 2.375% (3.76% at December 31, 2002).

At December 31, 2002, \$6,776,032 is outstanding under the note. The Company is required to comply with certain covenants including the maintenance of adequate insurance coverage and a liquidity covenant requiring the Company to maintain cash and marketable securities of not

less than \$20 million.

The loan contains certain subjective acceleration clauses, which upon the occurrence of certain events, may cause amounts due under each of the agreements to become immediately due and payable. The company has no indication that it is in default of any such clauses and therefore has classified its debt based on the dates regular payments are due.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Maturities under the debt at December 31, 2002 are as follows:

2003	\$	335,400
2004		350,400
2005		366,600
2006		382,800
2007		400,200
2008 and thereafter		4,940,632
		<hr/>
Total	\$	6,776,032
		<hr/>

In connection with the loan facility, the Company incurred approximately \$216,000 of loan origination costs. These costs are being amortized over the term of the loan. Amortization expense for the year ended December 31, 2002 was approximately \$26,000.

8. CAPITAL STRUCTURE*Preferred Stock*

The Company has a class of 5,000,000 authorized but undesignated shares of preferred stock, par value \$.01.

Common Stock

The Company has authorized 100,000,000 shares of common stock, par value \$.01 per share.

In connection with a February 1998 customer-sponsored research and development contract, the Company issued a warrant to purchase 50,000 shares of the Company's common stock at a purchase price of \$1.10 per share. At December 31, 2001, the warrant was fully exercisable and expires in February 2008.

9. EMPLOYEE BENEFIT AND STOCK OPTION PLANS

Stock Option Plan

The Company has two stock option plans: the 1996 Stock Option Plan (the 1996 Plan) and the 2000 Stock Option Plan (the 2000 Plan). The Company has reserved a total of 7,700,000 shares of common stock for issuance under the 1996 and 2000 Plans. Together the Plans provide for the grants of non-qualified and incentive stock options, restricted stock awards and other stock-based awards to its employees, officers, directors, consultants and advisors. As determined by the Board of Directors, options are generally granted at the fair market value of the common stock at the time of grant. However, the Board of Directors has determined that the exercise price for each incentive stock option shall not be less than the fair market value of the Common Stock at the time the incentive stock option is granted. Options generally vest ratably over four years and expire ten years from the date of grant.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

A summary of stock option activity for the years ended December 31, 2002, 2001 and 2000 under the Plans is as follows:

	<u>Shares</u>	<u>Weighted Average Exercise Price</u>
Outstanding at January 1, 2000 (246,225 shares exercisable)	1,036,241	\$ 0.23
Granted	1,811,871	11.86
Exercised	(52,311)	0.17
Cancelled or forfeited	(32,791)	0.17
	<hr/>	
Outstanding at December 31, 2000 (424,508 shares exercisable)	2,763,010	7.85
Granted	595,579	7.73
Exercised	(126,623)	0.21
Cancelled or forfeited	(63,105)	5.53
	<hr/>	
Outstanding at December 31, 2001 (829,801 shares exercisable)	3,168,861	8.18
Granted	1,133,989	4.66
Exercised	(190,018)	0.25
Cancelled or forfeited	(171,307)	9.64
	<hr/>	
Outstanding at December 31, 2002 (1,409,010 shares exercisable)	3,941,525	\$ 7.49

In connection with the grant of certain stock options to employees during 2000 and 1999, the Company recorded unearned stock compensation representing the difference between the deemed fair market value of the common stock on the date of grant and the exercise price.

Compensation related to options that vest over time was recorded as unearned compensation, a component of stockholders' equity (deficit), and is being amortized over the vesting periods of the related options. During the years ended December 31, 2002, 2001 and 2000, the Company recorded non-cash compensation expense relating to these options totaling \$684,057, \$716,319, and \$577,226, respectively. At December 31, 2002 and 2001, the unearned compensation balance is \$653,737 and \$1,408,045 respectively.

The following table summarizes additional information about stock options outstanding at December 31, 2002:

Range of Exercise Prices	<u>Options Outstanding</u>	<u>Options Exercisable</u>
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		Number Outstanding at December 31, 2002	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price	Number Exercisable at December 31, 2002	Weighted Average Exercise Price
\$.11	\$ 2.99	1,111,836	7.38	\$ 1.25	601,886	\$ 0.40
3.01	6.00	1,004,112	8.63	5.25	275,338	5.67
6.05	10.75	986,827	8.53	8.89	237,588	8.88
10.89	24.13	838,750	7.54	16.78	294,198	16.77
		3,941,525	8.02	\$ 7.49	1,409,010	\$ 6.28

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The fair value of each option grant is estimated on the date of grant using the minimum value option-pricing model through December 31, 1999, and the Black Scholes option-pricing model from January 1, 2000 through December 31, 2002, with the following assumptions:

	<u>2002</u>	<u>2001</u>	<u>2000</u>
Risk free interest rate	2.94%-4.74%	4.57%-5.39%	5.17%-6.68%
Expected dividend yield	None	None	None
Expected life of option	5 years	5 years	5 years
Expected volatility	100%	100%	100%

The weighted average fair value of options granted during 2002, 2001 and 2000 was \$3.55, \$5.93, and \$9.17, respectively.

SFAS No. 123 requires the disclosure of pro forma net income and earnings per share had the Company adopted the fair value method as disclosed in Note 2. Under SFAS No. 123, the fair value of stock-based awards to employees is calculated through the use of option-pricing models. These models require subjective assumptions, including future stock price volatility and expected time to exercise, which greatly affect the calculated value.

During the years ended December 31, 2001 and 2000 the Company granted fully vested, non-qualified stock options with a ten-year term, to non-employees to purchase 3,000 and 5,500 shares of common stock, respectively. The Company recognized compensation expense based on the fair value of these options of \$22,050 and \$47,925 for the years ended December 31, 2001 and 2000, respectively.

In September 2000, the Company granted non-qualified stock options to a non-employee to purchase 15,000 shares that vest over four years and expire at the end of ten years. Accounting for these options require that they be revalued on each subsequent reporting date until performance is complete or vesting occurs with a cumulative catch-up adjustment recognized for any changes in fair value. Compensation related to these options was recorded as unearned compensation, a component of stockholders' deficit, and is being amortized over the vesting periods of the related options. As of December 31, 2002, options of 7,500 options have vested and have an aggregate fair value of \$20,606. The remaining unvested options at December 31, 2002 and 2001 have an estimated fair value of \$16,800 and \$81,338 or \$2.24 and \$7.23 per share, respectively. The Company's results of operations for the year ended December 31, 2002 included a non-cash credit of \$25,645 for the amortization of the decrease in the fair value of these options. The Company's results of operations for the year ended December 31, 2001 and 2000 include a non-cash charge of \$37,961 and \$18,661 for the amortization of the fair value of these options. At December 31, 2002 and 2001, the unearned compensation balance is \$6,429 and \$39,584, respectively. The Company's future results of operations could be materially impacted by a change in valuation of these unvested stock options as a result of future increases or decreases in the price of the Company's common stock.

The fair value of each non-employee option grant is estimated using the Black Scholes option-pricing model with the following assumptions:

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	<u>2002</u>	<u>2001</u>	<u>2000</u>
Risk free interest rate	3.31%-5.26%	4.50%-5.46%	5.12%-6.21%
Expected dividend yield	None	None	None
Expected life of option	5-10 years	5-10 years	5-10 years
Expected volatility	100%	100%	100%

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2000 Employee Stock Purchase Plan

In June 2000, the Company adopted the 2000 Employee Stock Purchase Plan. A total of 250,000 shares of common stock have been reserved for issuance under this plan. Eligible employees may purchase common stock pursuant to payroll deductions at a price equal to 85% of the lower of the fair market value of the common stock at the beginning or end of each three-month offering period. Employee contributions are limited to 10% of an employee's eligible compensation not to exceed amounts allowed by the Internal Revenue Code. As of December 31, 2002, 2001 and 2000, 32,571, 13,829 and 1,950 shares of common stock were issued for proceeds of \$74,509, \$84,940 and \$17,404, respectively. As of December 31, 2002, 201,650 shares are available for future issuance.

401(k) Plan

In 1997, the Company established a 401(k) plan covering substantially all of its employees, subject to certain eligibility requirements. Participants have the option of contributing up to 15% of their annual compensation. In January 2002, the Company adopted a 50% match of employee contributions up to 6% of compensation. Employer matching contributions for the year ended December 31, 2002 approximated \$161,000.

10. COMMITMENTS AND CONTINGENCIES

In November 1999, the Company entered into an agreement with Matheson Tri-Gas, Inc. (*Matheson*) to develop, market and distribute hydrogen generators to be used solely in laboratory applications. This agreement granted the distributor worldwide exclusivity to the commercial sale of this product during the fifteen-year term of the contract as long as the distributor met minimum purchases, as defined in the agreement. In January 2003, the exclusive distribution agreement with Matheson Tri-Gas, Inc., was jointly terminated. Under the terms of the settlement agreement we agreed to continue to support units under warranty, provide spare parts for five years, sell an additional 55 laboratory hydrogen generators, and agreed not to sell or market our own laboratory hydrogen generators under Proton's or any other brand name before June 30, 2003. The Company recorded a loss of approximately \$533,000, \$273,000 and \$122,000 for orders received and delivered under this contract for the years ended December 31, 2002, 2001 and 2000, respectively.

In 2001, the Company entered into a 10-year agreement with STM Power, Inc. (*STM*) for the exclusive supply of high-pressure hydrogen replenishment systems for Stirling Cycle Engines. Under an initial purchase order relating to this agreement, STM has agreed to provide \$395,000 for the product development and delivery of prototype hydrogen replenishment systems. In 2002, the Company received purchase orders totaling approximately \$550,000 for additional product development and delivery of 57 high-pressure hydrogen generators.

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The Company accounts for the STM contract in accordance with SOP 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts, and accordingly has recorded costs of \$1,154,000 under the contract in inventory. Additionally, at December 31, 2002, the Company has recorded \$958,000 as deferred revenue representing amounts billed under the contract with STM and has \$137,680 of accounts receivable due from STM. In 2002, the Company recorded \$196,000 of cost overruns associated with this contract and accrued \$127,000 to cover the cost of potential warranty claims associated with the 57 units delivered.

Also in 2001, the Company entered into an agreement with the Connecticut Clean Energy Fund (CCEF). The agreement provides the Company with financial assistance for up to \$1.5 million to accelerate commercial deployment of the UNIGEN product. The Company is required to repay CCEF 110% of the amounts advanced

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PROTON ENERGY SYSTEMS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

by them under the agreement beginning at such time as revenues from UNIGEN products reach \$25 million annually. However, prior to the achievement of milestones described in this agreement, these funds are subject to repayment provisions based upon the occurrence of certain events. These events include a failure to maintain a Connecticut presence, the purchase of a controlling interest in the Company by a third party, the sale of substantially all of the Company's assets, the consolidation or merger of the company with a third party, or the granting of the exclusive license to a third party to manufacture or use the UNIGEN product line. Because of these repayment provisions, the Company records funds received as liabilities until it achieves the contract milestones. At December 31, 2001, \$200,000 had been received and was recorded in customer advances. During the first half of 2002 an additional \$400,000 had been received. During 2002, the Company achieved the contract milestones and recognized the related \$600,000 as an offset against costs and expenses.

In October 2002, the Company learned of problems with sensor modules in its HOGEN 40 series units at customer locations that might have been affected by moisture blockage thereby impairing the sensor's ability to detect the presence of hydrogen in the oxygen gas stream. Further investigation of these units revealed the presence of pinholes in the cell membranes, resulting in hydrogen leakage and cell failure. To address these problems, the Company has contacted all of its HOGEN 40 series customers to arrange appropriate sensor testing and modifications. Additionally, the Company intends to replace defective cell stacks that are experiencing leakage. The Company is taking the approach that all HOGEN 40 series sensor and cell stack components in the field may need to be replaced. The Company is also working to develop and implement design improvements to extend cell lifetime. For the year ended December 31, 2002 the Company recorded \$2,462,000 for these service costs. As of December 31, 2002 the Company has accrued \$2,093,000 for service costs that remain under this initiative which are probable and can be reasonably estimated. The liability for such service costs reflects management's estimate, as of the date of this report, of the ultimate cost of the program. The actual amount of such costs could be less than this accrual but they could also materially exceed the amount accrued.

In October 2002, the Company reduced its workforce by approximately 10% as part of an ongoing effort to increase the efficiency of operations and reduce costs. In connection with the reduction in workforce, the Company recognized a charge in the fourth quarter of 2002 of approximately \$130,000.

Legal Proceedings

Between July 3, 2001 and August 29, 2001, four purported class action lawsuits were filed in the United States District Court for the Southern District of New York against the Company and several of its officers and directors as well as against the underwriters who handled the September 28, 2000 initial public offering (IPO) of common stock. All of the complaints were filed allegedly on behalf of persons who purchased the Company's common stock from September 28, 2000 through and including December 6, 2000. The complaints are similar, and allege that the Company's IPO registration statement and final prospectus contained material misrepresentations and/or omissions related, in part, to excessive and undisclosed commissions allegedly received by the underwriters from investors to whom the underwriters allegedly allocated shares of the IPO. On April 19, 2002, a single Consolidated Amended Complaint was filed, reiterating in one pleading the allegations contained in the previously filed separate actions, including the alleged Class Period of September 28, 2000 through and including December 6, 2000. On July 15, 2002 the Company joined in an omnibus motion to dismiss the lawsuits filed by all issuer defendants named in similar actions which challenges the legal sufficiency of the plaintiffs' claims, including those in the consolidated amended complaint. Plaintiffs have opposed that motion, which has not yet been heard by the Court. In addition, in August 2002, the plaintiffs agreed to dismiss without prejudice all of the individual defendants from the consolidated complaint. An order to that effect was entered by the Court in October 2002.

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The Company believes it has meritorious defenses to the claims made in the complaints and intends to contest the lawsuits vigorously. However, there can be no assurance that we will be successful, and an adverse resolution of the lawsuits could have a material adverse effect on our financial position and results of operation in the period in which the lawsuits are resolved. The Company is not presently able to reasonably estimate potential losses, if any, related to the lawsuits. In addition, the costs to us of defending any litigation or other proceeding, even if resolved in our favor, could be substantial.

Operating Leases

At December 31, 2002, the Company was committed under operating leases for its facilities extending through June 2004. The Company also rents certain office equipment under operating leases.

Rent expense under the non-cancelable operating leases was approximately \$320,000, \$363,000, and \$197,000 for the years ended December 31, 2002, 2001 and 2000, respectively.

Minimum lease payments under the noncancelable leases at December 31, 2002 are as follows:

2003	\$	233,221
2004		116,611
		116,611
Total minimum obligations	\$	349,832

11. INCOME TAXES

The Company's gross deferred tax assets and liabilities were as follows:

	December 31,	
	2002	2001

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Gross deferred tax assets:		
Net operating loss carryforwards	\$ 9,256,000	\$ 5,701,000
Deferred revenue	1,053,000	344,000
Accrued expenses	62,000	151,000
Research and development tax credits	963,000	48,000
Inventory reserves	137,000	13,000
Warranty reserves	911,000	79,000
Deferred compensation	895,000	
	<u>13,277,000</u>	<u>6,336,000</u>
Gross deferred tax liabilities:		
Depreciation	182,000	84,000
Unrealized gain on marketable securities	410,000	815,000
Deferred costs	628,000	279,000
	<u>1,220,000</u>	<u>1,178,000</u>
Net deferred tax asset	12,057,000	5,158,000
Less: valuation allowance	(12,057,000)	(5,158,000)
	<u>\$</u>	<u>\$</u>

Table of Contents**PROTON ENERGY SYSTEMS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

At December 31, 2002, the Company had approximately \$23.8 million of federal net operating loss carryforwards that expire beginning in the year 2011 through 2021 and approximately \$23.7 million of state net operating loss carryforwards that expire beginning in the year 2002 through 2021.

The amount of the net operating loss and research and development tax credit carryforwards that may be utilized annually to offset future taxable income and tax liability is limited as a result of certain ownership changes pursuant to Section 382 of the Internal Revenue Code.

12. RELATED PARTIES

In October 2001, the Company loaned \$275,000 to Walter W. Schroeder, the President and Chief Executive Officer of the Company and a director. The loan has a two year term and is payable in monthly installments of \$10,000 each with a final payment due at maturity. The loan, which accrued interest at the prime rate contains no penalty for early repayment. In July 2002, the loan was repaid in full.

In 2001, the Company entered into a contract with STM to develop and deliver hydrogen generators (see Note 9). Richard A. Aube, a member of the Company's Board of Directors, is also a member of STM's Board of Directors.

13. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

The following tables set forth certain unaudited quarterly statement of operations data for the eight quarters ended December 31, 2002. This data has been derived from unaudited financial statements that, in our opinion, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of such information when read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this Form 10-K. The operating results for any quarter are not necessarily indicative of results for any future period.

	2002 Quarters			
	First	Second	Third	Fourth
	Amounts in 000s except for per share amounts			
Revenues	\$ 938	\$ 1,317	\$ 1,589	\$ 870
Costs and expenses	4,947	5,957	7,301	5,815
Loss from operations	(4,009)	(4,640)	(5,712)	(4,945)

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Net loss attributable to common stockholders	(2,263)	(3,080)	(4,287)	(3,850)
Basic and diluted net loss per share attributable to common stockholders	(0.07)	(0.09)	(0.13)	(0.11)

2001 Quarters

	First	Second	Third	Fourth
Amounts in 000s except for per share amounts				
Revenues	\$ 239	\$ 555	\$ 364	\$ 1,810
Costs and expenses	3,082	4,037	4,162	5,704
Loss from operations	(2,843)	(3,482)	(3,798)	(3,894)
Net loss attributable to common stockholders	(264)	(1,171)	(1,567)	(1,952)
Basic and diluted net loss per share attributable to common stockholders	(0.01)	(0.04)	(0.05)	(0.06)

See note 2 to the financial statements.

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ITEM 9. *Changes in and Disagreements with Accountants on Accounting and Financial Disclosure*

Not applicable.

PART III

Certain information required by Part III is omitted from this Annual Report as we intend to file our definitive Proxy Statement for our Annual Meeting of Stockholders to be held on June 3, 2003, pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, not later than 120 days after the end of the fiscal year covered by this Report, and certain information included in the Proxy Statement is incorporated herein by reference.

ITEM 10. *Directors and Executive Officers of the Registrant*

(a) Executive Officers and Directors The information in the section entitled Executive Officers and Directors of the Registrant in Part I hereof is incorporated herein by reference.

(b) Directors The information in the section entitled Directors and Nominees for Director in the Proxy Statement is incorporated herein by reference.

The disclosure required by Item 405 of Regulation S-K is incorporated by reference to the section entitled Section 16(a) Beneficial Ownership Reporting Compliance in the Proxy Statement.

ITEM 11. *Executive Compensation*

The information in the sections entitled Compensation of Executive Officers, Compensation of Directors and Compensation Committee Interlocks and Insider Participation in the Proxy Statement is incorporated herein by reference.

ITEM 12. *Security Ownership of Certain Beneficial Owners and Management*

The information in the section entitled Security Ownership of Certain Beneficial Owners and Management in the Proxy Statement is incorporated herein by reference.

ITEM 13. *Certain Relationships and Related Transactions*

The information in the section entitled "Certain Transactions" and "Compensation Committee Interlocks and Insider Participation" in the Proxy Statement is incorporated herein by reference.

ITEM 14. *Controls and Procedures*

(a) Evaluation of disclosure controls and procedures. Based on their evaluation of the Company's disclosure controls and procedures (as defined in Rules 13a-14(c) and 15d-14(c) under the Securities and Exchange Act of 1934) as of a date within 90 days of the filing date of this Annual Report on Form 10-K, the Company's chief executive officer and principal financial and accounting officer have concluded that the Company's disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and are operating in an effective manner.

(b) Changes in internal controls. There were no significant changes in the Company's internal controls or in other factors that could significantly affect these controls subsequent to the date of their most recent evaluation.

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PART IV

ITEM 15. Exhibits, Financial Statement Schedules and Reports on Form 8-K

(a) Documents filed as part of Form 10-K

1. Financial Statements

The following documents have been included in Item 8 of this report:

Report of PricewaterhouseCoopers LLP, Independent Auditors

Balance Sheets as of December 31, 2002 and 2001.

Statements of Operations for each of the three years ended December 31, 2002, 2001 and 2000.

Statements of Changes in Stockholders' Equity (Deficit) for each of the three years ended December 31, 2002, 2001 and 2000.

Statements of Cash Flows for each of the three years ended December 31, 2002, 2001 and 2000.

Notes to Consolidated Financial Statements

2. Financial Statement Schedules

All financial statement schedules have been omitted since they are either not required or the information required is included in the financial statements or the notes thereto.

Table of Contents**3. Exhibit Listing**

Exhibit	Description
1.1(a)	Third Amended and Restated Certificate of Incorporation of the Registrant
1.2(a)	Amended and Restated By-Laws of the Registrant
4.1(a)	Specimen common stock certificate
4.2(a)	See Exhibits 3.1 and 3.2 for provisions of the Certificate of Incorporation and By-Laws of the Registrant defining the rights of holders of common stock of the Registrant
10.1(a)	1996 Stock Option Plan
10.2(a)	2000 Stock Incentive Plan
10.3(a)	2000 Employee Stock Purchase Plan
10.5(a)	Distribution Agreement, dated November 24, 1999, between the Registrant and Diamond Lite Limited
10.6(a)	Lease, dated as of May 27, 1997, between the Registrant and 50 Inwood Road Limited Partnership, as amended on January 29, 1998, March 1, 1999, and April 9, 1999 and December 4, 2000.
10.7(a)	Series C Preferred Stock Purchase Agreement, dated April 12, 2000, among the Registrant and certain stockholders
10.8(a)	Form of Series B Preferred Stock Purchase Warrant
10.9(a)	Common Stock Purchase Warrant, dated February 1998, issued to the Electric Power Research Institute
10.11(a)	Contract with the U.S. Department of Energy, dated May 21, 1998
10.12(a)	Form of Indemnification Agreement with directors and executive officers
10.13(b)	Lease, dated as of January 1, 2001, between the Registrant and the Connecticut Student Loan Foundation
10.14(b)	Purchase and Sale Agreement, dated as of March 8, 2001, between the Registrant and WE Wallingford Land, L.L.C
10.15(b)	Agreement, dated as of March 8, 2001, between the Registrant, Medway Associates Limited Partnership and Wallingford Land, L.L.C.
10.16(b)	Amendment dated December 4, 2000 to Lease, dated as of May 27, 1997, between Registrant and 50 Inwood Road Limited Partnership.
10.17(c)	Secured Promissory Note, dated October 4, 2001, between the Registrant and Walter W. Schroeder.
10.18(d)	Construction Loan Agreement dated as of December 7, 2001 between Technology Drive, LLC, a limited liability company, wholly owned by us of the Registrant, and Webster Bank.
10.19(d)	Construction Mortgage Note dated as of December 7, 2001 between Technology Drive, LLC, a limited liability company, wholly owned by us of the Registrant, and Webster Bank.
10.20(d)	Open-End Construction Mortgage Deed and Security Agreement dated as of December 7, 2001 between Technology Drive, LLC, a limited liability company, wholly owned by us of the Registrant, and Webster Bank.
10.21(d)	Guaranty Agreement dated as of December 7, 2001 between the Registrant and Webster Bank.
23.1	Consent of PricewaterhouseCoopers LLP
99.1	Certifications pursuant to 18 U.S.C. sec. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

(a): Incorporated herein by reference to the identically numbered exhibit of the Company's registration statement on Form S-1, SEC File No. 333-39748.

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- (b): Incorporated herein by reference to the identically numbered exhibit of the Company s Form 10-K for the fiscal year ended December 31, 2000, SEC File No. 000-31533.
- (c): Incorporated herein by reference to the identically numbered exhibit of the Company s Form 10-Q for the quarter ended September 30, 2001, SEC File No. 000-31533.
- (d): Incorporated herein by reference to the identically numbered exhibit of the Company s Form 10-K for the fiscal year ended December 31, 2001, SEC File No. 000-31533.

(b) Reports on Form 8-K

No reports on Form 8-K were filed by the Registrant during the quarter ended December 31, 2002.

Table of Contents**SIGNATURES**

In accordance with Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PROTON ENERGY
SYSTEMS, INC.

/s/ WALTER W.
SCHROEDER

**Walter W. Schroeder,
President**

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

<u>Signature</u>	<u>Capacity</u>	<u>Date</u>
/s/ WALTER W. SCHROEDER <hr/> Walter W. Schroeder	Chief Executive Officer, President and Director (Principal executive officer)	March 19, 2003
/s/ LARRY M. SWEET <hr/> Larry M. Sweet	Chief Operating Officer and Director	March 19, 2003
/s/ ROBERT W. SHAW, JR. <hr/> Robert W. Shaw, Jr.	Chairman of the Board	March 19, 2003
/s/ RICHARD AUBE <hr/> Richard Aube	Director	March 19, 2003
/s/ MICHAEL J. CUDAHY <hr/> Michael J. Cudahy	Director	March 19, 2003
/s/ GERALD B. OSTROSKI <hr/> Gerald B. Ostroski	Director	March 19, 2003
/s/ JAMES H. OZANNE <hr/> James H. Ozanne	Director	March 19, 2003

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/s/ PHILIP R. SHARP

Director

March 19, 2003

Philip R. Sharp

/s/ JOHN A. GLIDDEN

Vice President of Finance
(Principal financial and accounting officer)

March 19, 2003

John A. Glidden

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**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report on Form 10-K of Proton Energy Systems, Inc. (the Company) for the year ended December 31, 2002 as filed with the Securities and Exchange Commission on the date hereof (the Report), the undersigned, Walter W. Schroeder, President and Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 19, 2003

/s/ Walter W. Schroeder

Walter W. Schroeder

**President and Chief
Executive Officer**

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**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the annual report on Form 10-K of Proton Energy Systems, Inc. (the Company) for the year ended December 31, 2002 as filed with the Securities and Exchange Commission on the date hereof (the Report), the undersigned, John A. Glidden, Vice President of Finance of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 19, 2003

/s/ John A. Glidden

John A. Glidden

Vice President of Finance