# TRANSFORMING ENERGY™

2001 ANNUAL REPORT

PROTON®
ENERGY SYSTEMS

# TO OUR SHAREHOLDERS

There is real excitement at Proton—we are harnessing breakthrough technology to solve energy problems that affect us all. Fuel cell technology will revolutionize energy markets by significantly reducing pollution and increasing efficiency associated with producing electricity. Proton is a part of this fuel cell revolution, and is unique among fuel cell technology companies because significant parts of our business plan focus on products that address the needs of today's commercial markets. We have developed a unique mix of products, some of which are already in commercial duty and producing rapid growth in our revenue line. During 2001, Proton made solid progress on both the near term (high margin) and longer term (high growth) dimensions of our business plan.

Our Technology

**Proton Exchange Membrane, or PEM, Electrochemistry**

We are in the mainstream of an industry whose technology is gaining increased recognition for bringing forth a whole new era in energy productivity. PEM fuel cells are relatively low temperature, high density power generating devices that offer the promise of distributed, pollution-free power from hydrogen that, because of high efficiency, will significantly reduce our dependence on imported oil. Hydrogen is the most abundant element in the universe and Proton's technology is all about harvesting and harnessing hydrogen-based energy.

Our Approach

**Harnessing PEM Technology: Bringing Technology to Market**

Proton is uniquely positioned to participate in and benefit from the growing adoption of fuel cell technology. Our core competence is in PEM electrolysis, where we transform electricity and water into hydrogen fuel.

Using our expertise in PEM electrolysis, we target two families of PEM products:

1. products that generate hydrogen for use by others, including industrial customers today and users of fuel cell devices such as vehicles or portable power generators tomorrow.
2. revolutionary products that can make and store hydrogen fuel for subsequent regeneration, via fuel cells, into electricity. This family of applications lets us draw from both our own fuel cell development progress and more than 80 companies and research groups focusing on PEM fuel cell development worldwide.

Our Markets

**Four Value-Driven PEM Technology Applications**

We believe that Proton Energy Systems is the leader in the manufacture and practical application of PEM technology. Our two technology application families are aimed at serving four specific application targets:

*Hydrogen Generators*

> **Laboratory and industrial hydrogen markets**
Generators that can make hydrogen on-site at a customer's facility at far lower cost than from conventional truck or cylinder-based delivery.

> **Hydrogen fuel for fuel cell devices**
Our hydrogen generators are ideally suited to utilize existing water and electricity infrastructures to make hydrogen fuel at existing automobile service stations. We are working with Ford's TH!NK Group and with the California Fuel Cell Partnership on separate demonstrations of this breakthrough concept.

*Regenerative Fuel Cells*

> **Backup power for the Telecommunications and Datacom Marketplaces**
We developed and demonstrated two different prototype products incorporating our hydrogen generator coupled with third party fuel cells for these applications. One of these prototypes is being developed with the assistance of Marconi, a leader in the telecommunications power quality market.

> **Energy Storage for Renewable Power**
Proton has begun working with renewable power developers, utilities and other demonstration partners to test products that use the renewably generated electricity to make and store hydrogen. The stored hydrogen can then serve as fuel for fuel cells or an internal combustion engine to make power available "on demand," providing power when solar or wind power is not available.

WALTER W. (CHIP) SCHROEDER
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

**Financial Results**
Our 2001 financial results were consistent with our objective of transitioning from a development-stage company to a product-oriented enterprise. 2001 marked the beginning of solid commercial product revenue recognition, with revenue totaling nearly $2 million.

We were fortunate to have a substantial portion of our overhead expenses offset by interest income. We carefully managed our financial resources and ended the year with $167 million, or about $5 per fully diluted share, in cash and cash equivalents.

**Our People**
We more than doubled our headcount to approximately 115 people at year-end and continue to attract and retain outstanding personnel. We added strong players in all important areas of our business, including manufacturing, engineering, sales and finance. Our people, as of the date we finalized this report, are proudly listed on the back cover.

**Our Stock Performance**
Every employee owns shares or options in Proton. We all care about how our efforts translate into the value of our company. This has been a very disappointing year in terms of market value of our shares, but we remain confident that the market will recognize and reward us as we execute our business plan.

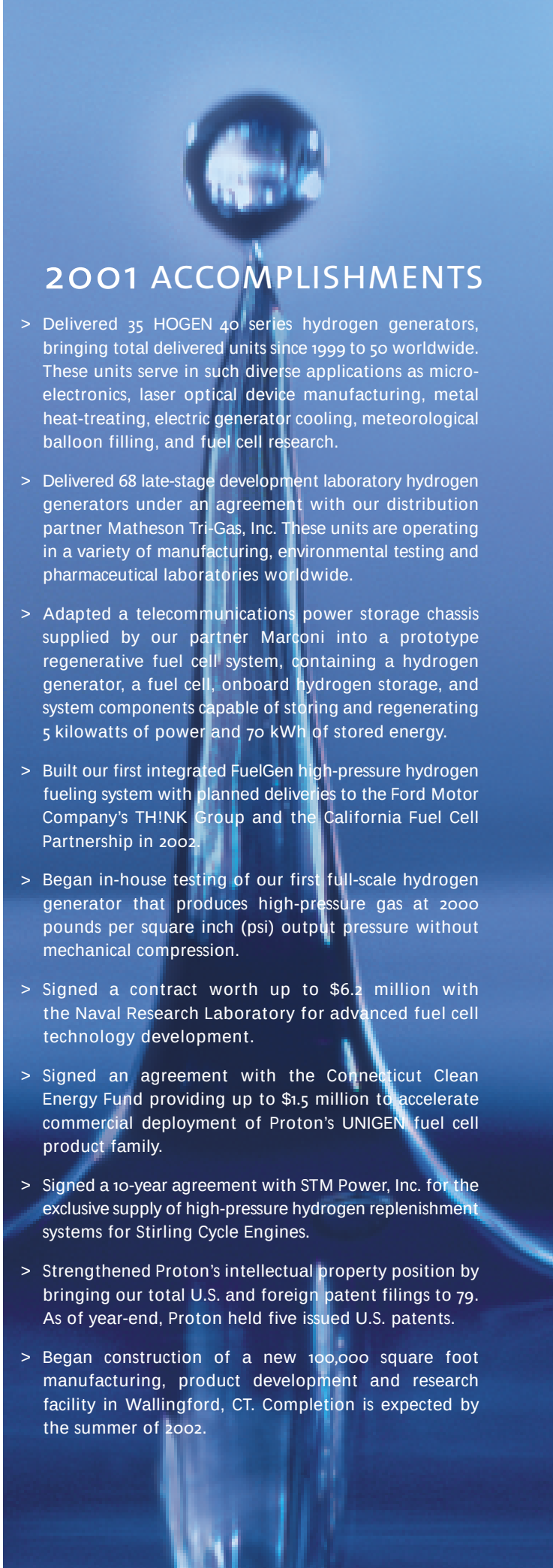
**Goals for the Year Ahead**
If we achieve the commercial and technological milestones established for 2002, we will create further value at Proton. On the commercial front, we plan to more than double commercial revenues from hydrogen generation products, targeting at least 200 Chrysalis™ laboratory products and 100 HOGEN® 40 series industrial hydrogen generator deliveries. Equally important, we plan to reduce the production cost of our HOGEN 40 series units, resulting in meaningful positive gross margin from these products by year-end.

With respect to technology advancement objectives, we intend to field test a UNIGEN® regenerative fuel cell prototype for power quality applications by year-end. Our FuelGen™ fueling systems are also scheduled to begin testing this year. Our electrolysis cell technology team is working to achieve higher internal pressure on our high-pressure HOGEN 40 cell module, making our generators more valuable and suitable for a wider array of energy applications.

**Summary**
We began 2001 with confidence in the fundamental merits of our business plan — targeting existing high margin markets and positioning for future high growth opportunities. We enter 2002 with even greater confidence in our plan and in our ability to build an exceptional company. Our confidence and excitement are based upon three important assets:

1. an outstanding group of talented and enthusiastic people
2. a body of intellectual property that protects our unique approach to harnessing PEM technology, and
3. our considerable cash on hand which we are carefully managing to fund our business plan to the point of financial self-sufficiency

As we look ahead, we will do our honest best to transform these assets into a company that delivers value to its owners and customers, and provides sustainable benefits to the world around us.



# 2001 ACCOMPLISHMENTS

> Delivered 35 HOGEN 40 series hydrogen generators, bringing total delivered units since 1999 to 50 worldwide. These units serve in such diverse applications as micro-electronics, laser optical device manufacturing, metal heat-treating, electric generator cooling, meteorological balloon filling, and fuel cell research.

> Delivered 68 late-stage development laboratory hydrogen generators under an agreement with our distribution partner Matheson Tri-Gas, Inc. These units are operating in a variety of manufacturing, environmental testing and pharmaceutical laboratories worldwide.

> Adapted a telecommunications power storage chassis supplied by our partner Marconi into a prototype regenerative fuel cell system, containing a hydrogen generator, a fuel cell, onboard hydrogen storage, and system components capable of storing and regenerating 5 kilowatts of power and 70 kWh of stored energy.

> Built our first integrated FuelGen high-pressure hydrogen fueling system with planned deliveries to the Ford Motor Company's TH!NK Group and the California Fuel Cell Partnership in 2002.

> Began in-house testing of our first full-scale hydrogen generator that produces high-pressure gas at 2000 pounds per square inch (psi) output pressure without mechanical compression.

> Signed a contract worth up to $6.2 million with the Naval Research Laboratory for advanced fuel cell technology development.

> Signed an agreement with the Connecticut Clean Energy Fund providing up to $1.5 million to accelerate commercial deployment of Proton's UNIGEN fuel cell product family.

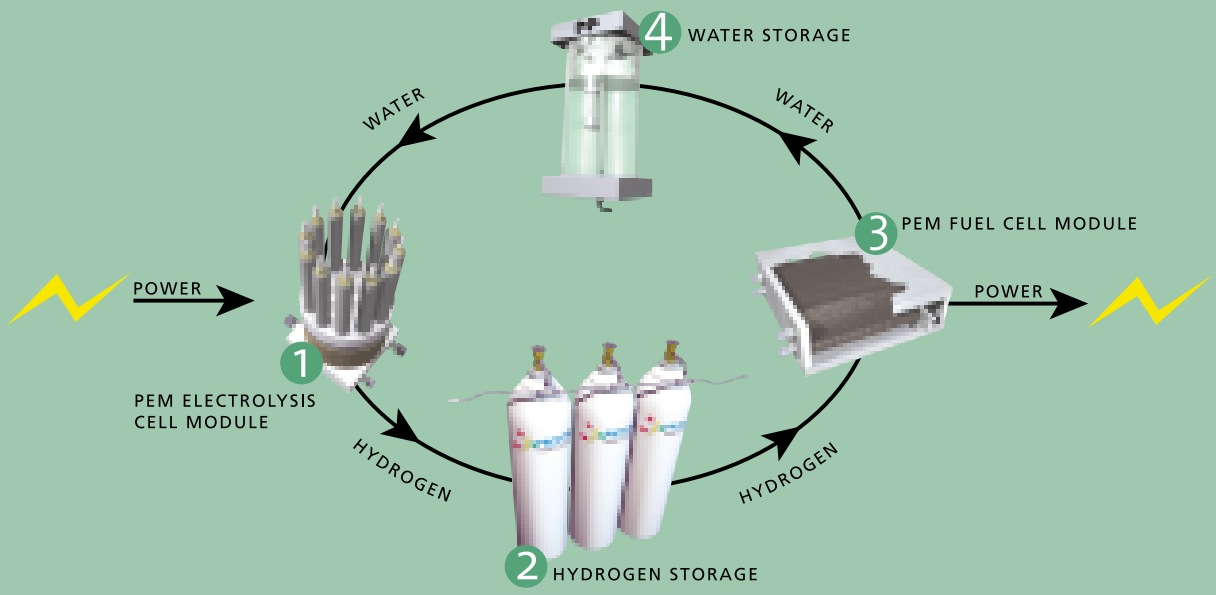
> Signed a 10-year agreement with STM Power, Inc. for the exclusive supply of high-pressure hydrogen replenishment systems for Stirling Cycle Engines.

> Strengthened Proton's intellectual property position by bringing our total U.S. and foreign patent filings to 79. As of year-end, Proton held five issued U.S. patents.

> Began construction of a new 100,000 square foot manufacturing, product development and research facility in Wallingford, CT. Completion is expected by the summer of 2002.

# CORE TECHNOLOGIES

## PEM REGENERATIVE FUEL CELL




A Proton Exchange Membrane (PEM) begins as a solid sheet of plastic. We incorporate this sheet into a single electrochemical cell structure that gives mechanical support, conducts electricity, and provides a means to introduce or remove water and gas. This structure is repeated and "stacked" to form a PEM cell module. A PEM cell module can function as either a hydrogen generator to produce hydrogen gas (water electrolysis) or as a fuel cell to produce electricity.


JUDITH MANCO
CHEMICAL ENGINEER

DR. FRANO BARBIR
CHIEF SCIENTIST AND
DIRECTOR OF FUEL CELL TECHNOLOGY

GREG HANLON
SENIOR DESIGN ENGINEER


**PEM Water Electrolysis: Hydrogen Production**
Since its invention in the 1950s, PEM water electrolysis has been relegated to military and laboratory hydrogen generation. For over 40 years, there was little vision or leadership in harnessing the potential of PEM technology for broad commercial purposes until Proton Energy Systems was founded in 1996.

PEM water electrolysis is a process in which water is divided into its component elements to produce pure hydrogen gas with heat and oxygen as the only byproducts. (1) Water is introduced into the PEM water electrolysis cell module and meets an applied electrical current. The hydrogen protons are drawn through the proton exchange membrane and recombined with electrons on the opposite side of the membrane to form pure hydrogen gas for use or storage. (2)

The transformation of electricity and water using our PEM water electrolysis produces hydrogen, which can be used as an industrial reactant and/or energy carrier. These hydrogen generators offer compactness and scalability and can produce pure hydrogen at high pressures without the need for mechanical compression or use of any caustic chemicals.

**Regenerative Fuel Cells: Energy from Hydrogen**
A fuel cell is a power generator that combines hydrogen fuel and the oxygen in air to produce electricity instantaneously and efficiently without any harmful byproducts. It is similar to an engine, but without any moving parts.

(3) To produce electricity on demand, a PEM fuel cell module utilizes stored hydrogen, created from PEM water electrolysis, and recombines it with oxygen to make electricity. Proton uses both its own proprietary fuel cell as well as fuel cells from other developers. This system may use two discrete PEM cell modules—one a PEM water electrolysis cell module, the other a fuel cell module, as illustrated above, or a single, reversible PEM cell module that alternates between electrolysis and fuel cell duty.

(4) The water produced during the fuel cell process is recycled within the system and stored in the water reservoir, to be utilized as needed by the PEM electrolysis cell module. Think of a regenerative fuel cell as a "water battery."

# TECHNOLOGY TO MARKET

## PROTON CONTINUES TO CONCENTRATE ON ENGINEERING, COMMERCIALIZING, AND MANUFACTURING INNOVATIVE PEM TECHNOLOGY PRODUCTS.

Our PEM technology has tremendous versatility and is applicable in numerous industrial and energy-related areas. While focusing on PEM products for today's high value markets, we are simultaneously demonstrating the performance of our PEM technology for use in emerging, high growth markets, such as fuel cell vehicle fueling and renewable energy storage.

Our commitment to developing this technology into commercial products is manifested in the Product Development Process (PDP) that we began implementing in 2001. This systematic process for selecting technology applications and product directions is based on customer needs and commercial viability. We plan to continue its deployment in 2002 and beyond.

We are currently applying our PEM technology to the manufacture of commercial products for today's industrial hydrogen markets. We specifically target industrial hydrogen markets because the value of hydrogen in today's economy is greater as a chemical than as a fuel. Through the manufacturing of these initial hydrogen generators, we developed significant, long-term skills essential for a successful manufacturing business. Further, in 2001, we achieved ISO 9001 status, which is an important indication of our commitment to quality. Our products meet international safety standards and carry a valued commercial warranty. It is our goal to manufacture cost-effective, environmentally sound, and reliable products for our customers.

Proton intends to maximize our sales by leveraging established marketing distribution and service channels, including industrial gas suppliers, major energy companies, automotive manufacturers, and providers of renewable technologies. We plan to provide safe, efficient and profitable products to these partners to enter into current and developing markets.

We have learned a great deal through the initial development and production stages of our PEM hydrogen generators. We continue to gain valuable insights through our ongoing development and manufacturing work. Proton believes that this invaluable knowledge will give us the ability to further bring PEM technology products to market and sustain a "first mover" commercial advantage.

High-Pressure Electrolysis Cell Module for STM Power, Inc.

Allan Tomasco
Director of Commercial Products

Frank Moran
Manager, Strategic Planning

### APPLICATIONS

Manufacturing of semiconductors

Cooling electric power plants

Heat treating of fabricated metal parts

High purity crystal growing and specialty coatings

Scientific and electrochemistry applications

Fuel for advanced fuel cell systems

Remote site meteorological weather balloons

HOGEN® 40 Hydrogen Generator

# INDUSTRIAL GAS

Proton's hydrogen generators are serving high value applications in today's industrial gas markets. Our products consist of three series of hydrogen generators that serve three tiers of the industrial hydrogen-using community. Our hydrogen generators utilize Proton's core PEM electrolysis technology to provide unique capabilities for serving existing high value markets. We believe these first products already make Proton a leader in PEM commercialization as measured by revenues.

Our smallest series systems are our laboratory hydrogen generators, which produce small amounts of ultra-high purity hydrogen primarily for analytical testing purposes. These bench top systems are marketed exclusively through Matheson Tri-Gas, a world leader in scientific gas supply systems. Our next series is the HOGEN® 40, which chiefly serves small industrial uses, currently served by gas cylinders. The HOGEN 380 series serves larger volume, industrial gas applications currently serviced by tube trailer hydrogen. The HOGEN 40 product makes up to 40 standard cubic feet of hydrogen per hour; the HOGEN 380 makes up to 380 standard cubic feet of hydrogen per hour. In 2001, we manufactured and delivered both laboratory hydrogen generators and HOGEN 40 systems to our customers. Commercial shipment of our HOGEN 380 systems is planned for 2003.

Proton's hydrogen generators produce high purity hydrogen at process pressure, without the need for mechanical compression, on demand at customer locations. By eliminating hydrogen delivery and storage, our hydrogen generators: reduce hydrogen costs for users; improve efficiencies for industrial gas suppliers; and improve safety for users, suppliers and the communities in which they operate.

Our hydrogen generators currently provide hydrogen at 150 psi or greater, a pressure sufficient for most industrial processes. In 2001, Proton demonstrated industrial scale systems that produce hydrogen at 2000 psi and above using the same reliable electrochemical process as our current commercialized systems. The capability of Proton's PEM electrolysis equipment to produce pressurized hydrogen simplifies storage by eliminating mechanical compression. We expect to introduce advanced high-pressure equipment to the industrial hydrogen and hydrogen fueling markets in the next several years and to provide optimized energy storage in our regenerative fuel cell systems.

Jose Alicea
Lead Test Assembler

Kristen Champion
Director of Manufacturing

Kimberly Lyttle
Manufacturing Engineer

Chrysalis™ Assembly Line

FuelGen™ Hydrogen Fueling System prototype

APPLICATIONS

Corporate fleets

Municipal bus fleets

Taxi fleets

Personal automobiles

# HYDROGEN FUELING

Automakers are developing fuel cell-powered vehicles to reduce both pollution and dependence on foreign oil. Their efforts are being paralleled by the work of fuel providers to create a hydrogen fuel infrastructure to fuel these vehicles. Significant penetration of hydrogen fuel cell automobiles into the mainstream may take many years, yet there is an immediate need to answer the following question: "What comes first—the fuel cell vehicle or the hydrogen fueling infrastructure?"

Compared to today's internal combustion engine (ICE) automobiles, fuel cell vehicles promise to operate pollution-free and deliver approximately twice the operating range per BTU of fuel. There is a growing consensus among the auto industry to select pure, pressurized hydrogen gas as the fuel to be carried on board fuel cell vehicles. The adoption of hydrogen fuel creates an immediate and continuing need for equipment capable of fueling fuel cell vehicles with high-pressure pure hydrogen.

Proton's FuelGen™ Hydrogen Fueling System utilizes our proven PEM electrolysis technology to provide the pure, pressurized hydrogen fuel essential for the transition to the hydrogen fuel cell vehicle fleet. Our FuelGen fueling system positions Proton to play a central role in the realization of a commercial hydrogen-fueling infrastructure and may ultimately answer the question of where the fuel for fuel cell vehicles will come from.

Proton's unique *Hydrogen by Wire*™ approach to manufacturing hydrogen wherever it is needed takes advantage of the existing water and electric infrastructures already serving automobile service stations. Our on-site technology eliminates the cost and risk of distributing hydrogen by truck or pipeline. Proton plans to work cooperatively with automakers and fuel suppliers to achieve a commercially sensible introduction of hydrogen fuel to the marketplace.

In 2001, Proton moved from theoretical equipment design to building a prototype FuelGen system for field-testing. In 2002, two prototypes are expected to be put into operation, one at Ford Motor Company's TH!NK Division, the other at the California Fuel Cell Partnership. Currently, two HOGEN hydrogen generators are being used in fueling demonstration programs in Arizona and Germany.


Ford TH!NK vehicle

Jason Shiepe
Program Engineering Manager, Hydrogen Fueling

Amjad Khan
Chemical Engineer

APPLICATIONS

Digital wireless voice and data
Wired telecommunications
Paging
Cable TV
Wired data communications


5 kW UNIGEN® Backup Power System

# BACKUP POWER

The world is undergoing a digital revolution. Data processing and digital communication systems require constant, high quality power to operate reliably. The cost of power failures and even minor disruptions can have significant economic impact. The expectation for increasing levels of service and reliability have outstripped the capabilities of our utility grid—both in terms of reliability and quality of power. In order to meet these requirements and achieve "high nines" (99.9999%) reliability, many communication providers are looking for better backup power systems.

The telecommunications infrastructure is central to the continued success of our economy. The telecommunications industry currently incorporates battery backup power systems in an attempt to ensure the reliability customers demand and our economy requires. While batteries usually meet the need for reliability, batteries also present problems for distributed applications, especially in harsh environments. Batteries are maintenance intensive, temperature sensitive, difficult to monitor remotely and provide a relatively short- term response to power interruptions.

Because of market size and importance, the initial focus for our UNIGEN® Regenerative Fuel Cell (RFC) technology is backup power for telecommunications systems. The needs of the telecommunications market are a perfect match to the characteristic and capabilities of our UNIGEN RFC systems: higher energy density, lower maintenance, minimal environmental impact, ability to operate unaffected by climate/temperature extremes, rapid load response, and long-term ride-through capability.

In 2001, Proton focused on refining our UNIGEN RFC systems and exploring critical industry partnerships to accelerate our commercial path forward into the telecommunications sector. Marconi PLC, a world leader in providing telecommunications infrastructure equipment, is one of our key development partners for our UNIGEN RFC backup power technology. Marconi's experience and position within the telecommunications sector will be of significant value in product design as well as sales, distribution and service. Proton also signed a Joint Development Agreement with Sumitomo Corporation. One of Japan's largest commercial enterprises, Sumitomo provides Proton with access to an important market—one that recognizes the value of using the most advanced technologies.

Mark Lillis
Program Engineering Manager, Backup Power

Iris Shiroma
Chemical Engineer

Spyros Nomikos
Systems Engineer


1kW UNIGEN® Backup Power System

We are confident that there is enormous potential for UNIGEN technology to exceed the performance and reliability of batteries. While the telecommunications market is our initial focus, the advances made in this product line will enable Proton to access the rapidly expanding renewable energy market with products to provide assured, dispatachable power.



APPLICATIONS

Remote electrification

Developing nation electrification

Off-grid power stations

Distributed energy storage

# RENEWABLE ENERGY

Due to their abundance, solar and wind power are attractive sustainable energy resources. Their primary drawback is that they are not always available when the demand for energy is greatest. The commercial value of renewables could therefore be enhanced by a cost-effective technology that makes it possible to store the electricity produced during the times of abundant sun or wind and make it available on demand.

Demand for off-grid energy is growing, paced by remote telecommunications infrastructure needs as well as the rural electrification programs of developing nations. Improved electrical energy storage products that enable large amounts of energy to be stored cleanly, simply and efficiently can have a profound impact on the delivery of energy in those markets—according to the World Bank, one-third of the world's population, 2 billion people, lives without electricity.

Proton's UNIGEN RFC systems will couple directly with renewable energy sources to provide a means to make such energy applications reliable. UNIGEN RFC systems may be appropriate in remote locations and other areas where today's battery and diesel generator technologies are unattractive. Batteries have a limited duration and require intensive maintenance, while diesel engines require fuel delivery, making the cost of remote operations prohibitive. These renewable applications represent an extension of the UNIGEN RFC energy storage technology beyond backup power duty. Backup power systems provide power for only a few hours per year, while renewable energy storage systems cycle power to meet the daily needs of users served by intermittent solar or wind.

Proton is gaining momentum in this market. Proton has orders today for HOGEN 40 hydrogen generators that utilize solar and wind energy to produce hydrogen. We are also exploring the use of hydrogen as an internal combustion engine (ICE) fuel. Coupled with a renewable energy source that is connected to a PEM hydrogen generator, a hydrogen powered ICE literally becomes a regenerative system. We believe the near-term market applicability of hydrogen as an internal combustion engine fuel and the on-demand capability of our PEM hydrogen generator technology will provide us with a first mover position in the renewable energy market.

Proton's 2002 business plan calls for several demonstrations of renewable-capable HOGEN hydrogen generators connected with photovoltaic or wind systems for electrical power production. Fuel cells and internal combustion engines will use the stored hydrogen for conversion back to electricity. These demonstrations will pave the way for further renewable applications for UNIGEN RFC systems.

OSCAR CHOW
PRINCIPAL ENGINEER

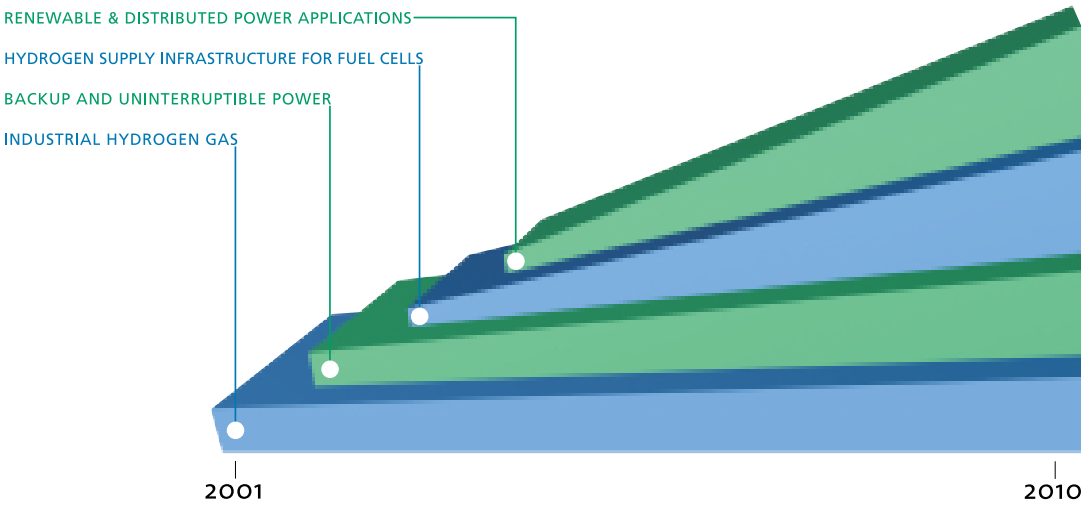
JOHN SPERANZA
PROGRAM ENGINEERING MANAGER,
RENEWABLE ENERGY

# TRANSFORMING ENERGY

AS PROTON EXPLORES APPLICATIONS FOR PEM TECHNOLOGY, WE WILL DEVELOP THE COMMERCIAL POTENTIAL OF THE MOST PROMISING OF THESE MARKETS, CREATING SHAREHOLDER VALUE.

Proton has made important technical and commercial strides since our founding in 1996, including the success of our hydrogen generators in the industrial gas market. However, this is only the first step in our business plan. Our next steps will take us beyond industrial gas applications into far larger energy markets. We plan to build upon our technical and commercial foundations to serve other potential high growth markets. Ultimately, our vision is to harness PEM technology and create products that transform energy distribution and markets, moving them toward distributed and renewable resources. Our success will yield greater control over the way energy is produced and used, freeing us from our overdependence on imported oil.

## MARKET OPPORTUNITIES




JASMIN PARIS
CUSTOMER SERVICE REPRESENTATIVE, INSIDE SALES

DR. THOMAS MALONEY
MANAGER, NEW BUSINESS & PROGRAMS

# 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, 2001**

**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)**

| **Delaware** | **06-1461988** |
|---|---|
| **(State or Other Jurisdiction of Incorporation or Organization)** | **(I.R.S. Employer Identification No.)** |

**50 INWOOD ROAD, ROCKY HILL, CT 06067**
**(Address of principal executive offices)**

**Registrant's telephone number, including area code (860) 571-6533**

**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. ☒

The aggregate market value of the voting stock held by non-affiliates of the Registrant on March 21, 2002 was approximately $175,110,000 based on the price of the last reported sale as reported by The Nasdaq Stock Market on March 21, 2002. The number of shares outstanding of the Registrant's Common Stock on March 21, 2002, was 33,259,567.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's definitive proxy statement in connection with the annual meeting of the stockholders to be held on June 5, 2002 are incorporated by reference in Part III hereof.

# Proton Energy Systems, Inc.

## INDEX

*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 "would" and other forms 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 2002.*

PROTON®, HOGEN®, UNIGEN®, FUELGEN™ are trademarks or registered trademarks of Proton Energy Systems, Inc. Chrysalis™ is a trademark of Matheson Tri-Gas, Inc. Other trademarks or service marks appearing in this report are the property of their respective holders.

## ITEM 1. *Description of Business*

### 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 on-site hydrogen gas generation in a variety of manufacturing and laboratory applications which we believe will provide a lower-cost, safer and more convenient alternative 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, as well as the increased use of sensitive electronics in manufacturing, 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.

We believe we are among the first companies to manufacture and deliver systems incorporating PEM technology for use in commercial applications. We delivered 35 of our HOGEN 40 style hydrogen generation units in 2001 to domestic and international customers for use in industrial applications. Our plan for 2002 is to expand production of HOGEN 40 units and deliver additional units to domestic and international customers seeking alternatives to conventionally delivered hydrogen.

In other commercial applications, we delivered 68 Chrysalis hydrogen generator units in 2001 under an exclusive agreement with Matheson Tri-Gas, Inc., a leading supplier of laboratory gas, for use in laboratory applications. The goal for 2002 is to expand our manufacturing capacity and deliver additional units to Matheson under our agreement.

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. 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 are to begin field testing of FUELGEN development units in the second half of 2002.

We also intend to develop commercial applications for our UNIGEN regenerative fuel cell technology. We built regenerative fuel cell systems in 2001 for both NASA and Marconi Inc. ("Marconi"), as well as for internal research and product development programs.Our goal for 2002 is to manufacture multiple demonstration regenerative fuel cell systems, and deliver them to domestic and international customers for evaluation. These systems are being designed to have the scale and technical attributes necessary to serve a broad range of commercial applications.

The development and commercialization of our hydrogen generators and regenerative fuel cell systems has been and we anticipate will continue to be supported by government and private development contracts. In October 2001, we signed our largest contract to date worth up to $6.2 million with the Naval Research Laboratory for advanced fuel cell technology development. Phase I of this contract, worth $3.2 million, will provide initial technology development, and has begun. The contract also includes a $3.0 million Phase II option under which Proton could provide prototype fabrication and testing. We also 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, which include backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage. We also have ongoing development contracts in 2002 with the Connecticut Clean Energy Fund, the Department of Energy and STM Power Inc.

We plan to move our Company to a newly constructed 100,000 square foot facility in Wallingford, CT during 2002 to accommodate the projected growth of our business over the next several years. The building will consolidate all of our corporate headquarters, manufacturing, research and product development activities.

## 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. Users can connect many of 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 35 commercial models of our HOGEN 40 style hydrogen generators with 20 and 40 cubic feet per hour hydrogen production capacities, and delivered a 380 cubic foot per hour capacity unit 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 products in 2002. We also intend to deliver additional HOGEN 380 units for demonstration in 2002. We anticipate expanding our family of hydrogen generation products into different output capacities to better serve customer and application requirements.

We have manufactured commercial hydrogen generators, marketed by Matheson Tri-Gas, Inc. under the Chrysalis brand name, under a long-term agreement for use in laboratory applications. These units are compact and designed to sit on a laboratory countertop. We intend to increase production and product shipments of these generators to Matheson in 2002.

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 between 150-200 psi. We have completed the construction and commenced in-house testing of a full-scale 2000 psi, 20 standard cubic foot per hour prototype hydrogen gas generator. This multi-cell system generates hydrogen pressure without a mechanical compressor using solid-state compression within the electrochemical cell stack. Our proprietary cell stack design has undergone continuous laboratory development since mid-1999. Proton believes its high-pressure technology will be important in a variety of applications and will continue its development in 2002.

We have 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 working pressure of greater than 2000 psi. Under an initial purchase order relating to this agreement, Proton has begun product development work on a high-pressure hydrogen replenishment system. We expect delivery of prototype units in 2002.

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. Proton's FuelGen units are 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 begin demonstration unit testing in the spring of 2002. Units are expected to be delivered to the TH!NK Group, an enterprise of Ford Motor Company, and to the California Fuel Cell Partnership later this year.

***Regenerative Fuel Cell Systems***

The UNIGEN regenerative fuel cell systems we are developing will integrate PEM hydrogen generation technology with PEM fuel cell technology to create a power generation 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 exactly like a hydrogen generator, producing hydrogen at pressures suitable for storage without compressors. In the power generation or fuel cell mode, the process is reversed and the stored hydrogen is combined with air to produce electricity instantaneously, 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.

We have entered into a Joint Development Program with Marconi Communication to further develop our regenerative fuel cell technology. Under a Memorandum of Understanding, Proton and Marconi are jointly developing concepts, designs and products incorporating Proton's technology for potential application in Marconi's product lines.

We also 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, which include backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage.

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 development for use in advanced space propulsion and energy systems. The Connecticut Clean Energy Fund program's purpose is to help accelerate the commercialization of UNIGEN regenerative fuel cell products for application in power quality markets.

**Our Strategy**

Our objective is to be a leader in harnessing PEM 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 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 as well as improving 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 products in the near term for two primary markets: hydrogen generation for industrial applications and backup power for communications network-related 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 and safety advantages to users that currently rely on conventionally delivered hydrogen. We believe the backup power market for the communications industry is also attractive given its large size and the advantages our regenerative fuel cell systems are being designed to offer over existing products. Our focus on near-term market opportunities will continue to reinforce our emphasis on the commercial application of PEM technology.

*Continue Focus on Cost Reduction*

Given our focus on commercial applications for PEM technology, manufacturing improvements are a critical element of our product development and design efforts. We intend to continue to focus on reducing the cost of manufacturing our products. We will seek to reduce costs in part 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 and the construction of a larger-scale manufacturing facility that will use higher volume, lean manufacturing processes and techniques.

*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 various stages of 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 fuel cell-related technology.

We have entered into a Joint Development Program with Marconi, a global provider of advanced communications solutions. Under a Memorandum of Understanding, Proton and Marconi have been jointly

developing concepts, designs and products incorporating Proton's UNIGEN® regenerative fuel cell technology for potential application to Marconi's product lines.

We also 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, which include backup power, hydrogen generation, load leveling/peak shaving, and renewable energy storage.

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 2002. 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.

*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.

**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 flowfield 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 designs operate 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. Unlike one-way fuel cells, 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.

Our regenerative fuel cell systems can be configured using one or two PEM stacks. The one stack approach uses one of our proprietary designs, 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 systems are 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 developing our own proprietary fuel cell stack, which we intend to incorporate into these systems. We are also testing fuel cell stacks from other fuel cell developers for potential incorporation into our regenerative systems.

**Research and Development**

A portion of our research and development has been funded by programs funded by government contracts, and is classified as research and development expense in our financial statements. For the years ended December 31, 2001, total research and development expenses, including amounts received from NRL, Connecticut Clean Energy Fund, DOE, NASA, other government agencies and private entities, and amounts that have been self-funded, was $6.5 million. We expect to receive funding in 2002 under our contracts from NRL, the Connecticut Clean Energy Fund, DOE, and STM Power Inc.

**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; and
- integrated system designs for both hydrogen generators and regenerative fuel cell systems.

**Distribution and Marketing**

We plan to sell our hydrogen generators primarily through distribution arrangements with third parties and also through a limited direct sales force. Because small and medium-volume hydrogen users generally buy hydrogen from industrial gas suppliers and distributors, we intend to focus our marketing efforts on sales to these companies for resale to end-users. 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 currently have a development, marketing and distribution agreement with Matheson Tri-Gas, Inc. under which Matheson has exclusive distribution rights for hydrogen generators for the laboratory market bearing Matheson's Chrysalis trademark or other designated commercial names. In addition, we have distribution

agreements with Diamond Lite S.A., Products of Technology LTD, and Fig Tree Marketing, for distribution of our hydrogen generators in western and central Europe, UK, Ireland and 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.

As the market to supply hydrogen fuel for fuel cell vehicles develops, we also plan, where possible, to focus on existing distribution channels. We believe that existing energy suppliers are likely to begin supplying new forms of automotive fuel as they come to market. Accordingly, we intend to establish relationships with major oil 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 fuel cell vehicles 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. We plan to sell our backup power products to these existing manufacturers, integrators and qualified resellers.

In 2001, sales to each of Air Liquide America Corp., Diamond Lite SA, Praxair Distribution, and The Bernd Group, Inc. accounted for more than 10% of our product revenue.

**Manufacturing**

We are currently manufacturing hydrogen generators at our facility in Rocky Hill, Connecticut. Key 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 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. We anticipate moving all our manufacturing capacity in 2002 to our new larger facility where we will continue to integrate and assemble our products.

In 2001, 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 five issued U.S. patents and one European patent, covering aspects of our hydrogen generation equipment and electrolysis cell designs. One U.S. patent covers a system that isolates the electrical components from the hydrogen gas, eliminating the need for explosion-proof equipment. We have over 75 U.S. and international patents pending, covering not only our current electrolysis products, but 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 assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

**Competition**

Our hydrogen generators will compete with delivered hydrogen, and with alternative equipment used to manufacture hydrogen-rich gas. Competitors in the delivered hydrogen market include 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.

In backup power applications, our products may compete against:

- battery-based, uninterruptible power supply systems, which are widely manufactured and used around the world;
- ultracapacitors, which store energy as an electrostatic charge;
- internal combustion engine generator sets;
- microturbines;
- superconducting energy storage systems, which store energy within a superconducting magnet kept at extremely low temperatures;
- flywheels, which store energy in the form of a continuously spinning wheel, the kinetic energy of which can be converted into electrical energy; and
- other fuel cells using alternative hydrogen supply applications.

There are a number of companies located in the United States, Canada and abroad that are developing PEM fuel cell technology. 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.

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, 2001, we had a total staff of approximately 115 employees, of which approximately 65 were engineers, scientists, and other degreed professionals. We consider our relations with our employees to be excellent.

**ITEM 2.** ***Properties***

Our principal executive offices are located in Rocky Hill, Connecticut. We currently lease two facilities totaling approximately 28,000 square feet that house all of our research, product development, manufacturing and office activities and staff.

In 2001, we purchased approximately 44 acres of land located in Wallingford, Connecticut 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 bank, 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. The loan agreement is structured as a one-year construction loan with monthly payments of interest only until December 2002 at which time the loan converts to a seven-year term note.

Our new facility will total approximately 100,000 square feet and contain all of our research, product development, manufacturing and office activities.We expect to relocate our operations in mid-2002.

**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.

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.

**ITEM 4.** ***Submission of Matters to a Vote of Security Holders***

Not applicable.

**Executive Officers and Directors**

Our executive officers and directors, and their ages as of December 31, 2001, are as follows:

| Name | Age | Title |
|---|---|---|
| Walter W. Schroeder | 53 | President, chief executive officer and director |
| Robert J. Friedland | 36 | Senior vice president of products and manufacturing |
| Trent M. Molter | 39 | Senior vice president of technology and new business and director |
| Lawrence C. Moulthrop, Jr. | 45 | Vice president of product development |
| William F. Smith | 50 | Vice president of programs and new business |
| David E. Wolff | 44 | Vice president of sales and marketing |
| John A. Glidden | 38 | Vice president of finance |
| Robert W. Shaw, Jr. | 60 | Chairman of the board of directors |
| Richard A. Aube | 33 | Director |
| Gerald B. Ostroski | 60 | Director |
| Philip R. Sharp | 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.

***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

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 Rennselaer 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 since 1997. 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 Rennselaer Polytechnic Institute.

***Lawrence C. Moulthrop, Jr***., one of our founders, has served as our vice president of product development since our founding in August 1996. From 1994 to August 1996, Mr. Moulthrop served as the PEM technology engineering manager for United Technologies. From 1984 to 1994, Mr. Moulthrop served in various other PEM engineering positions for United Technologies. Mr. Moulthrop holds a BS in chemical engineering from the University of New Hampshire.

***William F. Smith***, one of our founders, has served as our vice president of programs and new business since September 2001. From our founding in August 1996 through September 2001, Mr. Smith served as our vice president of business development. From 1986 to August 1996, Mr. Smith served as a business development program manager for United Technologies. Mr. Smith holds a BA in physics from the University of Connecticut and an MBA from the University of Massachusetts.

***David E. Wolff*** has served as our vice president of sales and marketing since March 1999. From 1992 to March 1999, Mr. Wolff served in various capacities for MG Industries, a subsidiary of the Messer Group, a supplier of industrial gas. From 1979 to 1992 Mr. Wolff served in various sales positions for Air Products and Chemicals. Mr. Wolff holds an AB in engineering science from Dartmouth College.

***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 general partner of The Beacon Group Energy Funds, a private investment firm and affiliate of J.P. Morgan Partners.Prior to that time, Mr. Aube was an investment banker in the natural resources group at Morgan Stanley & Co. Incorporated. Mr. Aube holds a BA from Dartmouth College. He serves as a director of Capstone Turbine Corporation, a public company which makes microturbine generation systems, and of STM Power Inc. and Powercell Corporation, each a private power technology company.

***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. Since 1991, Mr. Ostroski has also served as president of Minnesota Power's Synertec subsidiary and currently serves as a director or officer of several other Minnesota Power subsidiaries. Mr. Ostroski is a registered professional engineer, licensed in Minnesota and North Dakota. 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.

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 since our initial public offering is shown below:

**Proton Energy Systems**

**Support for Item 5—Market for Registrant's Common Stock**

| Year and Quarter | High | Low |
|---|---|---|
| **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 |
| **2000** | | |
| Fourth Quarter (from October 2, 2000) | $33.25 | $5.25 |

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. Accordingly, we do not anticipate that any cash dividends will be declared or paid on our common stock in the foreseeable future.

As of March 20, 2002 there were approximately 14,100 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 planned manufacturing facility, and the possible acquisition of businesses, products or technologies that are complementary to our business. As of December 31, 2001, approximately $11.4 million of the net proceeds of 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. 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, | | | | |
|---|---|---|---|---|---|
| | 2001 | 2000 | 1999 | 1998 | 1997 |
| | (in thousands, except per share data) | | | | |
| **Statement of Operations Data:** | | | | | |
| Revenue: | | | | | |
| Contract revenue | $ 1,215 | $ 644 | $ 934 | $ — | $ — |
| Product revenue | 1,753 | 56 | — | — | — |
| Total revenue | 2,968 | 700 | 934 | — | — |
| Costs and expenses: | | | | | |
| Costs of contract revenue | 1,001 | 396 | 355 | 377 | — |
| Costs of production | 2,534 | 248 | 154 | — | — |
| Research and development | 6,500 | 3,227 | 2,182 | 1,323 | 963 |
| General and administrative | 6,950 | 4,518 | 1,705 | 950 | 735 |
| | 16,985 | 8,389 | 4,396 | 2,650 | 1,698 |
| Loss from operations | (14,017) | (7,689) | (3,462) | (2,650) | (1,698) |
| Interest income (expense), net | 8,950 | 4,199 | 172 | (31) | 28 |
| Gain on sale of marketable securities | 113 | — | — | — | — |
| Net loss | (4,954) | (3,490) | (3,290) | (2,681) | (1,670) |
| Deemed preferred dividends and accretion | — | (52,691) | (899) | (441) | (160) |
| Net loss attributable to common stockholders | (4,954) | (56,181) | (4,189) | (3,122) | (1,830) |
| Basic and diluted net loss per share attributable to common stockholders | $ (0.15) | $ (5.92) | $ (2.20) | $ (1.64) | $ (0.96) |
| Shares used in computing basic and diluted net loss per share attributable to common stockholders | 33,161 | 9,484 | 1,900 | 1,900 | 1,900 |
| **Balance Sheet Data:** | | | | | |
| Cash, cash equivalents and marketable securities | $167,220 | $174,749 | $ 3,131 | $ 3,228 | $ 2,990 |
| Working capital | 169,253 | 176,856 | 3,225 | 3,274 | 2,925 |
| Total assets | 181,868 | 180,752 | 5,000 | 4,870 | 3,664 |
| Current liabilities | 4,675 | 2,445 | 921 | 792 | 129 |
| Long-term liabilities | 1,166 | — | — | — | — |
| Mandatorily redeemable convertible preferred stock | — | — | 13,136 | 9,237 | 5,571 |
| Total stockholders' equity (deficit) | 176,027 | 178,307 | (9,057) | (5,159) | (2,036) |

**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.

The following significant events occurred in 2001:

- We signed an agreement with Ford's TH!NK Group for a joint test and evaluation program of Proton's FUELGEN high-pressure hydrogen refueling system.
- We signed an agreement with the Connecticut Clean Energy Fund providing $1.5 million to accelerate commercial deployment of our UNIGEN® fuel cell product family
- We signed a contract worth up to $6.2 million with the Naval Research Laboratory.
- We signed a ten-year agreement with STM Power, Inc. for the exclusive supply of high-pressure hydrogen replenishment systems for Stirling Cycle Engines.
- In the fourth quarter of 2001 we determined that we had adequate information and experience to begin recognizing product revenue related to sales of HOGEN 40 units upon shipment. We delivered 19 additional HOGEN 40 series units in the fourth quarter for a total of 35 units shipped in 2001.
- During 2001, we began to generate significant revenue from our principal operations. As a result, we no longer consider ourselves to be a development stage enterprise.
- We strengthened our intellectual property position by bringing to 77 our total portfolio of U.S. and foreign patant filings. To date, 5 U.S. patents have been issued.
- We broke ground on a new 100,000 square foot manufacturing, product development and research facility.

We have generated cumulative losses since our inception, and as of December 31, 2001 our accumulated deficit was $67.0 million, of which $50.7 million is attributable to deemed preferred dividends and accretion and $16.3 million is attributable to net losses. 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 2002 and for the next several years and cannot predict when we will become profitable, if ever.

**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, 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 under different assumptions or conditions. 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*

We began delivering late-stage development models of our hydrogen generators to customers in 1999; revenue on such transactions has generally been deferred until the expiration of the product warranty period. 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. As of December 31, 2001, we have deferred revenue of approximately $884,000 related to hydrogen generators, other than HOGEN 40 units, we have delivered. In the future, we expect to derive the majority of our revenue from the sale of the hydrogen generator and regenerative fuel cell system products we may develop.

*Revenue Recognition—Contract Revenue*

We derive contract revenue from 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, 2001, we have recognized approximately $2.8 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*

Our 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. 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. This requires us to write-down our inventory for estimated obsolescence equal to 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*

We apply Accounting Principles Board Opinion No. 25, “Accounting for Stock Issued to Employees,” (APB 25) and related interpretations, as clarified by FASB Interpretation No. 44, “Accounting for Certain

Transactions Involving Stock Compensation," in accounting for our stock option plan and stock awards with the disclosure provisions of Statement of Financial Accounting Standards No. 123 "Accounting for Stock-Based Compensation" (SFAS 123). 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 equity instruments 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 decrease net income in such period would result.

*Deferred Tax Asset Valuation Allowance*

We provide a full valuation allowance against our net deferred tax assets as, 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. In the event that we determine in the future that we will be able to realize our deferred tax assets in excess of their carrying amounts, an adjustment to the valuation allowance would increase net income in the period such determination was made.

*Related Party Transactions*

From time to time, we may enter into transactions with parties that have relationships with our officers or directors. Such transactions are reviewed by the Board of Directors and are subject to the prior approval of members of the Board of Directors who do not have a personal interest in the applicable transaction. We disclose all material transactions that, in our judgment, constitute related party transactions.

**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 2001, HOGEN 40 product revenues began to be recognized upon shipment in the fourth quarter. 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.

To date, under our initial order, we have recognized costs in excess of our contracted sales price with Matheson Tri-Gas, Inc. in the amount of $394,000. We expect to continue to incur costs in excess of our sales price under our contract with Matheson Tri-Gas, Inc. until we are able to reduce the costs of production on these units through refinements in our production process.

Under the Matheson Tri-Gas contract, Matheson has the exclusive right to sell our hydrogen generators if it meets minimum purchase requirements specified in the contract. No minimum purchase requirements are applicable to Matheson prior to December 31, 2001. For periods after December 31, 2001, the contract currently provides that Matheson must purchase 1,000 units per year if it wishes to maintain exclusivity; however, the Company and Matheson are currently in negotiation regarding quantity and price adjustments for 2002. Under the contract, we have the right to increase prices on the units once annually by providing six months notice, subject to either party's right to terminate the contract if agreement on price increases is not reached. We anticipate that the terms of the contract may be revised as commercial development is completed. Any future recognition of losses by us under this contract will depend on the number of orders placed by Matheson and the extent to which our cost per unit exceeds the sale price per unit.

*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. We expect our research and development expenses to continue to increase in the future.

*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.

*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.

**Results of Operations**

*Comparison of Years 2000 and 1999*

*Contract revenue*. Contract revenue decreased from $934,000 in 1999 to $644,000 in 2000. This decrease was due to research and development activity related to regenerative fuel cell systems under the NASA and DOE contracts as well as the completion of the Electric Power Research Institute (EPRI) contract in 1999. In the future, we expect contract revenue from government sponsored research and development contracts to decrease as a percentage of total revenues once we begin to recognize revenue from product sales.

*Product revenue.* Product revenue increased from $0 in 1999 to $56,000 in 2000. The amount in 2000 relates to revenue recognized upon expiration of the product warranty and for product rentals.

*Costs of contract revenue.* Costs of contract revenue increased from $355,000 in 1999 to $396,000 in 2000. The amount in 1999 reflects costs incurred on the first phase of both our DOE and NASA contracts and on our EPRI contract, for which contract revenue was deferred until specific obligations were met in the fourth quarter of 1999. The amount in 2000 reflects costs incurred under the second phase of both our DOE and NASA contracts.

*Costs of production.* Costs of production increased from $154,000 in 1999 to $248,000 in 2000. The amount in 1999 reflects costs associated with manufacturing and delivering our hydrogen generators in excess of the corresponding sales price. The amount in 2000 reflects 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.

*Research and development expenses.* Research and development expenses increased from $2.2 million in 1999 to $3.2 million in 2000. 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 $1.7 million in 1999 to $4.5 million in 2000. This increase reflects an increase in salaries and benefits of $1,052,000, as a result of an increase in the number of employees, an increase in legal expenses of $410,000, primarily for patent application costs, an increase in recruiting and relocation of $119,000 and an increase of $353,000 of non-cash compensation expense associated with stock option grants.

*Interest income (expense), net.* Interest income increased from $172,000 in 1999 to $4.2 million in 2000. The increase resulted from increased cash and marketable securities as a result of investing the proceeds from the issuance of our series C convertible preferred stock and initial public offering.

**Liquidity and Capital Resources**

Since our inception in August 1996 through December 2001, 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, 2001, we had $167.2 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. At December 31, 2001, $1.2 million is 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 is structured as a one-year construction loan with monthly payments of interest only until December 2002 at which time the loan converts 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% (4.42% at December 31, 2001). 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 $420,910 of restricted cash in escrow.

At December 31, 2001, we were committed under operating leases for our current facilities extending through June 2004. Minimum lease payments under the noncancelable leases at December 31, 2001 are as follows: 2002: $303,484; 2003: $228,721; and 2004: $114,361.

In 2001, the Company entered into an agreement with the Connecticut Clean Energy Fund ("CCEF"). The agreement provides the Company with up to $1.5 million of funding to accelerate commercial deployment of the UNIGEN product. At such time as revenues from UNIGEN products reach $25 million annually the Company is required to repay CCEF 110% of the amounts advanced by them under the agreement. 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 record funds received as liabilities until it achieves the contract milestones. At December 31, 2001, $200,000 had been received and is recorded in customer advances.

Cash used in operating activities was $2.9 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 used in operating activities was $4.8 million in 2000 and was primarily attributable to our net loss and increases in inventory and other current assets, offset by increases in deferred revenue, accounts payable and accrued expenses.

Cash provided by investing activities was $2.3 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 used in investing activities was $171.0 million in 2000 and was primarily attributable to purchases of marketable securities offset by maturities of marketable securities.

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. Cash provided by financing activities was $176.5 million in 2000 and was attributable to the receipt of the proceeds from the sale of series C convertible preferred stock and our initial public offering.

We anticipate that our cash and marketable securities on hand as of December 31, 2001 will be adequate to fund our operations, working capital and capital expenditure requirements for at least the next 12 months. We have purchased approximately 44 acres of land in Wallingford, CT to build our new manufacturing facility and we expect to begin relocating our operations by mid-2002. We expect to spend approximately $7–9 million over the next 9–12 months in connection with this facility. To date through December 31, 2001, we have spent approximately $5.4 million in connection with the facility, primarily related to the land purchase and costs to prepare the land for construction. 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 assure you that we will not require additional financing to fund our operations or that, if required, any further financing will be available to 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**

*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, 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, 2001, we had an accumulated deficit of approximately $67 million. In 2001, we experienced increased cash burn and increased our headcount significantly. We cannot

predict when we will operate profitably, if ever. We expect to continue to incur increased 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 and regenerative fuel cell systems in substantial quantities. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

*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, Trent M. Molter, senior vice president of technology and new business, Robert J. Friedland, senior vice president of products and manufacturing, and Lawrence C. Moulthrop, Jr., vice president of product development, could impair our ability to pursue our growth strategy and slow our product development processes. We do not have employment agreements with any of our key executives. Furthermore, we must continue to hire large numbers of highly qualified individuals, including researchers, engineers and manufacturing professionals.Competition for these individuals is intense, and 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. In addition, we have just begun to demonstrate that we can supply hydrogen to our targeted customers at a lower cost than conventionally delivered hydrogen.

*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;
- 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 will be expanding 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 developing 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 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 our products primarily 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 and will have to create a 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.

*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.

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 not be able to control our warranty exposure, which could increase our expenses.*

Any significant incurrence of warranty expense could increase our costs. In addition, any warranty disclaimers we use may not effectively limit our liability.

*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. 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.*

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 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;
- 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.*

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;
- 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 approximately twenty five percent 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
- 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 hold marketable securities consisting of U.S. government obligations that are held by two major banking institutions. We do not hold derivative financial instruments. 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 | | | |
|---|---|---|---|---|
| | **2002** | **2003** | **2004** | **Total** |
| Investments | | | | |
| Fixed Rate Investments . . . . . | $88,839,638 | $73,654,575 | $2,888,788 | $165,383,001 |
| Average Interest . . . . . | 5.98% | 4.58% | 4.70% | 5.33% |

**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. at December 31, 2001 and 2000 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2001 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.

PRICEWATERHOUSECOOPERS LLP

Hartford, Connecticut
February 14, 2002

## Part II—FINANCIAL INFORMATION

## ITEM 1.
## FINANCIAL STATEMENTS

## PROTON ENERGY SYSTEMS, INC.

## CONSOLIDATED BALANCE SHEETS

| | December 31, 2001 | December 31, 2000 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 1,836,899 | $ 1,360,127 |
| Marketable securities (Note 3) | 165,383,001 | 173,389,002 |
| Accounts receivable | 1,011,259 | 289,816 |
| Inventories and deferred costs (Note 4) | 3,143,164 | 1,649,674 |
| Related party note receivable (Note 11) | 110,801 | — |
| Other current assets | 2,442,530 | 2,612,610 |
| Total current assets | 173,927,654 | 179,301,229 |
| Fixed assets, net (Note 5) | 7,152,156 | 1,204,353 |
| Related party note receivable, long term portion (Note 11) | 133,475 | — |
| Other assets, net | 654,957 | 246,889 |
| Total assets | $181,868,242 | $180,752,471 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities: | | |
| Accounts payable | $ 718,112 | $ 185,733 |
| Accrued expenses | 724,431 | 435,598 |
| Accrued construction costs | 1,603,640 | — |
| Accrued compensation | 234,661 | 507,250 |
| Deferred revenue | 884,248 | 1,035,302 |
| Customer advances | 509,973 | 156,549 |
| Taxes payable | — | 125,000 |
| Total current liabilities | 4,675,065 | 2,445,432 |
| Long term liabilities: | | |
| Construction loan (Note 6) | 1,166,000 | — |
| Total liabilities | 5,841,065 | 2,445,432 |
| Commitments and contingencies (Note 9) | | |
| Stockholders' equity (Note 7): | | |
| 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; 33,228,495 and 33,088,043 shares issued and outstanding, respectively | 332,285 | 330,880 |
| Additional paid-in capital | 242,034,880 | 242,092,743 |
| Unearned compensation | (1,447,629) | (2,374,361) |
| Accumulated other comprehensive income (Note 3) | 2,092,949 | 289,000 |
| Accumulated deficit | (66,985,308) | (62,031,223) |
| Total stockholders' equity | 176,027,177 | 178,307,039 |
| Total liabilities and stockholders' equity | $181,868,242 | $180,752,471 |

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

**PROTON ENERGY SYSTEMS, INC.**

**CONSOLIDATED STATEMENTS OF OPERATIONS**

| | Year Ended December 31, | | |
|---|---|---|---|
| | **2001** | **2000** | **1999** |
| Contract revenue | $ 1,215,465 | $ 644,253 | $ 933,512 |
| Product revenue | 1,752,556 | 55,950 | — |
| Total revenues | 2,968,021 | 700,203 | 933,512 |
| Costs and expenses: | | | |
| Costs of contract revenue | 1,001,306 | 396,169 | 354,532 |
| Costs of production | 2,533,841 | 247,692 | 154,000 |
| Research and development | 6,500,129 | 3,227,421 | 2,181,548 |
| General and administrative | 6,950,296 | 4,517,511 | 1,705,369 |
| Total costs and expenses | 16,985,572 | 8,388,793 | 4,395,449 |
| Loss from operations | (14,017,551) | (7,688,590) | (3,461,937) |
| Interest income, net | 8,949,996 | 4,198,865 | 172,227 |
| Gain on sale of marketable securities | 113,470 | — | — |
| Net loss | (4,954,085) | (3,489,725) | (3,289,710) |
| Deemed preferred dividends and accretion | — | (52,691,154) | (899,000) |
| Net loss attributable to common stockholders | $ (4,954,085) | $(56,180,879) | $(4,188,710) |
| Basic and diluted net loss per share attributable to common stockholders | $ (0.15) | $ (5.92) | $ (2.20) |
| Shares used in computing basic and diluted net loss per share attributable to common stockholders | 33,161,301 | 9,483,738 | 1,900,000 |

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

## PROTON ENERGY SYSTEMS, INC.

## CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)

| | Common Stock | | Additional Paid-In Capital | Unearned Compensation | Accumulated Other Comprehensive Income | Accumulated Deficit | Total Stockholders' Equity (Deficit) |
|---|---|---|---|---|---|---|---|
| | Shares | Amount | | | | | |
| Balance at December 31, 1998 | 1,900,000 | $ 19,000 | $ — | $ — | $ — | $ (5,177,634) | $ (5,158,634) |
| Unearned compensation related to stock option grants | — | — | 1,099,281 | (1,099,281) | — | — | — |
| Amortization of unearned compensation | — | — | — | 290,460 | — | — | 290,460 |
| Accretion | — | — | (899,000) | — | — | — | (899,000) |
| Net loss | — | — | — | — | — | (3,289,710) | (3,289,710) |
| 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 |

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

**PROTON ENERGY SYSTEMS, INC.**

**CONSOLIDATED STATEMENTS OF CASH FLOWS**

| | Year Ended December 31, | | |
|---|---|---|---|
| | **2001** | **2000** | **1999** |
| Cash flows from operating activities: | | | |
| Net loss | $ (4,954,085) | $ (3,489,725) | $(3,289,710) |
| Adjustments to reconcile net loss to net cash used in operations: | | | |
| Depreciation and amortization | 541,472 | 296,292 | 164,588 |
| Amortization of premiums (discounts) on securities | 691,935 | (251,000) | — |
| Non-cash stock-based expense | 776,330 | 791,924 | 395,460 |
| Loss on disposal of assets | 54,879 | — | — |
| Changes in operating assets and liabilities: | | | |
| Accounts receivable | (721,443) | (277,299) | 12,483 |
| Inventories and deferred costs | (1,493,490) | (707,447) | (189,508) |
| Other current assets | 170,080 | (2,551,462) | (1,495) |
| Other assets | (203,904) | (240,590) | — |
| Accounts payable and accrued expenses | 2,152,263 | 845,822 | 172,503 |
| Income taxes payable | (125,000) | 125,000 | — |
| Deferred revenue and contract advances | 202,370 | 703,369 | (147,488) |
| Net cash used in operating activities | (2,908,593) | (4,755,116) | (2,883,167) |
| Cash flows from investing activities: | | | |
| Purchases of fixed assets | (6,542,005) | (653,271) | (214,446) |
| Purchases of marketable securities | (189,599,533) | (179,210,023) | (2,550,000) |
| Proceeds from maturities and sales of marketable securities | 198,717,548 | 8,911,021 | 2,750,000 |
| Issuance of related party note | (275,000) | — | — |
| Proceeds from repayment of related party note | 30,724 | — | — |
| Net cash provided by (used in) investing activities | 2,331,734 | (170,952,273) | (14,446) |
| Cash flows from financing activities: | | | |
| Borrowings from long term debt | 1,166,000 | — | — |
| Payment of long term debt origination costs | (206,313) | | |
| Proceeds from sale of common stock, net | 67,535 | 125,849,284 | — |
| Proceeds from exercise of stock options | 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 | 3,000,000 |
| Net cash provided by financing activities | 1,053,631 | 176,486,807 | 3,000,000 |
| Net increase in cash | 476,772 | 779,418 | 102,387 |
| Cash and cash equivalents at beginning of period | 1,360,127 | 580,709 | 478,322 |
| Cash and cash equivalents at end of period | $ 1,836,899 | $ 1,360,127 | $ 580,709 |

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

**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 generally accepted accounting principles 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. In 1999, the Company began delivering 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. 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. The Company had deferred product revenue of $884,248 and $1,035,302 as of December 31, 2001 and 2000 respectively.

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, 2001, four research and development contracts were in place pursuant to which the Company had received $509,973 of customer advances. As of December 31, 2000, the Company had received $156,549 of such advances under two contracts.

*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 $420,910 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, 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, 2001 and December 31, 2000, consisted of reported net loss and unrealized gains on marketable securities and totaled $3,122,019 and $55,891,879, respectively. The Company's comprehensive loss for the year ended December 31, 1999 was the same as its net loss.

*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:

| Asset Category | Estimated Useful Life |
|---|---|
| Machinery and equipment . . . . . | 7 years |
| Leasehold improvements . . . . . | Shorter of remaining life of lease or 7 years |
| Office furniture, fixtures and equipment . . . . . | 3-5 years |

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 provided for as costs of production in the period in which the related revenue is recognized.

*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, 2001 and 2000, contract revenue from government-sponsored agencies accounted for approximately 41% and 92% of total revenue, respectively. At December 31, 2001 and 2000, accounts receivable from government-sponsored agencies accounted for approximately 45% and 65% of total accounts receivable, respectively.

For the year ended December 31, 2001, four customers comprised 54% of product revenue.

*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*

The Company applies Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," (APB 25) and related interpretations, as clarified by FASB Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation," in accounting for its stock option plan and stock awards

with the disclosure provisions of Statement of Financial Accounting Standards No. 123 "Accounting for Stock-Based Compensation" (SFAS 123). 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. The Company accounts for equity instruments 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.

*Recent Accounting Pronouncements*

In July 2001, the Financial Accounting Standards Board issued SFAS 141, "Business Combinations" ("SFAS 141") and SFAS 142, "Goodwill and other Intangible Assets" ("SFAS 142"). SFAS 141 applies to all business combinations initiated after June 30, 2001, and requires these business combinations to be accounted for using the purchase method of accounting. SFAS 142 applies to all goodwill and intangibles acquired in a business combination. Under SFAS 142, all goodwill, including goodwill acquired before initial application of the standard, will not be amortized but will be tested for impairment within six months of adoption of the statement, and at least annually thereafter. Intangible assets other than goodwill will be amortized over their useful lives and reviewed for impairment in accordance with SFAS 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of." SFAS 142 is effective for fiscal years beginning after December 15, 2001, and must be adopted as of the beginning of a fiscal year. The adoption of these standards in 2002 is not expected to have an impact on the Company's financial condition or results of operations.

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 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 August 2001, the Financial Accounting Standards Board issued SFAS 144, "Accounting for the Impairment or Disposal of Long-Lived Assets" ("SFAS 144"). SFAS 144 addresses financial accounting and reporting for the impairment or disposal of long-lived assets. SFAS 144 is effective for fiscal years beginning after December 15, 2001. The adoption of this standard in 2002 is not expected to have a material impact on the Company's financial condition or results of operations.

*Reclassifications*

Certain reclassifications have been made to the 2000 financial statements to conform to the 2001 presentation.

## 3. MARKETABLE SECURITIES

The following tables summarize investments:

| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| **December 31, 2001** | | | | |
| U.S. government securities | $163,290,052 | $2,129,649 | $(36,700) | $165,383,001 |
| | $163,290,052 | $2,129,649 | $(36,700) | $165,383,001 |

| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| **December 31, 2000** | | | | |
| U.S. government securities | $173,100,002 | $ 294,000 | $ (5,000) | $173,389,002 |
| | $173,100,002 | $ 294,000 | $ (5,000) | $173,389,002 |

As of December 31, 2001 and 2000, the approximate fair values of marketable securities by maturity date are as follows:

| | 2001 | 2000 |
|---|---|---|
| Less than one year | $ 88,839,638 | $165,102,600 |
| One to five years | 76,543,363 | 8,286,402 |
| | $165,383,001 | $173,389,002 |

Securities are carried at fair value with the unrealized gains/losses reported as a separate component of stockholders' equity. Proceeds from the sale of a security in 2001 totaled $15,546,432. The cost was determined using the specific identification method and the resulting realized gain was $113,470. The net unrealized gain from marketable securities was $2,092,949 and $289,000 at December 31, 2001 and 2000, respectively.

## 4. INVENTORIES AND DEFERRED COSTS

Inventories and deferred costs are as follows:

| | December 31, | |
|---|---|---|
| | 2001 | 2000 |
| Raw materials | $1,177,126 | $ 545,583 |
| Work in process | 534,809 | 133,315 |
| Finished goods | 1,431,229 | 970,776 |
| | $3,143,164 | $1,649,674 |

Deferred costs of $716,358 and $970,776 are included in finished goods as of December 31, 2001 and 2000 respectively. These costs of production have been deferred until the Company recognizes the related product revenue.

## 5. FIXED ASSETS

| | December 31, 2001 | December 31, 2000 |
|---|---|---|
| Machinery and equipment | $ 1,046,546 | $ 805,229 |
| Leasehold improvements | 368,225 | 280,705 |
| Office furniture, fixtures and equipment | 1,376,101 | 738,090 |
| Construction in process | 5,450,275 | 12,585 |
| | $ 8,241,147 | $1,836,609 |
| Less: accumulated depreciation | (1,088,991) | (632,256) |
| | 7,152,156 | 1,204,353 |

Construction in process 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 $539,323, $296,292, and $164,588 for the years ended December 31, 2001, 2000 and 1999, respectively.

## 6. 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 is structured as a one-year construction loan with monthly payments of interest only until December 2002 at which time the loan converts 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% (4.42% at December 31, 2001).

At December 31, 2001, $1,166,000 is outstanding under the note and is classified as long-term debt. 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.

In connection with the loan facility, the Company incurred approximately $206,000 of loan origination costs. These costs are being amortized over the term of the loan.

## 7. CAPITAL STRUCTURE

*Mandatorily Redeemable Preferred Stock*

Since inception, the Company has issued Series A, A-1, B, B-1 and C Convertible Preferred Stock ("Preferred Stock"). All of the series of Preferred Stock had similar conversion rights, voting rights, dividend rights, liquidation preferences and redemption rights.

In April 2000, the Company issued 14,306,901 shares of Series C Preferred Stock for $3.50 per share for gross proceeds of approximately $50.1 million. Concurrent with the issuance of the Series C Preferred Stock, the Company recorded a beneficial conversion charge. The beneficial conversion charge was calculated in accordance with the consensus in EITF 98-5, "Accounting for Convertible Securities with Beneficial Conversion

Features or Contingently Adjustable Conversion Ratios," and represents the difference between the Series C Preferred Stock price and the deemed fair market value of the Company's common stock into which the Series C Preferred Stock was immediately convertible, limited to the total Series C Preferred Stock proceeds. Accordingly, a deemed preferred dividend of approximately $50.1 million as of the issuance date has been recognized as a charge to accumulated deficit and net loss attributable to common stockholders, and as an increase to additional paid-in capital.

In May 2000, the Company issued 103,163 shares of Series A-1 Preferred Stock to a service provider for services rendered. For the years ended December 31, 2000 and 1999, the Company incurred approximately $148,000 and $105,000, respectively, in expense for services rendered.

In October 2000, 424,689 shares of Series B Preferred Stock were issued as a result of the exercise and conversion of warrants to acquire Series B Preferred Stock. Of the 441,959 then outstanding warrants, 295,179 warrants were exercised for cash and 146,780 were converted to 129,510 shares of Series B Preferred stock.

Holders of the Series A, Series A-1, Series B, Series B-1 and Series C mandatorily redeemable preferred stock had redemption rights equal to the original purchase price plus dividends at 8% per annum (compounded annually) for each year in which dividends were not declared and paid. Until the date of conversion, as noted above, such dividends had not been declared or paid and were being accreted annually to the carrying value of the Preferred Stock from additional paid-in capital or accumulated deficit if additional paid-in capital were not available. The Company recognized $2,616,999 and $899,000 in accretion for the years ended December 31, 2000 and 1999, respectively.

All outstanding shares of Series A, Series A-1, Series B, Series B-1 and Series C mandatorily redeemable preferred stock automatically converted into 22,659,093 shares of common stock on a one for one basis, upon the closing of the Company's initial public offering of common stock in October 2000.

*Preferred Stock*

In June 2000, the Company created 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. The Company issued 1,900,000 shares of common stock upon incorporation. Of the 1,900,000 issued shares, 1,400,000 shares were issued to the Company's founders, subject to a vesting schedule. At December 31, 2001, the shares were fully vested.

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.

In October 2000, the Company completed an initial public offering of 8,050,000 shares of common stock at an offering price of $17.00 per share, including 1,050,000 shares pursuant to the underwriters' exercise of their over-allotment option. The Company received proceeds of $125.8 million, which was net of $11 million of expenses and underwriting discounts relating to the issuance and distribution of the securities. Upon the closing of the offering, all of the Company's then outstanding preferred stock automatically converted into common stock on a one-for-one basis.

## 8. 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.

A summary of stock option activity for the years ended December 31, 2001, 2000 and 1999 under the Plans is as follows:

| | Shares | Weighted Average Exercise Price |
|---|---|---|
| Outstanding at January 1, 1999 (107,050 shares exercisable) | 374,201 | $ 0.13 |
| Granted | 667,040 | 0.28 |
| Cancelled or forfeited | (5,000) | 0.35 |
| Outstanding at December 31, 1999 (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 |
| 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 |
| Outstanding at December 31, 2001 (829,801 shares exercisable) | 3,168,861 | $ 8.18 |

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, 2001, 2000 and 1999, the Company recorded non-cash compensation expense relating to these options totaling $716,319, $577,226 and $290,460, respectively. At December 31, 2001 and 2000, the unearned compensation balance is $1,408,045 and $2,249,702, respectively.

The following table summarizes additional information about stock options outstanding at December 31, 2001:

| | Options Outstanding | | | Options Exercisable | |
|---|---|---|---|---|---|
| Range of Exercise Prices | Number Outstanding at December 31, 2001 | Weighted Average Remaining Contractual Life (years) | Weighted Average Exercise Price | Number Exercisable at December 31, 2001 | Weighted Average Exercise Price |
| $ .11–$ .15 | 444,589 | 6.35 | $ 0.14 | 377,589 | $ 0.14 |
| .35– .50 | 469,520 | 7.34 | 0.38 | 188,945 | 0.37 |
| 2.00– 6.00 | 493,212 | 8.70 | 5.82 | 108,050 | 5.88 |
| 6.35– 10.31 | 484,379 | 9.78 | 7.72 | 9,050 | 9.36 |
| 10.75– 15.25 | 443,661 | 8.99 | 11.05 | 5,500 | 12.80 |
| 16.88– 17.00 | 833,000 | 8.51 | 17.00 | 140,542 | 17.00 |
| 24.13– 24.13 | 500 | 8.79 | 24.13 | 125 | 24.13 |
| | 3,168,861 | 8.33 | $ 8.18 | 829,801 | $ 3.98 |

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, 2001, with the following assumptions:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| Risk free interest rate | 4.57%-5.39% | 5.17%-6.68% | 4.82%-6.48% |
| Expected dividend yield | None | None | None |
| Expected life of option | 5 years | 5 years | 6 years |
| Expected volatility | 100% | 100% | 0% |

The weighted average fair value of options granted during 2001, 2000 and 1999 was $5.93, $9.17 and $1.81, respectively.

If compensation expense had been recognized based on the fair value of options at their grant date, in accordance with SFAS No. 123, “Accounting for Stock-Based Compensation,” the net loss for the years ended December 31, 2001, 2000 and 1999 would have been as follows:

| | 2001 | 2000 | 1999 |
|---|---|---|---|
| Net loss attributable to common stockholders: | | | |
| As reported | $(4,954,085) | $(56,180,879) | $(4,188,710) |
| Pro forma under SFAS 123 | (9,780,706) | (57,588,581) | (4,439,118) |
| Basic and diluted net loss per share attributable to common shareholders: | | | |
| As reported | $ (.15) | $ (5.92) | $ (2.20) |
| Pro forma under SFAS 123 | (.29) | (6.07) | (2.34) |

The above pro forma results are not necessarily indicative of future results.

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, 2001, 3,750 options have vested with a fair value of $14,888 or $3.97 per share. The remaining unvested options have an estimated fair value of $81,338 or $7.23 per share. The Company's results of operations for the years ended December 31, 2001 and 2000 include a non-cash charge of $37,961 and $18,661 respectively, for the amortization of the fair value of these options. At December 31, 2001 and 2000, the unearned compensation balance is $39,584 and $124,659, 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:

| | 2001 | 2000 |
|---|---|---|
| Risk free interest rate | 4.50%-5.46% | 5.12%-6.21% |
| Expected dividend yield | None | None |
| Expected life of option | 5-10 years | 5-10 years |
| Expected volatility | 100% | 100% |

*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, 2001 and 2000, 15,779 and 1,950 shares of common stock were issued for proceeds of $84,940 and $17,404, respectively. As of December 31, 2001, 234,221 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.

## 9. COMMITMENTS AND CONTINGENCIES

*Development, Marketing and Distribution Agreements*

In November 1999, the Company entered into an agreement with Matheson Tri-Gas, Inc. to develop, market and distribute hydrogen generators to be used solely in laboratory applications. This agreement grants the distributor worldwide exclusivity to the commercial sale of this product during the fifteen-year term of the contract as long as the distributor meets minimum purchases, as defined in the agreement. The Company retains the right to modify the contract once annually by providing six months notice. The Company recorded a loss of approximately $273,000 and $122,000 for orders received and delivered under this contract for the years ended December 31, 2001 and 2000, respectively. Any future loss recognition is contingent on the distributor placing additional orders and the Company's cost per unit exceeding the related sale price per unit.

In 2001, the Company entered into an agreement with the Connecticut Clean Energy Fund ("CCEF"). The agreement provides the Company with up to $1.5 million of funding to accelerate commercial deployment of the UNIGEN product. At such time as revenues from UNIGEN products reach $25 million annually the Company is required to repay CCEF 110% of the amounts advanced by them under the agreement. 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 record funds received as liabilities until it achieves the contract milestones. At December 31, 2001, $200,000 had been received and is recorded in customer advances.

*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.

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, 2001, 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 $363,000, $197,000, and $118,000 for the years ended December 31, 2001, 2000 and 1999, respectively.

Minimum lease payments under the noncancelable leases at December 31, 2001 are as follows:

| | |
|---|---|
| 2002 | $303,484 |
| 2003 | 228,721 |
| 2004 | 114,361 |
| Total minimum obligations | $646,566 |

## 10. INCOME TAXES

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

| | December 31, 2001 | December 31, 2000 |
|---|---|---|
| Gross deferred tax assets: | | |
| Net operating loss carryforwards | $ 5,701,000 | $ 3,873,000 |
| Deferred revenue | 344,000 | 495,000 |
| Accrued expenses | 151,000 | 229,000 |
| Research and development tax credits | 48,000 | 385,000 |
| Other | 92,000 | 41,000 |
| | 6,336,000 | 5,023,000 |
| Gross deferred tax liabilities: | | |
| Depreciation | 84,000 | 97,000 |
| Unrealized gain on marketable securities | 815,000 | 113,000 |
| Deferred costs | 279,000 | 403,000 |
| | 1,178,000 | 613,000 |
| Net deferred tax asset | 5,158,000 | 4,410,000 |
| Less: valuation allowance | (5,158,000) | (4,410,000) |
| | $ — | $ — |

At December 31, 2001, the Company had approximately $14.6 million of federal net operating loss carryforwards that expire beginning in the year 2011 through 2021 and approximately $14.9 million of state net operating loss carryforwards that expire beginning in the year 2001 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.

## 11. 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 accrues interest at the prime rate (4.75% at December 31, 2001) contains no penalty for early repayment. At December 31, 2001, the balance of the loan was $244,276, which is recorded in related party note receivable.

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.

## 12. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

The following tables set forth certain unaudited quarterly statement of operations data for the eight quarters ended December 31, 2001. 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.

| | 2001 Quarters | | | |
|---|---|---|---|---|
| | First | Second | Third | Fourth* |
| | Amounts in 000s except for per share amounts | | | |
| Revenues | $ 239 | $ 555 | $ 364 | $ 1,810 |
| Cost and expenses | 3,082 | 4,037 | 4,162 | 5,704 |
| Loss from operations | (2,843) | (3,482) | (3,798) | (3,894) |
| Net loss | (264) | (1,171) | (1,567) | (1,952) |
| 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) |

| | 2000 Quarters | | | |
|---|---|---|---|---|
| | First | Second | Third | Fourth |
| Revenues | $ 56 | $ 131 | $ 350 | $ 163 |
| Costs and expenses | 1,300 | 1,523 | 2,092 | 3,348 |
| Loss from operations | (1,244) | (1,392) | (1,742) | (3,185) |
| Net loss | (1,210) | (744) | (1,014) | (522) |
| Net loss attributable to common stockholders | (1,470) | (51,914) | (2,275) | (522) |
| Basic and diluted net loss per share attributable to common stockholders | (0.77) | (27.30) | (1.18) | (0.02) |

* See footnote 2 to the financial statements.

**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 5, 2002, 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 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 Committe Interlocks and Insider Participation" in the Proxy Statement is incorporated herein by reference.

## PART IV

**ITEM 14.** ***Exhibits, Financial Statement Schedules and Reports on Form 8-K***

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

**1. Financial Statements**

The financial statements of the Company have been included in Item 8 of this report:

- Balance Sheets as of December 31, 2001 and 2000.
- Statements of Operations for each of the three years ended December 31, 2001, 2000 and 1999.
- Statements of Changes in Stockholders' Equity (Deficit) for each of the three years ended December 31, 2001, 2000 and 1999.
- Statements of Cash Flows for each of the three years ended December 31, 2001, 2000 and 1999.
- 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.

**3. Exhibit Listing**

| Exhibit | Description |
|---|---|
| 1.1* | Third Amended and Restated Certificate of Incorporation of the Registrant |
| 1.2* | Amended and Restated By-Laws of the Registrant |
| 4.1* | Specimen common stock certificate |
| 4.2* | 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* | 1996 Stock Option Plan |
| 10.2* | 2000 Stock Incentive Plan |
| 10.3* | 2000 Employee Stock Purchase Plan |
| 10.4* | Development, Marketing and Distribution Agreement, dated November 10, 1999, between the Registrant and Matheson Tri-Gas, Inc. |
| 10.5* | Distribution Agreement, dated November 24, 1999, between the Registrant and Diamond Lite Limited |
| 10.6* | 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* | Series C Preferred Stock Purchase Agreement, dated April 12, 2000, among the Registrant and certain stockholders |
| 10.8* | Form of Series B Preferred Stock Purchase Warrant |
| 10.9* | Common Stock Purchase Warrant, dated February 1998, issued to the Electric Power Research Institute |
| 10.11* | Contract with the U.S. Department of Energy, dated May 21, 1998 |
| 10.12* | Form of Indemnification Agreement with directors and executive officers |
| 10.13** | Lease, dated as of January 1, 2001, between the Registrant and the Connecticut Student Loan Foundation |
| 10.14** | Purchase and Sale Agreement, dated as of March 8, 2001, between the Registrant and Wallingford Land, L.L.C |
| 10.15** | Agreement, dated as of March 8, 2001, between the Registrant, Medway Associates Limited Partnership and Wallingford Land, L.L.C. |
| 10.16** | Amendment dated December 4, 2000 to Lease, dated as of May 27, 1997, between Registrant and 50 Inwood Road Limited Partnership. |
| 10.17*** | Secured Promissory Note, dated October 4, 2001, between the Registrant and Walter W. Schroeder. |
| 10.18 | Construction Loan Agreement dated as of December 7, 2001 between Technology Drive, LLC, a wholly owned limited liability company of the Registrant, and Webster Bank. |
| 10.19 | Construction Mortgage Note dated as of December 7, 2001 between Technology Drive, LLC, a wholly owned limited liability company of the Registrant, and Webster Bank. |
| 10.20 | Open-End Construction Mortgage Deed and Security Agreement dated as of December 7, 2001 between Technology Drive, LLC, a wholly owned limited liability company of the Registrant, and Webster Bank. |

| Exhibit | Description |
|---|---|
| 10.21 | Guaranty Agreement dated as of December 7, 2001 between the Registrant and Webster Bank. |
| 23.1 | Consent of PricewaterhouseCoopers LLP |

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

** 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.

*** 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.

(b) Reports on Form 8-K

No reports on Form 8-K were filed by the Registrant during the quarter ended December 31, 2001.

## 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 SYTEMS, 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.

| Signature | Capacity | Date |
|---|---|---|
| /s/ WALTER W. SCHROEDER<br>**Walter W. Schroeder** | Chief Executive Officer, President and Director (Principal executive officer) | March 29, 2002 |
| /s/ ROBERT W. SHAW, JR.<br>**Robert W. Shaw, Jr.** | Chairman of the Board | March 29, 2002 |
| /s/ RICHARD AUBE<br>**Richard Aube** | Director | March 29, 2002 |
| /s/ TRENT M. MOLTER<br>**Trent M. Molter** | Senior Vice President of Technology and New Business and Director | March 29, 2002 |
| /s/ GERALD B. OSTROSKI<br>**Gerald B. Ostroski** | Director | March 29, 2002 |
| /s/ PHILIP R. SHARP<br>**Philip R. Sharp** | Director | March 29, 2002 |
| /s/ JOHN A. GLIDDEN<br>**John A. Glidden** | Vice President of Finance (Principal financial and accounting officer) | March 29, 2002 |

# GENERAL SHAREHOLDER INFORMATION

## DIRECTORS AND OFFICERS

Robert W. Shaw, Jr.
Chairman of the Board of Directors

Richard A. Aube
Director

Gerald B. Ostroski
Director

Philip R. Sharp
Director

Walter W. Schroeder
President and Chief Executive Officer, Director

Trent M. Molter
Senior Vice President of
Technology and New Business,
Director

Robert J. Friedland
Senior Vice President of Products and Manufacturing

Lawrence C. Moulthrop
Vice President of Product Development

William F. Smith
Vice President of Programs and New Business

David E. Wolff
Vice President of Sales and Marketing

John A. Glidden
Vice President of Finance

## CORPORATE AND MANUFACTURING OFFICE

Proton Energy Systems, Inc.
50 Inwood Road
Rocky Hill, CT 06067

Phone: (860) 571-6533
Fax: (860) 571-6505

*(later in 2002)*
10 Technology Drive
Wallingford, CT 06492

## COMMON STOCK LISTING

NASDAQ National Market
Symbol: PRTN

## INTERNET

www.protonenergy.com
investor-relations@protonenergy.com

## COMPANY CONTACTS

For additional information about
Proton Energy Systems, Inc., contact:

***At the Company:***
John Glidden, Vice President of Finance
(860) 571-6533, Ext: 269

***At the Financial Relations Board:***
Marilyn Meek, General Info
(212) 445-8451

Nicole Engel, Analysts
(212) 445-8452

Judith Sylk-Siegel, Media
(212) 445-8431

## CORPORATE COUNSEL

Hale and Dorr LLP
11951 Freedom Drive, Suite 1400
Reston, VA 20190
(703) 654-7000

## TRANSFER AGENT

American Stock Transfer & Trust Company
6201 15th Avenue
Brooklyn, NY 11219
(718) 921-8145

## INDEPENDENT ACCOUNTANTS

PricewaterhouseCoopers LLP
100 Pearl Street
Hartford, CT 06103
(860) 241-7000

## ANNUAL MEETING

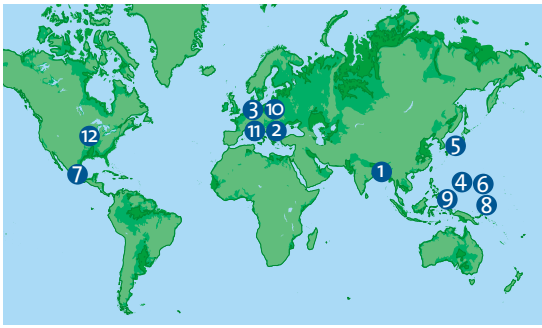
Proton Energy Systems, Inc.'s Annual Meeting of Stockholders will be held at 11:00 a.m. on Wednesday, June 5, 2002, at the Radisson Hotel and Conference Center, 100 Berlin Road, Route 372, Cromwell, CT 06416

## OTHER INFORMATION

Proton Energy Systems' fiscal year ends December 31st.

Proton Energy Systems has never declared or paid any cash dividends and does not anticipate paying any cash dividends in the foreseeable future.

Presently, Proton Energy Systems does not offer a direct stock purchase plan.




PROTON PRODUCTS AROUND THE WORLD

1 Bangladesh
2 Bulgaria
3 Germany
4 Guam
5 Japan
6 Marshall Islands
7 Mexico
8 Micronesia
9 Palau
10 Romania
11 Switzerland
12 United States



DESIGN group c inc PHOTOGRAPHY PROTON PRODUCTS / PEOPLE Frank Poole / Chris Dube PROTON GROUNDBREAKING John Garaventa SOLAR PANEL courtesy of Evergreen Solar, Inc. 3D MODELING Ken Bliven PRINTING Lithographics, Inc.

# Our team of committed employees all play a key role in making Proton Energy Systems a success.

GEORGE ALEXANDER
JOSE ALICEA
VERONICA ALONSO
DESIREE ALVIS
EVERETT ANDERSON
ROBERT AVERY
TIM BAKES
BHASKAR BALASUBRAMANIAN
STANLEY BALCEZAK
JUSTIN BALTRUCKI
FRANO BARBIR
RYAN BEGIN
WOODY BERINGER
MICHAEL BROWN
ROBERT BYRON
CHRISTOPHER CAPUANO
MICHAEL CARDIN
CARLOS CARRANZA
KRISTEN CHAMPION
OSCAR CHOW
DAVE CHRISTENSEN
MATTHEW CHRISTOPHER
CHAU CHUONG
JENNIFER CHUONG
CINDY CURTIS
LUKE DALTON
SHUROD DANIELS
NINA DELLADONNA
DANIEL DELONG
MIKE DELSESTO
EDWARD DEMAREST
KERRI DESAUTELS
RAY DEWLEY
RICHARD DUBEY
NANCY DUMOND
JIM DYKES
CURT EBNER
CONNIE ENGLISH
MELISSA FAUST
ROBERT FRIEDLAND
JAKE FRIEDMAN
TUSHAR GHUWALEWALA
DOUGLAS GILLETTE
JOHN GLIDDEN
SUSAN GOULD
GEOFFREY GRANT
WILLIAM GRAUGARD
JOHN GRIFFIN
DEAN HALTER
GREG HANLON
PETER HARRINGTON
DAVID HENDERSON
LARRY HENRY
TONY HURTADO
DAVID IACOBUCCI
JOSEPH INGRAM
ERIK JENSEN
SANDRA KELLY
AMJAD KHAN
RICHARD KING
JOHN KODUAH
JOHN KOOPMAN
LANCE KURNIK
TANYA LAMPRON
LUCINDA LENK
MARK LILLIS
KIMBERLY LYTTLE
MARGARET MAIETTO
THOMAS MALONEY
JUDITH MANCO
ROBERT MAXWELL
DON McCLUSKEY
CHUCK McCOLLOUGH
LARRY McDONNELL
BOB MELUSKY
JOE MILARDO
FRED MITLITSKY
TRENT MOLTER
FRANK MORAN
ANGELO MORSON
LARRY MOULTHROP
SHERRY MUNRO
BOB NEDDO
ROBERT NIESZCZEZEWSKI
SPYROS NOMIKOS
DON O'BRIEN
KATHLEEN O'HARA
BRIAN OLMSTEAD
DOUG ORTIZ
JASMIN PARIS
LINDA PARTRIDGE
JON PETERSEN
ALAN PETERSON
NICOLE PETILLO
BEN PIECUCH
STEPHEN PORTER
DANIEL RABBETT
MELISSA RAPOZA
WADE RAYMOND
JEFF REGEN
ALCIDES ROSA
DIANE RUDNICK
DEBORAH SAGE
MARCO SANTANGELO
NORM SCHAEFER
CHIP SCHROEDER
JASON SHIEPE
IRIS SHIROMA
MELISSA SIMMERLY
TOM SKOCZYLAS
FRANK SMARTZ
BILL SMITH
RACHAEL SNIPAS
JOHANNA SPADORY
MICHAEL SPANER
JOHN SPERANZA
ANDRZEJ STANEK
ELENA STOCKTON
MATT STONE
TOM STROPES
JEFF STULL
ERIC STYCHE
LAUREL SUCHECKI
SUSAN SULLIVAN
STEPHEN SZYMANSKI
FLAVIO TINOCO
GLEN TODARO
ALLAN TOMASCO
PHILIP TOMBAUGH
JOHN TORRANCE
RUSSELL WATSON
ERIK WHITE
FENTON WILSON
LISA WILSON
ANDREW WINTERS
DAVID WOLFF
JOHN ZAGAJA
MARIA ZOELLER

GROUNDBREAKING CEREMONY
OCTOBER 16, 2001

*(from left to right)*
Douglas Gillette *Director of Human Resources*
David Wolff *Vice President of Marketing & Sales*
Larry Moulthrop *Vice President of Product Development*
Bill Smith *Vice President of Programs & New Business*
Trent Molter *Senior Vice President of Technology and New Business*
John Rowland *Governor of the State of Connecticut*
Chip Schroeder *President and CEO of Proton Energy Systems*
Arthur Diedrick *Chairman of Connecticut Innovations*
Robert Friedland *Senior Vice President of Products & Manufacturing*
John Glidden *Vice President of Finance*

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ENERGY SYSTEMS
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