

PLUG POWER INC  
Form 10-K  
March 16, 2009

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**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**WASHINGTON, D.C. 20549**

**FORM 10-K**

**(Mark One)**

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2008**

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

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

**Commission file number: 0-27527**

**Plug Power Inc.**

**(Exact Name of Registrant as Specified in Its Charter)**

**Delaware  
(State or Other Jurisdiction)**

**22-3672377  
(I.R.S. Identification**

**of Incorporation or Organization) Number)**

**968 ALBANY SHAKER ROAD, LATHAM, NEW YORK 12110**

(Address of Principal Executive Offices, including Zip Code)

(518) 782-7700

(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common stock, par value \$.01 per share	The NASDAQ Global Market
<b>Securities registered pursuant to Section 12(g) of the Act: None</b>	

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer, non-accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates of the registrant on June 30, 2008 was \$77.8 million.



As of March 6, 2009, 128,093,232 shares of the registrant's common stock were issued and outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive proxy statement relating to the registrant's 2009 Annual Meeting of stockholders are incorporated by reference into Part III of this report to the extent described therein.

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### **PART I**

#### **Forward-Looking Statements**

*The following discussion should be read in conjunction with our accompanying Consolidated Financial Statements and Notes thereto included within this Annual Report on Form 10-K. In addition to historical information, this Annual Report on Form 10-K and the following discussion contain statements that are not historical facts and are considered forward-looking within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements contain projections of our future results of operations or of our financial position or state other forward-looking information. In some cases you can identify these statements by forward-looking words such as anticipate, believe, could, estimate, expect, intend, may, should, will and would or similar words. We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control and that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Investors are cautioned not to rely on forward-looking statements because they involve risks and uncertainties, and actual results may differ materially from those discussed as a result of various factors, including, but not limited to: the risk that our restructurings result in greater restructuring charges or less cost savings than anticipated; the risk that unit orders will not ship, be installed and/or convert to revenue, in whole or in part; our ability to develop commercially viable energy products; the cost and timing of developing our energy products; market acceptance of our energy products; our ability to manufacture energy products on a large-scale commercial basis; competitive factors, such as price competition and competition from other traditional and alternative energy companies; the cost and availability of components and parts for our energy products; the cost and availability of fuel and fueling infrastructures for Plug Power's energy products; the ability to raise and provide the necessary capital to develop, manufacture and market our energy products; our ability to establish relationships with third parties with respect to product development, manufacturing, distribution and servicing and the supply of key product components; our ability to protect our intellectual property; our ability to lower the cost of our energy products and demonstrate their reliability; the cost of complying with current and future governmental regulations; fluctuations in the trading price and volume of our common stock; and other risks and uncertainties discussed under Item IA Risk Factors. Readers should not place undue reliance on our forward-looking statements. These forward-looking statements speak only as of the date on which the statements were made and are not guarantees of future performance. Except as may be required by applicable law, we do not undertake or intend to update any forward-looking statements after the date of this Annual Report on Form 10-K.*

#### **Item 1. Business** ***Company Background***

Plug Power Inc., or the Company, is a development stage enterprise involved in the design, development and manufacture of fuel cell systems for industrial-motive (forklift or material handling) markets and stationary power markets worldwide. We are a development stage enterprise because substantially all of our resources and efforts are aimed at the discovery of new knowledge that could lead to significant improvement in fuel cell reliability and durability, and the establishment, expansion and stability of markets for our products. We continue to experience significant net outflows of cash from operations and devote significant efforts towards financial planning in order to forecast future cash spending and the ability to continue product development, manufacturing and sales activities. Fuel cell technology within our targeted markets material handling, remote prime power, residential combined heat and

power and wireless and wireline telecommunications - is still early in the technology adoption life cycle.

We are focused on proton exchange membrane, or PEM, fuel cell and fuel processing technologies and fuel cell/battery hybrid technologies, from which multiple products are available. A fuel cell is an electrochemical device that combines hydrogen and oxygen to produce electricity and heat without combustion. Hydrogen is derived from hydrocarbon fuels such as natural gas, propane, methanol, ethanol, gasoline or biofuels. Hydrogen can also be obtained from the electrolysis of water. Hydrogen can be purchased directly from industrial gas providers or can be produced on-site at consumer locations.

We sell our products worldwide through a product sales force. We sell to business, industrial and government customers.

We were organized in the State of Delaware on June 27, 1997 and became listed on the NASDAQ exchange on October 29, 1999. We were originally a joint venture between Edison Development Corporation and Mechanical Technology Incorporated. In 2007 we merged with and acquired all the assets, liabilities and equity of Cellex Power Products, Inc. (Cellex) and General Hydrogen Corporation (General Hydrogen).

Unless the context indicates otherwise, the terms Company, Plug Power, we, our or us as used herein refers to Plug Power Inc. (the registrant) and its subsidiaries.



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### ***Business Strategy***

We are committed to developing effective, economical and reliable fuel cell products and services for businesses, government agencies and, ultimately, commercial consumers. Building on our substantial fuel cell application and product integration experience, we are initially focused on building strong relationships with customers who value increased reliability, productivity, energy security and a sustainable future.

Our business strategy leverages our unique fuel cell application and integration knowledge to identify early adopter markets for which we can design and develop innovative systems and customer solutions that provide superior value, ease-of-use, and environmental design.

We continue to survey the market and evaluate our best opportunities to drive market adoption and a path to profitability for Plug Power. Currently, our primary focus and resource commitment is on our GenDrive™ solution for the material handling (forklift) market.

We believe continued investment in research and development is critical to the development and enhancement of innovative products, technologies and services. In addition to evolving our direct hydrogen fueled systems, we continue to capitalize on our investment in power electronics, controls, software and reforming technology.

Our strategy also includes expanding our sales network to effectively reach more of our targeted customers and provide them with high-quality products, service and post-sales support experience.

We are striving to meet longer-term objectives of delivering economic, social, and environmental benefits in terms of reliable, clean, cost-effective fuel cell solutions and, ultimately, sustainability.

### ***Business Organization***

We manage our business as a single development stage enterprise, emphasizing shared learning across end-user applications and common supplier/vendor relationships.

### ***Products***

We continue to develop a range of fuel cell products and services including hydrogen fuel cell low-temperature Proton Exchange Membrane (PEM) systems for motive, continuous and backup power and a high-temperature fuel cell system for residential and light commercial co-generation.

Our primary product lines that we sell and continue development work on are discussed below:

**GenDrive™** Hydrogen fueled PEM fuel cell system to provide power to industrial vehicles. We are focusing our primary efforts on material handling (forklift) and automated guided vehicles (AGV) at multi-shift high volume manufacturing and high throughput distribution sites where we believe our products and services provide a unique combination of productivity, flexibility and environmental benefits. In 2008, we continue to expand our sales and demonstrations to commercial and governmental customers including Wal-Mart, Bridgestone Firestone, Nestle, Central Grocers and Sysco Foods. We expect continued sales momentum in 2009 with our key target customers.

**GenSys®** Natural gas or liquid petroleum gas (LPG) fueled continuous power system. We continue to develop a low-temperature (70°C) PEM fuel cell system that supports remote prime power applications, specifically for the

telecommunications sector, where grid power is unreliable or non-existent. We successfully completed field trials for a low-temperature GenSys product at a Tata Teleservices Ltd. cell tower site in remote India.

In connection with the development of our GenSys platform, we are developing a high-temperature (180°C) polybenzimidazole (PBI) combined heat and power fuel cell system for light commercial and residential applications producing high quality heat and supplemental electricity. We will partner with the U.S. Department of Energy and National Grid to conduct the first field trial of the high-temperature GenSys product in 2009. Learning from the field trial will help determine system refinements for incorporation into the next-generation system design.

Additionally in 2008, we provided manufacturing and sales support to our GenCore® product Hydrogen fueled PEM fuel cell system to provide back-up power to businesses and government in critical infrastructure. We continue to work with certain established customers on future initiatives related to this product.

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Also, we developed technology in support of the automotive fuel cell market under a series of agreements with Honda R&D Co Ltd. of Japan (Honda), a subsidiary of Honda Motor Co., Ltd. Under these agreements we have developed and tested, on a joint and exclusive basis, four phases of prototype fuel cell systems that provide electricity and heat to a home, while also providing hydrogen fuel for a fuel cell vehicle. Since 2003 we have successfully demonstrated four successive prototype generations of this system at Honda R&D Americas' facility in Torrance, California and at Plug Power's facility in Latham, NY. In 2009 we will continue to provide service for the current model of the Home Energy Station located at Honda's Torrance, California facility.

***Product Support & Services***

To promote fuel cell adoption and maintain post-sale customer satisfaction, we offer a range of service and support options for customers of all our product offerings. These options include installation, commissioning, fueling and assistance that is built into software, printed and electronic product manuals, online support, as well as on-site technical support.

GenDrive product support and services may also include training and working directly with lift truck dealer networks with established service personnel. These personnel will assist with the commissioning and installation of GenDrive units and in some cases will be used to carry out regularly scheduled preventative maintenance.

***Markets/Geography***

Our commercial sales for GenDrive power units are in the material handling market segments which consist of large fleet, multi-shift operations in high volume manufacturing and high throughput distribution. In 2008, 100% of our installations were in North America.

We received 358 orders for our GenDrive product during the year ending December 31, 2008. Backlog on December 31, 2008 was 341 units representing approximately \$6.4 million which includes approximately \$1.1 million related to 45 GenDrive units that were previously funded under various government projects.

<u>GenDrive</u>	<b>2008</b>	<b>2007</b>
Shipments	132	47
Cancellations	4	-
Orders	358	94
Backlog	341	119

Commercial sales of GenCore stationary back-up power systems primarily support the telecommunications industry. We received 109 orders during the year ending December 31, 2008. Backlog on December 31, 2008 was 140 units representing approximately \$1.8 million.

<u>GenCore</u>	<b>2008</b>	<b>2007</b>
Shipments	146	180
Cancellations	7	313
Orders	109	106
Backlog	140	184

We satisfied our orders for our GenSys product during the year ending December 31, 2008. During the year we received 5 orders for the product. There was no backlog on December 31, 2008.

We have accepted orders that require certain conditions or contingencies to be satisfied prior to shipment, some of which are outside of our control. Historically, shipments made against these orders can occur between thirty (30) days and twenty-four (24) months from the date of acceptance of the order.

Final assembly of products that we sell is performed primarily at our manufacturing facility in Latham, New York. Currently, the supply and manufacture of several critical components used in our products are performed by sole-sourced third-party vendors in the U.S. and Canada.

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### ***Distribution, Marketing and Strategic Relationships***

We have developed an extended enterprise by forming strategic relationships with well-established companies in key areas including distribution, service, marketing, supply, technology development and product development. We sell our products through our direct sales force, original equipment manufacturers (OEMs) and their dealer networks. Our customers have no special right of return, price protection allowances or other sales incentives. We offer a discount from our manufacturers suggested retail price to resellers to allow for the mark-up of the reseller.

### ***Competition***

We are confronted by aggressive competition in all areas of our business. The markets we address for motive and stationary power are characterized by the presence of well-established commodity battery and combustion generator products in addition to several competing fuel cell companies.

Over the past several years, price competition in these markets has been particularly intense.

The principal competitive factors in the markets in which we operate include price, product features, relative price/performance, product quality and reliability, design innovation, marketing and distribution capability, service and support, and corporate reputation.

In the material handling power market, we believe our GenDrive systems have an advantage over lead acid batteries for customers who run high throughput, multi shift operations by offering increased productivity with lower operational costs. However, we expect competition in this space to intensify as competitors attempt to imitate our approach with their own offerings. Some of these current and potential competitors have substantial resources and may be able to provide such products and services at little or no profit or even at a loss to compete with our offerings.

### ***Intellectual Property***

We believe that neither we nor our competitors can achieve a significant proprietary position on the basic technologies currently used in PEM fuel cell systems. However, we believe the design and integration of our system and system components, as well as some of the low-cost manufacturing processes that we have developed, is intellectual property that can be protected.

During 2008 we increased our technology portfolio by adding 7 new U.S. patents. At December 31, 2008 we have a total of 148 U.S. patents and 7 foreign patents, and we currently have over 110 patents pending worldwide. Our patent portfolio decreased in 2008 as we began to focus our intellectual property protection on our current product offerings. Additionally, there are 29 pending patent applications filed on behalf of Honda relating to development work on the Home Energy Station (HES) to which we have certain rights. The technology portfolio covers among other things: fuel cell components that reduce manufacturing part count; fuel cell system designs that lend themselves to mass manufacturing; improvements to fuel cell system efficiency, reliability and system life; and control strategies, such as added safety protections and operation under extreme conditions. In general, our employees are party to agreements providing that all inventions (whether patented or not) made or conceived while an employee of Plug Power, which are related to or result from work or research that Plug Power performs, will remain the sole and exclusive property of Plug Power.

***Government Regulation***

We do not believe that we will be subject to existing federal and state regulatory commissions governing traditional electric utilities and other regulated entities. Our products and their installations are, however, subject to oversight and regulation at the state and local level in accordance with state and local statutes and ordinances relating to, among others, building codes, fire codes, public safety, electrical and gas pipeline connections and hydrogen siting. The level of regulation may depend, in part, upon where a system is located. For example, the 2008 National Electrical Code, or NEC, is a model code written by the National Fire Protection Association, or (NFPA) that governs the electrical wiring of most homes, businesses and other buildings. The NEC has been adopted by local jurisdictions throughout the United States and is enforced by local officials, such as building and electrical inspectors. Article 692 of the NEC governs the installation of fuel cell systems. Accordingly, all of our stationary products installed in a jurisdiction that has adopted the NEC are installed in accordance with Article 692.

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In addition, product safety standards have been established by the American National Standards Institute (ANSI) covering the overall fuel cell system. Our GenCore product has been certified by independent third-parties to be in compliance with such standards, and an assessment of our GenDrive product will begin in 2009. Other than these requirements, at this time we do not know what additional requirements, if any, each jurisdiction will impose on our products or their installation. We also do not know the extent to which any new regulations may impact our ability to distribute, install and service our products. As we continue distributing our systems to our target markets, the federal, state or local government entities or competitors may seek to impose regulations.

### ***Raw Materials***

Although most components essential to our business are generally available from multiple sources, we currently obtain certain key components including, but not limited to, fuel cell stack materials and energy storage devices, from single or limited sources. In 2008, Plug Power signed a supply agreement with Ballard Power Systems through December 31, 2010. Under this agreement, Ballard will remain the exclusive supplier of fuel cell stacks for Plug Power's GenDrive product line.

We believe there are several component suppliers and manufacturing vendors whose loss to the Company could have a material adverse effect upon our business and financial condition. At this time, such vendors include, but are not limited to, Ballard Power Systems, BASF Fuel Cells, 3M Co. and Dana Corporation. We attempt to mitigate these potential risks by working closely with these and other key suppliers on product introduction plans, strategic inventories, coordinated product introductions and internal and external manufacturing schedules and levels.

### ***Research and Development***

Because the fuel cell industry is characterized by its early state of adoption, our ability to compete successfully is heavily dependent upon our ability to ensure a continual and timely flow of competitive products, services, and technologies to the marketplace. We continue to develop new products and technologies and to enhance existing products in the areas of cost, size, weight, and in supporting service solutions in order to drive commercialization. We may expand the range of our product offerings and intellectual property through licensing and/or acquisition of third-party business and technology. Our research and development expense totaled \$35.0 million, \$39.2 million and \$41.6 million in 2008, 2007 and 2006, respectively. We also had cost of research and development contract revenue of \$21.5 million, \$19.0 million and \$7.6 million in 2008, 2007 and 2006, respectively. These expenses represent the cost of research and development programs that are partially funded under cost reimbursement research and development arrangements with third parties.

### ***Employees***

As of December 31, 2008, we had a total staff of 208 employees. Plug Power adopted restructuring plans in 2008 intended to focus the Company on revenue growth, improve organizational efficiency and position the Company for long-term profitability. Details of the Company's restructuring plans are available in previously filed Form 8-K reports dated June 10, 2008 and December 18, 2008 as filed on June 16, 2008 and December 22, 2008, respectively.

### ***Available information***

We maintain a website with an internet address of [www.plugpower.com](http://www.plugpower.com). The information contained on our website is not included as a part of, or incorporated by reference into, this Annual Report on Form 10-K. Other than an investor's own internet access charges, we make available free of charge, through our website, our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to these reports, as soon as reasonably practicable after we have electronically filed such material with, or furnished such material to, the Securities and Exchange Commission.



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### **Item 1A. Risk Factors**

The following factors should be considered carefully in addition to the other information in this Form 10-K. Except as mentioned under **Quantitative and Qualitative Disclosure About Market Risk** and except for the historical information contained herein, the discussion contained in this Form 10-K contains forward-looking statements, within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, that involve risks and uncertainties. Our actual results could differ materially from those discussed in this Form 10-K. Important factors that could cause or contribute to such differences include those discussed below, as well as those discussed elsewhere herein.

#### **Delays in our product development could have a material impact on the commercialization of our products.**

If we experience delays in meeting our development goals, our products exhibit technical defects, or if we are unable to meet cost or performance goals, including power output, useful life and reliability, the commercialization of our products will be delayed. In this event, potential purchasers of our products may choose alternative technologies and any delays could allow potential competitors to gain market advantages. We cannot assure you that we will successfully meet our commercialization schedule in the future.

#### **We may never complete the research and development of certain commercially viable energy and material handling products.**

We are a development stage company. Other than our GenCore and certain products within our GenDrive product family, which we believe to be commercially viable at this time, we do not know when or whether we will successfully complete research and development of other commercially viable energy and material handling products. If we are unable to develop additional commercially viable energy and material handling products, we will not be able to generate sufficient revenue to become profitable. The commercialization of our products depends on our ability to reduce the costs of our components and subsystems, and we cannot assure you that we will be able to sufficiently reduce these costs. In addition, the commercialization of our products requires achievement and verification of their overall reliability, efficiency and safety targets, and we cannot assure you that we will be able to develop, acquire or license the technology necessary to achieve these targets. Although we continue to increase the number of units sold in our GenCore and GenDrive products, we must complete additional research and development to fill out the product portfolio and deliver enhanced functionality and reliability before we will be able to manufacture commercially viable products in commercial quantities. In addition, while we are conducting tests to predict the overall life of our products, we may not have run our products over their projected useful life prior to large-scale commercialization. As a result, we cannot be sure that our products will last as long as predicted, resulting in possible warranty claims and commercial failures.

#### **We have incurred losses and anticipate continued losses for at least the next several years.**

As of December 31, 2008 we had an accumulated deficit of \$639.7 million. We have not achieved profitability in any quarter since our formation and expect to continue to incur net losses until we can produce sufficient revenue to cover our costs, which is not expected to occur for at least the next several years. We anticipate that we will continue to incur losses until we can produce and sell our products on a large-scale and cost-effective basis. However, we cannot predict when we will operate profitably, if ever. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

**We are still a development stage company.**

We were formed in June 1997 to further the research and development of stationary fuel cell systems. While we delivered our initial product in the third quarter of 2001, our initial GenCore product in the fourth quarter of 2003 and our GenDrive product in the third quarter of 2007, we do not expect to be profitable for at least the next several years. Before investing in our common stock, you should consider the challenges, expenses and difficulties that we will face as a development stage company seeking to develop and manufacture new products.

**Our financial results could be negatively impacted by impairments of goodwill or other intangible assets required by SFAS 142 and the application of future accounting policies or interpretations of existing accounting policies.**

In accordance with Statement of Financial Accounting Standards No. 142, Goodwill and Other Intangible Assets referred to as SFAS 142, we perform an annual assessment on goodwill and other intangible assets for impairment and also an assessment if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. A downward revision in the fair value of one of our acquired businesses could result in impairments of goodwill under SFAS 142 and non-cash charges. Any charge resulting from the application of SFAS 142 could have a significant negative effect on our reported net loss. For example, in the fourth quarter of 2009, we recorded a non-cash impairment charge of \$45.8 million relating to goodwill which resulted in an increase in our net loss for the quarter of \$45.8 million. In addition, our financial results could be negatively impacted by the application of existing and future accounting policies or interpretations of existing accounting policies, any continuing impact of SFAS 142 or any negative impact relating to the application of Statement of Financial Accounting Standards No. 144, Accounting for the Improvement and Disposal of Long-Lived Assets.

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### **A viable market for our products may never develop or may take longer to develop than we anticipate.**

Our energy and material handling products represent emerging markets, and we do not know the extent to which our targeted customers will want to purchase them and whether end-users will want to use them. If a viable market fails to develop or develops more slowly than we anticipate, we may be unable to recover the losses we will have incurred to develop our products and may be unable to achieve profitability. The development of a viable market for our products may be impacted by many factors which are out of our control, including:

- the cost competitiveness of our products;
- the future costs of natural gas, propane, hydrogen and other fuels expected to be used by our products;
- consumer reluctance to try a new product;
- consumer perceptions of our products safety;
- regulatory requirements;
- barriers to entry created by existing energy providers; and
- the emergence of newer, more competitive technologies and products.

### **We have no experience manufacturing our products on a large-scale commercial basis and may be unable to do so.**

To date, we have focused primarily on research, development and low volume manufacturing and have no experience manufacturing our products on a large-scale commercial basis. In 2000, we completed construction of our 50,000 square foot manufacturing facility and have continued to develop our manufacturing capabilities and processes. We do not know whether or when we will be able to develop efficient, low-cost manufacturing capabilities and processes that will enable us to manufacture our products in commercial quantities while meeting the quality, price, engineering, design, and production standards required to successfully market our products. Our failure to develop such manufacturing processes and capabilities could have a material adverse effect on our business, financial condition and results of operations. Even if we are successful in developing our manufacturing capabilities and processes, we do not know whether we will do so in time to meet our product commercialization schedule or to satisfy the requirements of our distributors or customers.

### **We have not developed and produced the products that we have agreed to sell to some of our customers.**

We have not developed or produced certain products that are required by some of our sales and customer agreements. There can be no assurance that we will complete development of products meeting specifications required by our sales and customer agreements and deliver them on schedule. Pursuant to certain agreements, the customers have the right to provide notice to us if, in their good faith judgment, we have materially deviated from the agreement. Should a customer provide such notice, and we cannot mutually agree to a modification to the agreement, then the customer may have the right to terminate the agreement.

### **Our orders may not ship or convert to revenue, in whole or in part.**

We have accepted orders from certain customers which include firm orders, stocking orders and orders that require certain conditions or contingencies to be satisfied prior to shipment, some of which are outside of our control. Historically, shipments made against these orders have occurred between thirty (30) days and twenty- four (24) months from the date of acceptance of the order. Orders received during the year ended December 31, 2008 totaled 472 units. Backlog on December 31, 2008 was 481 units. Of the unit orders in backlog on December 31, 2008, orders for 141 units were older than 12 months. The time periods from receipt of an order to shipment date and installation vary widely and are determined by a number of factors, including the terms of the customer contract and the customer's deployment plan. Due to certain redesign elements to be satisfied prior to shipment of units under certain of our agreements, some of which are outside of the Company's control, some or all of our orders may not ship or convert to revenue.

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### **We may be unable to establish relationships, or we may lose existing relationships, with third parties for certain aspects of product development, manufacturing, distribution and servicing and the supply of key components for our products.**

We will need to enter into additional strategic relationships in order to complete our current product development and commercialization plans. We will also require partners to assist in the sale, servicing and supply of components for our anticipated products, which are in development. If we are unable to identify or enter into satisfactory agreements with potential partners, including those relating to the distribution, service and support of our anticipated products, we may not be able to complete our product development and commercialization plans on schedule or at all. We may also need to scale back these plans in the absence of needed partners, which would adversely affect our future prospects for development and commercialization of future products. In addition, any arrangement with a strategic partner may require us to issue a significant amount of equity securities to the partner, provide the partner with representation on our board of directors and/or commit significant financial resources to fund our product development efforts in exchange for their assistance or the contribution to us of intellectual property. Any such issuance of equity securities would reduce the percentage ownership of our then current stockholders. While we have entered into relationships with suppliers of some key components for our products, we do not know when or whether we will secure supply relationships for all required components and subsystems for our products, or whether such relationships will be on terms that will allow us to achieve our objectives. Our business, prospects, results of operations and financial condition could be harmed if we fail to secure relationships with entities which can develop or supply the required components for our products and provide the required distribution and servicing support. Additionally, the agreements governing our current relationships allow for termination by our partners under certain circumstances, some of which are beyond our control. If any of our current strategic partners were to terminate any of its agreements with us, there could be a material adverse impact on the development and commercialization of our products and the operation of our business, financial condition, results of operations and prospects.

### **We rely on our partners to develop and provide components for our products.**

A supplier's failure to develop and supply components in a timely manner or at all, or to develop or supply components that meet our quality, quantity or cost requirements, or our inability to obtain substitute sources of these components on a timely basis or on terms acceptable to us, could harm our ability to manufacture our products. In addition, to the extent that our supply partners use technology or manufacturing processes that are proprietary, we may be unable to obtain comparable components from alternative sources.

### **We face intense competition and may be unable to compete successfully.**

The markets for energy products are intensely competitive. There are a number of companies located in the United States, Canada and abroad that are developing PEM and other fuel cell technologies and energy products that compete with our products. Some of our competitors in the fuel cell sector are much larger than we are and may have the manufacturing, marketing and sales capabilities to complete research, development and commercialization of commercially viable fuel cell products more quickly and effectively than we can.

In addition, there are many companies engaged in all areas of traditional and alternative energy generation in the United States, Canada and abroad, including, among others, major electric, oil, chemical, natural gas, battery,

generator and specialized electronics firms, as well as universities, research institutions and foreign government-sponsored companies. These firms are engaged in forms of power generation such as solar and wind power, reciprocating engines and micro turbines, advanced battery technologies, as well as traditional grid-supplied electric power. Many of these entities have substantially greater financial, research and development, manufacturing and marketing resources than we do.

**We must lower the cost of our products and demonstrate their reliability.**

The initial capital cost of our fuel cell systems is currently significantly more than many established competing technologies. If we are unable to develop products that are competitive with competing technologies in terms of price, reliability and longevity, consumers will be unlikely to buy our products. The price of our products depends largely on material and manufacturing costs. We cannot guarantee that we will be able to lower these costs to the level where we will be able to produce a competitive product or that any product produced using lower cost materials and manufacturing processes will not suffer from a reduction in performance, reliability and longevity.

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### **Failure of our field tests could negatively impact demand for our products.**

We are currently field-testing a number of our products, and we plan to conduct additional field tests in the future. We may encounter problems and delays during these field tests for a number of reasons, including the failure of our technology or the technology of third parties, as well as our failure to maintain and service our products properly. Many of these potential problems and delays are beyond our control. Any problem or perceived problem with our field tests could materially harm our reputation and impair market acceptance of, and demand for, our products.

### **Further regulatory changes and electric utility industry restructuring may affect demand for our products.**

The market for electric power generation products is heavily influenced by federal and state governmental regulations and policies concerning the electric utility and telecommunications industries. A change in the current regulatory policies could deter further investment in the research and development of alternative energy sources, including fuel cells, and could result in a significant reduction in the demand for our products. We cannot predict how deregulation or restructuring of the industry will affect the market for our products.

### **Our business may become subject to future government regulation, which may impact our ability to market our products.**

Our products will be subject to federal, local, and non-U.S. laws and regulations, including, for example, state and local ordinances relating to building codes, public safety, electrical and gas pipeline connections, hydrogen transportation and siting and related matters. Further, as products are introduced into the market commercially, governments may impose new regulations. We do not know the extent to which any such regulations may impact our ability to distribute, install and service our products. Any regulation of our products, whether at the federal, state, local or foreign level, including any regulations relating to installation and servicing of our products, may increase our costs and the price of our products.

### **Utility companies could place barriers on our entry into the marketplace where customers depend on traditional grid supplied energy.**

Utility companies often charge fees to industrial companies for disconnecting from the grid, for using less electricity or for having the capacity to use power from the grid for back-up purposes and may charge similar fees to residential customers in the future. The imposition of such fees could increase the cost to grid-connected customers of using our products and could make our products less desirable, thereby harming our revenue and profitability.

### **Alternatives to our technology or improvements to traditional energy technologies could make our products less attractive or render them obsolete.**

Our products are among a number of alternative energy products being developed. A significant amount of public and private funding is currently directed toward development of micro turbines, solar power, wind power, advanced batteries and generator sets, fast charged technologies and other types of fuel cell technologies. Improvements are also being made to the existing electric transmission system and battery based systems. Technological advances in alternative energy products, improvements in the electric power grid, battery systems or other fuel cell technologies

may make our products less attractive or render them obsolete.

**The hydrocarbon fuels and other raw materials on which our products rely may not be readily available or available on a cost-effective basis.**

Our products depend largely on the availability of natural gas, liquid propane and hydrogen gas. If these fuels are not readily available, or if their prices are such that energy produced by our products costs more than energy provided by other sources, our products could be less attractive to potential users.

In addition, platinum is a key material in our PEM fuel cells. Platinum is a scarce natural resource and we are dependent upon a sufficient supply of this commodity. Any shortages could adversely affect our ability to produce commercially viable fuel cell systems and significantly raise our cost of producing our fuel cell systems.



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### **Our products use flammable fuels that are inherently dangerous substances.**

Our fuel cell systems use natural gas, liquid propane and hydrogen gas in catalytic reactions, which produce less heat than a typical gas furnace. While our products do not use this fuel in a combustion process, natural gas, liquid propane and hydrogen gas are flammable fuels that could leak in a home or office and combust if ignited by another source. Further, while we are not aware of any accidents involving our products, any such accidents involving our products or other products using similar flammable fuels could materially suppress demand for, or heighten regulatory scrutiny of, our products.

### **Product liability or defects could negatively impact our results of operations.**

Any liability for damages resulting from malfunctions or design defects could be substantial and could materially adversely affect our business, financial condition, results of operations and prospects. In addition, a well-publicized actual or perceived problem could adversely affect the market's perception of our products resulting in a decline in demand for our products and could divert the attention of our management, which may materially and adversely affect our business, financial condition, results of operations and prospects.

### **Future acquisitions may be difficult to integrate, add additional burden to our management and reduce the percentage ownership of our stockholders.**

As part of our business strategy we may engage in acquisitions that we believe will provide us with complementary technologies, products, channels, revenue streams, expertise and/or other valuable assets. However, we may not be able to identify suitable acquisition candidates. If we do identify suitable candidates, we may not be able to acquire them on commercially acceptable terms or at all. If we acquire another company, we may not be able to successfully integrate the acquired business into our existing business in a timely and non-disruptive manner. We may have to devote a significant amount of time and management and financial resources to do so. Even with this investment of management and financial resources, an acquisition may not produce the desired revenues, earnings or business synergies. In addition, an acquisition involving our stock may reduce the percentage ownership of our then current stockholders. If we fail to integrate the acquired business effectively or if key employees of that business leave, the anticipated benefits of the acquisition would be jeopardized. The time, capital, management and other resources spent on an acquisition that fails to meet our expectations could cause our business and financial condition to be materially and adversely affected. In addition, from an accounting perspective, acquisitions can lead to non-recurring charges and amortization or impairment of significant amounts of intangible assets that could adversely affect our results of operations.

### **We may not be able to protect important intellectual property and we could incur substantial costs defending against claims that our products infringe on the proprietary rights of others.**

PEM fuel cell technology was first developed in the 1950s, and fuel processing technology has been practiced on a large scale in the petrochemical industry for decades. Accordingly, we do not believe that we can establish a significant proprietary position in the fundamental component technologies in these areas. However, our ability to compete effectively will depend, in part, on our ability to protect our proprietary system-level technologies, systems designs and manufacturing processes. We rely on patents, trademarks, and other policies and procedures related to

confidentiality to protect our intellectual property. However, some of our intellectual property is not covered by any patent or patent application. Moreover, we do not know whether any of our pending patent applications will issue or, in the case of patents issued or to be issued, that the claims allowed are or will be sufficiently broad to protect our technology or processes. Even if all of our patent applications are issued and are sufficiently broad, our patents may be challenged or invalidated. We could incur substantial costs in prosecuting or defending patent infringement suits or otherwise protecting our intellectual property rights. While we have attempted to safeguard and maintain our proprietary rights, we do not know whether we have been or will be completely successful in doing so. Moreover, patent applications filed in foreign countries may be subject to laws, rules and procedures that are substantially different from those of the United States, and any resulting foreign patents may be difficult and expensive to enforce. In addition, we do not know whether the U.S. Patent & Trademark Office will grant federal registrations based on our pending trademark applications. Even if federal registrations are granted to us, our trademark rights may be challenged. It is also possible that our competitors or others will adopt trademarks similar to ours, thus impeding our ability to build brand identity and possibly leading to customer confusion. We could incur substantial costs in prosecuting or defending trademark infringement suits.

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Further, our competitors may independently develop or patent technologies or processes that are substantially equivalent or superior to ours. If we are found to be infringing third party patents, we could be required to pay substantial royalties and/or damages, and we do not know whether we will be able to obtain licenses to use such patents on acceptable terms, if at all. Failure to obtain needed licenses could delay or prevent the development, manufacture or sale of our products, and could necessitate the expenditure of significant resources to develop or acquire non-infringing intellectual property.

Asserting, defending and maintaining our intellectual property rights could be difficult and costly and failure to do so may diminish our ability to compete effectively and may harm our operating results. We may need to pursue lawsuits or legal action in the future to enforce our intellectual property rights, to protect our trade secrets and domain names, and to determine the validity and scope of the proprietary rights of others. If third parties prepare and file applications for trademarks used or registered by us, we may oppose those applications and be required to participate in proceedings to determine the priority of rights to the trademark. Similarly, competitors may have filed applications for patents, may have received patents and may obtain additional patents and proprietary rights relating to products or technology that block or compete with ours. We may have to participate in interference proceedings to determine the priority of invention and the right to a patent for the technology. Litigation and interference proceedings, even if they are successful, are expensive to pursue and time consuming, and we could use a substantial amount of our financial resources in either case.

### **We rely, in part, on contractual provisions to protect our trade secrets and proprietary knowledge.**

Confidentiality agreements to which we are party may be breached, and we may not have adequate remedies for any breach. Our trade secrets may also be known without breach of such agreements or may be independently developed by competitors. Our inability to maintain the proprietary nature of our technology and processes could allow our competitors to limit or eliminate any competitive advantages we may have.

### **We may have difficulty managing change in our operations.**

We continue to undergo rapid change in the scope and breadth of our operations as we advance the development and commercialization of our products. Such rapid change is likely to place a significant strain on our senior management team and other resources. We will be required to make significant investments in our engineering, logistics, financial and management information systems and to motivate and effectively manage our employees. Our business, prospects, results of operations and financial condition could be harmed if we encounter difficulties in effectively managing the budgeting, forecasting and other process control issues presented by such a rapid change.

### **We face risks associated with our plans to market, distribute and service our products internationally.**

We intend to market, distribute and service our products internationally. We have limited experience developing and manufacturing our products to comply with the commercial and legal requirements of international markets. Our success in international markets will depend, in part, on our ability and that of our partners to secure relationships with foreign sub-distributors, and our ability to manufacture products that meet foreign regulatory and commercial requirements. Additionally, our planned international operations are subject to other inherent risks, including potential difficulties in enforcing contractual obligations and intellectual property rights in foreign countries and fluctuations in currency exchange rates. Also, to the extent our operations and assets are located in foreign countries, they are potentially subject to nationalization actions over which we will have no control.

**Our international sales and operations may be adversely affected by changes in local government laws, regulations and policies.**

Our international sales and operations are subject to risks associated with changes in local government laws, regulations and policies, including those related to tariffs and trade barriers, investments, taxation, exchange controls, employment regulations, and repatriation of earnings. Our international sales and operations are also sensitive to changes in foreign national priorities, including government budgets, as well as to political and economic instability. International transactions may involve increased financial and legal risks due to differing legal systems and customs in foreign countries. For example, as a condition of sale or to the awarding of a contract, some international customers require us to agree to offset arrangements, which may include in-country purchases, manufacturing and financial support arrangements. The contract may provide for penalties in the event we fail to perform in accordance with the offset requirements. In addition, as part of our globalization strategy, we have invested in certain countries which may carry high levels of currency, political and economic risk. While these factors or the impact of these factors are difficult to predict, any one or more of them could adversely affect our business, financial condition or operating results.

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### **Our government contracts could restrict our ability to effectively commercialize our technology.**

Some of our technology has been developed under government funding by the United States and Canada, and by other countries. The United States and Canadian governments have a non-exclusive, royalty-free, irrevocable world-wide license to practice or have practiced any of our technology developed under contracts funded by the respective government. In some cases, government agencies in the United States or Canada can require us to obtain or produce components for our systems from sources located in the United States or Canada, respectively, rather than foreign countries. Our contracts with government agencies are also subject to the risk of termination at the convenience of the contracting agency, potential disclosure of our confidential information to third parties and the exercise of march-in rights by the government. March-in rights refer to the right of the United States or Canadian governments or government agency to license to others any technology developed under contracts funded by the government if the contractor fails to continue to develop the technology. The implementation of restrictions on our sourcing of components or the exercise of march-in rights could harm our business, prospects, results of operations and financial condition. In addition, under the Freedom of Information Act, any documents that we have submitted to the government or to a contractor under a government funding arrangement are subject to public disclosure that could compromise our intellectual property rights unless such documents are exempted as trade secrets or as confidential information and treated accordingly by such government agencies.

### **Our future plans could be harmed if we are unable to attract or retain key personnel.**

We have attracted a highly skilled management team and specialized workforce, including scientists, engineers, researchers, manufacturing, marketing and sales professionals. Our future success will depend, in part, on our ability to attract and retain qualified management and technical personnel. We do not know whether we will be successful in hiring or retaining qualified personnel. Our inability to hire qualified personnel on a timely basis, or the departure of key employees, could materially and adversely affect our development and commercialization plans and, therefore, our business, prospects, results of operations and financial condition.

### **OJSC (Third Generation Company of the Wholesale Electricity Market)(OGK-3) has substantial control over us and could limit your ability to influence the outcome of key transactions, including a change of control.**

OGK-3 and its affiliates own approximately 35% of the outstanding shares of our common stock. As a result, these stockholders can significantly influence or control certain matters requiring approval by our stockholders, including the approval of mergers or other extraordinary transactions. The interests of these stockholders may differ from yours and these stockholders may vote in a way with which you disagree and which may be adverse to your interests. This concentration of ownership may have the effect of delaying, preventing or deterring a change of control of our Company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our Company and might ultimately affect the market price of our common stock.

### **If a substantial number of shares of the Company's common stock become available for sale and are sold in a short period of time, the market price of our common stock could decline.**

OGK-3 holds 44,626,939 shares of common stock, which represent in aggregate approximately 35% of the Company's outstanding common stock. If OGK-3 or its affiliates sell substantial amounts of our common stock in the public market, the market price of our common stock could decrease significantly. The perception in the public market that OGK-3 might sell shares of common stock could also depress the trading price of our common stock. A decline in the

price of shares of our common stock might impede our ability to raise capital through the issuance of additional shares of our common stock or other equity securities.

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### **Provisions in our charter documents and Delaware law may prevent or delay an acquisition of us, which could decrease the value of our common stock.**

Our certificate of incorporation, bylaws and Delaware law contain provisions that could make it harder for a third party to acquire us without the consent of our board of directors. These provisions include those that:

- authorize the issuance of up to 5,000,000 shares of preferred stock in one or more series without a stockholder vote;
- limit stockholders' ability to call special meetings;
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings; and
- provide for staggered terms for our directors.

In addition, in certain circumstances, Delaware law also imposes restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock.

### **Our stock price has been and could remain volatile.**

The market price of our common stock has historically experienced and may continue to experience significant volatility. In 2008 the market price of our common stock fluctuated from a high of \$4.17 per share in the first quarter of 2008 to a low of \$0.69 per share in the fourth quarter of 2008. Our progress in developing and commercializing our products, our quarterly operating results, announcements of new products by us or our competitors, our perceived prospects, changes in securities analysts' recommendations or earnings estimates, changes in general conditions in the economy or the financial markets, adverse events related to our strategic relationships, significant sales of our common stock by existing stockholders, including one or more of our strategic partners, and other developments affecting us or our competitors could cause the market price of our common stock to fluctuate substantially. In addition, in recent years, the stock market has experienced significant price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies for reasons unrelated to their operating performance and may adversely affect the price of our common stock. In addition, we may be subject to additional securities class action litigation as a result of volatility in the price of our common stock, which could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business, prospects, results of operations and financial condition.

### **Our failure to comply with NASDAQ's listing standards could result in the delisting of our common stock by NASDAQ from the NASDAQ Global Market and severely limit the ability to sell our common stock.**

Our common stock is currently traded on the NASDAQ Global Market. Under NASDAQ's listing maintenance standards, if the closing bid price of our common stock is under \$1.00 per share for 30 consecutive trading days, NASDAQ will notify us that we may be delisted from the NASDAQ Global Market. If the closing bid price of our common stock does not thereafter regain compliance for a minimum of 10 consecutive trading days during the 90 days following notification by NASDAQ, NASDAQ may delist our common stock from trading on the NASDAQ Global Market. There can be no assurance that our common stock will remain eligible for trading on the NASDAQ Global Market. In addition, if our common stock is delisted, our stockholders would not be able to sell our common stock on the NASDAQ Global Market, and their ability to sell any of our common stock would be severely, if not completely, limited.

On October 17, 2008, the NASDAQ Stock Market, citing almost unprecedented turmoil in U.S. and world financial markets issued a release temporarily suspending through January 16, 2009 its continued listing requirements related to minimum bid price set forth in Marketplace Rule 4310(c)(4) and market value of shares set forth in Marketplace Rule 4310(c)(7). On December 19, 2008, the NASDAQ Stock Market extended the temporary suspension until April 20, 2009. There can be no assurance that the temporary suspension of such rules will be extended beyond April 20, 2009. If the suspension of such rules is lifted, there can be no assurance that we will be able to maintain compliance with the listing requirements. On March 5, 2009, the per share price of our common stock closed at \$0.71 on the NASDAQ Global Market. If we are not able to maintain compliance with such continuing listing requirements beginning April 20, 2009, our stock may be delisted from the NASDAQ Global Market, which could have a negative effect on the price of our common stock, as well as on our ability to raise additional funds.



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### **If we do not realize the expected benefits from our restructuring plans, our business prospects may suffer and our operating results and financial condition would be adversely affected.**

On June 10, 2008 and December 18, 2008, the Company adopted restructuring plans. If we are unable to realize the benefits from our restructuring plans, our business prospects may suffer and our operating results and financial condition would be adversely affected. Details of the Company's restructuring plans are available in previously filed Form 8-K reports dated June 10, 2008 and December 18, 2008 as filed on June 16, 2008 and December 22, 2008, respectively.

### **Adverse changes in general economic conditions in the United States or any of the major countries in which we do business could adversely affect our operating results.**

As a global company, we are subject to the risks arising from adverse changes in global economic conditions. For example, as a result of the recent financial crisis in the credit markets, softness in the housing markets, difficulties in the financial services sector and continuing economic uncertainties, the direction and relative strength of the U.S. economy has become increasingly uncertain. If economic growth in the United States and other countries continues to slow or recede, our current or potential customers may delay or reduce technology purchases. This could result in reductions in sales of our products, longer sales cycles, slower adoption of new technologies and increased price competition, which could materially and adversely affect our business, results of operations and financial condition.





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### **Item 1B. Unresolved Staff Comments**

We have received no written comments regarding our periodic or current reports from the staff of the Securities and Exchange Commission that were issued 180 days or more preceding the end of our 2008 fiscal year.

### **Item 2. Properties**

Our principal executive offices are located in Latham, New York. At our 36-acre campus, we own a 56,000 square foot research and development center, a 32,000 square foot office building and a 50,000 square foot manufacturing facility and believe that these facilities are sufficient to accommodate our anticipated production volumes for at least the next two years. Our principal executive office also leases a 25,000 square foot warehouse facility in New York.

In connection with the acquisitions of Cellex and General Hydrogen, we also lease two facilities in Richmond, British Columbia with combined square footage of approximately 70,200 square feet to accommodate office, prototyping, and research and development activities.

The Company also leases approximately 14,000 square feet of office and lab space in Holland, approximately 9,000, 6,000 and 900 square feet of office space in Ohio, Tennessee and Washington D.C., respectively.

### **Item 3. Legal Proceedings**

In May 2008, the Company filed a lawsuit against UBS Financial Services Inc. and UBS AG in the United States District Court, Northern District of New York, the financial advisor that placed the Company in certain auction rate debt securities held in the Company's investment portfolio. The lawsuit seeks a return of the \$62.8 million of Company funds UBS invested in auction rate debt securities in contravention to the Company's investment policy, among other damages.

On December 15, 2008, Plug Power Inc. (Plug or the Company) accepted an offer by UBS AG (UBS) of certain rights to cause UBS to purchase, at a future date, auction rate debt securities owned by the Company. The repurchase rights are offered in connection with UBS's obligations under settlement agreements with the U.S. Securities and Exchange Commission and other federal and state regulatory authorities. The offering, the settlement agreements, and the respective rights and obligations of the parties, are described in a prospectus issued by UBS dated October 7, 2008, File No. 333-153882 (the Prospectus). As a result of accepting UBS's offer, the Company can require UBS to repurchase at par value all of the auction rate debt securities held by the Company at any time during the period from June 30, 2010 through July 2, 2012 (if the Company's auction rate debt securities have not previously been sold by the Company or by UBS on its behalf), and pending litigation between the parties has been dismissed with prejudice.

In connection with the Prospectus offering, the Company also entered into a Credit Line Agreement with UBS Credit Corp. that provides the Company with a credit line of up to \$62.875 million with the Company's auction rate debt securities pledged as collateral. The Company has drawn down the full amount of the credit line. In accordance with the offering by UBS, the loan will be treated as a "no net cost loan" as defined in the Prospectus. The loan will bear interest at a rate equal to the average rate of interest paid to Plug Power on the pledged auction rate debt securities

such that the net interest cost to Plug Power will be zero. Though the loan is payable on demand, if UBS Credit Corp. should exercise its right to demand repayment of any portion of the loan prior to the date the Company can exercise its repurchase rights, UBS and certain of its affiliates will arrange for alternative financing on terms and conditions substantially the same as those contained in the loan. If alternative financing cannot be established, then UBS or one of its affiliates will purchase the Company's pledged auction rate debt securities at par. As a result, the loan and any alternative financing will not be payable by the Company prior to the time that the Company can require UBS to repurchase the pledged auction rate debt securities in full satisfaction of the outstanding amounts on the Line of Credit. Proceeds of sales of the Company's auction rate debt securities will first be applied to repayment of the credit line with the balance, if any, to be maintained by the Company. UBS has previously provided investment management services for a portion of the Company's investment portfolio.

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

None.

**Table of Contents****PART II****Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity****Item 5. Securities**

During the years ended December 31, 2008 and 2007, we issued 379,189 and 279,054 shares of our common stock in connection with matching contributions under our 401(k) Savings & Retirement Plan. The issuance of these shares is exempt from registration under Section 3(a)(2) of the Securities Act of 1933, as amended.

*Market Information.* Our common stock is traded on the NASDAQ Global Market under the symbol PLUG. As of March 2, 2009, there were approximately 2,806 record holders of our common stock. However, management believes that a significant number of shares are held by brokers under a nominee name and that the number of beneficial shareholders of our common stock exceeds 52,000. The following table sets forth high and low last reported sale prices for our common stock as reported by the NASDAQ Global Market for the periods indicated:

	Sales prices	
	High	Low
2008		
1st Quarter	\$ 4.17	\$ 2.52
2nd Quarter	\$ 3.58	\$ 2.32
3rd Quarter	\$ 2.91	\$ 0.90
4th Quarter	\$ 1.55	\$ 0.69
2007		
1st Quarter	\$ 3.96	\$ 2.86
2nd Quarter	\$ 3.49	\$ 2.90
3rd Quarter	\$ 3.33	\$ 2.49
4th Quarter	\$ 4.39	\$ 2.97

*Dividend Policy.* We have never declared or paid cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future. Any future determination as to the payment of dividends will depend upon capital requirements and limitations imposed by our credit agreements, if any, and such other factors as our board of directors may consider.



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*Five-Year Performance Graph* . Below is a line graph comparing the percentage change in the cumulative total return on the Company's common stock, based on the market price of the Company's common stock, with the total return of companies included within the NASDAQ Market Index and the companies included within the Russell 300 Technology Index for the period commencing December 31, 2003 and ending December 31, 2008. The calculation of the cumulative total return assumes a \$100 investment in the Company's common stock, the NASDAQ Market Index and the Russell 300 Technology Index on December 31, 2003 and the reinvestment of all dividends.

<b>Index</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
PLUG POWER INC.	100.00	84.28	70.76	53.66	54.48	14.07
RUSSELL 300 TECHNOLOGY INDEX	100.00	105.58	111.90	123.31	145.69	83.38
NASDAQ MARKET INDEX	100.00	108.59	110.08	120.56	132.39	78.72

See also Part III Item 12 in this Annual Report on Form 10-K for additional detail related to security ownership and related stockholder matters, and for additional detail on equity compensation plan matters.





**Table of Contents****Item 6. Selected Financial Data**

The following tables set forth selected financial data and other operating information of the Company. The selected statements of operations and balance sheet data for 2008, 2007, 2006, 2005, and 2004 as set forth below are derived from the audited consolidated financial statements of the Company. The information is only a summary and you should read it in conjunction with the Company's audited consolidated financial statements and related notes and other financial information included herein and Management's Discussion and Analysis of Financial Condition and Results of Operations.

	<b>Years Ended December 31,</b>				
	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>
	<b>(in thousands, except per share data)</b>				
<b>Statements Of Operations:</b>					
Product and service revenue	\$ 4,667	\$ 3,082	\$ 2,657	\$ 4,881	\$ 5,306
Research and development contract revenue	13,234	13,189	5,179	8,606	10,835
Total revenue	17,901	16,271	7,836	13,487	16,141
Cost of product and service revenues	11,442	9,399	4,833	4,098	5,368
Cost of research and development contract revenues	21,505	19,045	7,637	12,076	13,474
In-process research and development					
Research and development expense	34,987	39,218	41,577	35,632	32,453
Selling, general and administrative expenses	28,333	19,323	12,268	8,973	8,423
Goodwill impairment charge	45,843				
Amortization of intangible assets	2,225	1,614		687	2,750
Other income (expense), net	4,734	11,757	8,169	(3,764 )	(412 )
Net loss	\$ (121,700)	\$ (60,571 )	\$ (50,310 )	\$ (51,743 )	\$ (46,739 )
Loss per share, basic and diluted	\$ (1.36 )	\$ (0.69 )	\$ (0.58 )	\$ (0.66 )	\$ (0.64 )
Weighted average number of common shares outstanding	89,383	87,342	86,100	78,463	73,126
<b>Balance Sheet Data:</b>					
<i>(at end of the period)</i>					
Unrestricted cash, cash equivalents, trading securities and available-for-sale securities	\$ 157,339	\$ 165,701	\$ 269,123	\$ 97,563	\$ 66,849
Total assets	209,112	268,392	307,920	139,784	117,997
Borrowings under line of credit	62,875				
Current portion of long-term obligations	401	1,384		527	427

Long-term obligations	1,313	4,580	1,112	4,659	4,996
Stockholders' equity	125,864	248,900	294,528	124,955	102,113
Working capital	86,171	163,906	267,002	95,511	64,073

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

The discussion contained in this Form 10-K contains forward-looking statements, within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, that involve risks and uncertainties. Our actual results could differ materially from those discussed in this Form 10-K. In evaluating these statements, you should review Part I, Item 1A: Risk Factors and our Consolidated Financial Statements and notes thereto included in Part II, Item 8: Financial Statements and Supplementary Data of this Form 10-K.

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### *Overview*

Plug Power Inc. is a development stage enterprise involved in the design, development and manufacture of fuel cell systems for material handling and stationary power markets worldwide. The Company is a development stage enterprise because substantially all of the Company's resources and efforts are aimed at the discovery of new knowledge that could lead to significant improvement in fuel cell reliability, durability and affordability, and the establishment, expansion and stability of markets for the Company's products. We are focused on proton exchange membrane, or PEM, fuel cell and fuel processing technologies and fuel cell/battery hybrid technologies, from which multiple products are available.

The Company continues to experience significant net outflows of cash from operations and devotes significant efforts towards financial planning in order to forecast future cash spending and the ability to continue product research and development activities. We continue to survey the market to determine the most solid path to profitability for Plug Power. Currently, the Company's primary focus and resources are placed on our GenDrive solution for the material handling market. Fuel cell technology within the Company's targeted market, material handling power, and secondary markets, remote prime, residential and backup power, is still early in the technology adoption life cycle.

We currently offer our hydrogen fueled GenDrive power unit for commercial sale to material handling (forklift) applications, with a focus on multi-shift high volume manufacturing and high throughput distribution sites. We have sold, on commercial terms, two product offerings to target customers including Wal-Mart, Bridgestone Firestone and Nestle Waters. Our sales to Central Grocers and Sysco Foods involve Greenfield conversion sites. Greenfield sites offer the potential for the greatest financial benefits to our customers by eliminating the need for customers to make capital investments in batteries and the associated chargers, storage and changing systems.

Additionally, we continue to develop our low-temperature remote-prime, and high-temperature residential GenSys continuous power products. Our low-temperature GenSys unit successfully completed a field trial in rural India in 2008. It is offered commercially to remote telecommunications providers whose sites are located where the grid is unreliable or non-existent. Our high-temperature GenSys unit will be tested by the U.S. Department of Energy and National Grid during field trials in 2009. Learning from the trial will help determine system refinements for incorporation into the next-generation system design.

In 2008, manufacturing and sales support was given to our GenCore product which provides back-up power to businesses and government in critical infrastructure, specifically in the wireless and wireline telecommunications market. We continue to work with certain established customers on future initiatives related to this product.

As an extension of our GenSys development work, we developed technology in support of the automotive fuel cell market under a series of agreements with Honda R&D Co Ltd. of Japan (Honda), a subsidiary of Honda Motor Co., Ltd. In 2008 we continued our work with Honda, maintaining the phase 4 system at Honda's facility in Torrance, California.

We also form relationships with customers and enter into development and demonstration programs with government agencies and other energy providers. Many of our initial sales of GenCore, GenDrive and GenSys are contract-specific arrangements containing multiple obligations that may include a combination of fuel cell systems, continued service,

maintenance, a supply of hydrogen and other support. The multiple obligations within our contractual arrangements are not accounted for separately based on our limited commercial experience and lack of evidence of fair value for the separate elements. As a result, we defer recognition of product and service revenue and recognize revenue on a straight-line basis over the contractual terms as the continued service, maintenance and other support obligations expire, which are may be for periods of twelve (12) to thirty (30) months or in some cases as long as (8) eight years. See Critical Accounting Policies and Estimates Revenue Recognition. Our customers have no special right of return, price protection allowances or other sales incentives. We do offer a discount from our manufacturer's suggested retail price to resellers to allow for the mark-up of the reseller.

As we gain experience, including field experience relative to service and warranty of our initial products, the fair values for the multiple elements within our future contracts may become determinable and we may, in future periods, recognize product revenue upon delivery or installation of the product, or we may continue to defer recognition, based on application of appropriate guidance within EITF 00-21, Accounting for Revenue Arrangements with Multiple Deliverables, or changes in the manner in which we structure contractual agreements, including our agreements with distribution partners.

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Our cash requirements depend on numerous factors, including completion of our product development activities, ability to commercialize our fuel cell systems, market acceptance of our systems and other factors. We expect to pursue the expansion of our operations through internal growth and strategic acquisitions. As of December 31, 2008, we had cash and cash equivalents of \$80.8 million, trading securities of \$52.7 million, available-for-sale securities of \$23.8 million and working capital of \$86.2 million. See Liquidity and Capital Resources below.

During the year ended December 31, 2008, cash used for operating activities was \$56.6 million, consisting primarily of a net loss of \$121.7 million offset, in part, by non-cash expenses in the amount of \$59.8 million, including \$6.6 million for amortization and depreciation, \$8.6 million for stock based compensation, \$45.8 million for goodwill impairment, \$10.2 million other than temporary impairment loss on available-for-sale securities, a \$10.2 million gain on auction rate debt securities repurchase agreement, and a \$1.2 million gain on termination of repayable government assistance. Cash provided by investing activities for the year ended December 31, 2008 was \$65.7 million, consisting of \$67.1 million of maturities, net of purchases, of available-for-sale securities, offset by \$1.4 million used to purchase property, plant and equipment. Cash provided by financing activities was approximately \$60.2 million consisting primarily of proceeds from borrowings under line of credit of \$62.9 million.

We have financed our operations from inception through December 31, 2008 primarily from the sale of equity (including those related to stock-based compensation), which has provided cash in the amount of \$636.3 million since inception. Also since inception, cumulative net cash used in operating activities has been \$454.3 million, and cash used in investing activities has been \$154.9 million, including our purchase of property, plant and equipment of \$38.3 million, our net investments in available-for-sale securities in the amount of \$86.5, and cash used for acquisitions of \$19.3 million, net of cash received.

Subsequent to December 31, 2008, we issued 1,349,772 shares of common stock for the achievement of scorecard objectives in 2008.

### ***Recent Developments***

*Goodwill Impairment.* The Company performs its annual goodwill assessment under SFAS 142 at the date of its fiscal year end. As a result of this assessment, the Company determined that a goodwill impairment had occurred and recorded a non-cash goodwill impairment charge of \$45.8 million. See Note 7 of the Notes to Consolidated Financial Statements.

*Credit Line Agreement and Auction Rate Security Repurchase Agreement.* In December 2008, the Company entered into a Credit Line Agreement with a third-party lender with a maximum availability of \$62.9 million. As of December 31, 2008, the Company has drawn down \$62.9 million on this line of credit. The Company's auction rate securities included in trading securities on the consolidated balance sheet are pledged as collateral for the Credit Line Agreement. The fair value of the auction rate securities is \$52.7 million at December 31, 2008. The Credit Line Agreement bears interest at a variable rate equal to the average rate of interest earned by the Company on the auction rate securities pledged as collateral for the Credit Line Agreement. The interest rate on the Credit Line Agreement was 2.418% at December 31, 2008.

The Credit Line Agreement is repayable on demand by the third-party lender. If the third-party lender exercises its right to demand repayment of the advances under the Credit Line Agreement prior to June 30, 2010 (the date upon which the Company can first exercise its rights under the Repurchase Agreement discussed below), the third-party

lender is required to arrange alternative financing on terms substantially the same as the Credit Line Agreement or the third party lender must repurchase the auction rate securities pledged as collateral for the Credit Line Agreement at their par value, which is \$62.9 million at December 31, 2008.

In December 2008, the Company has also entered into a Repurchase Agreement with the third-party lender such that the Company may require the third-party lender to repurchase the auction rate securities pledged as collateral for the Credit Line Agreement, at their par value, commencing June 30, 2010 and through July 2, 2012. At December 31, 2008 the fair value of this item is \$10.2 million and is recorded as gain on auction rate debt securities repurchase agreement in the consolidated statements of operations.

*Restructuring.*

On June 10, 2008, the Company adopted a restructuring plan to become a market and sales driven organization. The Company has refocused on the GenDrive motive power product where there has been significant customer interest in fuel cell power units. As part of the restructuring, the Company has reduced its workforce, cut back discretionary spending, and deferred non strategic projects. As a result of the reduced workforce and contract cancellation, the Company recorded restructuring charges in the amount of \$3,744,801 within selling, general and administrative expenses in the consolidated statement of operations for 2008. At December 31, 2008, \$402,721 remains as accrued expenses on the consolidated balance sheet.

On December 18, 2008, the Company adopted a restructuring plan intended to focus the Company on revenue growth, improve organizational efficiency and position the Company for long-term profitability. As part of this plan, the Company implemented a reduction in workforce by eliminating 90 positions in addition to terminating purchase commitments and charging off inventory related to lapsed product lines. As a result, the Company recorded restructuring charges in the amount of \$3,990,364 within selling, general and administrative expenses and \$2,295,370 in cost of product and service revenue in the consolidated statement of operations for the twelve months ended December 31, 2008. At December 31, 2008, \$3,990,364 remains as accrued expenses on the consolidated balance sheets.

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*Class B Stock Conversion.* On December 23, 2008, the Company announced the sale by Smart Hydrogen Inc. to OJSC (Third Generation Company of the Wholesale Electricity Market) ("OGK-3") of all 395,000 shares of the Company's Class B Capital Stock as well as 5,126,939 shares of the Company's common stock, the automatic conversion of the Company's Class B Capital Stock into 39,500,000 shares of common stock, and the termination of all the rights and obligations attached to the Class B Capital Stock. The rights and obligations attached to the Class B Capital Stock that terminated include but are not limited to the right to appoint directors, veto rights and voting support obligations under the Investor Rights Agreement dated as of June 29, 2006, as amended (the "Investor Rights Agreement"). OGK-3 has executed a joinder agreement to the Investor Rights Agreement and is prohibited from transferring its shares of the Company's Common Stock to a competitor of the Company. OGK-3 is also bound by the same standstill provisions that applied to Smart Hydrogen, as set forth in the Investor Rights Agreement. This transfer and conversion triggered a change of control pursuant to Section 17 of our 1999 Stock Option and Incentive Plan; and, therefore, each outstanding stock option automatically became fully exercisable and conditions and restrictions on each outstanding restricted stock award, deferred stock award and performance share award that relates solely to the passage of time and continued employment were removed.

## ***Results of Operations***

*Product and service revenue.* We defer recognition of product and service revenue at the time of shipment and recognize revenue as the continued service, maintenance and other support obligations expire.

Many of our initial sales of product contain multiple obligations that may include a combination of fuel cell systems, continued service, maintenance, fueling and other support. While contract terms generally require payment shortly after shipment or delivery and installation of the fuel cell system and are not contingent on the achievement of specific milestones or other substantive performance, the multiple obligations within our contractual arrangements are generally not accounted for separately based on our limited experience and lack of evidence of fair value of the different components. As a result, we defer recognition of product and service revenue and recognize revenue on a straight-line basis as the continued service, maintenance and other support obligations expire, which are generally for periods of twelve to thirty months, or in some cases as long as eight years. In the case of our limited consignment sales, we do not begin recognizing revenue on a deferred basis until the customer has accepted the product, at which time the risks and rewards of ownership have transferred, the price is fixed and we have a reasonable expectation of collecting upon billing. See Critical Accounting Policies and Estimates Revenue Recognition.

Product and service revenue for the year ended December 31, 2008 increased \$1.6 million, or 51%, to \$4.7 million from \$3.1 million for the year ended December 31, 2007. The increase is related to increased system shipments and the revenue recognized on those shipments as well as an increase in non-deferred revenue. The non-deferred revenue represents revenue associated with replacement parts or services not covered by service agreements or other similar types of sales where the Company has no continuing obligation after the parts are shipped or delivered or after services are rendered.

In the product and service revenue category, during the year ended December 31, 2008, we shipped 273 fuel cell systems compared to 204 fuel cell systems during the year ended December 31, 2007. In the year ended December 31, 2008, we recognized \$2.3 million of revenue for products shipped or delivered or services rendered in the year ended December 31, 2008, which includes \$1.1 million of non-deferred revenue as compared to \$1.1 million of revenue recognized in the year ended December 31, 2007 for products shipped or delivered or services rendered in the year ended December 31, 2007, which includes \$365,000 of non-deferred revenue. Additionally, in the year ended



December 31, 2008 we recognized approximately \$2.4 million of product and services revenue originally deferred at December 31, 2007, whereas in the year ended December 31, 2007 we recognized \$2.0 million of revenue originally deferred at December 31, 2006.

Product and service revenue for the year ended December 31, 2007 increased \$425,000 or 16% to \$3.1 million from \$2.7 million for the year ended December 31, 2006. Approximately \$289,000 of the increase is related to the acquisitions of Cellex and General Hydrogen. The remaining amount of the increase is related to increased system shipments in 2007 and the revenue recognized on those shipments, partially offset by decreased revenue recognition for systems shipped or delivered prior to 2007. Additionally, we recognized \$365,000 and \$291,000 of non deferred revenue during the years ended December 31, 2007 and 2006, respectively. This revenue represents revenue associated with replacement parts or services not covered by service agreements or other similar types of sales where the Company has no continuing obligation after the parts are shipped or services rendered.

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In the product and service revenue category, during 2007 the Company shipped 204 fuel cell systems compared to 109 fuel cell systems during 2006. In 2007, we recognized \$1.1 million of revenue for products shipped or services rendered in 2007 compared to \$800,000 of revenue recognized in 2006 for products shipped or services rendered in 2006. Additionally, in 2007 we recognized approximately \$2.0 million of product and services revenue originally deferred at December 31, 2006 whereas in 2006 we also recognized \$1.9 million of revenue originally deferred at December 31, 2005.

*Research and development contract revenue.* Research and development contract revenue primarily relates to cost reimbursement research and development contracts associated with the development of PEM fuel cell technology. We generally share in the cost of these programs with our cost-sharing percentages generally ranging from 22% to 78% of total project costs. Revenue from time and material contracts is recognized on the basis of hours expended plus other reimbursable contract costs incurred during the period. Revenue from fixed fee contracts is recognized on the basis of percentage of completion. We expect to continue certain research and development contract work that is directly related to our current product development efforts.

Research and development contract revenue for the years ended December 31, 2008 was \$13.2 million compared to \$13.2 million in 2007. The acquisitions in 2007 increased research and development contract revenue \$2.2 million as a result of twelve full months of operations in 2008 versus 2007, offset by a decrease of \$2.2 million related to a completion of contracts from prior years. In the research and development contract revenue category, during the twelve months ended December 31, 2008 we shipped 5 GenSys fuel cell systems and 5 GenDrive fuel cell systems.

Research and development contract revenue for the year ended December 31, 2007 increased to \$13.2 million from \$5.2 million in 2006. The acquisitions of Cellex and General Hydrogen accounted for approximately \$1.2 million of the increase. Of the remaining \$6.8 million increase, approximately \$2.2 million resulted from additional U.S. Department of Energy (DOE) contracts awarded in 2007; \$3.5 million resulted from 4 additional contracts received from the U.S. Department of Defense (DOD) in 2007; and revenue from new contracts with NASA, the European Union, and Montana State University contributed approximately \$1.8 million in 2007. These increases were partially offset by decreases resulting from completion of activities under other government contracts in 2006.

*Cost of product and service revenue.* Cost of product and service revenue includes the direct material cost incurred in the manufacture of the products we sell as well as the labor and material costs incurred for product maintenance, replacement parts and service under our contractual obligations.

Cost of product and service revenue for the year ended December 31, 2008 increased \$2.0 million to \$11.4 million compared to \$9.4 million in 2007. The increase was related to \$2.3 in inventory write-offs associated with the corporate restructuring plan announced in December, 2008, coupled with higher cost of product and service revenues recorded due to an increased in shipments in 2008. This was partially offset by one-time charges of \$2.0 million for certain future expected service and warranty costs for existing units in the field recorded in the second quarter of 2007. Also contributing to the increase was an increase in servicing costs of the larger installed base.

Cost of product and service revenue for the year ended December 31, 2007 increased \$4.6 million to \$9.4 million compared to \$4.8 million in 2006. Approximately \$713,000 of the increase is related to the acquisitions of Cellex and General Hydrogen. The remaining increase of \$3.9 million primarily related to a \$2.0 million charge for certain future expected service and warranty costs for existing fuel cell units in the field. Also contributing to the increase was an increase in shipments and servicing costs of the larger installed base.

*Cost of research and development contract revenue.* Cost of research and development contract revenue includes costs associated with research and development contracts including: cash and non-cash compensation and benefits for engineering and related support staff, fees paid to outside suppliers for subcontracted components and services, fees paid to consultants for services provided, materials and supplies used and other directly allocable general overhead costs allocated to specific research and development contracts.

Cost of research and development contract revenue for the year ended December 31, 2008 increased \$2.5 million to \$21.5 million from \$19.0 million in 2007. This increase is primarily related to a higher percentage of cost sharing on research and development contracts in 2008.

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Cost of research and development contract revenue for the year ended December 31, 2007 increased \$11.4 to \$19.0 million from \$7.6 million in 2006. The acquisitions of Cellex and General Hydrogen contributed approximately \$1.3 million of this increase. The remainder of the increase, about \$10.1 million, was associated with the additional effort applied to funded research and development projects commensurate with the additional revenue mentioned above.

*Research and development expense.* Research and development expense includes: materials to build development and prototype units, cash and non-cash compensation and benefits for the engineering and related staff, expenses for contract engineers, fees paid to outside suppliers for subcontracted components and services, fees paid to consultants for services provided, materials and supplies consumed, facility related costs such as computer and network services, and other general overhead costs associated with our research and development activities.

Research and development expense decreased to \$35.0 million for the year ended December 31, 2008 from \$39.2 million in 2007. This decrease was a direct result of the corporate restructuring plans announced in June and December of 2008, which included a reduced workforce and a reduction in non-strategic research and development projects. This decrease was largely offset by an increase of \$2.0 million, primarily due to a full twelve month period of expense in 2008 related to the acquisition of Cellex and General Hydrogen, versus a partial twelve month period in 2007.

Research and development expense decreased to \$39.2 million for the year ended December 31, 2007 from \$41.6 million in 2006. The acquisitions of Cellex and General Hydrogen contributed \$6.4 million of additional research and development expense which was more than offset by a reduction of nearly \$8.8 million related to the activities of the pre-acquisition business. This reduction in expense is primarily related to the Company's ability to receive increased third party funding to perform certain activities necessary to advance our understanding of various types of fuel cell systems consistent with our long-term goal of developing systems and applications. As a result of the receipt of funding for certain research and development programs, the related costs associated with these projects is included in cost of contract research and development revenue as described above.

*Selling, general and administrative expenses.* Selling, general and administrative expenses includes cash and non-cash compensation, benefits and related costs in support of our general corporate functions, including general management, finance and accounting, human resources, selling and marketing, information technology and legal services.

Selling, general and administrative expenses for the year ended December 31, 2008 increased from the prior year \$9.0 million to \$28.3 million. Approximately \$7.0 million of the increase is related to the corporate restructuring plans announced in June and December of 2008. The remainder of the increase is a direct result of a full twelve month period of expense in 2008 related to the acquisition of Cellex and General Hydrogen, versus a partial twelve month period in 2007.

Selling, general and administrative expenses for the year ended December 31, 2007 increased from the prior year \$7.0 million to \$19.3 million. Approximately \$4.5 million of the increase is related to the acquisition of Cellex and General Hydrogen. The remaining \$2.5 million of the increase is primarily related to the increased size of our sales group in an effort to increase market adoption of our fuel cell technology.

*Goodwill Impairment.* The Company performs its annual goodwill assessment under SFAS 142 at the date of its fiscal year end. As a result of this assessment, the Company determined that a goodwill impairment has occurred and recorded an impairment charge of \$45.8 million. See Note 7 (Goodwill and Other Intangible Assets) of the Notes to

Consolidated Financial Statements.

*Amortization of intangible assets.* Amortization of intangible assets represents the amortization associated with the Company's acquired identifiable intangible assets from Cellex and General Hydrogen, including acquired technology and customer relationships, which are being amortized over eight years.

Amortization of intangible assets increased to \$2.2 million for the year ended December 31, 2008, compared to \$1.6 million for the year ended December 31, 2007. The increase is related to a full twelve month period of amortization of intangible assets in 2008 as compared to a partial twelve month period in 2007.

*Interest and other income and net realized gains from available-for-sale securities.* Interest and other income and net realized gains from available-for-sale securities consists primarily of interest earned on our cash, cash equivalents, available-for-sale and trading securities, other income, and the net realized gain from the sale of available-for-sale securities. Interest income on trading securities from the date of the transfer of the auction rate debt securities to trading in December 2008 was not significant.

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Interest and other income and net realized gains from available-for-sale securities decreased \$7.2 million to \$5.1 million for the year ended December 31, 2008 from \$12.3 million for the year ended December 31, 2007. This decrease is primarily related to lower cash balances coupled with lower yields on our investments due to a declining rate environment. In addition, the yield on auction rate debt securities declined significantly in 2008 as compared to 2007 due primarily to the impact of failed auctions related to these securities which began in February 2008. This was partially offset by a \$1.2 million gain relating to the termination of Technology Partnerships Canada (TPC) agreements with Cellex and General Hydrogen. Total net realized gains/losses from the sale of available-for-sale securities was a gain of \$389,000 and \$118,000 and 68,000 for the years ended December 31, 2008, 2007 and 2006 respectively.

Interest income and net realized gains/losses from the sale of available-for-sale securities increased to \$12.3 million for the year ended December 31, 2007 from \$8.3 million for the year ended December 31, 2006. Nearly all of the increase of \$4.0 million was the result of higher yields on our cash and available-for-sale securities in 2007. Total net realized gains from the sale of available-for-sale securities was a gain of \$118,000 and \$68,000 for the years ended December 31, 2007 and 2006, respectively.

*Gain on auction rate debt securities repurchase agreement.* In December 2008, the Company entered into a Repurchase Agreement with the third-party lender such that the Company may require the third-party lender to repurchase the auction rate debt securities pledged as collateral for the Credit Line Agreement, at their par value, from June 30, 2010 through July 2, 2012. The Company has elected to record this item at its fair value in accordance with SFAS No. 159, The Fair Value Option for Assets and Financial Liabilities. At December 31, 2008, the fair value of this item is \$10.2 million and is recorded as gain on auction rate debt securities repurchase agreement in the consolidated statements of operations.

*Impairment loss on available-for-sale securities.* Due to the liquidity issues in the credit and capital markets, the market for auction rate debt securities began experiencing auction failures in February 2008 and there have been no successful auctions for the securities held in our portfolio since the failures began. Given the lack of liquidity in the market for auction rate debt securities, the Company concluded that the estimated fair value of these securities has become lower than the cost of these securities, and, based on an analysis of the other than temporary impairment factors, management has determined that this difference represents a decline in fair value that is other than temporary. Accordingly, the Company recorded an other than temporary impairment charge of \$10.2 million and \$0 million, respectively in the twelve months ended December 31, 2008 and 2007 in the consolidated statements of operations.

As a result of the Repurchase Agreement entered into with a third party lender in December 2008, the Company reclassified the auction rate debt securities from available-for-sale securities to trading securities. The change in the fair value of these trading securities from the date of their transfer into trading through December 31, 2008 was not significant.

*Interest and other expense.* Interest and other expense consists of interest on repayable government assistance amounts related to the activities of Cellex and General Hydrogen, interest related to the Line of Credit Agreement, and foreign currency exchange gain/(loss).

Interest and other expense for the year ended December 31, 2008 was approximately \$401,000, compared to \$580,000 for the year ended December 31, 2007. The decrease is related to foreign currency exchange losses from our Canadian operations. Interest expense related to the Credit Line Agreement entered into in December 2008 was not significant.

Interest and other expenses increased approximately \$409,000 to \$580,000 for the year ended December 31, 2007, compared to \$171,000 for the year ended December 31, 2006. This increase is primarily related to foreign currency exchange losses from our newly acquired Canadian operations.

*Income taxes.* We did not report a benefit for federal and state income taxes in the consolidated financial statements as the deferred tax asset generated from our net operating loss has been offset by a full valuation allowance because it is more likely than not that the tax benefits of the net operating loss carry forward will not be realized.

***Critical Accounting Policies and Estimates***

The preparation of financial statements in conformity with generally accepted accounting principles and related disclosures requires management to make estimates and assumptions that affect:

- the amounts reported for assets and liabilities;
- the disclosure of contingent assets and liabilities at the date of the financial statements; and
- the amounts reported for revenues and expenses during the reporting period.

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Specifically, we must use estimates in determining the economic useful lives of assets, including identifiable intangible assets, and various other recorded or disclosed amounts. Therefore, our consolidated financial statements and related disclosures are necessarily affected by these estimates. We evaluate these estimates on an ongoing basis, utilizing historical experience and other methods considered reasonable in the particular circumstances. Nevertheless, actual results may differ significantly from these estimates. To the extent that actual outcomes differ from estimates, or additional facts and circumstances cause management to revise estimates, our financial position as reflected in our consolidated financial statements will be affected. Any effects on business, financial position or results of operations resulting from revisions to these estimates are recorded in the period in which the facts that give rise to the revision become known.

We believe that the following are our most critical accounting policies affected by the estimates and assumptions the Company must make in the preparation of its consolidated financial statements and related disclosures:

*Revenue recognition:* We are a development stage enterprise currently performing field testing and selling and marketing of our products to a limited number of customers, including distribution center operators, manufacturing facilities, telecom, utilities, and government entities. Our fuel cell systems are designed to replace incumbent electric power technologies in material handling equipment, serve as complementary or replacement power in prime power applications and serve as complementary quality power sources in back-up applications. Our current product offerings are intended to offer complementary, quality power while demonstrating the market value of fuel cells as a preferred form of alternative distributed power generation. Subsequent enhancements to our initial product are expected to expand the market opportunity for fuel cells by lowering the installed cost, decreasing operating and maintenance costs, increasing efficiency, improving reliability, and adding features such as grid independence and co-generation as well as UPS applications.

We apply the guidance within SEC Staff Accounting Bulletin No. 104, Revenue Recognition in Financial Statements (SAB 104), to our initial sales contracts to determine when to properly recognize revenue. Many of our initial sales of product contain multiple obligations that may include a combination of fuel cell systems, continued service, maintenance, a supply of hydrogen and other support. While contract terms generally stipulate that title and risk of ownership pass and require payment upon shipment or delivery of the fuel cell system, or acceptance in the case of certain consignment sales, and also stipulate that payment is not contingent on the achievement of specific milestones or other substantive performance, the multiple obligations within our contractual arrangements are generally not accounted for separately based on our limited experience and lack of evidence of fair value of the different components. As a result, we defer recognition of product and service revenue and recognize revenue on a straight-line basis over the stated contractual term, as the continued service, maintenance and other support obligations expire, which may be for periods of twelve to thirty months or in some cases as long as eight years, or over the anticipated service period if expected to exceed the contractual service period. In the case of our limited consignment sales, we do not begin recognizing revenue on a deferred basis until the customer has accepted the product, at which time the risks and rewards of ownership have transferred, the price is fixed and we have a reasonable expectation of collection upon billing. The costs associated with the product, service and other obligations are generally expensed as they are incurred.

As we gain experience, including field experience relative to service and warranty obligations based on the sales of our initial products, the fair values for the multiple elements within our future contracts may become determinable and we may, in future periods, recognize revenue upon shipment or delivery of the product or we may continue to defer recognition, based on application of appropriate guidance within EITF 00-21, Accounting for Revenue Arrangements



with Multiple Deliverables, or changes in the manner in which we structure contractual agreements, including our agreements with distribution partners.

Additionally, our research and development contract revenue primarily relates to cost reimbursement research and development contracts associated with the development of PEM fuel cell technology. The Company generally shares in the cost of these programs with our cost-sharing percentages generally ranging from 22% and 78% of total project costs. Revenue from time and material contracts is recognized on the basis of hours expended plus other reimbursable contract costs incurred during the period. Revenue from fixed fee contracts is recognized on the basis of percentage of completion.

*Valuation of long-lived assets:* We value long-lived assets at their fair value at the date of acquisition. We utilize third-party valuation experts in our assessments of the fair values of acquired long-lived assets and allocate purchase price to the acquired assets and liabilities assumed accordingly. We assess the impairment of long-lived assets, including identifiable intangible assets, and goodwill, if any, whenever events or changes in circumstances indicate that the carrying value may not be recoverable and, for goodwill, at least annually. Factors we consider important that could trigger an impairment review include, but are not limited to, the following:

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- significant underperformance relative to expected historical or projected future operating results;
- significant changes in the manner of our use of the acquired assets or the strategy for our overall business;
- significant negative industry or economic trends;
- significant decline in our stock price for a sustained period; and
- our market capitalization relative to net book value.

When we determine that the carrying value of long-lived assets, including identifiable intangible assets, and goodwill may not be recoverable based upon the existence of one or more of the above indicators of impairment, we would measure any impairment based upon the provisions of Statement of Financial Accounting Standards, or SFAS, No. 142, Goodwill and Other Intangible Assets and SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets, as appropriate. Any resulting impairment loss could have a material adverse impact on our financial condition and results of operations.

Goodwill impairment testing is performed at the segment (or reporting unit) level. Currently, the Company's goodwill is evaluated at the entity level as there is only one reporting unit. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or organically grown, are available to support the value of the goodwill.

The Company performs its annual goodwill impairment assessment under SFAS 142 at the date of its fiscal year end. Our goodwill impairment test was based on a set of assumptions regarding discounted future cash flows, which represent the Company's best estimate of future performance at this time, as well as consideration of the Company's market capitalization. As a result of this assessment, the Company has determined that a goodwill impairment has occurred and has recorded a non-cash impairment charge of \$45.8 million in its consolidated statement of operations for 2008.

The goodwill impairment analysis is dependent on many variables used to determine fair value of the Company overall and the fair value of the Company's assets and liabilities. Please see Note 7 (Goodwill and Other Intangible Assets) of the Notes to Consolidated Financial Statements for a description of the valuation methods and related estimates and assumptions used in our impairment testing. The complexity of the analysis does not permit a simplistic determination of the impact of changes in assumptions.

*Accounting for income taxes* : Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our net deferred tax assets. As of December 31, 2008, we have recorded a valuation allowance due to uncertainties related to our ability to utilize the net deferred tax assets, primarily consisting of net operating losses and credits which may be carried forward, before they expire. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust the recorded valuation allowance, which could materially impact our financial position and results of operations. At December 31, 2008 and 2007, our net deferred tax assets have been offset in full by a valuation allowance. As a result, the net provision for income taxes is zero for the years ended December 31, 2008 and 2007. The Company adopted Financial Accounting Standards Board (FASB) Interpretation No. 48, Accounting for Uncertainty in Income Taxes-an interpretation of FASB Statement No. 109 (FIN 48), which clarifies the accounting for uncertainty in tax positions on January 1, 2007. No adjustment of opening balances was required and the adoption of this Interpretation did not have a material impact on the Company's consolidated financial statements.



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*Stock Based Compensation* : We recognize stock-based compensation expense associated with the vesting of share based instruments in the consolidated statements of operations. Determining the amount of stock-based compensation to be recorded requires us to develop estimates to be used in calculating the grant-date fair value of stock options. We calculate the grant-date fair values using the Black-Scholes valuation model. The Black-Scholes model requires us to make estimates of the following assumptions:

*Expected volatility* The estimated stock price volatility was derived based upon a blend of implied volatility (i.e. management's expectation of volatility) and the Company's actual historic stock prices over the expected life of the options, which represents the Company's best estimate of expected volatility.

*Expected option life* The Company's estimate of an expected option life was calculated in accordance with the Staff Accounting Bulletin No. 110 (SAB 110) simplified method for calculating the expected term assumption. The simplified method is a calculation based on the contractual life of the associated options.

*Risk-free interest rate* We use the yield on zero-coupon U.S. Treasury securities for a period that is commensurate with the expected life assumption as the risk-free interest rate.

The amount of stock-based compensation recognized during a period is based on the value of the portion of the awards that are ultimately expected to vest. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. The term "forfeitures" is distinct from "cancellations" or "expirations" and represents only the unvested portion of the surrendered option. We review historical forfeiture data and determine the appropriate forfeiture rate based on that data. We re-evaluate this analysis periodically and adjust the forfeiture rate as necessary. Ultimately, we will recognize the actual expense over the vesting period only for the shares that vest.

*Auction rate securities and auction rate debt securities repurchase agreement* : We value our auction rate debt securities and auction rate debt securities repurchase agreement based upon factors specific to these securities, including duration, tax status (taxable or tax-exempt), credit quality, the existence of insurance wraps, and the composition of the underlying student loans (Federal Family Education Loan Program or private loans). Assumptions are made about future cash flows based upon interest rate formulas as described in Note 4, Fair Value Measurements. Also, our valuation includes estimates of market data including yields or spreads of similar trading instruments, when available, or assumptions believed to be reasonable. Illiquid credit markets and volatile equity markets have combined to increase the uncertainty inherent in our estimates and assumptions. As future events cannot be determined with precision, actual results could differ significantly from our estimates.

## ***Recent Accounting Pronouncements***

A discussion of recently adopted and new accounting pronouncements is included in Note 2 (Summary of Significant Accounting Policies) of the Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K.

## ***Liquidity and Capital Resources***

Our cash requirements depend on numerous factors, including completion of our product development activities, our ability to commercialize our energy products, market acceptance of our systems and other factors. We expect to devote substantial capital resources to continue our development programs directed at commercializing our energy

products for worldwide use, hiring and training our sales and service staff, developing and expanding our manufacturing capacity and continuing to expand our research and development activities. We expect to pursue the expansion of our operations through internal growth and strategic acquisitions and expect that such activities will be funded from existing cash, cash equivalents, trading securities, available-for-sale securities, and the issuance of additional equity or debt securities or additional borrowings subject to market and other conditions. The failure to raise the funds necessary to finance our future cash requirements or consummate future acquisitions could adversely affect our ability to pursue our strategy and could negatively affect our operations in future periods. We anticipate incurring substantial additional losses over at least the next several years and believe that our current cash, cash equivalents, trading securities and available-for-sale securities balances will provide sufficient liquidity to fund operations for at least the next twelve months.

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Several key indicators of liquidity are summarized in the following table:

(in thousands)	Years ended December 31,		
	2008	2007	2006
Cash and cash equivalents at end of period	\$ 80,845	\$ 12,077	\$ 26,900
Trading securities – auction rate debt securities	52,651	-	-
Available-for-sale securities at end of period	23,844	153,624	242,223
Working capital at end of period	86,171	163,906	267,002
Net loss	121,700	60,571	50,310
Net cash used in operating activities	56,552	49,311	46,107
Purchase of property, plant and equipment	1,419	2,944	1,275

Included in trading securities and working capital at December 31, 2008 and in available-for-sale securities and working capital at December 31, 2007, respectively, is \$52.7 million and \$90.8 million of auction rate debt securities. The auction rate debt securities are secured by student loans which are generally guaranteed by the Federal government. These auction rate debt securities are structured to be tendered at par, at the investor's option, at auctions occurring every 27-30 days. However, due to the liquidity issues in the credit and capital markets, the market for auction rate debt securities began experiencing auction failures in February 2008 and there have been no successful auctions for the securities held in our portfolio since the failures began. We continue to receive interest on these securities, subject to an interest rate cap formula for each security as periodically adjusted in accordance with the respective securities agreement. At December 31, 2008, the interest rates ranged from 1.55% to 3.43% on the auction rate debt securities as compared to the interest rate range at December 31, 2007 from 5.6% to 6.85%. See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement.

The Company has pledged these securities as collateral to a third-party lender for a Credit Line Agreement (See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement) entered into in December 2008. Given the lack of liquidity in the market for auction rate debt securities, the estimated fair value of these auction rate debt securities have become lower than their cost and, based on an analysis of other than temporary impairment factors, management has determined, beginning in the first quarter of 2008, that this difference represents a decline in value that is other than temporary. Accordingly, the Company recorded an other than temporary impairment charge of \$10.2 million for the year ended December 31, 2008 in the consolidated statements of operations. In December 2008, the Company entered into a Repurchase Agreement with a third-party lender such that the Company may require the third-party lender to repurchase the auction rate debt securities pledged as collateral for the Credit Line Agreement (See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement), at their par value, from June 30, 2010 through July 2, 2012. The fair value of the Repurchase Agreement at its origination was \$10.2 million and was recorded as income in the 2008 consolidated statement of operations.

We continue to monitor the market for auction rate debt securities and will be required to mark the securities to fair value which could negatively affect our financial condition, liquidity and reported operating results. We will also be monitoring and marking to fair value the auction rate debt securities repurchase agreement. The Company expects that the fair adjustments of the auction rate debt securities will generally be offset by the fair value adjustments of the

auction rate debt securities repurchase agreement.

In May 2008, the Company filed a lawsuit against UBS Financial Services Inc. and UBS AG in the United States District Court, Northern District of New York, the financial advisor that placed the Company in certain auction rate debt securities held in the Company's investment portfolio. The lawsuit seeks a return of the \$62.8 million of Company funds UBS invested in auction rate debt securities in contravention to the Company's investment policy, among other damages.

On December 15, 2008, Plug Power Inc. (Plug or the Company) accepted an offer by UBS AG (UBS) of certain rights to cause UBS to purchase, at a future date, auction rate debt securities owned by the Company. The repurchase rights are offered in connection with UBS's obligations under settlement agreements with the U.S. Securities and Exchange Commission and other federal and state regulatory authorities. The offering, the settlement agreements, and the respective rights and obligations of the parties, are described in a prospectus issued by UBS dated October 7, 2008, File No. 333-153882 (the Prospectus). As a result of accepting UBS's offer, the Company can require UBS to repurchase at par value all of the auction rate debt securities held by the Company at any time during the period from June 30, 2010 through July 2, 2012 (if the Company's auction rate debt securities have not previously been sold by the Company or by UBS on its behalf), and pending litigation between the parties has been dismissed with prejudice.

In connection with the Prospectus offering, the Company also entered into a loan agreement with UBS Credit Corp. that provides the Company with a credit line of up to \$62.875 million with the Company's auction rate debt securities pledged as collateral. The Company has drawn down the full amount of the credit line. In accordance with the offering by UBS, the loan will be treated as a "no net cost loan" as defined in the Prospectus. The loan will bear interest at a rate equal to the average rate of interest paid to Plug Power on the pledged auction rate debt securities such that the net interest cost to Plug Power will be zero. Though the loan is payable on demand, if UBS Credit Corp.

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should exercise its right to demand repayment of any portion of the loan prior to the date the Company can exercise its repurchase rights, UBS and certain of its affiliates will arrange for alternative financing on terms and conditions substantially the same as those contained in the loan. If alternative financing cannot be established, then UBS or one of its affiliates will purchase the Company's pledged auction rate debt securities at par. As a result, the loan and any alternative financing will not be payable by the Company prior to the time that the Company can require UBS to repurchase the pledged auction rate debt securities. Proceeds of sales of the Company's auction rate debt securities will first be applied to repayment of the credit line with the balance, if any, for the Company's account. UBS has previously provided investment management services for a portion of the Company's investment portfolio.

Our cash requirements depend on numerous factors, including completion of our product development activities, ability to commercialize our fuel cell systems, market acceptance of our systems and other factors. We expect to pursue the expansion of our operations through internal growth and strategic acquisitions. As of December 31, 2008, we had cash and cash equivalents of \$80.8 million, trading securities of \$52.7 million, available-for-sale securities of \$23.8 million and working capital of \$86.2 million.

During the year ended December 31, 2008, cash used for operating activities was \$56.6 million, consisting primarily of a net loss of \$121.7 million offset, in part, by non-cash expenses in the amount of \$59.8 million, including \$6.6 million for amortization and depreciation, \$8.6 million for stock based compensation, \$45.8 million for goodwill impairment charge, \$10.2 million other than temporary impairment loss on available-for-sale securities, a \$10.2 million gain on auction rate debt securities repurchase agreement, and a \$1.2 million gain on termination of repayable government assistance. Cash provided by investing activities for the year ended December 31, 2008 was \$65.7 million, consisting of \$67.1 million of maturities, net of purchases, of available-for-sale securities, offset by \$1.4 million used to purchase property, plant and equipment. Cash provided by financing activities was approximately \$60.2 million consisting primarily of proceeds from borrowings under line of credit of \$62.9 million.

We have financed our operations from inception through December 31, 2008 primarily from the sale of equity (including those related to stock-based compensation), which has provided cash in the amount of \$636.3 million since inception. Also since inception, cumulative net cash used in operating activities has been \$454.3 million, and cash used in investing activities has been \$154.9 million, including our purchase of property, plant and equipment of \$38.3 million, our net investments in available-for-sale securities in the amount of \$86.5, and cash used for acquisitions of \$19.3 million, net of cash received.

Other significant transactions impacting our liquidity and capital resources have been as follows:

### *Mergers & Acquisitions*

On April 3, 2007, the Company completed the acquisition of all of the outstanding shares of Cellex, a development stage enterprise, for an aggregate purchase price, including acquisition costs, of \$46.1 million. As part of this acquisition, we acquired technology and certain other assets of Cellex as noted in more detail in Note 3 (Acquisitions) of the Notes to Consolidated Financial Statements. The entire \$10 million balance of intangible assets has been assigned to acquired technology, which is being amortized over 8 years. The results of Cellex's operations have been included in the consolidated financial statements since that date. Cellex, based in Richmond, British Columbia, develops and commercializes fuel cell solutions that replace the industrial lead acid battery system used today in powering electric lift truck fleets in large-scale distribution centers.

On May 4, 2007, the Company completed the acquisition of all of the outstanding shares of General Hydrogen, a development stage enterprise, for an aggregate purchase price of \$12.4 million. The purchase price includes the



settlement of \$3.0 million in senior secured loans previously made by the Company to General Hydrogen, as well as 571,429 warrants granted to shareholders of General Hydrogen that were valued at \$1.4 million. The warrants become exercisable when Plug Power's Common Stock trades at a volume weighted average price of \$7.00 or more for 10 consecutive trading days. The warrants carry an exercise price of \$.01 per share and expire four years from the date of issuance. As part of this acquisition, we acquired technology and customer relationships and certain other assets of General Hydrogen as noted in more detail in Note 3 (Acquisitions) of the Notes to Consolidated Financial Statements. Of the \$6.9 million of intangible assets, \$5.9 million has been assigned to acquired technology and \$1.0 million has been assigned to customer relationships, both of which are being amortized over 8 years. The results of General Hydrogen's operations have been included in the consolidated financial statements since May 4, 2007. General Hydrogen is located in Richmond, British Columbia, Canada within close proximity to Cellex.

By acquiring both General Hydrogen and Cellex, leaders in their industry, the Company expects to realize significant technological and operational synergies while pursuing high-value applications in the material handling market. As a result of the acquisitions, the Company is expected to be a leading provider of PEM fuel cell power units for electric lift trucks and is targeting the estimated \$1.5 billion industrial motive battery market. The acquisitions diversify the Company's product portfolio and add new revenue streams from a potentially significant market.

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During October 2007, Plug Power integrated the operations of both companies into one organization. Further, the Company anticipates that higher volume product manufacturing activities will be established in Plug Power's Latham, N.Y. facility. The Company intends to leverage Plug Power's existing commercial infrastructure and expects to avoid some of the expenditures typically associated with the transition to a manufacturing enterprise.

On March 25, 2003, we consummated a merger transaction with H Power pursuant to which we acquired H Power in a stock-for-stock exchange valued at approximately \$46.3 million. In connection with the transaction, H Power stockholders received 0.8305 shares of our common stock for each share of H Power common stock held immediately prior to the transaction. Immediately following the transaction H Power became a wholly owned subsidiary of the Company. As part of the acquisition, we acquired intellectual property and certain other assets including cash, cash equivalents and marketable securities of H Power worth approximately \$29.6 million, after payment of \$7.1 million of certain costs and expenses associated with the consummation of the merger, which were accounted for as additional purchase price.

### *Public Offerings*

In November 1999, we completed an initial public offering of 6,782,900 shares of common stock, which includes additional shares purchased pursuant to exercise of the underwriters' over allotment option. We received proceeds of \$93.0 million, which was net of \$8.7 million of expenses and underwriting discounts relating to the issuance and distribution of the securities.

In July 2001, we completed a follow-on public offering of 4,575,000 shares of common stock, which includes additional shares purchased pursuant to exercise of the underwriters' over allotment option. We received proceeds of \$51.6 million, which was net of \$3.3 million of expenses and underwriting discounts relating to the issuance and distribution of the securities.

In November 2003, the Company completed a public offering of 11,700,000 shares of common stock. We received proceeds of \$55.0 million, net of \$3.5 million of expenses and placement fees relating to the issuance and distribution of the securities.

In August 2005, the Company completed a public offering of 12,000,000 shares of common stock. We received proceeds of \$70.6 million, net of expenses and placement fees relating to the issuance and distribution of the securities.

### *Private Placements*

In July 2001, simultaneous with the closing of the follow-on public offering, we closed a private equity financing of 416,666 shares of common stock to GE Power Systems Equities, Inc., an indirect wholly owned subsidiary of General Electric Company, and 416,666 shares of common stock to Edison Development Corporation, an indirect wholly owned subsidiary of DTE Energy Company, raising an additional \$9.6 million in net proceeds.

In June 2006, the Company completed a private placement with Smart Hydrogen Inc. whereby the Company sold 395,000 shares of Class B Capital Stock, a class of preferred stock of the Company, which are convertible into 39,500,000 shares of common stock of the Company, and 11,240 shares of common stock of the Company to Smart Hydrogen for an aggregate net purchase price of approximately \$214.4 million. The purchase price per share of the shares sold to Smart Hydrogen, on an as-converted into common stock basis, was \$5.50. The Buyer also contemporaneously purchased 1,825,000 shares of common stock of the Company from DTE Energy Foundation.

Following the closing of these transactions, the Buyer owned approximately 35% of the Company's outstanding common stock on an if-converted basis.

In December 2008, Smart Hydrogen Inc. sold to OJSC (Third Generation Company of the Wholesale Electricity Market) (OGK-3) all 395,000 shares of the Company's Class B Capital Stock as well as 5,126,939 shares of the Company's common stock (representing an approximately 35% ownership stake in aggregate). This sale triggered the automatic conversion of the Company's Class B Capital Stock into 39,500,000 shares of common stock, and the termination of all the rights and obligations attached to the Class B Capital Stock. The rights and obligations attached to the Class B Capital Stock that terminated include, but are not limited to, the right to appoint directors, veto rights and voting support obligations under the Investor Rights Agreement dated as of June 29, 2006, as amended (the Investor Rights Agreement). OGK-3 has executed a joinder agreement to the Investor Rights Agreement and is prohibited from transferring its shares of the Company's Common Stock to a competitor of the Company. OGK-3 is also bound by the same standstill provisions that applied to Smart Hydrogen, as set forth in the Investor Rights Agreement. This transfer and conversion triggered a change of control pursuant to Section 17 of our 1999 Stock Option and Incentive Plan; and, therefore, each outstanding Stock Option Right automatically became fully exercisable and conditions and restrictions on each outstanding Restricted Stock Award, Deferred Stock Award and Performance Share Award that relates solely to the passage of time and continued employment were removed.

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### *Initial Capital Contributions*

We were formed in June 1997 as a joint venture between Mechanical Technology Incorporated and Edison Development Corporation, an indirect wholly owned subsidiary of DTE Energy Company. At formation, Mechanical Technology Incorporated contributed assets related to its fuel cell program, including intellectual property, 22 employees, equipment and the right to receive government contracts for research and development of PEM fuel cell systems, if awarded. Edison Development Corporation contributed or committed to contribute \$9.0 million in cash, expertise in distributed power generation and marketplace presence to distribute and sell stationary fuel cell systems.

In aggregate, Mechanical Technology Incorporated has made cash contributions of \$27.0 million plus non-cash contributions of \$14.2 million, while Edison Development Corporation has made aggregate cash contributions of \$46.2 million, including \$5.0 million in connection with the closing of a private placement of our common stock in July, 2001. Mechanical Technology Incorporated and Edison Development Corporation have not made any additional cash or non-cash contributions since October 1999 and July 2001, respectively.

### *GE Fuel Cell Systems*

In March 2006, the Company, GE MicroGen, Inc. a wholly-owned subsidiary of General Electric Company, or GE, and GE restructured their service and equity relationships by terminating the joint venture, GEFCS, and the associated distributor and other agreements, and entering into a new development collaboration agreement. Under the new agreement, the Company and GE (through its Global Research unit) have agreed to collaborate on programs including but not limited to development of tools, materials and components that can be applied to various types of fuel cell products. The Company and GE mutually agreed to extend the terms of the new development collaboration agreement such that the Company is obligated to purchase \$1 million of services from GE in connection with this collaboration prior to December 31, 2009. As of December 31, 2008 the obligation remaining under the contract was approximately \$400,000. The development collaboration agreement is scheduled to terminate on the earlier of (i) December 31, 2014 or (ii) upon completion of a certain level of program activity.

### *Grant Agreements*

Since our inception we have been awarded, or participated in, federal and state government contracts related to research, development, test and demonstration of our PEM fuel cell technology. These contracts are primarily cost reimbursement contracts associated with the development of our PEM fuel cell technology. We have recognized research and development contract revenue of approximately \$88.7 million related to federal and state government contracts, and commercial contracts. We generally share in the cost of these programs, with cost-sharing percentages generally ranging from 22% and 78% of total project costs. We expect to continue certain research and development contract work that is directly related to our current product development efforts.



**Table of Contents***Contractual Obligations*

Contractual obligations as of December 31, 2008, under agreements with non-cancelable terms are as follows:

		<b>Total</b>	<b>&lt;1 Year</b>	<b>1-3 Years</b>	<b>3-5 Years</b>
Operating lease obligations	\$	3,908,079	\$ 1,717,725	\$ 2,190,354	\$ -
Purchase obligations	\$	744,500	524,500	220,000	-
Other obligations (A), (B), (C)	\$	380,880	380,880	-	-
<b>Total</b>	<b>\$</b>	<b>5,033,459</b>	<b>\$ 2,623,105</b>	<b>\$ 2,410,354</b>	<b>\$ -</b>

- (A) The Company has a contractual obligation to NYSERDA, a New York State Government agency, to pay royalties to NYSERDA based on 0.5% of net sales of our GenCore and GenSys products if product is manufactured in the state of New York. See Note 18 (Commitments and Contingencies) of the Consolidated Financial Statements for more detail.
- (B) The Company has a contractual obligation to the National Research Council of Canada (NRC), a Canadian Government agency, through an Industrial Research Assistance Program (IRAP) agreement, to pay royalties to NRC based on 3.5% of gross revenues. See Note 10 (Repayable Government Assistance) of the Consolidated Financial Statements for more detail.
- (C) The Company has a contractual obligation with General Electric (GE) through its Global Research unit. The Company and GE mutually agreed to extend the terms of the new development collaboration agreement such that the Company is obligated to purchase \$1 million of services from GE in connection with this collaboration prior to December 31, 2009. The development collaboration agreement is scheduled to terminate on the earlier of (i) December 31, 2014 or (ii) upon the completion of a certain level of program activity. See Note 18 (Commitments and Contingencies) of the Consolidated Financial Statements for more detail.

**Item 7A. Quantitative and Qualitative Disclosures about Market Risk**

We invest our excess cash in government, government backed and interest-bearing investment-grade securities that we generally hold for the duration of the term of the respective instrument. We do not utilize derivative financial instruments, derivative commodity instruments or other market risk sensitive instruments, positions or transactions in any material fashion. Accordingly, other than with respect to auction rate debt securities, we believe that, while the investment-grade securities we hold are subject to changes in the financial standing of the issuer of such securities, we are not subject to any material risks arising from changes in interest rates, foreign currency exchange rates, commodity prices, equity prices or other market changes that affect market risk sensitive instruments.

A portion of the Company's total financial performance was attributable to our operations in Canada. Our exposure to changes in foreign currency rates primarily arises from short-term inter-company transactions with our Canadian subsidiaries and from client receivables in different currencies. Foreign sales are mostly made by our Canadian subsidiaries in their respective countries and are typically denominated in Canadian dollars. Our foreign subsidiaries incur most of their expenses in their local currency as well, which helps minimize our risk of exchange rate fluctuations. Accordingly, the Company's financial results are affected by risks such as currency fluctuations, particularly between the U.S. dollar and the Canadian dollar. As exchange rates vary, the Company's results can be materially affected.

In addition, the Company may source inventory among its worldwide operations. This practice can give rise to foreign exchange risk resulting from the varying cost of inventory to the receiving location as well as from the revaluation of intercompany balances. The Company mitigates this risk through local sourcing efforts.

**Item 8. Financial Statements and Supplementary Data**

The Company's consolidated financial statements included in this report beginning at page F-1 are incorporated in this Item 8 by reference.

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**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**  
None.

**Item 9A. Controls and Procedures**

*(a) Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures.*

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act). Based on this evaluation, our principal executive officer and our principal financial officer concluded that, as of the end of the period covered by this annual report, our disclosure controls and procedures were effective, in that they provide reasonable assurance that information required to be disclosed by us in the reports we file or submit, under the Exchange Act, is recorded, processed, summarized and reported within the time period specified in the Securities and Exchange Commission's rules and forms.

*(b) Management's Report on Internal Control Over Financial Reporting*

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organization of the Treadway Commission. Based on our evaluation under the framework in *Internal Control - Integrated Framework*, our management concluded that the Company maintained effective internal control over financial reporting as of December 31, 2008.

*(c) Attestation Report of the Registered Public Accounting Firm*

The attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting is included on page F-3 of this Annual Report on Form 10-K and incorporated herein by reference.

*(d) Changes in Internal Control Over Financial Reporting*

There were no changes in the Company's internal control over financial reporting identified in connection with the evaluation of such internal control that occurred during the Company's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.



**Item 9B. Other Information**

Not applicable.

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**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance**

*(a) Directors*

Incorporated herein by reference is the information appearing under the captions "Information about our Directors" and "Compliance with Section 16(a) of the Securities Exchange Act of 1934" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Security and Exchange Commission.

*(b) Executive Officers*

Incorporated herein by reference is the information appearing under the captions "Executive Officers" and "Compliance with Section 16(a) of the Securities Exchange Act of 1934" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Security and Exchange Commission.

*(c) Code of Business Conduct and Ethics*

We have adopted a Code of Business Conduct and Ethics that applies to all officers, directors, employees and consultants of the Company. The Code of Business Conduct and Ethics is intended to comply with Item 406 of Regulation S-K of the Securities Exchange Act of 1934 and with applicable rules of The NASDAQ Stock Market, Inc. Our Code of Business Conduct and Ethics is posted on our Internet website under the "Investor" page. Our Internet website address is [www.plugpower.com](http://www.plugpower.com). To the extent required or permitted by the rules of the SEC and NASDAQ, we will disclose amendments and waivers relating to our Code of Business Conduct and Ethics in the same place as our website.

*(d) Audit Committee*

Incorporated herein by reference is the information appearing under the caption "Audit Committee" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission.

**Item 11. Executive Compensation**

Incorporated herein by reference is the information appearing under the caption "Executive Compensation" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Security and Exchange Commission.



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**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**  
 Incorporated herein by reference is the information appearing under the caption "Principal and Management Stockholders" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission.

*Equity Compensation Plan Information*

The following table gives information about the shares of Common Stock that may be issued upon the exercise of options, restricted stock and warrants under the Plug Power, L.L.C. Second Amendment and Restatement of the Membership Option Plan (1997 Plan), the Company's 1999 Stock Option and Incentive Plan, as amended (1999 Stock Option Plan) and the Company's 1999 Employee Stock Purchase Plan, as of December 31, 2008.

Plan Category	Number of shares to be issued upon exercise of outstanding options, warrants and rights(a)		Number of shares	
			Weighted average price of outstanding warrants reflecting this column(b)	Remaining exercise available for future issuance under equity compensation plans (c)
Equity compensation plans approved by security holders	6,119,804	(1)	\$ 8.84	4,336,449
Equity compensation plans not approved by security holders(3)	571,429	(3)	0.01	
Total	6,691,233		\$ 8.09	4,336,449

(1) Represents outstanding options issued under the 1997 Plan and 1999 Stock Option Plan.

(2) Includes 4,038,883 shares available for future issuance under the 1999 Stock Option Plan and 297,566 shares available for future issuance under the 1999 Employee Stock Purchase Plan. The 1999 Stock Option Plan incorporates an evergreen formula pursuant to which the aggregate number of shares reserved for issuance under the 1999 Stock Option Plan will increase on the first day of January and July each year. On each January 1 and July 1, the aggregate number of shares reserved for issuance under the 1999 Stock Option Plan increases by 16.45% of any net increase in the total number of outstanding shares since the preceding July 1 or January 1, as the case may be. In accordance with this formula, on January 1, 2009, the maximum number of shares remaining available for future issuance under the 1999 Stock Option Plan is 10,581,012.

(3)

Represents 571,429 warrants issued to General Hydrogen shareholders in connection with the acquisition of General Hydrogen.

**Item 13. Certain Relationships and Related Transactions and Director Independence**

Incorporated herein by reference is the information appearing under the caption "Certain Relationships and Related Transactions" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission.

**Item 14. Principal Accounting Fees and Services**

Incorporated herein by reference is the information appearing under the caption "Independent Auditors Fees" in the Company's definitive Proxy Statement for its 2009 Annual Meeting of Stockholders to be filed with the Securities and Exchange Commission.

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**PART IV**

**Item 15. Exhibits and Financial Statement Schedules**

***15(a)(1) Financial Statements***

The financial statements and notes are listed in the Index to Consolidated Financial Statements on page F-1 of this Report.

***15(a)(2) Financial Statement Schedules***

Consolidated financial statement schedules not filed herein have been omitted as they are not applicable or the required information or equivalent information has been included in the consolidated financial statements or the notes thereto.

***15(a)(3) Exhibits***

Exhibits are as set forth in the List of Exhibits which immediately precedes the Index to Consolidated Financial Statements on page F-1 of this Report.







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**SIGNATURES**

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

PLUG POWER INC .

By: /s/ ANDREW MARSH  
**Andrew Marsh,**  
**Chief Executive Officer**

Date: March 16, 2009

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.

<b>Signature</b>	<b>Title</b>	<b>Date</b>
/s/ ANDREW MARSH <b>Andrew Marsh</b>	Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2009
/s/ GERALD A. ANDERSON <b>Gerald A. Anderson</b>	Chief Financial Officer	March 16, 2009
/s/ JEFFREY M. DRAZAN <b>Jeffrey M. Drazan</b>	Director	March 16, 2009
/s/ LARRY G. GARBERDING <b>Larry G. Garberding</b>	Director	March 16, 2009
/s/ MAUREEN O. HELMER <b>Maureen O. Helmer</b>	Director	March 16, 2009
/s/ GEORGE C. MCNAMEE <b>George C. McNamee</b>	Director	March 16, 2009

**George C. McNamee**

/s/ GARY K. WILLIS

Director

March 16, 2009

**Gary K. Willis**

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Certain exhibits indicated below are incorporated by reference to documents of Plug Power on file with the Commission. Exhibits nos. 10.1, 10.2, 10.3, 10.5, 10.7 and 10.12 through 10.21 represent the management contracts and compensation plans and arrangements required to be filed as exhibits to this Annual Report on Form 10-K.

**Exhibit No.  
and Description**

3.1	Amended and Restated Certificate of Incorporation of Plug Power Inc.(9)
3.2	Amended and Restated By-laws of Plug Power Inc.(1)
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Plug Power.(9)
4.1	Specimen certificate for shares of common stock, \$.01 par value, of Plug Power.(2)
10.1	Second Amendment and Restatement of the Membership Option Plan dated February 15, 1999 and First Amendment to Second Amendment and Restatement of the Membership Option Plan dated October 1, 1999.(3)
10.2	1999 Stock Option and Incentive Plan.(2)
10.3	Employee Stock Purchase Plan.(2)
10.4	Registration Rights Agreement to be entered into by the Registrant and the stockholders of the Registrant.(9)
10.5	Severance Agreement, dated as of July 12, 2007, by and between Plug Power Inc. and Gerald A. Anderson.(6)
10.6	Joint Development Agreement, dated as of June 2, 2000, between Plug Power Inc. and Engelhard Corporation.(9)
10.7	Executive Severance Agreement, dated as of July 9, 2007, by and between Plug Power Inc. and Gerald A. Anderson.(6)
10.8	Indemnification Agreement, dated as of July 9, 2007, by and between Plug Power Inc. and Gerald A. Anderson.(6)
10.9	Investor Rights Agreement, dated as of June 29, 2006, by and among Plug Power Inc., Smart Hydrogen Inc. and the other parties named therein.(1)

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- 10.10 Registration Rights Agreement, dated as of June 29, 2006, by and between Plug Power Inc. and Smart Hydrogen Inc.(1)
- 10.11 Form of Indemnification Agreement entered into with each director.(1)
- 10.12 Form of Incentive Stock Option Agreement.(4)
- 10.13 Form of Non-Qualified Stock Option Agreement for Employees.(4)



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**Exhibit No.  
and Description**

10.14	Form of Non-Qualified Stock Option Agreement for Independent Directors.(4)
10.15	Form of Restricted Stock Award Agreement.(4)
10.16	Amendment No. 1 to the 1999 Stock Option and Incentive Plan.(4)
10.17	Plug Power Executive Incentive Plan.(5)
10.18	Employment Agreement, dated as of April 7, 2008, by and between Andrew Marsh and Plug Power Inc.(7)
10.19	Form of Non-Qualified Stock Option Agreement for Employees.(7)
10.20	Executive Employment Agreement, dated as of May 5, 2008, by and between Gerard L. Conway, Jr. and Plug Power Inc.(8)
10.21	Executive Employment Agreement, dated as of May 5, 2008, by and between Mark A. Sperry and Plug Power Inc.(8)
23.1	Consent of KPMG LLP.(9)
31.1 and 31.2	Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.(9)
32.1 and 32.2	Certifications pursuant to 18 U.S.C. Section 1350, adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.(9)

- (1) Incorporated by reference to the Company's current Report on Form 8-K dated June 29, 2006.
- (2) Incorporated by reference to the Company's Registration Statement on Form S-1 (File Number 333-86089).
- (3) Incorporated by reference to the Company's Registration Statement on Form S-1/A (File Number 333-86089).
- (4) Incorporated by reference to the Company's Form 10-Q for the period ended June 30, 2006.
- (5) Incorporated by reference to the Company's current Report on Form 8-K dated February 15, 2007.
- (6) Incorporated by reference to the Company's current Report on Form 8-K dated July 9, 2007.
- (7) Incorporated by reference to the Company's current Report on Form 8-K dated April 2, 2008.
- (8) Incorporated by reference to the Company's Form 10-Q for the period ended June 30, 2008.
- (9) Filed herewith.







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### **Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

Plug Power Inc.:

We have audited the accompanying consolidated balance sheets of Plug Power Inc. and subsidiaries (a development stage enterprise) as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2008, and the information included in the cumulative from inception presentations for the period January 1, 2001 to December 31, 2008 (not separately presented herein). These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Plug Power Inc. and subsidiaries (a development stage enterprise) as of December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2008, and the information included in the cumulative from inception presentations for the period January 1, 2001 to December 31, 2008 (not separately presented herein), in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Plug Power Inc. and subsidiaries' internal control over financial reporting as of December 31, 2008, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 16, 2009, expressed an unqualified opinion on the effectiveness of Plug Power Inc. and subsidiaries' internal control over financial reporting.

/s/ KPMG LLP

Albany, New York

March 16, 2009

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### **Report of Independent Registered Public Accounting Firm**

The Board of Directors and Stockholders

Plug Power Inc.

We have audited internal control over financial reporting of Plug Power Inc. and subsidiaries (a development stage enterprise) as of December 31, 2008, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Plug Power Inc. and subsidiaries (a development stage enterprise) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on criteria established in *Internal Control – Integrated Framework* issued by COSO.

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We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Plug Power Inc. and subsidiaries as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 2008, and the information included in the cumulative from inception presentations for the period January 1, 2001 to December 31, 2008 (not separately presented herein), and our report dated March 16, 2009 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

Albany, New York

March 16, 2009

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****CONSOLIDATED BALANCE SHEETS**

	December 31, 2008	December 31, 2007
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 80,844,500	\$ 12,076,938
Trading securities - auction rate debt securities	52,650,654	-
Available-for-sale securities	23,843,950	153,623,670
Accounts receivable, less allowance of \$75,148 in 2008 and \$57,000 in 2007	2,151,121	4,608,456
Inventory	6,264,372	5,787,180
Prepaid expenses and other current assets	2,350,738	2,720,915
Total current assets	168,105,335	178,817,159
Property, plant and equipment, net	17,769,974	21,064,795
Auction rate debt securities repurchase agreement	10,224,346	-
Goodwill	-	51,399,497
Intangible assets, net	12,843,182	16,979,327
Other assets	169,130	130,940
Total assets	\$ 209,111,967	\$ 268,391,718
<b>Liabilities and Stockholders Equity</b>		
Current liabilities:		
Accounts payable	\$ 3,274,972	\$ 4,636,997
Accrued expenses	9,945,316	5,509,804
Borrowings under line of credit	62,875,000	-
Deferred revenue	5,425,270	3,341,341
Other current liabilities	413,837	1,423,188
Total current liabilities	81,934,395	14,911,330
Repayable government assistance	173,138	4,388,374
Other liabilities	1,140,312	191,540
Total liabilities	83,247,845	19,491,244
Stockholders equity:		
Class B Capital stock, a class of preferred stock, \$0.01 par value per share; 5,000,000 shares authorized;		
0 shares at December 31, 2008 and 395,000 shares at December 31, 2007	-	3,950
Common stock, \$0.01 par value per share; 245,000,000 shares authorized;		
Issued (including shares in treasury):	1,281,640	878,829



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128,164,003 at December 31, 2008 and  
87,882,922 at December 31, 2007

Additional paid-in capital	765,347,706	758,169,498
Accumulated other comprehensive income	(359,253)	7,810,558
Deficit accumulated during the development stage	(639,662,385)	(517,962,361)
Less common stock in treasury:		
402,114 shares at December 31, 2008 and		
0 shares at December 31, 2007	(743,586)	-
Total stockholders equity	125,864,122	248,900,474
Total liabilities and stockholders equity	\$ 209,111,967	\$ 268,391,718

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

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****CONSOLIDATED STATEMENTS OF OPERATIONS****For the years ended December 31, 2008, 2007 and 2006 and Cumulative Amounts from Inception**

	December 31, 2008	December 31, 2007	December 31, 2006	Cumulative Amounts from Inception
Product and service revenue	\$ 4,667,295	\$ 3,081,956	\$ 2,656,475	\$ 40,109,176
Research and development contract revenue	13,234,022	13,188,667	5,179,275	88,701,255
Total revenue	17,901,317	16,270,623	7,835,750	128,810,431
Cost of product and service revenue	11,442,232	9,398,774	4,832,994	54,971,443
Cost of research and development contract revenue	21,504,926	19,044,847	7,636,662	129,339,411
In-process research and development	-	-	-	12,026,640
Research and development expense	34,987,207	39,218,349	41,577,234	405,483,259
Selling, general and administrative expenses	28,333,151	19,323,158	12,267,862	128,431,191
Goodwill impairment charge	45,842,656	-	-	45,842,656
Amortization of intangible assets	2,224,954	1,614,103	-	18,963,558
Operating loss	(126,433,809)	(72,328,608)	(58,479,002)	(666,247,727)
Interest and other income and net realized gains				
from available-for-sale securities	5,134,442	12,337,792	8,340,250	47,491,884
Gain on auction rate debt securities repurchase agreement	10,224,346	-	-	10,224,346
Impairment loss on available-for-sale securities	(10,224,346)	-	-	(10,224,346)
Interest and other expense	(400,657)	(580,000)	(170,835)	(2,328,792)
Loss before equity in losses of affiliates	(121,700,024)	(60,570,816)	(50,309,587)	(621,084,635)
Equity in losses of affiliates	-	-	-	(18,577,750)
Net loss	\$ (121,700,024)	\$ (60,570,816)	\$ (50,309,587)	\$ (639,662,385)

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Loss per share:

Basic and diluted	\$ (1.36)	\$ (0.69)	\$ (0.58)
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Weighted average number of common shares

outstanding	89,383,480	87,341,717	86,100,326
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The accompanying notes are an integral part of the consolidated financial statements.

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****CONSOLIDATED STATEMENTS OF CASH FLOWS****For the years ended December 31, 2008, 2007 and 2006 and cumulative amounts from inception**

	<b>Twelve months ended</b>			<b>Cumulative Amounts</b>
	<b>December 31,</b>			<b>from Inception</b>
	<b>2008</b>	<b>2007</b>	<b>2006</b>	
<b>Cash Flows From Operating Activities:</b>				
Net loss	\$ (121,700,024)	\$ (60,570,816)	\$ (50,309,587)	\$ (639,662,385)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	4,398,147	3,847,024	3,219,790	38,428,722
Equity in losses of affiliates	-	-	-	18,577,750
Amortization of intangible asset	2,224,954	1,614,103	-	18,963,558
Noncash prepaid development costs	-	-	-	10,000,000
(Gain) loss on disposal of property, plant and equipment	(2,701)	12,421	-	37,213
In-kind services	-	-	-	1,340,000
Stock-based compensation	8,590,573	5,422,745	4,266,130	43,308,431
Provision for bad debts	75,148	57,000	35,670	167,818
Amortization of deferred grant revenue	-	-	-	(1,000,000)
Amortization and write-off of deferred rent	-	-	-	2,000,000
Goodwill impairment charge	45,842,656	-	-	45,842,656
Impairment loss on available-for-sale securities	10,224,346	-	-	10,224,346
Gain on auction rate debt securities repurchase agreement	(10,224,346)	-	-	(10,224,346)
Gain on termination of repayable government assistance	(1,232,522)	-	-	(1,232,522)
In-process research and development	-	-	-	7,042,640
Changes in assets and liabilities, net of effects of acquisitions:				
Accounts receivable	2,281,723	(2,738,263)	588,658	(1,165,510)
Inventory	(521,253)	655,753	(866,195)	(5,069,637)
Prepaid expenses and other current assets	256,448	1,223,756	(1,186,691)	(3,304,364)
Accounts payable and accrued expenses	1,103,013	518,297	(1,399,159)	5,039,020
Deferred revenue	2,087,370	647,218	(455,728)	6,426,908
Net cash used in operating activities	(56,596,468)	(49,310,762)	(46,107,112)	(454,259,702)
<b>Cash Flows From Investing Activities:</b>				
Cash paid for acquisitions, net	-	(47,732,866)	(1,000,000)	(19,267,125)
Purchase of property, plant and equipment	(1,418,641)	(2,944,405)	(1,274,794)	(38,342,221)
Proceeds from disposal of property, plant and equipment	14,587	13,963	-	344,216
Purchase of intangible asset	-	-	-	(9,624,500)
Investment in affiliate	-	-	-	(1,500,000)
Proceeds from maturities and sales of available-for-sale securities	266,774,180	556,640,568	852,968,512	2,596,199,458
Purchases of available-for-sale securities	(199,713,772)	(472,899,139)	(1,014,319,441)	(2,682,691,304)
Net cash provided by (used in) investing activities	65,656,354	33,078,121	(163,625,723)	(154,881,476)
<b>Cash Flows From Financing Activities:</b>				
Proceeds from issuance of common and preferred stock	-	-	217,311,820	428,529,602
Proceeds from initial public offering, net	-	-	-	201,911,705
Stock issuance costs	-	-	(2,869,691)	(5,548,027)
Purchase of treasury stock	(618,642)	-	-	(618,642)
Proceeds from stock option exercises and employee stock purchase plan	202,875	480,654	396,019	11,445,225

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Cash released from escrow	-	-	3,965,274	-
Repayment of loans due to General Hydrogen Shareholders	-	(400,000)	-	(400,000)
Proceeds from borrowings under line of credit	62,875,000	-	-	62,875,000
Repayment of government assistance	(2,235,244)	-	-	(2,235,244)
Principal payments on long-term debt and capital lease obligations	-	-	(4,048,447)	(6,786,687)
Net cash provided by financing activities	60,223,989	80,654	214,754,975	689,172,932
Effect of exchange rate changes on cash	(516,313)	1,329,059	-	812,746
Increase (decrease) in cash and cash equivalents	68,767,562	(14,822,928)	5,022,140	80,844,500
<b>Cash and cash equivalents, beginning of period</b>	12,076,938	26,899,866	21,877,726	
<b>Cash and cash equivalents, end of period</b>	\$ 80,844,500	\$ 12,076,938	\$ 26,899,866	\$ 80,844,500

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

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE LOSS****For the years ended December 31, 2008, 2007 and 2006**

	Preferred Stock		Common Stock			Additional Paid-in- Capital	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Treasury Stock		Total Stockholders' Equity	Total Compr Loss
	Shares	Amount	Shares	Amount	Amount				Shares	Amount		
<b>December 31, 2005</b>	-	\$ -	85,835,248	\$ 858,353	\$ 531,435,616	\$ (257,120)	\$(407,081,958)	-	\$ -	\$ -	\$ 124,954,891	
Net loss	-	-	-	-	-	-	(50,309,587)	-	-	-	(50,309,587)	(50,309,587)
Unrealized gain on available-for-sale securities, net of reclassification adjustments for realized net losses and gains	-	-	-	-	-	186,640	-	-	-	186,640		
Total comprehensive loss												\$(50,122,947)
Private placement, net	395,000	3,950	11,240	112	214,438,067	-	-	-	-	214,442,129		
Stock based compensation	-	-	839,800	8,401	4,849,699	-	-	-	-	4,858,100		
Stock option exercises	-	-	7,958	80	31,271	-	-	-	-	31,351		
Stock issued under employee stock purchase plan	-	-	100,669	1,006	363,662	-	-	-	-	364,668		
<b>December 31, 2006</b>	395,000	\$ 3,950	86,794,915	\$ 867,952	\$ 751,118,315	\$ (70,480)	\$(457,391,545)	-	\$ -	\$ -	\$ 294,528,192	
Net loss	-	-	-	-	-	-	(60,570,816)	-	-	-	(60,570,816)	(60,570,816)
Foreign currency translation gain	-	-	-	-	-	7,739,141	-	-	-	7,739,141		7,739,141
Unrealized gain on available-for-sale securities, net of reclassification adjustments for realized net losses and gains	-	-	-	-	-	141,897	-	-	-	141,897		
Total comprehensive loss												\$(52,682,485)

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Stock based compensation	-	-	871,255	8,710	5,290,590	-	-	-	-	5,299,300
Stock option exercises	-	-	151,237	1,512	149,725	-	-	-	-	151,237
Stock issued under employee stock purchase plan	-	-	65,515	655	205,153	-	-	-	-	205,808
Warrants	-	-	-	-	1,405,715	-	-	-	-	1,405,715
<b>December 31, 2007</b>	395,000	\$ 3,950	87,882,922	\$ 878,829	\$ 758,169,498	\$ 7,810,558	\$(517,962,361)	-	\$ -	\$ 248,900,474
Net loss	-	-	-	-	-	-	(121,700,024)	-	-	(121,700,024)
Foreign currency translation loss	-	-	-	-	-	(8,325,499)	-	-	-	(8,325,499)
Unrealized gain on available-for-sale securities, net of reclassification adjustments for realized net losses and gains	-	-	-	-	-	155,688	-	-	-	155,688
Total comprehensive loss										\$(129,869,835)
Stock based compensation	-	-	665,744	6,658	7,258,897	-	-	-	-	7,265,555
Conversion of Preferred Stock	(395,000)	(3,950)	39,500,000	395,000	(391,050)	-	-	-	-	-
Treasury stock	-	-	-	-	-	-	-	402,114	(743,586)	(743,586)
Stock option exercises	-	-	3,935	39	3,896	-	-	-	-	3,935
Stock issued under employee stock purchase plan	-	-	111,402	1,114	306,465	-	-	-	-	307,579
<b>December 31, 2008</b>	-	\$ -	128,164,003	\$ 1,281,640	\$ 765,347,706	\$ (359,253)	\$(639,662,385)	402,114	\$(743,586)	\$ 125,864,122

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

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### **PLUG POWER INC. AND SUBSIDIARIES**

### **(A DEVELOPMENT STAGE ENTERPRISE)**

### **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

#### **1. Nature of Operations**

##### *Description of Business*

Plug Power Inc. is a development stage enterprise involved in the design, development and manufacture of fuel cell systems for industrial-motive (forklift or material handling) markets and stationary power markets worldwide. The Company is a development stage enterprise because substantially all of the Company's resources and efforts are aimed at the discovery of new knowledge that could lead to significant improvement in fuel cell reliability and durability, and the establishment, expansion and stability of markets for the Company's products. The Company continues to experience significant net outflows of cash from operations and devotes significant efforts towards financial planning in order to forecast future cash spending and the ability to continue product development, manufacturing and sales activities. Fuel cell technology within the Company's targeted markets - material handling, remote prime power, residential combined heat and power and wireless and wireline telecommunications - is still early in the technology adoption life cycle.

The Company is focused on proton exchange membrane, or PEM, fuel cell and fuel processing technologies and fuel cell/battery hybrid technologies, from which multiple products are available. A fuel cell is an electrochemical device that combines hydrogen and oxygen to produce electricity and heat without combustion. Hydrogen is derived from hydrocarbon fuels such as natural gas, propane, methanol, ethanol, gasoline or biofuels. Hydrogen can also be obtained from the electrolysis of water. Hydrogen can be purchased directly from industrial gas providers or can be produced on-site at consumer locations.

The Company sells its products worldwide through a product sales force. The Company sells to business, industrial and government customers.

The Company was organized in the State of Delaware on June 27, 1997 and became listed on the NASDAQ exchange on October 29, 1999. The Company was originally formed as a joint venture between Edison Development Corporation and Mechanical Technology Incorporated. In 2007 the Company merged with and acquired all the assets, liabilities and equity of Cellex Power Products, Inc. (Cellex) and General Hydrogen Corporation (General Hydrogen).

Unless the context indicates otherwise, the terms Company, Plug Power, we, our or us as used herein refers to Plug Power Inc. (the registrant) and its subsidiaries.

Although the Company has a significant amount of available-for-sale securities, as described further below, as of December 31, 2008, neither the Company nor any of its subsidiaries was an investment company pursuant to the Investment Company Act of 1940, as amended.

##### *Liquidity*



The Company anticipates incurring substantial additional losses over at least the next several years and believes that its current cash, cash equivalents, trading securities and available-for-sale securities balances will provide sufficient liquidity to fund operations for at least the next twelve months. The Company's cash requirements depend on numerous factors, including completion of our product development activities, our ability to commercialize our energy products, market acceptance of our systems and other factors. The Company expects to devote substantial capital resources to continue its development programs directed at commercializing our energy products for worldwide use, hiring and training production staff, develop and expand manufacturing capacity and continue expanding our production and research and development activities. The Company expects to pursue the expansion of its operations through internal growth and strategic acquisitions and expects that such activities will be funded from existing cash, cash equivalents, trading securities, available-for-sale securities, and the issuance of additional equity or debt securities or additional borrowings subject to market and other conditions. The failure to raise the funds necessary to finance future cash requirements or consummate future acquisitions could adversely affect the Company's ability to pursue its strategy and could negatively affect its operations in future periods.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Included in trading securities and working capital at December 31, 2008 and in available-for-sale securities and working capital at December 31, 2007, respectively is \$52.7 million and \$90.8 million of auction rate debt securities. The auction rate debt securities are secured by student loans which are generally guaranteed by the Federal government. These auction rate debt securities are structured to be tendered at par, at the investor's option, at auctions occurring every 27-30 days. However, due to the liquidity issues in the credit and capital markets, the market for auction rate debt securities began experiencing auction failures in February 2008 and there have been no successful auctions for the securities held in our portfolio since the failures began. We continue to receive interest on these securities, subject to an interest rate cap formula for each security as periodically adjusted in accordance with the respective securities' agreement. At December 31, 2008, the interest rates ranged from 1.55% to 3.43% on the auction rate debt securities as compared to the interest rate range at December 31, 2007 from 5.6% to 6.85%. See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement.

The Company has pledged these securities as collateral to a third-party lender for a Credit Line Agreement (See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement) entered into in December 2008. Given the lack of liquidity in the market for auction rate debt securities, the estimated fair value of these auction rate debt securities have become lower than their cost and, based on an analysis of other than temporary impairment factors, management has determined, beginning in the first quarter of 2008, that this difference represents a decline in value that is other than temporary. Accordingly, the Company recorded an other than temporary impairment charge of \$10.2 million for the year ended December 31, 2008 in the consolidated statements of operations. In December 2008, the Company entered into a Repurchase Agreement with a third-party lender such that the Company may require the third-party lender to repurchase the auction rate debt securities pledged as collateral for the Credit Line Agreement (See Note 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement), at their par value, from June 30, 2010 through July 2, 2012. The fair value of the Repurchase Agreement at its origination was \$10.2 million and was recorded as income in the 2008 consolidated statement of operations.

As of December 31, 2008, we had cash and cash equivalents of \$80.8 million, trading securities of \$52.7 million, available-for-sale securities of \$23.8 million and working capital of \$86.2 million.

On April 3, 2007, we purchased all of the outstanding capital stock of Cellex, a development stage enterprise, from its equity holders for an aggregate cash purchase price of \$46.1 million, including acquisition costs.

On May 4, 2007, the Company completed the acquisition of all of the outstanding shares of General Hydrogen, a development stage enterprise, for an aggregate purchase price of \$12.4 million, including acquisition costs. The purchase price includes the settlement of \$3 million in senior secured loans previously made by Plug Power to General Hydrogen, as well as 571,429 warrants granted to shareholders of General Hydrogen that were valued at \$1.4

million. The warrant price was based on a Monte Carlo simulation which was performed, and the mean value was selected. The warrants become exercisable when Plug Power's Common Stock trades at a volume weighted average price of \$7.00 or more for 10 consecutive trading days. The warrants carry an exercise price of \$.01 per share and expire four years from the date of issuance.

In June 2006, the Company completed a private placement with Smart Hydrogen Inc. (the Buyer) whereby the Company sold 395,000 shares of Class B Capital Stock, a class of preferred stock of the Company, which were convertible into 39,500,000 shares of common stock, and 11,240 shares of common stock to the Buyer for a net purchase price of approximately \$214.4 million, after payment of expenses relating to the issuance. The Buyer also contemporaneously purchased 1,825,000 shares of common stock of the Company from DTE Energy Foundation.

*Change in Control*

In December 2008, Smart Hydrogen Inc. sold to OJSC (Third Generation Company of the Wholesale Electricity Market) (OGK-3) all 395,000 shares of the Company's Class B Capital Stock as well as 5,126,939 shares of the Company's common stock. This sale triggered the automatic conversion of the Company's Class B Capital Stock into 39,500,000 shares of common stock, and the termination of all the rights and obligations attached to the Class B Capital Stock. The rights and obligations attached to the Class B Capital Stock that terminated included, but were not limited to, the right to appoint directors, veto rights and voting support obligations under the Investor Rights Agreement dated as of June 29, 2006, as amended (the Investor Rights Agreement). OGK-3 has executed a joinder agreement to the Investor Rights Agreement and is prohibited from transferring its shares of the Company's Common Stock to a competitor of the Company. OGK-3 is also bound by the same standstill provisions that applied to Smart Hydrogen, as set forth in the Investor Rights Agreement. This transfer and conversion triggered a change of control pursuant to Section 17 of our 1999 Stock Option and Incentive Plan; and, therefore, each outstanding Stock Option Right automatically became fully exercisable and conditions and restrictions on each outstanding Restricted Stock Award, Deferred Stock Award and Performance Share Award that relates solely to the passage of time and continued employment were removed.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**2. Summary of Significant Accounting Policies**

*Principles of Consolidation*

The consolidated financial statements include the financial statements of Plug Power Inc. and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated in consolidation. It is the Company's policy to reclassify prior year consolidated financial statements to conform to current year presentation.

*Cash Equivalents*

Cash equivalents consist of money market accounts and overnight repurchase agreements with an initial term of less than three months. For purposes of the consolidated statements of cash flows, the Company considers all highly-liquid debt instruments with original maturities of three months or less to be cash equivalents.

*Investment Securities*

Investment securities at December 31, 2008 and 2007 consist of U.S. Treasury, corporate debt, auction rate debt securities, and government agency securities. The Company classifies its securities in one of two categories: trading or available for sale. Trading securities consist of auction rate debt securities. All other securities not included in trading are classified as available for sale.

Trading and available for sale securities are recorded at fair value. Unrealized holding gains and losses on trading securities are included in earnings. Unrealized holding gains and losses, net of the related tax effect, on available for sale securities are excluded from earnings and are reported as a separate component of accumulated other comprehensive income until realized. Realized gains and losses from the sale of available for sale securities are determined on a specific identification basis.

A decline in the fair value of any available for sale security below cost that is deemed to be other than temporary results in an impairment to reduce the carrying amount to fair value. The impairment is charged to earnings and a new cost basis for the security is established. To determine whether an impairment is other than temporary, the Company considers whether it has the ability and intent to hold the investment until a market price recovery and considers whether evidence indicating the cost of the investment is recoverable outweighs evidence to the contrary. Evidence considered in this assessment includes the reasons for the impairment, the severity and duration of the impairment, changes in value subsequent to year end, forecasted performance of the investee, and the general market condition in the geographic area or industry the investee operates in.

Premiums and discounts are amortized or accreted over the life of the related available for sale security as an adjustment to yield using the interest method. Interest income is recognized when earned.

***Accounts Receivable***

Accounts receivable related to product and service arrangements are recorded when products are shipped or delivered to customers, as appropriate. Accounts receivable related to contract research and development arrangements are recorded when work is completed under government contracts. Accounts receivable are stated at the amount billed to customers. Interest and late charges billed to customers are not material, and because collection is uncertain, are not recognized until collected. Accounts receivable are ordinarily due between 30 and 60 days after the issuance of the invoice. Accounts are considered delinquent when more than 90 days past due. Delinquent receivables are reserved or written off based on individual credit evaluation and specific circumstances of the customer. The allowance for doubtful accounts and related receivable are reduced when the amount is deemed uncollectible.

***Inventory***

Inventory is stated at the lower of cost or market value and consists primarily of raw materials. In the case of our limited consignment arrangements, we do not relieve inventory until the customer has accepted the product, at which time the risks and rewards of ownership have transferred. At December 31, 2008 and 2007, inventory on consignment was valued at approximately \$45,000 and \$60,000, respectively.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Goodwill and Other Intangible Assets***

The Company accounts for goodwill pursuant to SFAS No. 141, Business Combinations, and SFAS No. 142, Goodwill and Other Intangible Assets. Goodwill represents the costs of the acquired businesses in excess of the fair value of Cellex and General Hydrogen net assets acquired during 2007 and H Power net assets acquired during 2003. Goodwill is tested for impairment annually or more frequently when events or circumstances indicate that the carrying value more likely than not exceeds its fair value. Goodwill impairment testing is performed at the segment (or reporting unit) level. Currently, the Company's goodwill is evaluated at the entity level as there is only one reporting unit. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or organically grown, are available to support the value of the goodwill. The goodwill impairment analysis is a two-step test. The first step, used to identify potential impairment, involves comparing the reporting unit's fair value to its carrying value including goodwill. If the fair value of a reporting unit exceeds its carrying value, applicable goodwill is considered not to be impaired. If the carrying value exceeds fair value, there is an indication of impairment and the second step is performed to measure the amount of impairment, if any. The Company performs its annual goodwill assessment under SFAS 142 at the date of its fiscal year end. As a result of this assessment, the Company has determined that a goodwill impairment has occurred and has recorded an impairment charge of \$45.8 million. See Note 7, Goodwill and Other Intangible Assets for more information.

SFAS No. 142 also requires that intangible assets with estimable useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment when certain triggering events occur in accordance with SFAS No. 144, Accounting for Impairment or Disposal of Long-Lived Assets. Intangible assets consisting of acquired technology and customer relationships related to Cellex and General Hydrogen are amortized using a straight-line method over their useful lives of 8 years. As a result of the uncertain economic environment in general and the decline in our stock price during the fourth quarter of 2008, the Company performed an impairment assessment in accordance with SFAS No. 144 as of December 31, 2008 and has determined that no impairment exists.

***Product and Service Revenue***

The Company applies the guidance within SEC Staff Accounting Bulletin No. 104, Revenue Recognition in Financial Statements (SAB 104) in the evaluation of its contracts to determine when to properly recognize revenue. Under SAB 104 revenue is recognized when title and risk of loss have passed to the customer, there is persuasive evidence of an arrangement, delivery has occurred or services have been rendered, the sales price is determinable, and collectibility is reasonably assured.

The Company's initial sales of product contain multiple obligations that may include a combination of fuel cell systems, continued service, maintenance, a supply of hydrogen and other support. While contract terms generally stipulate that title and risk of ownership pass and require payment upon shipment or delivery of the fuel cell system, or acceptance in the case of certain consignment sales, and also stipulate that payment is not contingent on the achievement of specific milestones or other substantive performance, the multiple obligations within the Company's contractual arrangements are generally not accounted for separately based on the Company's limited commercial experience and lack of evidence of fair value of the different components. As a result, the Company defers recognition of product and service revenue and recognizes revenue on a straight-line basis over the stated contractual term, as the continued service, maintenance and other support obligations expire, which may be for periods of twelve to thirty months or in some cases as long as eight years. In the case of the Company's limited consignment sales, the Company does not begin recognizing revenue on a deferred basis until the customer has accepted the product, at which time the risks and rewards of ownership have transferred, the price is fixed and the Company has a reasonable expectation of collection upon billing. The costs associated with the product, service and other obligations are generally expensed as they are incurred. At December 31, 2008 and 2007, the Company had unbilled amounts from product and service revenue in the amount of approximately \$18,000 and \$0, respectively. At December 31, 2008 and 2007, the Company had deferred product and service revenue in the amount of \$5.4 million and \$3.3 million, respectively.

As the Company gains experience, including field experience relative to service and warranty obligations based on the sales of initial products, the fair values for the multiple elements within future contracts may become determinable and the Company may, in future periods, recognize revenue upon shipment or delivery of the product or may continue to defer recognition, based on application of appropriate guidance within Emerging Issues Task Force (EITF) Issue No. 00-21, Accounting for Revenue Arrangements with Multiple Deliverables.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Research and Development Contract Revenue***

Research and development contract revenue primarily relates to cost reimbursement research and development contracts associated with the development of PEM fuel cell technology. The Company generally shares in the cost of these programs with cost sharing percentages generally ranging from 22% to 78% of total project costs. Revenue from time and material contracts is recognized on the basis of hours expended plus other reimbursable contract costs incurred during the period. Revenue from fixed fee contracts is recognized on the basis of percentage of completion. Our percentage-of-completion contracts are best efforts contracts with essentially no set deliverables. We measure progress on our percentage-of-completion contracts based on costs incurred. All allowable work performed through the end of each calendar quarter is billed, subject to limitations in the respective contracts. We expect to continue certain research and development contract work that is directly related to our current product development efforts. At December 31, 2008 and 2007, the Company had unbilled amounts from research and development contract revenue in the amount of approximately \$1.5 million and \$0, respectively. At December 31, 2008 and 2007, the Company had customer deposits from research and development contract revenue, representing deposits in advance of performance of the allowable work, in the amount of approximately \$13,000 and \$0, respectively.

***Property, Plant and Equipment***

Property, plant and equipment are originally recorded at cost. Maintenance and repairs are expensed as costs are incurred. Depreciation on plant and equipment is calculated on the straight-line method over the estimated useful lives of the assets. The Company records depreciation and amortization over the following estimated useful lives:

Buildings	20 years
Building improvements	5 20 years
Software, machinery and equipment	1 15 years

***Impairment of Long-Lived Assets***

The Company evaluates the recoverability of long-lived assets in accordance with the provisions of Statement of Financial Accounting Standards (SFAS) No. 144, Accounting for the Impairment of Long-Lived Assets. Long-lived assets, such as property, plant, and equipment, and purchased intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an



asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or fair value less costs to sell, and are no longer depreciated. The assets and liabilities of a disposal group classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet. As a result of the uncertain economic environment in general and the decline in our stock price during the fourth quarter of 2008, the Company performed an impairment assessment in accordance with SFAS No. 144 as of December 31, 2008 and has determined that no impairment exists.

### ***Income Taxes***

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets if it is more likely than not that such assets will not be realized. We did not report a benefit for federal and state income taxes in the consolidated financial statements as the deferred tax asset generated from our net operating loss has been offset by a full valuation allowance because it is more likely than not that the tax benefits of the net operating loss carryforward will not be realized.

The Company adopted Financial Accounting Standards Board (FASB) Interpretation No. 48, Accounting for Uncertainty in Income Taxes-an interpretation of FASB Statement No. 109, or FIN 48, which clarifies the accounting for uncertainty in tax positions on January 1, 2007. This Interpretation requires that the Company recognize in its financial statements the impact of a tax position, if that position is more likely than not to be sustained on audit, based on the technical merits of the position. The adoption of this Interpretation had no material impact on the Company's consolidated financial statements.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Foreign Currency Translation***

Foreign currency translation adjustments arise from conversion of the Company's foreign subsidiary's financial statements to US dollars for reporting purposes, and are included in accumulated other comprehensive income (loss) in stockholders' equity on the accompanying consolidated balance sheets. Realized foreign currency transaction gains and losses are included in interest and other expense in the accompanying consolidated statements of operations.

***Research and Development***

Costs incurred in research and development by the Company are expensed as incurred.

***Stock-Based Compensation***

The Company has two stock-based employee compensation plans, which are described more fully in Note 14, Employee Benefit Plans.

The accounting provisions of SFAS No. 123 Revised (FAS 123R), Share-Based Payment, which establishes accounting for share-based awards exchanged for employee services and requires companies to expense the estimated fair value of these awards over the requisite employee service period, have been adopted by the Company as of January 1, 2006 in conjunction with its adoption of FAS 123R. In March 2005, the SEC issued Staff Accounting Bulletin No. 107 (SAB 107) to assist filers by simplifying some of the implementation challenges of SFAS 123R. In particular, SAB 107 provides supplemental implementation guidance on FAS 123R, including guidance on valuation methods, classification of compensation expense, inventory capitalization of share-based compensation cost, income tax effects, disclosures in Management's Discussion and Analysis and several other issues. The Company has applied the principles of SAB 107.

Under FAS 123R, share-based compensation cost is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense over the employee's requisite service period. The Company adopted the provisions of FAS 123R, using the modified prospective application, which provides for certain changes to the method for valuing share-based compensation. Under the modified prospective application, prior periods are not revised for comparative purposes. The valuation provisions of FAS 123R apply to new awards and to awards that were outstanding on the effective date and subsequently modified or cancelled. Estimated compensation expense for awards outstanding at the effective date will be recognized over the remaining service period using the compensation cost calculated for pro forma disclosure purposes under the original FASB Statement No. 123, Accounting for Stock-Based Compensation (FAS 123).

Stock-based compensation represents the cost related to stock-based awards granted to employees and directors. The Company measures stock-based compensation cost at grant date, based on the estimated fair value of the award, and

recognizes the cost as expense on a straight-line basis (net of estimated forfeitures) over the option's requisite service period.

The Company estimates the fair value of stock-based awards using a Black-Scholes valuation model. Stock-based compensation expense is recorded in Research and development expense and Selling, general and administrative expense in the consolidated statements of operations based on the employees' respective function.

The Company records deferred tax assets for awards that result in deductions on the Company's income tax returns, unless the Company cannot recognize the deduction (i.e. the Company is in a net operating loss (NOL) position), based on the amount of compensation cost recognized and the Company's statutory tax rate. Differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the Company's income tax return are recorded in additional paid-in capital if the tax deduction exceeds the deferred tax asset or in the consolidated statements of operations if the deferred tax asset exceeds the tax deduction and no additional paid-in capital exists from previous awards. No tax benefit or expense for stock-based compensation has been recorded during the years ended December 31, 2008, 2007 and 2006 since the Company remains in a NOL position.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Per Share Amounts***

The Company reports net loss per basic and diluted common share in accordance with SFAS No. 128, Earnings Per Share, which establishes standards for computing and presenting loss per share. Basic earnings per common share are computed by dividing net loss available to common stockholders by the weighted average number of common shares outstanding during the reporting period, adjusted for unvested restricted stock. Diluted earnings per share reflects the potential dilution that could occur if securities or other contracts to issue common stock (such as convertible preferred stock, stock options, unvested restricted stock, and warrants) were exercised or converted into common stock or resulted in the issuance of common stock (net of any assumed repurchases) that then shared in the earnings of the Company, if any, computed by dividing net earnings by the combination of dilutive common share equivalents, comprised of shares issuable under outstanding warrants and the Company's share-based compensation plans, and the weighted average number of common shares outstanding during the reporting period. Since the Company is in a net loss position, all common stock equivalents would be considered to be anti-dilutive and are, therefore, not included in the determination of diluted earnings per share. Accordingly, basic and diluted loss per share are the same.

The following table provides the components of the calculations of basic and diluted earnings per share:

	<b>Year Ended December 31,</b>		
	<b>2008</b>	<b>2007</b>	<b>2006</b>
Numerator:			
Net loss	\$ (121,700,024 )	\$ (60,570,816 )	\$ (50,309,587 )
Denominator:			
Weighted average number of common shares outstanding	89,383,480	87,341,717	86,100,326

These dilutive potential common shares are summarized as follows:

	<b>Year Ended December 31,</b>		
	<b>2008</b>	<b>2007</b>	<b>2006</b>
Stock options outstanding (2)	6,119,804	6,578,313	6,511,563
Unvested restricted stock		784,697	430,623
Preferred stock(1)		39,500,000	39,500,000
Warrants	571,429	571,429	
Number of dilutive potential common shares	6,691,233	47,434,439	46,442,186

- (1) The preferred stock amount represents the dilutive potential common shares of the 395,000 shares of Class B capital stock issued on June 29, 2006, which were converted into 39,500,000 shares of common stock in December 2008.
- (2) Does not include 1,349,772 shares subsequently issued in 2009 (which will immediately vest) for the achievement of scorecard objectives in 2008.

#### *Use of Estimates*

The consolidated financial statements of the Company have been prepared in conformity with U.S. generally accepted accounting principles, which require 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.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

***Recently Adopted Accounting Pronouncements***

The Company adopted SFAS No. 157, Fair Value Measurements on January 1, 2008, for financial assets and financial liabilities. The adoption of this standard is discussed more fully in Note 4, Fair Value Measurements. The adoption of SFAS No. 157 did not have a material effect on the Company's consolidated financial position, consolidated results of operations, or liquidity.

The Company adopted SFAS No. 159, The Fair Value Option for Financial Assets and Financial Liabilities Including an Amendment of SFAS No. 115 (SFAS No. 159) on January 1, 2008. This standard permits entities to choose to measure many financial instruments and certain warranty and insurance contracts at fair value on a contract-by-contract basis. The Company chose to value its auction rate debt securities repurchase agreement at fair value. See Notes 4, Fair Value Measurements and 8, Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement, respectively.

The Company adopted Emerging Issues Task Force (EITF) No. 07-01, Accounting for Collaborative Arrangements Related to the Development and Commercialization of Intellectual Property (EITF No. 07-01) on January 1, 2008. This standard prescribes the accounting for collaborations. It requires certain transactions between collaborators to be recorded in the income statement on either a gross or net basis within expenses when certain characteristics exist in the collaboration relationship. The adoption did not have a material effect on its consolidated financial position, consolidated results of operations, or liquidity.

The Company adopted Staff Accounting Bulletin No. 110, Share-Based Payment (SAB No. 110) on January 1, 2008. SAB No. 110 amends SAB No. 107, Share-Based Payment, and allows for the continued use, under certain circumstances, of the simplified method in developing an estimate of the expected term on stock options accounted for under the Statement of Financial Accounting Standards (SFAS) No. 123R, Share-Based Payment (revised 2004). The Company continued to use the simplified method in developing an estimate of the expected term on stock options granted in 2008. The Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate expected term due to the limited period of time its shares of Common Stock have been publicly traded.

***Recent Accounting Pronouncements***

In December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements an amendment of Accounting Research Bulletin No. 51 (SFAS No. 160). This new standard establishes accounting and reporting standards for ownership interests in subsidiaries held by parties other than the parent, the amount of consolidated net income attributable to the parent and to the noncontrolling interest, changes in a parent's ownership

interest and the valuation of retained noncontrolling equity investments when a subsidiary is deconsolidated. The statement also establishes reporting requirements that provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. This standard is effective for fiscal years beginning after December 15, 2008. The Company does not have any outstanding noncontrolling interests. The Company plans to adopt SFAS No. 160 on January 1, 2009 and does not expect that the adoption of SFAS No. 160 will have a material impact on its consolidated financial position, consolidated results of operations, or liquidity.

In December 2007, the FASB issued SFAS No. 141 (Revised 2007), Business Combinations, (SFAS No. 141R). This new standard applies to all transactions or other events in which an entity obtains control of one or more businesses, including those sometimes referred to as true mergers or mergers of equals and combinations achieved without the transfer of consideration. This standard replaces FASB Statement No. 141 and applies to all business entities, including mutual entities that previously used the pooling-of-interests method of accounting for some business combinations. The Company plans to adopt SFAS No. 141R on January 1, 2009 and will apply the provisions of this standard on a prospective basis. The Company does not expect that the adoption of SFAS No. 141R will have a material impact on its consolidated financial position, consolidated results of operations, or liquidity. However, prospective business combinations, if any, will be significantly impacted by the adoption of SFAS No. 141R.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In May 2008, the FASB issued SFAS No. 162, The Hierarchy of Generally Accepted Accounting Principles. This new standard identifies the sources of accounting principles and the framework for selecting the accounting principles used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles (GAAP) in the United States. This new standard mandates the GAAP hierarchy reside in the accounting literature as opposed to the audit literature. This has the practical impact of elevating FASB Statements of Financial Accounting Concepts in the GAAP hierarchy. SFAS No. 162 is effective 60 days after the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, The Meaning of Present Fairly in Conformity with Generally Accepted Accounting Principles. The Company does not believe adoption of this new standard will have a material effect on its consolidated financial position, consolidated results of operations, or liquidity.

In June 2008, the FASB issued the FASB Staff Position (FSP) EITF No. 03-6-1, Determining Whether Instruments Granted in Share-Based Payment Transactions are Participating Securities (FSP EITF No. 03-6-1). FSP EITF No. 03-6-1 requires that unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) should be classified as participating securities and should be included in the computation of earnings per share pursuant to the two-class method as described in SFAS No. 128, Earnings per Share. FSP EITF No. 03-6-1 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. The Company plans to adopt FSP EITF No. 03-6-1 on January 1, 2009 and does not expect that the adoption of FSP EITF No. 03-6-1 will have a material impact on its consolidated financial position, consolidated results of operations, or liquidity.

**3. Acquisitions**

On April 3, 2007, the Company completed the acquisition of all of the outstanding shares of Cellex, a development stage enterprise, for an aggregate cash purchase price, including acquisition costs, of \$46.1 million. The results of Cellex's operations have been included in the consolidated financial statements since that date. Cellex, based in Richmond, British Columbia, develops and commercializes fuel cell solutions that replace the industrial lead acid battery system used today in powering electric lift truck fleets in large-scale distribution centers.

The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the date of acquisition.

Current assets	\$ 9,856,529
Property, plant and equipment	1,220,580
Identifiable intangible assets	10,000,000



Goodwill	27,585,632
Total assets acquired	48,662,741
Current liabilities	831,817
Long term liabilities	1,693,348
Total liabilities assumed	2,525,165
Net assets acquired	\$ 46,137,576

The entire \$10 million balance of intangible assets has been assigned to acquired technology, which is being amortized over 8 years.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

On May 4, 2007, the Company completed the acquisition of all of the outstanding shares of General Hydrogen, a development stage enterprise, for an aggregate purchase price of \$12.4 million, including acquisition costs. The purchase price includes the settlement of \$3 million in senior secured loans previously made by the Company to General Hydrogen, as well as 571,429 warrants granted to shareholders of General Hydrogen that were valued at \$1.4 million. The warrants become exercisable when Plug Power's Common Stock trades at a volume weighted average price of \$7.00 or more for 10 consecutive trading days. The warrants carry an exercise price of \$.01 per share and expire four years from the date of issuance. The results of General Hydrogen's operations have been included in the consolidated financial statements since May 4, 2007. General Hydrogen is located in Richmond, British Columbia, Canada within close proximity to Cellex.

The following table summarizes the estimated fair values of the assets acquired and liabilities assumed at the date of acquisition.

Current assets	1,591,492
Property, plant and equipment	2,351,941
Identifiable intangible assets	6,900,000
Goodwill	8,579,469
Total assets acquired	19,422,902
Current liabilities	4,366,229
Long term liabilities	2,681,356
Total liabilities assumed	7,047,585
Net assets acquired	\$ 12,375,317

Of the \$6.9 million of intangible assets, \$5.9 million has been assigned to acquired technology and \$1.0 million has been assigned to customer relationships, both of which are being amortized over 8 years.

The gross carrying amount and accumulated amortization of the Company's acquired identifiable intangible assets as of December 31, 2008 are as follows:

	<b>Weighted Average Amortization Period</b>	<b>Gross Carrying Amount</b>	<b>Accumulated Amortization</b>	<b>Effect of Foreign Currency Translation</b>	<b>Total</b>
Acquired Technology	8 years	\$ 15,900,000	\$ (3,630,724 )	\$ (217,761 )	\$ 12,051,515
Customer Relationships	8 years	1,000,000	(208,333 )		791,667
		\$ 16,900,000	\$ (3,839,057 )	\$ (217,761 )	\$ 12,843,182

Amortization expense for acquired identifiable intangible assets for the year ended December 31, 2008, was \$2.2 million. Estimated amortization expense for subsequent years is as follows:

2009	\$ 2,224,954
2010	2,224,954
2011	2,224,954
2012	2,224,954
2013	2,224,954
Thereafter	1,718,412
<b>Total</b>	<b>\$ 12,843,182</b>

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following unaudited pro forma financial information for the years ended December 31, 2007 and 2006 presents the consolidated operations of the Company as if the Cellex and General Hydrogen acquisitions had been made on January 1, 2006. The unaudited pro forma financial information is provided for informational purposes only and does not project the Company's results of operations for any future period:

	<b>Year ended December 31, 2007</b>	<b>Year ended December 31, 2006</b>
Unaudited proforma revenue	\$ 16,824,944	\$ 10,226,408
Unaudited proforma net loss	(64,774,052 )	(65,319,494 )
Unaudited proforma basic and diluted loss per share	\$ (0.74 )	\$ (0.76 )

**4. Fair Value Measurements**

The Company adopted SFAS No. 157, Fair Value Measurements on January 1, 2008, for financial assets and financial liabilities. SFAS No. 157 defines fair value, provides guidance for measuring fair value, and requires certain disclosures. Financial Accounting Standards Board Staff Position (FSP) No. 157-2 amends SFAS No. 157 to delay the effective date of the application of SFAS No. 157 to fiscal years beginning after November 15, 2008 for all nonfinancial assets and nonfinancial liabilities. Nonfinancial assets and nonfinancial liabilities for which the Company has not applied the provisions of SFAS No. 157 include those measured at fair value in goodwill impairment testing.

SFAS No. 157 discusses valuation techniques, such as the market approach (comparable market prices), the income approach (present value of future income or cash flow), and the cost approach (cost to replace the service capacity of an asset or replacement cost). The statement utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

**Level 1 Inputs** Level 1 inputs are unadjusted quoted prices in active markets for assets or liabilities identical to those to be reported at fair value. An active market is a market in which transactions occur for the item to be fair valued with sufficient frequency and volume to provide pricing information on an ongoing basis.

**Level 2 Inputs** Level 2 inputs are inputs other than quoted prices included within Level 1. Level 2 inputs are observable either directly or indirectly. These inputs include: (a) Quoted prices for similar assets or liabilities in active markets; (b) Quoted prices for identical or similar assets or liabilities in markets that are not active, such as when there

are few transactions for the asset or liability, the prices are not current, price quotations vary substantially over time or in which little information is released publicly; (c) Inputs other than quoted prices that are observable for the asset or liability; and (d) Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

**Level 3 Inputs** Level 3 inputs are unobservable inputs for an asset or liability. These inputs should be used to determine fair value only when observable inputs are not available. Unobservable inputs should be developed based on the best information available in the circumstances, which might include internally generated data and assumptions being used to price the asset or liability.

When determining the fair value measurements for assets or liabilities required or permitted to be recorded at and/or marked to fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability. When possible, the Company looks to active and observable markets to price identical assets. When identical assets are not traded in active markets, the Company looks to market observable data for similar assets. Nevertheless, certain assets are not actively traded in observable markets and the Company must use alternative valuation techniques to derive a fair value measurement.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes the bases used to measure certain financial assets at fair value on a recurring basis in the consolidated balance sheet:

## Basis of Fair Value Measurements

<b>Balance at December 31, 2008</b>	<b>Total</b>	<b>Quoted Prices in Active Markets for Identical Items (Level 1)</b>	<b>Significant Observable Inputs (Level 2)</b>	<b>Significant Unobservable Inputs (Level 3)</b>
Trading securities - auction rate debt securities	\$ 52,650,654	\$	\$	\$ 52,650,654
Available-for-sale securities	\$ 23,843,950	\$ 23,843,950	\$	\$
Auction rate debt securities repurchase agreement	\$ 10,224,346	\$	\$	\$ 10,224,346

The following tables show reconciliations of the beginning and ending balances for assets measured at fair value on a recurring basis using significant unobservable inputs (i.e. Level 3):

	<b>Fair Value Measurements Using Significant Unobservable Inputs</b>
Beginning of period	\$
Transfers into Level 3 - auction rate debt securities	62,875,000
Other than temporary impairment charge on auction rate debt securities included in the consolidated statements of operations for the twelve months ended December 31, 2008	(10,224,346 )
Fair value of trading securities - auction rate debt securities at December 31, 2008	\$ 52,650,654

	<b>Fair Value Measurements Using Significant Unobservable Inputs</b>
Beginning of period	\$
Transfers into level 3	10,224,346
Fair value of auction rate debt securities repurchase agreement at December 31, 2008	\$ 10,224,346

The following summarizes the valuation technique for assets measured and recorded at fair value:

Available-for-sale securities: For our level 1 securities, which represent Federal treasury securities, fair value is based on quoted market prices.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Trading securities auction rate debt securities and auction rate debt securities repurchase agreement: The securities valued using unobservable inputs were the auction rate debt securities and auction rate debt securities repurchase agreement as the financial and capital markets have experienced significant dislocation and illiquidity in regard to these types of instruments and there is currently no secondary market for these types of securities. There have been no successful auctions since early 2008. The valuation of these auction rate debt securities and auction rate debt securities repurchase agreement is an estimate based upon factors specific to these securities, including duration, tax status (taxable or tax-exempt), credit quality, the existence of insurance wraps, and the composition of the underlying student loans (Federal Family Education Loan Program or private loans). Assumptions were made about future cash flows based upon interest rate formulas as described above. Also, the valuation included estimates of market data including yields or spreads of similar trading instruments, when available, or assumptions believed to be reasonable for non-observable inputs such as likelihood of redemption. Actual transactions involving these securities and/or future valuations could differ from the estimated fair value of these securities at December 31, 2008.

**5. Available-for-Sale Securities**

The amortized cost and estimated fair value of the Company's available-for-sale securities as of December 31, 2008 were as follows:

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Estimated Fair Value</b>
U.S. Treasury Securities	\$ 23,616,845	\$ 227,105	\$	\$ 23,843,950

The amortized cost and estimated fair value of the Company's available-for-sale securities as of December 31, 2007 were as follows:

	<b>Amortized Cost</b>	<b>Gross Unrealized Gains</b>	<b>Gross Unrealized Losses</b>	<b>Estimated Fair Value</b>
Corporate Debt Securities	\$ 51,777,800	\$ 125,490	\$ (56,580 )	\$ 51,846,710
	92,775,000	12,120		92,787,120



Auction Rate Debt Securities				
Government Agency Securities	8,999,453	2,437	(12,050 )	8,989,840
	\$ 153,552,253	\$ 140,047	\$ (68,630 )	\$ 153,623,670

The auction rate debt securities are collateralized by student loan debt securities issued by various states, in the United States, or state agencies. These auction rate debt securities are structured to be tendered at par, at the option of the investor, at auctions occurring every 27-30 days. The auctions that occurred in January of 2008 were successful. However, the recent disruption in the financial and capital markets has resulted in reduced liquidity of these auction rate debt securities and increased the liquidity risk associated with these securities as the auctions that have occurred beginning in February 2008 have not been successful. Each of the auction rate debt securities includes contractual provisions to deal with these events. The Company will continue to receive interest income on these debt securities; however, the interest rates will be at the maximum rate defined for each security. The default interest rates will be received until there is a successful auction or the Company sells these securities in the open market. As of December 31, 2008, these securities have been reclassified to trading securities and have been pledged as collateral for a Credit Line Agreement entered into by the Company with a third-party lender in December 2008. Prior to the transfer of these securities to trading securities in December 2008, the Company recorded other than temporary impairment charges on these securities of \$10,224,346. There were no significant changes in the fair value of these securities from the time of their transfer into trading securities in December 2008 through December 31, 2008.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

There were no unrealized losses in the securities available-for-sale securities portfolio at December 31, 2008. The contractual maturities of securities available-for-sale securities are all in the year ended December 31, 2009.

The following are estimated fair values and unrealized losses of the Company's available-for-sale securities that were in an unrealized loss position as of December 31, 2007:

	<b>Less than 12 months</b>		<b>More than 12 months</b>	
	<b>Estimated Fair Value</b>	<b>Unrealized Losses</b>	<b>Estimated Fair Value</b>	<b>Unrealized Losses</b>
Corporate Debt Securities	\$ 9,822,341	\$ (40,236 )	\$ 5,088,140	\$ (16,344 )
Government Sponsored Enterprise Securities	4,987,950	(12,050 )		
	\$ 14,810,291	\$ (52,286 )	\$ 5,088,140	\$ (16,344 )

The above table represents 7 securities where the current estimated fair value was less than the related amortized cost at December 31, 2007. These unrealized losses do not reflect any deterioration of the credit worthiness of the issuers of the securities and are not considered to be other than temporary. All securities are of investment grade.

The Company recognized gross gains, gross losses and proceeds on available-for-sale securities for each of the years ended December 31 as follows:

	<b>2008</b>	<b>2007</b>	<b>2006</b>
Proceeds on sales	\$ 159,849,925	\$ 24,859,823	\$ 29,284,989
Proceeds on maturities	106,924,255	531,780,745	823,683,523
Gross realized gains	404,074	162,890	80,318
Gross realized losses	14,890	45,227	12,396

**6. Property, Plant and Equipment**

Property, plant and equipment at December 31, 2008 and 2007 consist of the following:

	<b>December 31, 2008</b>	<b>December 31, 2007</b>
Land	\$ 90,000	\$ 90,000
Buildings	14,557,080	14,557,080
Building improvements	8,615,636	8,580,001
Software, machinery and equipment	29,779,651	29,147,823
	53,042,367	52,374,904
Less accumulated depreciation and amortization	(35,272,393 )	(31,310,109 )
Property, plant, and equipment, net	\$ 17,769,974	\$ 21,064,795

Depreciation expense was \$4.4 million, \$3.7 million and \$3.1 million for the years ended December 31, 2008, 2007 and 2006, respectively, and was included in research and development and selling, general and administrative expenses on the accompanying consolidated statements of operations.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****7. Goodwill and Other Intangible Assets**

Goodwill is tested for impairment annually or more frequently when events or circumstances indicate that the carrying value more likely than not exceeds its fair value. As a result of the uncertain economic environment in general and the decline in our stock price during the fourth quarter of 2008, indicative of a potential devaluation of the Company's assets, the Company performed a goodwill impairment assessment under SFAS 142. As a result of this assessment, the Company has determined that a goodwill impairment has occurred and has recorded an impairment charge of \$45.8 million.

The test for goodwill impairment, as defined by SFAS No. 142 is a two-step approach. The first step of the goodwill impairment test requires a determination of whether or not the fair value of goodwill is less than its carrying value. If so, the second step is required, which involves an analysis reflecting the allocation of the fair value determined in the first step (as if it was the purchase price in a business combination). This process may result in the determination of a new amount of goodwill. If the calculated fair value of the goodwill resulting from this allocation is lower than the carrying value of the goodwill in the reporting unit, the difference is reflected as a non-cash impairment loss. The purpose of the second step is only to determine the amount of goodwill that should be recorded on the consolidated balance sheet. The recorded amounts of other items on the consolidated balance sheet are not adjusted.

We estimate the fair value of our single reporting unit using market and income valuation approaches. The market valuation approach estimates our enterprise value, which is comprised of our market capitalization. The income valuation approach estimates our enterprise value using a net present value model, which discounts projected free cash flows (DCF) of our business at a computed weighted average cost of capital as the discount rate.

In the fourth quarter of 2008, as a result of completing the first step of the goodwill impairment test, we determined that the carrying value of our goodwill exceeded its fair value, which required us to perform the second step of the goodwill impairment test. The second step of the goodwill impairment test, which included consideration of the Company's market capitalization as well as discounted cash flow projections and estimations of the fair values of identified assets and liabilities and intangible assets with estimated useful lives, indicated that goodwill was impaired and we recorded a non-cash goodwill impairment charge of \$45.8 million, all of which is classified as goodwill impairment in the accompanying 2008 consolidated statement of operations.

The carrying amount of goodwill and changes in the carrying amount of goodwill for the year ended December 31, 2008, were as follows:

Goodwill at December 31, 2007	\$ 51,399,497
Increase related to tax purchase accounting adjustment	1,017,641
Goodwill impairment charge	(45,842,656)
Impact of foreign currency translation	(6,574,482)

Goodwill at December 31, 2008

\$ -

Intangible assets consisting of acquired technology and customer relationships related to Cellex and General Hydrogen are amortized using a straight-line method over their useful lives of 8 years. Amortization expense for acquired intangible assets during the years ended December 31, 2008, 2007 and 2006 was \$2.2 million, \$1.6 million, and \$0, respectively. Amortization related to the assets acquired as part of Cellex and General Hydrogen is described more fully in Note 3, Acquisitions.

Identifiable intangible assets which have indefinite lives are tested at least annually for impairment. As a result of the uncertain economic environment in general and the decline in our stock price during the fourth quarter of 2008, the Company performed an impairment assessment in accordance with SFAS No. 144 as of December 31, 2008 and has determined that no impairment exists.

#### **8. Credit Line Agreement and Auction Rate Debt Securities Repurchase Agreement**

In December 2008, the Company entered into a Credit Line Agreement with a third-party lender with a maximum availability of \$62.9 million. As of December 31, 2008, the Company has drawn down \$62.9 million on this line of credit. The Company's auction rate debt securities included in trading securities on the consolidated balance sheets are pledged as collateral for the Credit Line Agreement. The fair value of the auction rate debt securities is \$52.7 million at December 31, 2008. The Credit Line Agreement bears interest at a variable rate equal to the average rate of interest earned by the Company on the auction rate debt securities pledged as collateral for the Credit Line Agreement. The interest rate on the line of credit advances was 2.4% at December 31, 2008. Interest accrued on the advances on the Credit Line Agreement between its origination in December 2008 through December 31, 2008 was not significant.

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The advances on the Credit Line Agreement is repayable on demand by the third-party lender. If the third-party lender exercises its right to demand repayment of the advances under the Credit Line Agreement prior to June 30, 2010 (the date upon which the Company can first exercise its rights under the Repurchase Agreement discussed below), the third-party lender is required to arrange alternative financing on terms substantially the same as the Credit Line Agreement or the third party lender must repurchase the auction rate debt securities pledged as collateral for the Credit Line Agreement at their par value, which is \$62.9 million at December 31, 2008.

In December 2008, the Company also entered into a Repurchase Agreement with the third-party lender such that the Company may require the third-party lender to repurchase the auction rate debt securities pledged as collateral for the Credit Line Agreement, at their par value, from June 30, 2010 through July 2, 2012 as full settlement for the advances on the Credit Line Agreement. The Company has elected to record this item at its fair value in accordance with SFAS No. 159. At December 31, 2008 the fair value of this item is approximately \$10.2 million and is recorded as an asset on the consolidated balance sheets and as a gain on the consolidated statements of operations. The change in the fair value of the Repurchase Agreement between its origination in December 2008 through December 31, 2008 was not significant.

**9. Accrued Expenses**

Accrued expenses at December 31, 2008 and 2007 consist of:

	<b>2008</b>	<b>2007</b>
Accrued payroll and compensation related costs	\$ 2,694,177	\$ 1,729,424
Accrued restructuring costs	4,393,085	
Other accrued liabilities	2,858,054	3,780,380
	<b>\$ 9,945,316</b>	<b>\$ 5,509,804</b>

**10. Repayable Government Assistance**

During the year ended December 31, 2000, the Company's wholly-owned subsidiary, Plug Power Canada Inc., formerly known as Cellex Power Products Inc., entered into an Industrial Research Assistance Program (IRAP) Repayable Contribution Agreement with the National Research Council of Canada (NRC) under which it received contributions totaling Cdn\$500,000 for certain development activities. The agreement with the NRC provides for payment of royalties of up to 170% of the contributions received subject to certain conditions, payable quarterly, calculated at 3.5% of gross revenues. Plug Power Canada's repayment obligation to the NRC exists from July 1, 2002

to March 31, 2009. If by April 1, 2009, the total amount repaid to the NRC is less than the Cdn\$500,000 contribution, then Plug Power Canada will continue to make the payments to the NRC until either the full Cdn\$500,000 is repaid or until July 1, 2012, whichever comes first. The maximum liability under this repayment obligation is Cdn\$850,000. If at any point Plug Power Canada's repayments reach this amount, the obligation shall cease.

The Company has recorded the estimate of amounts owed under this arrangement as a debt, which includes accrued interest that is determined based on imputed interest rates. Royalty payments are recorded as a reduction of the debt. Accordingly, liabilities relating to this agreement, including imputed interest, in the amount of \$173,138 and \$369,331, respectively, have been recorded as repayable government assistance and current portion of repayable government assistance (other current liabilities) in the consolidated balance sheets as of December 31, 2008 and \$572,473 and \$213,500, respectively, have been recorded as repayable government assistance and current portion of repayable government assistance (other current liabilities) in the consolidated balance sheets as of December 31, 2007. The imputed interest is recorded as interest expense in the consolidated statement of operations.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

General Hydrogen Corporation and its wholly owned subsidiary General Hydrogen (Canada) Corporation, and Cellex Power Products, Inc. each entered into agreements with Technology Partnerships Canada (TPC) during the year ended December 31, 2005 for the development of early market fuel cell applications. On December 31, 2007, General Hydrogen Corporation merged with Plug Power Inc. and, subsequently, Plug Power Inc. contributed the wholly owned subsidiary General Hydrogen (Canada) Corporation to Plug Power Canada Inc. On January 1, 2008, General Hydrogen (Canada) Corporation, Plug Power Canada Inc. and Cellex Power Products, Inc. amalgamated as Plug Power Canada Inc. Under the former Cellex Power Products, Inc.'s TPC agreement (the Cellex TPC Agreement), TPC would contribute the lesser of Cdn\$9.5 million or 33% of eligible costs incurred during the period July 2004 to June 2009. Following the completion of the development project, TPC would be entitled to recover its investment through royalty payments of 2.06% of gross revenues during the period January 1, 2010 to December 31, 2017, or until a Cdn\$42.2 million cap is reached, whichever occurred first. If, as of December 31, 2017, the cumulative royalty paid and owing had not reached Cdn\$28.1 million, royalty payments would continue to be payable until Cdn\$28.1 million was reached or until December 31, 2027, whichever occurred first. Under the former General Hydrogen Corporation and General Hydrogen (Canada) Corporation's TPC agreement (the General Hydrogen TPC Agreement), TPC would contribute the lesser of Cdn\$9.0 million or 32% of eligible costs incurred through June 2008. Following the completion of the development project, TPC would be entitled to recover its investment through royalty payments of 1.98% of revenues during the period January 1, 2009 to December 31, 2016. If, as of December 31, 2016, the cumulative royalty paid and owing has not reached Cdn\$22.9 million, royalty payments would continue to be payable until Cdn\$22.9 million was reached or until December 31, 2026, whichever occurred first.

On September 30, 2008 Plug Power Inc., Plug Power Canada Inc., and TPC entered into Assumption and Termination Agreements related to both the Cellex TPC Agreement and the General Hydrogen TPC Agreement. In consideration of the Assumption and Termination Agreements, Plug Power Inc. and Plug Power Canada Inc. agreed to pay \$2,235,244 to TPC. As a result of this agreement, the Company has recorded a gain on the termination of these agreements in the amount of \$1,232,522 in interest and other income and net realized gains from available-for-sale securities in the consolidated statement of operations for 2008.

A liability, including imputed interest, in the amount of \$3,815,890 was recorded as repayable government assistance in the consolidated balance sheets as of December 31, 2007. The imputed interest is recorded as interest expense in the consolidated statement of operations.

**11. Restructuring Charges**

On June 10, 2008, the Company adopted a restructuring plan to become a market and sales driven organization. The Company has refocused on the GenDrive motive power product where there has been significant customer interest in fuel cell power units. As part of the restructuring, the Company has reduced its workforce, cut back discretionary spending, and deferred non strategic projects. As a result of the reduced workforce and contract cancellation, the Company recorded restructuring charges in the amount of \$3,744,801 within selling, general and administrative expenses in the consolidated statement of operations for 2008. At December 31, 2008, \$402,721 remains as accrued expenses on the consolidated balance sheet.



The accrued restructuring charges are comprised of the following at December 31, 2008:

	<b>Total Amount Expensed Twelve Months Ended December 31, 2008</b>	<b>Total Amount Paid Twelve Months Ended December 31, 2008</b>	<b>Remaining Accrual at December 31, 2008</b>
Personnel Related	\$ 3,380,701	\$ 3,342,080	\$ 38,621
Contract Cancellation	364,100		364,100
Total	\$ 3,744,801	\$ 3,342,080	\$ 402,721

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

On December 18, 2008, the Company adopted a restructuring plan intended to focus the Company on revenue growth, improve organizational efficiency and position the Company for long-term profitability. As part of this plan, the Company implemented a reduction in workforce by eliminating 90 positions in addition to terminating purchase commitments and charging off inventory related to lapsed product lines. As a result, the Company recorded restructuring charges in the amount of \$3,990,364 within selling, general and administrative expenses and \$2,295,370 in cost of product and service revenue in the consolidated statement of operations for 2008. At December 31, 2008, \$3,990,364 remains as accrued expenses on the consolidated balance sheet.

The accrued restructuring charges are comprised of the following at December 31, 2008:

	<b>Total Amount Expensed Twelve Months Ended December 31, 2008</b>	<b>Total Amount Paid Twelve Months Ended December 31, 2008</b>	<b>Remaining Accrual at December 31, 2008</b>
Personnel Related	\$ 2,653,597	\$	\$ 2,653,597
Purchase Commitment Cancellations	1,336,767		1,336,767
Inventory Non-Cash Write-Down	2,295,370	N/A	N/A
Total	\$ 6,285,734	\$	\$ 3,990,364

**12. Income Taxes**

The components of income/(loss) before income taxes for the years ended December 31, 2008, 2007 and 2006 are as follows:

	<b>2008</b>	<b>2007</b>	<b>2006</b>
Income/(loss) before income taxes:			
United States	\$ (91,543,000 )	\$ (55,831,000 )	\$ (50,529,000 )
Foreign	(30,157,000 )	(4,740,000 )	219,000
	\$ (121,700,000 )	\$ (60,571,000 )	\$ (50,310,000 )

There was no current income tax expense for the years ended December 31, 2008, 2007 and 2006. The Company was a Limited Liability Company (LLC) until its merger into Plug Power Inc. effective November 3, 1999. From inception through November 3, 1999, the Company was treated as a partnership for federal and state income tax purposes and accordingly the Company's income taxes or credits resulting from earnings or losses were payable by, or accrued to its members. Therefore, no provision for income taxes has been made prior to November 3, 1999.

Since November 3, 1999, the Company is taxed as a corporation for Federal and State income tax purposes and the effect of deferred taxes recognized as a result of the change in tax status of the Company have been included in operations. Deferred tax assets and liabilities are determined based on the temporary differences between the financial statement and tax bases of assets and liabilities as measured by the enacted tax rates.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The significant components of U.S. income tax (benefit) expense for the years ended December 31, 2008, 2007 and 2006 are as follows:

	<b>Years ended December 31,</b>		
	<b>2008</b>	<b>2007</b>	<b>2006</b>
Deferred tax benefit	\$ (18,983,017 )	\$ (3,563,416 )	\$ (2,615,824 )
Net operating loss carryforward	(9,307,811 )	(18,477,874 )	(17,361,668 )
Valuation allowance	28,290,828	22,041,290	19,977,492
Provision for income taxes	\$	\$	\$

The significant components of foreign income tax (benefit) expense for the years ended December 31, 2008 and 2007 are as follows:

	<b>Year ended December 31, 2008</b>	<b>Year ended December 31, 2007</b>
Deferred tax expense	\$ 2,020,310	\$ 55,170
Net operating loss carryforward, net	786,486	935,484
Valuation allowance	(2,806,796 )	(990,654 )
Provision for income taxes	\$	\$

The Company's effective income tax rate differed from the Federal statutory rate as follows:

	<b>Years ended December 31,</b>		
	<b>2008</b>	<b>2007</b>	<b>2006</b>

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U.S. Federal statutory tax rate	(35.0	)%	(35.0	)%	(35.0	)%
Deferred state taxes, net of federal benefit	(1.8	)	(2.8	)	(3.0	)
Other, net	0.1				.8	
Goodwill impairment charge	12.3					
Change in foreign tax rate	0.8		2.6			
Expiring net operating loss carryforward	0.7		2.4		.3	
Adjustment to opening deferred tax balance	0.8		(0.4	)	.7	
Tax credits	(0.3	)	(1.6	)	(3.0	)
Change in valuation allowance	22.4		34.8		39.2	
	0.0	%	0.0	%	0.0	%

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of certain assets and liabilities for financial reporting and the amounts used for income tax expense purposes. Significant components of the Company's deferred tax assets and liabilities as of December 31, 2008 and 2007 are as follows:

	<b>U.S. Years ended December 31,</b>		<b>Foreign Years ended December 31,</b>	
	<b>2008</b>	<b>2007</b>	<b>2008</b>	<b>2007</b>
Deferred tax assets and liabilities:				
Intangible assets	\$ (2,023,365 )	\$ (1,955,220 )	\$ (1,823,521 )	\$ (2,655,111)
Non-employee stock-based compensation	(500,642 )	320,956		
Gain on auction rate debt securities repurchase agreement	(3,885,251 )			
Impairment loss on available for sale securities	3,885,251			
Deferred revenue	2,058,774	1,250,299		
Other reserves and accruals	1,792,292	205,319	44,049	139,491
Capital loss carryforwards	5,883,889	6,768,435		
Tax credit carryforwards	9,858,749	9,436,309	1,209,903	1,500,710
Property, plant and equipment	124,061	874,982	541,233	279,784
Amortization of stock-based compensation	6,603,377	3,873,037		
Research and development expenditures	15,960,000		3,309,462	5,891,782
Repayable government assistance			141,042	1,198,190
Net operating loss	188,726,938	179,419,127	3,024,891	4,655,275
Total deferred tax assets and liabilities	228,484,073	200,193,244	6,447,059	11,010,121
Less valuation allowances	(228,484,073)	(200,193,244)	(6,447,059 )	(11,010,121)
Net deferred tax assets and liabilities	\$	\$	\$	\$

The Company has recorded a valuation allowance, as a result of uncertainties related to the realization of its net deferred tax asset, at December 31, 2008 and 2007 of approximately \$234.9 million and \$211.2 million, respectively. The increase of the valuation allowance of approximately \$23.7 million during 2008 relates to an \$8.5 million increase from current year net operating losses and \$19.2 million from deferred tax assets other than net operating losses. These amounts are offset in part by a decrease of \$1.8 million as result of foreign currency fluctuation and \$2.2 million due to current year change of deferred tax assets as a result of FIN 48.

The deferred tax assets have been offset by a full valuation allowance because it is more likely than not that the tax benefits of the net operating loss carryforwards and other deferred tax assets may not be realized. Included in the valuation allowance as of December 31, 2008 are \$14.3 million of deferred tax assets resulting from the exercise of employee stock options, which upon subsequent realization of the tax benefits, will be allocated directly to paid-in capital. Included in the valuation allowance as of December 31, 2008 are \$13.6 million of acquired deferred tax assets.

At December 31, 2008, the Company has unused Federal and State net operating loss carryforwards of approximately \$602 million, of which \$78.6 million was generated from the operations of H Power during the period May 31, 1989, through the date of the H Power acquisition, \$2.7 million was generated by Cellex through the date of the Cellex acquisition, \$44.1 million was generated by General Hydrogen through the date of the General Hydrogen acquisition, and \$476.6 million was generated by the Company during the period November 3, 1999 through December 31, 2008. The net operating loss carryforwards if unused will expire at various dates from 2009 through 2028. In 2008, net operating loss carryforwards of \$1,054,000 acquired as part of the H Power transaction expired.

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**PLUG POWER INC. AND SUBSIDIARIES**

**(A DEVELOPMENT STAGE ENTERPRISE)**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Under Section 382 of the Internal Revenue Code, the use of loss carryforwards may be limited if a change in ownership of a company occurs. In 2007, the Company had determined that due to transactions involving the Company's shares owned by significant shareholders, a change of ownership had occurred under the provisions of IRC Section 382. As the result of the prior year ownership change, approximately \$481 million of the \$602 million of net operating losses are subject to IRC Section 382 limitations and as the result of IRC Section 382 limitations, approximately \$53.7 million of the net operating losses acquired from H Power will expire prior to utilization, and approximately \$27 million of the net operating losses acquired from General Hydrogen will expire prior to utilization. Additionally, approximately \$25 million of H Power's remaining net operating loss represent a FIN 48 unrecognized tax benefit. As the result of the IRC Section 382 limitations and the unrecognized tax benefits, these net operating losses are not reflected in the Company's deferred tax asset as of December 31, 2008.

At December 31, 2008, the Company has Federal capital loss carryforwards of approximately \$15.5 million available to offset future capital gains that will expire at various dates from 2009 through 2011. At December 31, 2008, the Company has US Federal Research and Experimentation credit carryforwards of approximately \$15.5 million available to offset future income tax that will expire at various dates from 2020 through 2028. Approximately \$5.7 million of the Company's Research and Experimentation carryforwards represent an unrecognized tax benefit and are therefore, not reflected in the Company's deferred tax asset as of December 31, 2008.

At December 31, 2008, the Company has unused foreign net operating loss carryforwards of approximately \$14.7 million. The net operating loss carryforwards if unused will expire at various dates from 2009 through 2028. At December 31, 2008, the Company has Scientific Research and Experimental Development expenditures of \$18.3 million available to offset future taxable income. These expenditures have no expiry date. At December 31, 2008, the Company has Canadian investment tax credit (ITC) carryforwards of \$1.9 million available to offset future income tax. These credit carryforwards if unused will expire at various dates from 2009 through 2026. Approximately \$3 million of the net operating loss carryforwards, \$5.6 million of the Scientific Research and Experimental Development expenditures and \$701,000 of the Canadian ITC credit carryforwards represent unrecognized tax benefits and are therefore, not reflected in the Company's deferred tax asset as of December 31, 2008.

The Company intends to reinvest indefinitely any of its unrepatriated foreign earnings. The Company has not provided for US income taxes on these undistributed earnings of its foreign subsidiaries because management considers such earnings to be reinvested indefinitely outside of the U.S. If the earnings were distributed, the Company may be subject to both foreign withholding taxes and U.S. income taxes that may not be fully offset by foreign tax credits. Determination of the amount of this unrecognized deferred income tax liability is not practical.

The Company adopted the provisions of FIN 48 on January 1, 2007. A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:



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	<b>2008</b>	<b>2007</b>
Unrecognized tax benefits balance at beginning of year	\$ 16,119,790	\$ 15,200,161
Additions for tax positions of prior years	2,518,182	866,762
Reductions based on tax positions related to the current year		(23,485)
Reductions for tax positions of prior years		
Settlements		
Currency translation	(488,847)	76,352
Unrecognized tax benefits balance at end of year	\$ 18,149,125	\$ 16,119,790

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### **PLUG POWER INC. AND SUBSIDIARIES**

#### **(A DEVELOPMENT STAGE ENTERPRISE)**

#### **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

As a result of the implementation of FIN 48, the Company recognized \$0 increase in the liability for unrecognized tax benefits. During the year ended December 31, 2008, the Company did not recognize any additional tax liabilities related to uncertain tax positions.

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax expense. This accounting policy did not change as a result of the adoption of FIN 48. During the year ended December 31, 2008, the Company recognized \$1.0 million in interest and penalties. The Company had \$1.0 million in interest and penalties accrued at December 31, 2008. This amount related to purchase accounting and was allocated directly to goodwill.

The Company files income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business the Company is subject to examination by taxing authorities. Open tax years in the U.S. range from 2005 to 2008. Open tax years in the foreign jurisdictions range from 2002 to 2008. However, upon examination in subsequent years, if net operating losses carryforwards and tax credit carryforwards are utilized, the U.S. and foreign jurisdictions can reduce net operating loss carryforwards and tax credit carryforwards utilized in the year being examined if they do not agree with the carryforward amount. As of December 31, 2008, the Company was not under audit in the U.S. or non-U.S. taxing jurisdictions. No significant changes to the amount of unrecognized tax benefits are anticipated within the next twelve months.

### **13. Stockholders Equity**

From inception through December 31, 2008, our stockholders in the aggregate have contributed \$636.3 million in cash, net of issuance costs, to the Company, including a net \$214.4 million as a result of our June 29, 2006 transaction with Smart Hydrogen Inc. (the Buyer). The Company sold 395,000 shares of Class B Capital Stock, a class of preferred stock of the Company, which were convertible into 39,500,000 shares of common stock of the Company, and 11,240 shares of common stock of the Company to the Buyer.

In December 2008, Smart Hydrogen Inc. sold to OJSC (Third Generation Company of the Wholesale Electricity Market) (OGK-3) all 395,000 shares of the Company's Class B Capital Stock as well as 5,126,939 shares of the Company's common stock. This sale triggered the automatic conversion of the Company's Class B Capital Stock into 39,500,000 shares of common stock, and the termination of all the rights and obligations attached to the Class B Capital Stock. The rights and obligations attached to the Class B Capital Stock that terminated included, but were not limited to, the right to appoint directors, veto rights and voting support obligations under the Investor Rights Agreement dated as of June 29, 2006, as amended (the Investor Rights Agreement). OGK-3 has executed a joinder agreement to the Investor Rights Agreement and is prohibited from transferring its shares of the Company's Common Stock to a competitor of the Company. OGK-3 is also bound by the same standstill provisions that applied to Smart

Hydrogen, as set forth in the Investor Rights Agreement. This transfer and conversion triggered a change of control pursuant to Section 17 of our 1999 Stock Option and Incentive Plan; and, therefore, each outstanding Stock Option Right automatically became fully exercisable and conditions and restrictions on each outstanding Restricted Stock Award, Deferred Stock Award and Performance Share Award that relates solely to the passage of time and continued employment were removed.

***Preferred Stock***

The Company has authorized 5.0 million shares of preferred stock, par value \$.01 per share. The Company's certificate of incorporation provides that shares of preferred stock may be issued from time to time in one or more series. The Company's Board of Directors is authorized to fix the voting rights, if any, designations, powers, preferences, qualifications, limitations and restrictions thereof, applicable to the shares of each series. As of December 31, 2008, there were no shares of preferred stock issued and outstanding.

***Common Stock***

The Company has one class of common stock, par value \$.01 per share. Each share of the Company's common stock is entitled to one vote on all matters submitted to stockholders. As of December 31, 2008 there were 128,164,003 shares of common stock issued and outstanding.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following represents changes in stockholders' equity since inception.

	No. of Preferred Shares	No. of Common Shares	No. of Treasury Shares	Cash Contribution	Noncash Contribution	Total Capital Contribution	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Treasury Stock	Total Stockholders' Equity
<b>1997</b>										
Net Loss	-	-	-	\$ -	\$ -	\$ -	\$ -	\$(5,903,340)	\$ -	\$(5,903,340)
DTE Energy Company (Issuance at 1.00 per share)	-	4,750,000	-	4,750,000	-	4,750,000	-	-	-	4,750,000
Mechanical Technology Incorporated	-	4,750,000	-	-	4,750,000 (a)	4,750,000	-	-	-	4,750,000
	-	9,500,000	-	4,750,000	4,750,000	9,500,000	-	(5,903,340)	-	3,596,660
<b>1998</b>										
Net Loss	-	-	-	-	-	-	-	(9,615,963)	-	(9,615,963)
DTE Energy Company	-	4,950,000	-	7,750,000	-	7,750,000	-	-	-	7,750,000
Mechanical Technology Incorporated	-	2,700,000	-	3,000,000	550,000 (a)	3,550,000	-	-	-	3,550,000
Stock based compensation and other noncash transactions	-	-	-	-	212,000 (c)	212,000	-	-	-	212,000
	-	7,650,000	-	10,750,000	762,000	11,512,000	-	(9,615,963)	-	1,896,037
<b>1999</b>										
Net Loss	-	-	-	-	-	-	-	(33,469,312)	-	(33,469,312)
Edison Development Corporation	-	4,004,315	-	28,697,782	-	28,697,782	-	-	-	28,697,782
Mechanical Technology Incorporated	-	6,254,315	-	24,000,000	8,897,782 (a)	32,897,782	-	-	-	32,897,782
General Electric Company	-	5,250,000	-	37,500,000	11,250,000 (b)	48,750,000	-	-	-	48,750,000
Other private investors	-	3,549,850	-	25,045,000	-	25,045,000	-	-	-	25,045,000
Initial public offering-net	-	6,782,900	-	92,971,878	-	92,971,878	-	-	-	92,971,878

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Stock option exercises	-	24,128	-	41,907	-	41,907	-	-	-	41,907
Stock based compensation and other noncash transactions	-	-	-	-	978,800 (c)	978,800	-	-	-	978,800
	-	25,865,508	-	208,256,567	21,126,582	229,383,149	-	(33,469,312)	-	195,913,837

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	No. of Preferred Shares	No. of Common Shares	No. of Treasury Shares	Cash Contribution	Noncash Contribution	Total Capital Contribution	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Treasury Stock	Total Stockholders' Equity
<b>2000</b>										
Net Loss	-	-	-	-	-	-	-	(86,241,899)	-	(86,241,899)
Stock option exercises	-	632,378	-	3,793,028	-	3,793,028	-	-	-	3,793,028
Stock issued under employee stock purchase plan	-	32,717	-	408,452	-	408,452	-	-	-	408,452
Stock issued for development agreement	-	104,869	-	-	5,000,000 (d)	5,000,000	-	-	-	5,000,000
Stock issued for equity in affiliate	-	7,000	-	-	827,750 (e)	827,750	-	-	-	827,750
Stock based compensation and other noncash transactions	-	3,041	-	-	8,936,779 (c)	8,936,779	-	-	-	8,936,779
	-	780,005	-	4,201,480	14,764,529	18,966,009	-	(86,241,899)	-	(67,275,890)
<b>2001</b>										
Net Loss	-	-	-	-	-	-	-	(73,112,027)	-	(73,112,027)
Edison Development Corporation	-	416,666	-	4,800,000	-	4,800,000	-	-	-	4,800,000
General Electric Company	-	416,666	-	4,800,000	-	4,800,000	-	-	-	4,800,000
Public offering-net	-	4,575,000	-	51,588,551	-	51,588,551	-	-	-	51,588,551
Stock option exercises	-	760,531	-	2,051,954	-	2,051,954	-	-	-	2,051,954
Stock issued under employee stock purchase plan	-	73,132	-	730,592	-	730,592	-	-	-	730,592
Stock issued for development agreement	-	96,336	-	-	3,000,000 (d)	3,000,000	-	-	-	3,000,000
Stock option issued to affiliate	-	-	-	-	5,000,000 (f)	5,000,000	-	-	-	5,000,000
Stock based compensation and other noncash transactions	-	189,084	-	-	2,013,177 (c)	2,013,177	-	-	-	2,013,177
	-	6,527,415	-	63,971,097	10,013,177	73,984,274	-	(73,112,027)	-	872,247
<b>2002</b>										
Net Loss	-	-	-	-	-	-	-	(47,218,326)	-	(47,218,326)

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Stock option exercises	-	138,567	-	708,931	-	708,931	-	-	-	708,931
Stock issued under employee stock purchase plan	-	78,208	-	395,679	-	395,679	-	-	-	395,679
Stock issued for development agreement	-	243,383	-	-	2,000,000 (d)	2,000,000	-	-	-	2,000,000
Stock based compensation and other noncash transactions	-	213,987	-	-	1,807,593 (c)	1,807,593	-	-	-	1,807,593
	-	674,145	-	1,104,610	3,807,593	4,912,203	-	(47,218,326)	-	(42,306,123)
<b>2003</b>										
Net Loss	-	-	-	-	-	-	-	(53,038,802)	-	(53,038,802)
Public offering, net	-	11,700,000	-	54,967,204	-	54,967,204	-	-	-	54,967,204
Stock option exercises	-	35,033	-	84,973	-	84,973	-	-	-	84,973
Stock issued under employee stock purchase plan	-	90,380	-	348,605	-	348,605	-	-	-	348,605
Stock issued in acquisition of H Power	-	9,063,080	-	-	46,260,576 (g)	46,260,576	-	-	-	46,260,576
Stock based compensation	-	965,143	-	-	2,966,797 (c)	2,966,797	-	-	-	2,966,797
	-	21,853,636	-	55,400,782	49,227,373	104,628,155	-	(53,038,802)	-	51,589,353
<b>2004</b>										
Net Loss	-	-	-	-	-	-	-	(46,738,827)	-	(46,738,827)
Stock option exercises	-	95,960	-	501,308	-	501,308	-	-	-	501,308
Stock issued under employee stock purchase plan	-	71,709	-	409,413	-	409,413	-	-	-	409,413
Stock based compensation	-	332,500	-	-	4,137,202 (c)	4,137,202	-	-	-	4,137,202
Change in unrealized loss on marketable securities	-	-	-	-	-	-	(482,391)	-	-	(482,391)
	-	500,169	-	910,721	4,137,202	5,047,923	(482,391)	(46,738,827)	-	(42,173,295)
<b>2005</b>										
Net Loss	-	-	-	-	-	-	-	(51,743,462)	-	(51,743,462)
Public offering, net	-	12,000,000	-	70,580,736	-	70,580,736	-	-	-	70,580,736
Stock option exercises	-	82,082	-	516,686	-	516,686	-	-	-	516,686
Stock issued under employee stock purchase plan	-	78,702	-	374,149	-	374,149	-	-	-	374,149
Stock based compensation	-	323,586	-	-	2,888,685 (c)	2,888,685	-	-	-	2,888,685
Unrealized gain on available for sale securities	-	-	-	-	-	-	225,271	-	-	225,271
	-	12,484,370	-	71,471,571	2,888,685	74,360,256	225,271	(51,743,462)	-	22,842,065





**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

	No. of Preferred Shares	No. of Common Shares	No. of Treasury Shares	Cash Contribution	Noncash Contribution	Total Capital Contribution	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Treasury Stock	Total Stockholders' Equity
<b>2006</b>										
Net Loss	-	-	-	-	-	-	-	(50,309,587)	-	(50,309,587)
Stock offering (Issued at 5.50 per share net of purchase cost)	395,000	11,240	-	214,442,129 (h)	-	214,442,129	-	-	-	214,442,129
Stock option exercises	-	7,958	-	31,351	-	31,351	-	-	-	31,351
Stock issued under employee stock purchase plan	-	100,669	-	364,668	-	364,668	-	-	-	364,668
Stock based compensation	-	839,800	-	-	4,858,100 (c)	4,858,100	-	-	-	4,858,100
Unrealized gain on available for sale securities	-	-	-	-	-	-	186,640	-	-	186,640
	395,000	959,667	-	214,838,148	4,858,100	219,696,248	186,640	(50,309,587)	-	169,573,301
<b>2007</b>										
Net Loss	-	-	-	-	-	-	-	(60,570,816)	-	(60,570,816)
Stock option exercises (Issued at average cost of 1.00 per share)	-	151,237	-	151,237	-	151,237	-	-	-	151,237
Stock issued under employee stock purchase plan	-	65,515	-	205,808	-	205,808	-	-	-	205,808
Stock based compensation	-	871,255	-	-	5,299,300 (c)	5,299,300	-	-	-	5,299,300
Unrealized gain on available for sale securities	-	-	-	-	-	-	141,897	-	-	141,897
Foreign currency translation gain	-	-	-	-	-	-	7,739,141	-	-	7,739,141

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Warrants issued	-	-	-	-	1,405,715 (i)	1,405,715	-	-	-	1,405,715
	-	1,088,007	-	357,045	6,705,015	7,062,060	7,881,038	(60,570,816)	-	(45,627,718)
<b>2008</b>										
Net Loss	-	-	-	-	-	-	-	(121,700,024)	-	(121,700,024)
Stock option exercises (Issued at average cost of 1.00 per share)	-	3,935	-	3,935	-	3,935	-	-	-	3,935
Stock issued under employee stock purchase plan	-	111,402	-	307,579	-	307,579	-	-	-	307,579
Stock based compensation	-	665,744	-	6,658	7,258,897 (c)	7,265,555	-	-	-	7,265,555
Conversion of Preferred Stock	(395,000)	39,500,000 (j)	-	-	-	-	-	-	-	-
Unrealized gain on available for sale securities	-	-	-	-	-	-	155,688	-	-	155,688
Foreign currency translation loss	-	-	-	-	-	-	(8,325,499)	-	-	(8,325,499)
Treasury stock	-	-	402,114	-	-	-	-	-	(743,586)	(743,586)
	(395,000)	40,281,081	402,114	\$318,172	\$7,258,897	\$7,577,069	\$(8,169,811)	\$(121,700,024)	\$(743,586)	\$(123,036,352)
Total as of December 31, 2008	-	128,164,003	402,114	\$ 636,330,193	\$ 130,299,153	\$ 766,629,346	\$ (359,253)	\$ (639,662,385)	\$(743,586)	\$ 125,864,122

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- a. Since inception, Mechanical Technology Incorporated has contributed in-process research and development of \$4,042,640; certain net assets at inception of \$707,360; \$2,000,000 of deferred rent related to a below market lease for office and manufacturing facilities; \$500,000 of in-kind services; land and buildings valued at approximately \$4,697,782; and research contracts valued at approximately \$2,250,000.
- b. In February 1999, the Company issued 2,250,000 shares of common stock to GE MicroGen, Inc. in exchange for a 25% interest in GE Fuel Cell Systems, LLC. The fair value of the shares issued of \$11,250,000 was recorded under the balance sheet caption Investment in affiliates .
- c. These issuances primarily represent stock based compensation issued to employees, consultants and others for services performed. These amounts are recorded at the fair value of the issuance on the grant date.
- d. Represents the fair value of shares issued to Engelhard Corporation for the development and supply of advanced catalysts as part of a development agreement.
- e. Represents the fair value of shares issued for ownership interest in Advanced Energy Incorporated.
- f. Represents the fair value of an option to purchase 725,000 shares of the Company s common stock issued to GE Power Systems Equities, Inc. as part of the amendment to the GE Fuel Cell Systems LLC distribution agreement.
- g. Represents the fair value of shares issued related to the acquisition of H Power.
- h. On June 29, 2006, Smart Hydrogen, Inc. purchased 395,000 shares of Class B Capital Stock, a class of preferred stock, along with the 11,240 shares of common stock.
- i. On May 4, 2007, the shareholders of General Hydrogen received warrants to purchase up to 571,429 shares of Plug Power Common Stock. See Note 3, Acquisitions.
- j. On December 20, 2008 the 395,000 shares of Class B capital stock was converted into 39,500,000 shares of common stock.

## **14. Employee Benefit Plans**

### ***1999 Employee Stock Purchase Plan***

In 1999, the Company adopted the 1999 Employee Stock Purchase Plan (the Plan) under which employees are eligible to purchase shares of the Company s common stock at a discount through periodic payroll deductions. The Plan is intended to meet the requirements of Section 423 of the Internal Revenue Code. Purchases occur at the end of six month offering periods at a purchase price equal to 85% of the market value of the Company s common stock at either

the beginning of the offering period or the end of the offering period, which ever is lower. Participants may elect to have up to 10% of their pay withheld for purchase of common stock at the end of the offering period, up to a maximum of \$12,500 within any offering period. The Company has reserved 1,000,000 shares of common stock for issuance under the Plan. The Company issued 111,402, 65,515 and 100,669 shares of stock under the Plan during 2008, 2007, and 2006, respectively.

Under SFAS No. 123(R), the 15% discount and the look-back feature are considered compensatory items for which expense must be recognized. The Company values Plan shares as a combination position consisting of 15% of a share of nonvested stock and 85% of a six-month stock option. The value of the nonvested stock is estimated based on the trading value of the Company's common stock at the beginning of the offering period, and an expected life of six months. The resulting per-share value is multiplied by the shares estimated to be purchased during the offering period based on historical experience to arrive at a total estimated compensation cost for the offering period. The estimated compensation cost is recognized on a straight-line basis over the offering period.

### **Stock Option Plans (the Option Plans)**

#### ***1997 Stock Option Plan***

Effective July 1, 1997, the Company established a stock option plan to provide employees, consultants, and members of the Board of Directors the ability to acquire an ownership interest in the Company (1997 Stock Option Plan). Options for employees issued under this plan generally vested 20% per year and expire ten years after issuance. Options granted to members of the Board generally vested 50% upon grant and 25% per year thereafter. Options granted to consultants generally vested one-third on the expiration of the consultant's initial contract term, with an additional one-third vesting on each of the next two anniversaries thereafter. At December 31, 2008, there were 84,428 options outstanding and vested under this plan. Although no further options will be granted under this plan, the options previously granted will be exercisable for shares of common stock until their expiration dates are reached.

#### ***1999 Stock Option and Incentive Plan***

Effective August 16, 1999, the Company established a stock option plan to encourage and enable the officers, employees, independent directors and other key persons (including consultants) of the Company and its subsidiaries upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company (1999 Stock Option Plan).

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

At December 31, 2008 there were approximately 6.0 million options granted and outstanding and 4.0 million options available to be issued under the 1999 Stock Option Plan. The number of shares of common stock available for issuance under the Plan will increase by the amount of any forfeitures under the 1999 Stock Option Plan and under the 1997 Stock Option Plan. The number of shares of common stock under the 1999 Stock Option Plan will further increase January 1 and July 1 of each year by an amount equal to 16.45% of any net increase in the total number of common shares of stock outstanding. The 1999 Stock Option Plan permits the Company to: grant incentive stock options; grant non-qualified stock options; grant stock appreciation rights; issue or sell common stock with vesting or other restrictions, or without restrictions; grant rights to receive common stock in the future with or without vesting; grant common stock upon the attainment of specified performance goals; and grant dividend rights in respect of common stock. Options for employees issued under this plan generally vest in equal annual installments over periods of three or four years and expire ten years after issuance. Options granted to members of the Board generally vest one year after issuance. Options granted to consultants generally vested one-third on the expiration of the consultant's initial contract term, with an additional one-third vesting on each of the next two anniversaries thereafter. To date, options granted under the 1999 Stock Option Plan have vesting provisions ranging from immediate vesting to five years in duration and expire ten years after issuance.

Compensation cost associated with employee stock options represented approximately \$3.9 million of the total share-based payment expense recorded for the year ended December 31, 2008. This \$3.9 million includes \$1.6 million in accelerated stock option expense recorded as a result of the change in control as described in Note 13, Stockholders' Equity. The Company estimates the fair value of stock options and shares issued under the employee stock purchase plan using a Black-Scholes valuation model consistent with the provisions of FAS 123R and SAB 107, and the resulting fair value is recorded as compensation cost on a straight-line basis over the option vesting period. Key inputs and assumptions used to estimate the fair value of stock options include the grant price of the award, the expected option term, volatility of the Company's stock, an appropriate risk-free rate, and the Company's dividend yield. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards, and subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the Company. The assumptions made for purposes of estimating fair value under the Black-Scholes model for the 1,114,750, 1,317,450 and 1,168,450 options granted during the years ended December 31, 2008, 2007 and 2006, respectively were as follows:

	<b>2008</b>	<b>2007</b>	<b>2006</b>
Dividend yield:	0%	0%	0%
Expected term of options (years):	6	6	6

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Risk free interest rate:	2.56%-3.45%	3.77%-5.04%	4.37%-5.05%
Volatility:	61%-84%	55%-62%	60%-65%

The Company's estimate of an expected option term was calculated in accordance with the SAB 110 simplified method for calculating the expected term assumption. The estimated stock price volatility was derived based upon a blend of implied volatility and the Company's actual historic stock prices over the past six years, which represents the Company's best estimate of expected volatility.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

A summary of stock option activity for the year December 31, 2008 is as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms	Aggregate Intrinsic Value
Options outstanding at December 31, 2007	6,578,313	\$ 9.14	5.9	
Granted	1,114,750	2.83		
Exercised	(3,935)	1.00		
Forfeited	(489,484)	3.64		
Expired	(1,079,840)		6.85	
Options outstanding at December 31, 2008	6,119,804	\$ 8.84	5.6	\$ 18,750
Options exercisable at December 31, 2008	6,119,804	\$ 8.84	5.6	\$ 18,750
Options fully vested at December 31, 2008	6,119,804	\$ 8.84	5.6	\$ 18,750

The weighted average grant date fair value of options granted during the years ended December 31, 2008, 2007 and 2006 was \$1.68, \$1.92 and \$3.00, respectively. The total intrinsic value of options exercised during the year ended December 31, 2008 was approximately \$7,800. As of December 31, 2008, there was no unrecognized compensation cost related to stock option awards to be recognized in future years. The total fair value of stock options that vested during years ended December 31, 2008 and 2007 was approximately \$3.9 million and \$2.7 million, respectively.

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**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The following table summarizes information about the stock options outstanding and exercisable under the Option Plans at December 31, 2008:

<b>Exercise Price range</b>	<b>Options Outstanding and Exercisable</b>		
	<b>Shares</b>	<b>Weighted Average Remaining Contractual Term (years)</b>	<b>Weighted Average Exercise Price</b>
\$ 0.00 14.00	5,555,189	6.0	\$ 6.00
14.01 28.00	355,375	1.4	17.82
28.01 42.00			
42.01 56.00	98,000	1.4	44.42
56.01 70.00	21,000	1.4	66.35
70.01 84.00	10,200	1.1	83.50
84.01 98.00	67,240	1.5	96.22
98.01 112.00	12,800	1.2	106.75
	6,119,804	5.6	8.84

Restricted stock awards vest in equal installments over a period of one to four years. Restricted stock awards were valued based on the closing price of the Company's common stock on the date of grant, and compensation cost is recorded on a straight-line basis over the share vesting period. The Company recorded expense of approximately \$1.8 million associated with its restricted stock awards in 2008. This \$1.8 million includes \$0.3 million in accelerated restricted stock expense recorded as a result of the change in control as described in Note 13, Stockholders' Equity. As of December 31, 2008, there was no unrecognized compensation cost related to restricted stock awards to be recognized in future years.

A summary of restricted stock activity for the year ended December 31, 2008 is as follows:

	<b>Shares</b>	<b>Aggregate Intrinsic Value</b>
Unvested restricted stock at December 31, 2007	784,697	\$ 2,810,756
Granted	158,500	407,240
Forfeited	(79,378 )	(250,271 )
Vested	(863,819 )	(2,967,725 )
Unvested restricted stock at December 31, 2008		\$

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### **PLUG POWER INC. AND SUBSIDIARIES**

#### **(A DEVELOPMENT STAGE ENTERPRISE)**

#### **NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

For the years ended December 31, 2008, 2007, and 2006, the Company recorded expense of approximately \$8.6 million, \$5.4 million, and \$4.3 million respectively, in connection with its share based payment awards.

#### ***401(k) Savings & Retirement Plan***

The Company offers a 401(k) Savings & Retirement Plan to eligible employees meeting certain age and service requirements. This plan permits participants to contribute 100% of their salary, up to the maximum allowable by the Internal Revenue Service regulations. Participants are immediately vested in their voluntary contributions plus actual earnings or less actual losses thereon. Participants are vested in the Company's matching contribution based on years of service completed. Participants are fully vested upon completion of three years of service. During 2002, the Company began funding its matching contribution in common stock. Accordingly, the Company has issued 379,189, 279,054 and 199,124 shares of common stock to the Plug Power Inc. 401(k) Savings & Retirement Plan during 2008, 2007 and 2006, respectively.

The Company's expense for this plan, including the issuance of shares, was approximately \$835,000, \$962,000 and \$915,000 for years ended December 31, 2008, 2007 and 2006, respectively.

#### **15. Other Related Party Transactions**

Pursuant to the Second Amendment to the Amended and Restated Distribution Agreement dated May 13, 2005, the Company currently has a non-exclusive distribution agreement with DTE Energy Technologies, Inc. (DTE), an affiliate of Edison Development Company and DTE Energy Corporation, for the states of Michigan, Ohio, Illinois, and Indiana. According to the most recent amendments to the agreement, the Company may sell directly or negotiate non-exclusive distribution rights with third parties for the GenCore, GenSite and GenSys2T products in these four states. For every product sold directly by the Company or by a third party within Michigan, Ohio, Illinois and Indiana the Company has agreed to pay a 5% commission to DTE based on sales price of units shipped to the above noted states. The distribution agreement expires on December 31, 2014.

As of December 31, 2008 and 2007, the Company had no payables due to DTE under this commission provision and no outstanding receivables from DTE.

#### **16. Fair Value of Financial Instruments**

The following disclosure of the estimated fair value of financial instruments is made in accordance with the provision of SFAS No. 107, Disclosures About Fair Value of Financial Instruments. Although the estimated fair value amounts have been determined by the Company using available market information and appropriate valuation methodologies, the estimates presented are not necessarily indicative of the amounts that the Company could realize in current market exchanges.

The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments:

*Cash and cash equivalents, accounts receivable, accrued interest receivable and payable, and notes receivable:* The carrying amounts reported in the consolidated balance sheets approximate fair value because of the short maturities of these instruments.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****17. Supplemental Disclosures of Cash Flows Information**

The following represents required supplemental disclosures of cash flows information and non-cash financing and investing activities which occurred during the years ended December 31, 2008, 2007 and 2006:

	<b>2008</b>	<b>2007</b>	<b>2006</b>
Cash paid for interest	\$	\$	\$ 160,124
Stock-based compensation accrual impact	(1,341,324 )	(247,054 )	591,970
Change in unrealized gain/loss on available-for-sale securities	155,688	141,897	186,640
Estimated fair value of net assets acquired and liabilities assumed		58,512,893	
(Decrease) increase to broker for security purchase		(5,000,000)	5,000,000
Restricted shares forfeited	(124,945 )		
Transfer to trading securities    auction rate debt securities	52,650,654		

**18. Commitments and Contingencies*****Alliances and development agreements***

**BASF** : In 2006, BASF SE, a German Societas Europaea (SE) corporation, acquired Engelhard, with whom we have a Development Agreement and a Supply Agreement. With its acquisition, BASF inherited Engelhard's obligations to the Company under both of these agreements. The Development Agreement, dated April 5, 2004, is for the development of advanced catalysts to increase the overall performance and efficiency of the Company's fuel processor and will expire on December 31, 2010. The Supply Agreement, also dated April 5, 2004, is a requirements contract whereby the Company agrees to buy from BASF and BASF agrees to sell to the Company, 100% of the Company's requirements for catalyst materials, as developed under the Development Agreement, the price to be determined January 1<sup>st</sup> of each year by BASF, until the agreement's expiration date of December 31, 2010.

*Home Energy Station* : We have been developing technology in support of the automotive fuel cell market under a series of agreements with Honda R&D Co Ltd. of Japan (Honda), a subsidiary of Honda Motor Co., Ltd. Under these agreements, the Company has developed, on a joint and exclusive basis, and tested four phases of prototype fuel cell systems that provide electricity and heat to a home or business, while also providing hydrogen fuel for a fuel cell vehicle (the Home Energy Station). Since 2003, the Company has successfully demonstrated four successive prototype generations of the Home Energy Station at Honda R&D Americas' facility in Torrance, California and at Plug Power's facility in Latham. In 2009 we will continue to provide service for the current model of the Home Energy Station located at Honda's Torrance, California facility.

*General Electric Company (GE) Entities*: On February 27, 2006, the Company, GE MicroGen, Inc., and GE restructured their service and equity relationships by terminating the joint venture and the associated distributor and other agreements, and entering into a new development collaboration agreement. Under the new agreement, the Company and GE (through its Global Research unit) have agreed to collaborate on programs including but not limited to development of tools, materials and components that can be applied to various types of fuel cell products. The Company and GE mutually agreed to extend the terms of the new development collaboration agreement such that the Company is obligated to purchase \$1 million of services from GE in connection with this collaboration prior to December 31, 2009. As of December 31, 2008 the obligation remaining under the contract was approximately \$400,000. The development collaboration agreement is scheduled to terminate on the earlier of (i) December 31, 2014 or (ii) upon the completion of a certain level of program activity.

**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*NYSERDA* : The Company has an obligation to repay the New York State Environmental Research and Development Authority (NYSERDA) according to royalty payment provisions in each of the Company's past and present NYSERDA agreements. For sales made by a New York State manufacturer, the Company must pay a royalty to NYSERDA at a rate of 0.5% of net sales of products developed under the NYSERDA programs; or, for a non-new York State manufacturer, the Company must pay a royalty to NYSERDA at a rate of 3% of net sales. The royalty payments are currently calculated at 0.5% of net sales of our GenCore and GenSys products because we are a New York State manufacturer and both of these products were developed using some percentage of NYSERDA monies. The Company's maximum liability under the NYSERDA royalty provisions is one times the aggregate total amount of monies received from NYSERDA. If the total amount received from NYSERDA under an individual agreement is not paid back in royalties to NYSERDA within fifteen (15) years from the date of that individual agreement, then that amount is deducted from the aggregate total amount due under the royalty provisions. As of December 31, 2008 and 2007, approximately \$15,000 and \$17,000, respectively have been recorded as accrued expenses in the consolidated balance sheets related to the royalty provisions.

***Leases***

As of December 31, 2008 and 2007, the Company has no capital leases outstanding. The Company has several noncancelable operating leases, primarily for warehouse facilities and office space that expire over the next five years. Rental expense for operating leases during 2008, 2007, and 2006 was approximately \$1,909,000, \$1,600,000 and \$350,000, respectively.

Future minimum lease payments under noncancelable operating leases (with initial or remaining lease terms in excess of one year) as of December 31, 2008 are:

<b>Year ending December 31</b>	<b>Operating leases</b>	
2009	\$	1,661,469
2010		1,314,855
2011		875,500
2012		
2013 and thereafter		

Total minimum lease payments	\$	3,851,824
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***Concentrations of credit risk***

Concentrations of credit risk with respect to receivables exist due to the limited number of select customers that the Company has initial commercial sales arrangements. To mitigate credit risk, the Company applies standard credit approvals and performs appropriate evaluation of a prospective customer's financial condition. At December 31, 2008, five customers comprise approximately 62.0% of the total accounts receivable balance, with each customer individually representing 22.3%, 11.7%, 10.6%, 10.1% and 7.3% of total accounts receivable, respectively.

At December 31, 2007, five customers comprise approximately 55.4% of the total accounts receivable balance, with each customer individually representing 16.3%, 13.1%, 10.3%, 8.5% and 7.2% of total accounts receivable, respectively.

The Company has cash deposits in excess of federally insured limits. The amount of such deposits is essentially all cash at December 31, 2008.

***Employment Agreements***

The Company is party to employment agreements with certain executives which provide for compensation and certain other benefits. The agreements also provide for severance payments under certain circumstances.



**Table of Contents****PLUG POWER INC. AND SUBSIDIARIES****(A DEVELOPMENT STAGE ENTERPRISE)****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Early Commercial Purchase Agreement***

On October 15, 2007, the Company and Wal-Mart Stores East, LP (Wal-Mart) signed an Early Commercial Purchase Agreement for GenDrive units. Under this agreement, the Company has certain commitments to provide for the maintenance/service of the units sold as well as supply of hydrogen to Wal-Mart for up to seven years from the date of commissioning. The Company also provides certain indemnifications related to this agreement to Wal-Mart. As of September 30, 2008, all units sold to Wal-Mart have been placed in service.

**19. Geographic Information**

As discussed in Note 3, Acquisitions, the Company acquired businesses in Canada during 2007. Prior to these acquisitions, substantially all of the Company's revenue was recognized in the United States. The following is a summary of revenue for the years ended December 31, 2008 and 2007, based on physical location of the subsidiary making the sale:

	<b>2008</b>	<b>2008</b>	<b>2007</b>	<b>2007</b>
	<b>Product and service revenue</b>	<b>Research and development contract revenue</b>	<b>Product and service revenue</b>	<b>Research and development contract revenue</b>
United States	\$ 4,442,432	\$ 10,779,553	\$ 2,792,923	\$ 11,982,095
Canada	224,863	2,454,469	289,033	1,206,572
Total	\$ 4,667,295	\$ 13,234,022	\$ 3,081,956	\$ 13,188,667

Long-lived assets, representing the sum of net book value of property, plant, and equipment plus intangible assets, goodwill and other assets, based on physical location as of December 31, 2008 and 2007, are as follows:

	<b>2008</b>	<b>2007</b>
United States	\$ 20,871,248	\$ 29,388,998

Canada	9,911,038	60,185,561
Total	\$ 30,782,286	\$ 89,574,559

**20. Unaudited Quarterly Financial Data (in thousands, except per share data)**

	<b>Quarters Ended</b>			
	<b>March 31, 2008</b>	<b>June 30, 2008</b>	<b>September 30, 2008</b>	<b>December 31, 2008</b>
Product and service revenue	\$ 850	\$ 1,130	\$ 1,271	\$ 1,416
Contract revenue	2,887	3,702	2,783	3,862
Net loss	(20,728 )	(22,867 )	(13,810 )	(64,295 )
Loss per share:				
Basic and diluted	(0.24 )	(0.26 )	(0.16 )	(0.69 )

	<b>Quarters Ended</b>			
	<b>March 31, 2007</b>	<b>June 30, 2007</b>	<b>September 30, 2007</b>	<b>December 31, 2007</b>
Product and service revenue	\$ 462	\$ 676	\$ 1,199	\$ 745
Contract revenue	2,168	3,331	3,336	4,354
Net loss	(11,183 )	(16,727 )	(15,176 )	(17,485 )
Loss per share:				
Basic and diluted	(0.13 )	(0.19 )	(0.17 )	(0.20 )