

PLUG POWER INC  
Form S-1  
January 15, 2013

As filed with the Securities and Exchange Commission on January 15, 2013

Registration No. 333-

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

PLUG POWER INC.

(Exact name of Registrant as specified in its charter)

Delaware	3629	22-3672377
(State or other jurisdiction of incorporation or organization)	( Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

968 Albany Shaker Road  
Latham, New York 12110

(518) 782-7700

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

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**President and Chief Executive Officer**  
**Plug Power Inc.**  
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this registration statement.

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

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

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

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

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 and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
 Non-accelerated filer  Smaller reporting company

**CALCULATION OF REGISTRATION FEE**

Title of Each Class of Securities To Be Registered	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee
Common Stock, \$0.01 par value per share(3)		
Warrants		
Total	\$20,000,000	\$2,728

- (1) Includes offering price of any additional shares of Common Stock and warrants that the underwriter has an option to purchase to cover over-allotments, if any.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended.
- (3) This registration statement also relates to the rights to purchase Series A Junior Participating Cumulative Preferred Stock of the registrant which are attached to all shares of common stock issued pursuant to the terms of the registrant's Shareholders Rights Agreement dated June 23, 2009, as amended. Until the occurrence of certain prescribed events, the rights are not exercisable, are evidenced by the certificates for the common stock and will be transferred with and only with such common stock. Because no separate consideration is paid for the rights, the registration fee therefore is included in the fee for common stock.

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



**The information in this prospectus is not complete and may be changed. We may not sell or accept an offer to buy these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any jurisdiction where such offer or sale is not permitted.**

**Subject to Completion, Dated January 15, 2013**

## **PROSPECTUS**

*Shares of Common Stock*  
*Warrants to Purchase      Shares of Common Stock*

We are selling      shares of our common stock and warrants to purchase up to      shares of our common stock (and the shares of common stock issuable from time to time upon exercise of these warrants). Each share of common stock is being sold together with      of a warrant to purchase one share of common stock at an exercise price of \$      . The shares of common stock and warrants will be issued separately.

Our common stock is traded on the NASDAQ Capital Market under the symbol PLUG. On January 14, 2013, the last reported sale price of our common stock on the NASDAQ Capital Market was \$0.59. There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange or other nationally recognized trading system.

**INVESTING IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES REFERENCED UNDER THE HEADING RISK FACTORS BEGINNING ON PAGE 7.**

	<b>Per Share</b>	<b>Per Warrant</b>	<b>Total</b>
<b>Public offering price</b>	\$	\$	\$
<b>Underwriting discounts and commissions (1)</b>	\$	\$	\$
<b>Proceeds, before expenses, to Plug Power Inc.</b>	\$	\$	\$

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(1) We have agreed to reimburse the underwriter for certain of its expenses as described under "Underwriting" on page 68 of this prospectus.

We have granted the underwriter a 45-day option to purchase up to \_\_\_\_\_ additional shares of common stock and/or additional warrants to purchase up to \_\_\_\_\_ shares of common stock from us at the public offering price for each security, less underwriting discounts and commissions, to cover over-allotments, if any.

Roth Capital Partners, LLC expects to deliver the shares on or about \_\_\_\_\_, 2013.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

## **Roth Capital Partners**

This prospectus is dated \_\_\_\_\_, 2013

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**TABLE OF CONTENTS**

	<b>Page</b>
<u>Prospectus Summary</u>	1
<u>The Offering</u>	5
<u>Summary Consolidated Financial Data</u>	6
<u>Risk Factors</u>	7
<u>Forward-Looking Statements</u>	18
<u>Use of Proceeds</u>	19
<u>Price Range of Common Stock</u>	19
<u>Dividend Policy</u>	19
<u>Capitalization</u>	20
<u>Dilution</u>	21
<u>Selected Consolidated Financial Data</u>	22
<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	23
<u>Business</u>	36
<u>Management</u>	41
<u>Executive Compensation</u>	46
<u>Certain Relationships and Related Party Transactions</u>	59
<u>Principal Stockholders</u>	60
<u>Description of Securities</u>	62
<u>Underwriting</u>	68
<u>Legal Matters</u>	72
<u>Experts</u>	72
<u>Where You Can Find More Information</u>	72
<u>Index to Consolidated Financial Statements</u>	F-1

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You should rely only on the information contained in this prospectus or in any free writing prospectus we file with the Securities and Exchange Commission. We and the underwriter have not authorized anyone to provide you with information different from that contained in this prospectus or any free writing prospectus. We and the underwriter are offering to sell, and seeking offers to buy, shares of our common stock and warrants to purchase common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock and warrants to purchase common stock.

For investors outside of the United States: Neither we nor the underwriter has done anything that would permit this offering outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside of the United States.



## PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes included elsewhere in this prospectus. You should also consider, among other things, the matters described under Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations, in each case appearing elsewhere in this prospectus.

Unless otherwise mentioned or unless the context requires otherwise, all references to Plug Power, we, us, our, the company or similar designations refer to Plug Power Inc. and its subsidiaries.

This prospectus includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus or any related free writing prospectus are the property of their respective owners.

### PLUG POWER INC.

## Background

We are a leading provider of alternative energy technology focused on the design, development, commercialization and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market.

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 liquid petroleum gas, or LPG, 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 concentrate our efforts on developing, manufacturing and selling our hydrogen-fueled PEM GenDrive products on commercial terms for industrial off-road (forklift or material handling) applications, with a focus on multi-shift high volume manufacturing and high throughput distribution sites.

We have previously invested in development and sales activities for low-temperature remote-prime power GenSys products and our GenCore product, which is a hydrogen fueled PEM fuel cell system to provide back-up power for critical infrastructure. While we will continue to service and support GenSys and/or GenCore products on a limited basis, our current main focus is our GenDrive product line.

We sell our products worldwide, with a primary focus on North America, through our direct product sales force, original equipment manufacturers, or OEMs, and their dealer networks. We sell to businesses, government agencies

and commercial consumers.

## **Business Strategy**

We are committed to developing effective, economical and reliable fuel cell products and services for businesses, government agencies and commercial consumers. Building on our substantial fuel cell application and product integration experience, we are focused on generating 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 have made significant progress in our analysis of the material handling market. We believe we have developed reliable products which allow the end customers to eliminate incumbent power sources from their operations, and realize their sustainability objectives through clean energy alternatives.

Our strategy is to focus our resources on the material handling market with our GenDrive product line, which represents an alternative to lead-acid battery configurations. Our strategy also includes the following objectives: decrease product costs by leveraging the supply chain, lower manufacturing costs, improve system reliability, expand our sales network to effectively reach more of our targeted customers and provide customers with high-quality products, service and post-sales support experience.

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

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 and expertise in power electronics, controls, and software design.

## Products

We sell and continue to develop a range of fuel cell products to replace lead-acid batteries in material handling vehicles and industrial trucks for some of North America's largest distribution and manufacturing businesses. Our primary product line is GenDrive, a hydrogen fueled PEM fuel cell system to provide power to industrial vehicles. We are focusing our efforts on material handling applications (forklifts) at multi-shift high volume manufacturing and high throughput distribution sites where our products and services provide a unique combination of productivity, flexibility and environmental benefits. In October, 2011 we introduced our next generation GenDrive products. These next generation fuel cell units include a simplified architecture featuring 30% fewer components and a scalable design for low power applications, giving customers greater flexibility in managing their deployments. By the third quarter of 2012, the majority of units produced and shipped were based on the simplified architecture. During the fiscal year ended December 31, 2012, we received new orders from Stihl, Mercedes Benz, Lowe's, Carter's and Ace Hardware. We also experienced add-on orders from Walmart, P&G, Coca-Cola, Sysco, Wegmans, Kroger and BMW.

We continue to develop and monitor future iterations of our products aligned with our evolving product roadmap. According to Fuel Cells Bulletin, an industry publication, we had 85% world-wide market share in the fuel cell powered material handling industry as of September 2010.

## Markets/Geography & Order Status

Our commercial sales for GenDrive products are in the material handling market, which primarily consist of large fleet, multi-shift operations in high-volume manufacturing and high-throughput distribution centers. In 2012, all of our GenDrive product installations were in North America.

We shipped 873 units and received 353 orders for our GenDrive product during the nine months ended September 30, 2012, representing \$9.7 million in orders from material handling customers. We shipped 1,024 units and received 2,503 orders for our GenDrive product during the year ended December 31, 2011, representing \$46.1 million in orders from material handling customers; \$18.1 million of which were received during the fourth quarter. Backlog on December 31, 2012 is estimated to have been 1,319 units, representing approximately \$26.2 million in value. Backlog on December 31, 2011 was 1,969 units representing approximately \$36.0 million in value. Backlog on December 31, 2010 was 527 units representing approximately \$12.8 million in value including approximately \$700,000 related to 20 units that were awarded under a government project.

The following table sets forth certain shipment, order and backlog information (in units):

	<b>Years Ended</b>		<b>Nine Months</b>
	<b>December 31,</b>		<b>ended</b>
	<b>2010</b>	<b>2011</b>	<b>September 30</b>
Product Shipments	552	1,024	873
Lease Shipments	98	-	-
Cancellations/Adjustments	(20)	(37)	-
Orders	543	2,503	353
Backlog	527	1,969	1,449

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 generally occur between ninety days and twenty-four months from the date of acceptance of the order.

The assembly of GenDrive products that we sell is performed 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., Canada and China.

We intend to focus our efforts on developing, manufacturing and selling our GenDrive products and do not expect to develop or manufacture GenSys or GenCore products in the near term. We took no GenCore or GenSys orders in 2012 and did not ship any of these products in 2012.

## Selected Risk Factors

Our business is subject to many risks and uncertainties of which you should be aware before you decide to invest in our common stock and/or warrants to purchase common stock. These risks are discussed more fully under Risk Factors in this prospectus. Some of these risks are:

We have incurred losses, anticipate continuing to incur losses and might never achieve or maintain profitability.

We do not have enough cash to fund our operations to profitability and if we are unable to secure additional capital, we may need to reduce and/or cease our operations.

Despite this offering, we will still require significant additional capital funding and such capital may not be available to us.

The recent restructuring plan we adopted may adversely impact management's ability to meet financial reporting requirements.

We do not have extensive experience in manufacturing and marketing our products and, as a result, may be unable to sustain a profitable commercial market for our new and existing products.

Certain GenDrive component quality issues have resulted in adjustments to our warranty reserves, which negatively impacted our results and delayed our new order momentum, and unanticipated future product reliability and quality issues could impair our ability to service long term warranty and maintenance contracts profitably.

Our purchase orders may not ship, be commissioned or installed, or convert to revenue, and our pending orders may not convert to purchase orders, which may have a material adverse effect on our revenue and cash flow.

If our stock price continues to remain below \$1.00, our common stock may be subject to delisting from The NASDAQ Stock Market.

Our stock price has been and could remain volatile, which could further adversely affect the market price of our stock, our ability to raise additional capital and/or cause us to be subject to securities class action litigation.

Two of our stockholders, JSC INTER RAO Capital, or INTER RAO Capital, and affiliates and associates of AWM Investment Company, including, but not limited to Special Situations Technology Fund, L.P., Special Situations Technology Fund II, L.P. and Special Situations Private Equity Fund, L.P., or, collectively, SSF, have substantial control over us and could limit our other stockholders' ability to influence the outcome of key transactions, including a change of control.

The sale by INTER RAO Capital or SSF of a substantial number of shares of our common stock could cause the market price of our common stock to decline and adversely affect our ability to remain listed on an exchange and/or raise capital through equity offerings.

Investors in this offering will experience immediate and substantial dilution.

There is no public market for the warrants to purchase common stock being offered in this offering.

Holder of our warrants will have no rights as a common stockholder until such holder exercises their warrants and acquires our common stock.

The warrants in this offering may not have any value.



## Recent Developments

### NASDAQ Notice

On October 12, 2012, we received a deficiency notice from The NASDAQ Stock Market, or the NASDAQ, stating that we no longer comply with NASDAQ Marketplace Rule 5550(a)(2) because the bid price of our common stock closed below the required minimum \$1.00 per share for the previous 30 consecutive business days. The notice also indicated that, in accordance with Marketplace Rule 5810(c)(3)(A), we have a period of 180 calendar days, until April 10, 2013, to regain compliance with Rule 5550(a)(2). If at any time before April 10, 2013 the bid price of our common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days, NASDAQ will notify us that we have regained compliance with Rule 5550(a)(2). In the event we do not regain compliance with Rule 5550(a)(2) prior to the expiration of the 180-day period, NASDAQ will notify us that our common stock is subject to delisting. We may appeal the delisting determination to a NASDAQ hearing panel and the delisting will be stayed pending until the panel's determination. At such hearing, we would present a plan to regain compliance and NASDAQ would then subsequently render a decision. We are currently evaluating our alternatives to resolve the listing deficiency.

### Restructuring

On December 11, 2012, we adopted a restructuring plan to improve organizational efficiency and conserve working capital needed to support the growth of our GenDrive business. In doing so, 22 full-time positions were eliminated at our U.S. facilities. This workforce reduction was substantially completed on December 13, 2012. As a result of the restructuring, we expect to reduce annual expenses by \$3.0 to \$4.0 million.

We currently estimate that we will incur pre-tax restructuring charges in the fourth quarter resulting from the restructuring of approximately \$600,000 related to severance pay and other related costs. We expect to pay the majority of these restructuring charges within the next few months. The estimates of total charges and cash expenditures that we expect to incur in connection with the restructuring, and the timing thereof, is subject to a number of assumptions, and actual results may materially differ from those stated above.

## Company and Other Information

We were organized in the State of Delaware on June 17, 1997. We were originally a joint venture between Edison Development Corporation and Mechanical Technology Incorporated. In 2007, we acquired all the issued and outstanding equity of Cellex Power Products, Inc., or Cellex, and General Hydrogen Corporation, or General Hydrogen. Through these acquisitions, and our continued GenDrive product development efforts, we became the first fuel cell company to offer a complete suite of Class 1 - sit-down counterbalance trucks, Class 2 - stand-up reach trucks and Class 3 - rider pallet trucks products.

Effective April 1, 2010, we were no longer considered a development stage enterprise since our principal operations began to provide more than insignificant revenues as we received orders from repeat customers, increased our customer base and had a significant backlog. Prior to April 1, 2010, we were considered a development stage enterprise because substantially all of our resources and efforts were 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.

Our principal executive offices are located at 968 Albany-Shaker Road, Latham, New York, 12110, and our telephone number is (518) 782-7700. Our corporate website address is [www.plugpower.com](http://www.plugpower.com). The information contained on, or accessible through, our website is not part of this prospectus.



## THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding after this offering	shares
Warrants we are offering	We are offering warrants to purchase up to        shares of common stock, which will be exercisable during the period commencing on the date of original issuance and ending five years from such date at an exercise price of \$     per share of common stock. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the warrants. There is no established public trading market for the warrants, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange or other nationally recognized trading system.
Over-allotment option to purchase additional shares	The underwriter has an option to purchase a maximum of     additional shares of common stock and/or warrants to purchase a maximum of     shares of common stock from us. The underwriter can exercise this option at any time within 45 days from the date of this prospectus.
Use of Proceeds	We estimate that we will receive net proceeds from the sale of shares of our common stock and warrants to purchase common stock in this offering of approximately \$     million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the proceeds to be used for working capital and other general corporate purposes including, among other things, capital expenditures. See Use of Proceeds in this prospectus.
NASDAQ Stock Market symbol	PLUG
Risk Factors	You should read carefully Risk Factors in this prospectus for a discussion of factors that you should consider before deciding to invest in shares of our common stock and warrants to purchase common stock.

The number of shares of common stock to be outstanding after this offering is based on 38,197,255 shares outstanding as of September 30, 2012 and excludes:

1,999,521 shares of common stock issuable upon exercise of outstanding options as of September 30, 2012 at a weighted average exercise price of \$9.01 per share (of which options to acquire 665,305 shares of common stock are vested as of September 30, 2012);

275,262 shares of common stock issuable upon the exercise of unvested restricted stock awards outstanding as of September 30, 2012;

5,485,229 shares of our common stock reserved for future issuance under our equity incentive plans as of September 30, 2012;

9,421,008 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2012, which number of shares will increase as a result of the offering due to anti-dilution provisions contained in such warrants; and

shares of common stock issuable upon the exercise of the warrants to be sold in this offering.

Except as otherwise indicated, all information in this prospectus assumes no exercise by the underwriter of its over-allotment option.



## SUMMARY CONSOLIDATED FINANCIAL DATA

The following table presents our summary consolidated financial data for the periods indicated. The consolidated statement of operations and comprehensive income (loss) data for the years ended December 31, 2009, 2010 and 2011 and the balance sheet data as of December 31, 2010 and 2011 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The balance sheet data as of December 31, 2009 and September 30, 2011 have been derived from our audited consolidated financial statements and unaudited interim consolidated financial statements, respectively, that are not included in this prospectus. The consolidated statement of operations and comprehensive income (loss) data for the nine months ended September 30, 2011 and 2012 and the consolidated balance sheet data as of September 30, 2012 have been derived from our unaudited interim consolidated financial statements that are included elsewhere in this prospectus. The unaudited consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements, and in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly our financial position for such periods. Our historical results are not necessarily indicative of future operating results, and the interim results set forth below are not necessarily indicative of expected results for the year ended December 31, 2012 or for any future period.

Effective January 1, 2012, the company adopted the Financial Accounting Standards Board's Accounting Standards Update (ASU) No. 2011-5, Comprehensive Income (Topic 220): Presentation of Comprehensive Income, as amended by ASU 2011-12, Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05. These updates revise the manner in which entities present comprehensive income in their financial statements. The statement of comprehensive income (loss) data presented below revises historical information to illustrate the new presentation required by this pronouncement for those periods prior to adoption.

You should read this summary consolidated financial data in conjunction with the sections entitled Capitalization, Selected Consolidated Financial Data and Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and related notes, all included elsewhere in this prospectus.

	Years Ended December 31,			Nine Months Ended September 30,	
	2009	2010	2011	2011	2012
	(in thousands, except per share data)				
<b>Consolidated Statements of Operations Data:</b>					
Product and service revenue.....	\$4,833	\$15,739	\$23,223	\$11,927	\$18,712
Research and development contract revenue.....	7,460	3,598	3,886	3,342	1,475
Licensed technology revenue.....	-	136	517	489	-
Total revenue.....	12,293	19,473	27,626	15,758	20,187
Cost of product and service revenue.....	7,246	23,111	30,670	19,188	28,552
Cost of research and development contract revenue.....	12,433	6,371	6,232	5,506	2,390
Research and development expense.....	16,324	12,901	5,656	3,648	4,090
Selling, general and administrative expenses.....	15,427	25,572	14,546	11,051	10,556
Gain on sale of assets.....	-	(3,217)	(673)	(673)	-
Amortization of intangible assets.....	2,132	2,264	2,322	1,755	1,727
Other income (expense), net.....	560	570	3,673	4,429	3,740
Net loss.....	\$(40,709)	\$(46,959)	\$(27,454)	\$(20,286)	\$(23,388)

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Loss per share, basic and diluted.....	\$(3.15)	\$(3.58)	\$(1.46)	\$(1.16)	\$(0.71)
Weighted average number of common shares outstanding.....	12,911	13,123	18,778	17,442	33,107

**Statements of Comprehensive Income (Loss) Data:**

Net Loss	\$ (40,709)	\$ (46,959)	\$(27,454)	\$(20,286)	\$(23,388)
Other comprehensive (loss) income:					
Foreign currency translation gain (loss).....	1,294	277	(56)	(74)	107
Unrealized gain (loss) on available-for-sale securities.....	(131)	(114)	19	19	-
Comprehensive Loss.....	\$ (39,546)	\$ (46,796)	\$(27,491)	\$(20,341)	\$(23,281)

**Balance Sheet Data:**

*(at end of the period)*

Unrestricted cash, cash equivalents and available- for-sale securities.....	\$62,541	\$21,359	\$13,857	\$22,802	\$9,461
Trading securities    auction rate debt securities.....	53,397	-	-	-	-
Total assets.....	164,185	59,177	55,656	53,312	45,567
Borrowings under line of credit.....	59,375	-	5,405	-	1,000
Current portion of long-term obligations.....	533	-	-	-	-
Long-term obligations.....	2,426	3,141	9,577	5,768	6,426
Stockholders' equity.....	88,269	42,913	29,036	35,728	23,045
Working capital.....	60,009	25,556	22,452	24,543	15,584

## RISK FACTORS

Investing in our common stock and warrants involves a high degree of risk. You should carefully consider the following risks and uncertainties, together with all other information in this prospectus, including our consolidated financial statements and related notes, before investing in our common stock. Any of the risk factors we describe below could adversely affect our business, financial condition or results of operations. The market price of our common stock could decline if one or more of these risks or uncertainties actually occurs, causing you to lose all or part of the money you paid to buy our common stock and warrants. Certain statements below are forward-looking statements. See [Forward-Looking Statements](#) in this prospectus.

### Risks Related to our Business and our Industry

#### **We have incurred losses, anticipate continuing to incur losses and might never achieve or maintain profitability.**

We have not achieved profitability in any quarter since our formation and we will continue to incur net losses until we can produce sufficient revenue to cover our costs. Our net losses were approximately \$60.6 million in 2007, \$121.7 million in 2008, \$40.7 million in 2009, \$47.0 million in 2010, \$27.5 million in 2011 and \$23.4 million for the nine months ended September 30, 2012. As of September 30, 2012, we had an accumulated deficit of \$778.2 million. 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. Substantially all of our losses resulted from costs incurred in connection with our manufacturing operations, research and development expenses and from general and administrative costs associated with our operations. We cannot guarantee when we will operate profitably, if ever. In order to achieve profitability, among other factors, management must successfully execute our planned path to profitability in the early adoption markets on which we are focused, the hydrogen infrastructure that is needed to support our growth readiness and cost efficiency must be available and cost efficient, we must: continue to shorten the cycles in our product roadmap with respect to: product reliability and performance that our customers expect and successful introduction of our products into the market, we must accurately evaluate our markets for, and react to, competitive threats in both other technologies (such as advanced batteries) and our technology field, and we must continue to lower our products' build costs and lifetime service costs. If we are unable to successfully take these steps, we may never operate profitably, and, even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future.

#### **We do not have enough cash to fund our operations to profitability and if we are unable to secure additional capital, we may need to reduce and/or cease our operations.**

We have experienced recurring operating losses and as of September 30, 2012, we had an accumulated deficit of approximately \$778.2 million. Substantially all of our accumulated deficit has resulted from costs incurred in connection with our operating expenses, research and development expenses and from general and administrative costs associated with our operations. On September 30, 2012, we had cash and cash equivalents of \$9.5 million and net working capital of \$15.6 million. This compares to \$22.8 million and \$24.5 million, respectively, at September 30, 2011. We currently estimate that we had, as of December 31, 2012, cash and cash equivalents of approximately \$9.4 million and accounts payable of approximately \$3.5 million. We also estimate that as of December 31, 2012, of our total accounts payable, approximately \$1.6 million were more than 30 days past due and approximately \$0.3

million were more than 120 days past due. In addition, based on the borrowing base calculation and our outstanding loan balance, we currently have no availability under our loan facility with Silicon Valley Bank. To date, we have funded our operations primarily through public and private offerings of our common and preferred stock, our line of credit and maturities and sales of our available for sale securities. We anticipate incurring substantial additional losses and may never achieve profitability. Additionally, even if we raise sufficient capital through equity or debt financing, strategic alliances or otherwise, there can be no assurances that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow.

***Despite this offering, we will still require significant additional capital funding and such capital may not be available to us.***

In the event that our operating expenses are higher than anticipated or the gross margins and shipments of our GenDrive products do not increase as we expect, we may be required to implement contingency plans within our control to conserve and/or enhance our liquidity to meet operating needs. Such plans include: our ability to further reduce discretionary expenses, monetize our real estate assets through a sale-leaseback arrangement and obtain additional funding from licensing the use of our technologies. Our cash requirements relate primarily to working capital needed to operate and grow our business, including funding operating expenses, growth in inventory to support both shipments of new units and servicing the installed base, and continued development and expansion of our products. Our ability to achieve profitability and meet future liquidity needs and capital requirements will depend upon numerous factors, including the timing and quantity of product orders and shipments, the timing and amount of our operating expenses; the timing and costs of working capital needs; the timing and costs of building a sales base; the timing and costs of developing marketing and distribution channels; the timing and costs of product service requirements; the timing and costs of hiring and training product staff; the extent to which our products gain market acceptance; the timing and costs of product development and introductions; the extent of our ongoing and any new research and development programs; and changes in our strategy or our planned activities. If we are unable to fund our operations without additional external financing and therefore cannot sustain future operations, we may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection.

Alternatives we would consider for additional funding include additional equity or debt financings, a sale-leaseback of our real estate, or licensing of our technology. In addition to raising capital, we may also consider strategic alternatives including business combinations, strategic alliances or joint ventures. If we are unable to obtain additional capital in 2013, we may not be able to sustain our future operations and may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. The additional capital from the proceeds we receive in this offering is expected to fund our operations through the remainder of our 2013 fiscal year. We cannot assure you that any necessary additional financing will be available on terms favorable to us, or at all. Given the difficult current economic environment, we believe that it could be difficult to raise additional funds and there can be no assurance as to the availability of additional financing or the terms upon which additional financing may be available. Additionally, even if we raise sufficient capital through additional equity or debt financings, strategic alternatives or otherwise, there can be no assurance that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur additional debt, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. The terms of any debt securities issued could also impose significant restrictions on our operations. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance, and may adversely impact our ability to raise additional funds. Similarly, if our common stock is delisted from the NASDAQ Capital Market, it may limit our ability to raise additional funds. If we raise additional funds through collaborations and/or licensing arrangements, we might be required to relinquish significant rights to our technologies, or grant licenses on terms that are not favorable to us.

### **The recent restructuring plan we adopted may adversely impact management's ability to meet financial reporting requirements.**

On December 11, 2012, we adopted a restructuring plan to improve organizational efficiency and conserve working capital needed to support the growth of our GenDrive business. In doing so, 22 full-time positions were eliminated at our U.S. facilities, including positions in our finance department. This workforce reduction was substantially completed on December 13, 2012. As a result of the restructuring and associated reduced headcount, going forward we may lack the resources to adequately meet our financial reporting requirements.

### **We do not have extensive experience in manufacturing and marketing our products and, as a result, may be unable to sustain a profitable commercial market for our new and existing products.**

From 1997 to 2008, we focused primarily on research and development of fuel cell systems. In the latter half of 2008, we shifted our focus to viable commercialization of our fuel cell products. While we have been manufacturing our products in small quantities for several years, we do not have extensive experience in mass-manufacturing and marketing our products. 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 profitably market our products. 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. Before investing in our common stock, you should consider the challenges, expenses and difficulties that we will face as an emerging technology company seeking to sustain a viable commercial market for our new and existing products. If we are unable to sustain a viable commercial market for our products, that failure would have a material adverse effect on our business, prospects, financial condition and results of operations.

The recent restructuring plan we adopted may adversely impact management's ability to meet financial reporting requirements.

**Our purchase orders may not ship, be commissioned or installed, or convert to revenue, and our pending orders may not convert to purchase orders, which may have a material adverse effect on our revenue and cash flow.**

Some of the orders we accept from customers require certain conditions or contingencies to be satisfied prior to shipment or prior to commissioning or installation, some of which are outside of our control. Historically, shipments made against these orders have generally occurred between ninety days and twenty-four months from the date of acceptance of the order. Orders received in the nine months ended September 30, 2012 were 353 units for approximately \$10.0 million in value. Backlog on September 30, 2012 was \$25.5 million, with approximately \$4.3 million of this backlog 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. There may also be product redesign or modification requirements that must be satisfied prior to shipment of units under certain of our agreements. If the redesigns or modifications are not completed, some or all of our orders may not ship or convert to revenue. We also have publicly discussed anticipated, pending orders with prospective customers; however, those prospective customers may require certain conditions or contingencies to be satisfied prior to issuing a purchase order to us, some of which are outside of our control. Such conditions or contingencies that may be required to be satisfied before we receive a purchase order may include, but are not limited to, successful product demonstrations or field trials. Some conditions or contingencies that are out of our control may include, but are not limited to, government tax policy, government funding programs, and government incentive programs. Additionally, some conditions and contingencies may extend for several years. We may have to compensate customers, by either reimbursement, forfeiting portions of associated revenue, or other methods depending on the terms of the customer contract, based on the failure on any of these conditions or contingencies. This could have an adverse impact on our revenue and cash flow.



**Certain GenDrive component quality issues have resulted in adjustments to our warranty reserves, which negatively impacted our results and delayed our new order momentum, and unanticipated future product reliability and quality issues could impair our ability to service long term warranty and maintenance contracts profitably.**

Isolated quality issues have arisen with respect to certain components in our next-generation GenDrive units that are currently being used at customer sites. The product and service revenue contracts we entered into generally provide a one-to-two-year product warranty to customers from date of installation. We have had to retrofit the units subject to component quality issues with replacement components that will improve the reliability of our next-generation GenDrive products for those customers. We have estimated the costs of satisfying those warranty claims and have recorded a reserve adjustment of \$3.3 million in the third quarter of 2012, as reported in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2012, and as a result, our product and warranty reserve as of September 30, 2012 is approximately \$3.0 million and is included in product warranty reserve in the consolidated balance sheets. However, if any unanticipated additional quality issues or warranty claims arise, additional material charges may be incurred in the future. We continue to work with our vendors on these component issues to recover charges taken and improve quality and reliability of components to prevent a reoccurrence of the isolated quality issues we have experienced. However, 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.

**Our GenDrive product depends on the availability of hydrogen and our lack of control over or limited availability of such fuel may adversely impact our sales and product deployment.**

Our products depend largely on the availability of natural gas and hydrogen gas. We are dependent upon hydrogen suppliers for success with the profitable commercialization of our GenDrive product. Although we will continue to work with hydrogen suppliers to mutually agree on terms for our customers, including, but not limited to, price of the hydrogen molecules, liquid hydrogen, hydrogen infrastructure and service costs, to the benefit of our GenDrive product value proposition, ultimately we have no control over such third parties. 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, then our products could be less attractive to potential users and our products' value proposition could be negatively affected. If hydrogen suppliers elect not to participate in the material handling market, there may be an insufficient supply of hydrogen for this market that could negatively affect our sales and deployment of our GenDrive product.

**Unless we lower the cost of our GenDrive products and demonstrate their reliability, our product sales could be adversely affected.**

The initial capital cost of our GenDrive products is currently higher than many established competing technologies. If we are unable to successfully complete the development of GenDrive or any future products we develop that are competitive with competing technologies in terms of price, reliability and longevity, customers will be unlikely to buy our products. The profitability 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.

**Our GenDrive products face intense competition and we may be unable to compete successfully.**

The markets for energy products are intensely competitive. Some of our competitors in the fuel cell sector and in incumbent technologies are much larger than we are and may have the manufacturing, marketing and sales capabilities to complete research, development and commercialization of profitable, commercially viable products more quickly and effectively than we can. 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, generator sets, fast charged technologies and other types of fuel cell technologies. Many of these entities have substantially greater financial, research and development, manufacturing and marketing resources than we do. Technological advances in alternative energy products, battery systems or other fuel cell technologies may make our products less attractive or render them obsolete.

**We depend on only a few customers for the majority of our revenues and the loss of any one or more of these customers, or a significant loss, reduction or rescheduling of orders from any of these customers, would have a material adverse effect on our business, financial condition and results of operations.**

We sell most of our products to a small number of customers, and while we are continually seeking to expand our customer base, we expect this will continue for the next several years. As of December 31, 2011, five of our customers comprised approximately 83.0% of the total accounts receivable balance, with each customer individually representing 27.0%, 17.3%, 16.4%, 12.1% and 10.2% of that amount. For the year ended December 31, 2011, contracts with three customers comprise approximately 39.0% of total consolidated revenues, with each customer individually representing 14.5%, 14.0% and 10.5%, of total consolidated revenues, respectively. For the nine months ended September 30, 2012, contracts with three customers comprise approximately 55.5% of total consolidated revenues, with each customer representing 25.8%, 19.4%, and 10.3%, respectively. Any decline in business with these small numbers of customers could have an adverse impact on our business, financial condition and results of operations. Our future success is dependent upon the continued purchases of our products by a small number of customers. Any fluctuations in demand from such customers or other customers may negatively impact our business, financial condition and results of operations. If we are unable to broaden our customer base and expand relationships with potential customers, our business will continue to be impacted by unanticipated demand fluctuations due to our dependence on a small number of customers. Unanticipated demand fluctuations can have a negative impact on our revenues and business, and an adverse effect on our business, financial condition and results of operations. In addition, our dependence on a small number of major customers exposes us to numerous other risks, including: a slowdown or delay in a customer's deployment of our products could significantly reduce demand for our products; reductions in a single customer's forecasts and demand could result in excess inventories; the current or future economic conditions could negatively affect one or more of our major customers and cause them to significantly reduce operations, or file for bankruptcy; consolidation of customers can reduce demand as well as increase pricing pressure on our products due to increased purchasing leverage; each of our customers has significant purchasing leverage over us to require changes in sales terms including pricing, payment terms and product delivery schedules; and concentration of accounts receivable credit risk, which could have a material adverse effect on our liquidity and financial condition if one of our major customers declared bankruptcy or delayed payment of their receivables.

**The loss of one or more of our key supply partners could have a material adverse effect on our business.**

We have certain key suppliers, such as Ballard and Air Squared, that we rely on for critical components in our products and there are numerous other components for our products that are sole sourced. 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. For example, in the fourth quarter of 2012, Ballard had temporarily stopped shipping fuel cell stacks for our GenDrive product line due to a dispute with us, but we have since resolved this dispute and we are once again in good standing with Ballard as our supplier. 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.

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

We believe we have identified viable markets for our GenDrive products, however our products represent emerging technologies, 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 sizable 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 sizable 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, 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 may be unable to establish or maintain relationships with third parties for certain aspects of continued product development, manufacturing, distribution and servicing and the supply of key components for our products.**

We will need to maintain and may 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 continued development and profitable commercialization of our products and the operation of our business, financial condition, results of operations and prospects.

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

We intend to market, distribute, sell and service our GenDrive 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.

For example, we have formed a joint venture company based in France with Axane, S.A. under the name Hypulsion to develop and sell hydrogen fuel cell systems for the European material handling market. However, for the reasons discussed above, Hypulsion may not be able to accomplish its goals or become profitable.

## **Delays in our product development could have a material impact on the profitable 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 profitable 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 enter into contracts for products that have not yet been developed or produced, which may give such customers the right to terminate their agreements with us.**

We may enter into contracts with our customers for certain products that have not been developed or produced. There can be no assurance that we will complete the development of these products and meet the specifications required to fulfill customer agreements and deliver products on schedule. Pursuant to such agreements, the customers would have the right to provide notice to us if, in their good faith judgment, we have materially deviated from such agreements. 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, which could adversely affect our future business.

## **We may never complete the research and development of certain commercially viable products, which may adversely affect our revenue, profitability and result in possible warranty claims.**

Other than certain products within our GenCore, GenSys and GenDrive product families, 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 products. If we are unable to develop additional commercially viable products, we may not be able to generate sufficient revenue to become profitable. The profitable commercialization of

We may be unable to establish or maintain relationships with third parties for certain aspects of continued product d

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 profitable 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. We must complete additional research and development to fill out product portfolios and deliver enhanced functionality and reliability in order to manufacture additional 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 are a named party in a contract dispute for which an adverse outcome could result in us being liable for damages and subject to indemnification claims.**

In July 2008, Sorooof Trading Development Company Ltd., or Sorooof, filed a demand for arbitration against GE Fuel Cell Systems, LLC, or GEFCS, claiming breach of a distributor agreement and seeking damages of \$3 million. Prior to GEFCS' dissolution in 2006, we held a 40% membership interest and GE Microgen, Inc., or GEM, held a 60% membership interest in GEFCS. In January 2010, Sorooof requested, and GEM and we agreed, that the arbitration proceeding be administratively closed pending final resolution of the matter in United States District Court, Southern District of New York. On January 22, 2010, Sorooof filed a complaint in United States District Court, Southern District of New York naming, among others, Plug Power Inc., GEFCS, and GEM as defendants. On January 24, 2012, following a motion for judgment on the pleadings and motion for summary judgment, the Court dismissed with prejudice four of Sorooof's claims and dismissed without prejudice two of Sorooof's claims. The Court also dismissed with prejudice all claims against GEFCS. Sorooof filed an amended complaint on May 14, 2012 against us, GEM, and General Electric Company, re-pleading the two claims that were dismissed without prejudice. On December 12, 2012, the parties participated in a court settlement conference with the presiding judge at the United States District Court for the Southern District of New York. The case was not resolved at the settlement conference and discovery continues. Accordingly, we believe that it is too early to determine whether there is likely exposure to an adverse outcome and whether or not the probability of an adverse outcome is more than remote. We, GEFCS, GEM and General Electric Company, or GE, are party to an agreement under which we agreed to indemnify such parties for up to \$1 million of certain losses related to the Sorooof distributor agreement. GE has made a claim for indemnification against us under this agreement for all losses it may suffer as a result of the Sorooof dispute. To the extent that the dispute results in an adverse outcome for us or for any of the parties for which we have agreed to indemnify, we could suffer financially as a result of the damages it would have to pay on behalf of itself or its indemnitees.

**Failure of our prospective customer demonstrations could negatively impact demand for our products.**

We conduct demonstrations with a number of our prospective customers, and we plan to conduct additional demonstrations for prospective customers as required in the future. We may encounter problems and delays during these demonstrations 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 demonstrations with these prospective customers could materially harm our reputation and impair market acceptance of, and demand for, 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.

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

We are a named party in a contract dispute for which an adverse outcome could result in us being liable for damages

For example, 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.

**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 profitable commercialization plans and, therefore, our business prospects, results of operations and financial condition.

**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.**

We are subject to the risks arising from adverse changes in global economic conditions. For example, adverse changes in general economic conditions, continuing economic uncertainties, and the direction and relative strength of the U.S. economy has become increasingly uncertain. If economic growth in the United States and other countries slows or recedes, our current or prospective 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.



**Our business may become subject to future government regulation, which may impact our ability to market our products and costs and price of our products.**

Our products are subject to certain 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. See [Business Government Regulations](#) for additional information. 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.

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

Our fuel cell systems use natural gas and hydrogen gas in catalytic reactions. While our products do not use this fuel in a combustion process, natural gas and hydrogen gas are flammable fuels that could leak in a home or business 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.

**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.

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

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

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, the adequacy of which may not be sufficient.**

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.

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

Some of our technology has been developed with state and federal government funding in the United States, Canada and other countries. The United States and Canadian governments have a non-exclusive, royalty-free, irrevocable world-wide license to practice or have practiced some 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.

## **Risks Related to Our Securities and this Offering**

### **If our stock price continues to remain below \$1.00, our common stock may be subject to delisting from The NASDAQ Stock Market.**

On October 12, 2012, we received a deficiency notice from NASDAQ stating that we no longer comply with NASDAQ Marketplace Rule 5550(a)(2) because the bid price of our common stock closed below the required minimum \$1.00 per share for the previous 30 consecutive business days. The notice also indicated that, in accordance with Marketplace Rule 5810(c)(3)(A), we have a period of 180 calendar days, until April 10, 2013, to regain compliance with Rule 5550(a)(2). If at any time before April 10, 2013 the bid price of our common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days, NASDAQ will notify us that we have regained compliance with Rule 5550(a)(2). In the event we do not regain compliance with Rule 5550(a)(2) prior to the expiration of the 180-day period, NASDAQ will notify us that our common stock is subject to delisting. We may appeal the delisting determination to a NASDAQ hearing panel and the delisting will be stayed pending until the panel's determination. At such hearing, we would present a plan to regain compliance and NASDAQ would then subsequently render a decision. We are currently evaluating our alternatives to resolve the listing deficiency. To the extent that we are unable to resolve the listing deficiency, there is a risk that our common stock may be delisted from NASDAQ, which would adversely impact liquidity of our common stock and potentially result in even lower bid prices for our common stock.

**Our stock price has been and could remain volatile, which could further adversely affect the market price of our stock, our ability to raise additional capital and/or cause us to be subject to securities class action litigation.**

The market price of our common stock has historically experienced and may continue to experience significant volatility. In 2012, the closing market price of our common stock fluctuated from a high of \$2.60 per share in the first quarter of 2012 to a low of \$0.47 per share in the fourth quarter of 2012. 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. Such market price volatility could adversely affect our ability to raise additional capital. 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.

**Two of our stockholders, JSC INTER RAO Capital, or INTER RAO Capital, and affiliates and associates of AWM Investment Company, including, but not limited to Special Situations Technology Fund, L.P., Special Situations Technology Fund II, L.P. and Special Situations Private Equity Fund, L.P., or, collectively, SSF, has substantial control over us and could limit our other stockholders ability to influence the outcome of key transactions, including a change of control.**

As of December 31, 2012, INTER RAO Capital and SSF owned approximately 11.75% and 23.8 %, respectively, of the outstanding shares of our common stock. As a result, each of INTER RAO Capital and SSF can significantly influence or control certain matters requiring approval by our stockholders, including the approval of mergers or other extraordinary transactions. The interests of INTER RAO Capital and SSF may differ from our interest and the interest of our other stockholders, and INTER RAO Capital and/or SSF may vote in a way which may be adverse to our interests and the interests of our other stockholders. This concentration of ownership may have the effect of delaying, preventing or deterring key transactions such as 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. There may be other shareholders who beneficially own significant shares of our common stock such that they may influence or have control over certain Company matters. However, such shareholders have not yet filed reports to disclose their ownership of us and we cannot confirm the exact ownership of those shareholders at this time.

**The sale by INTER RAO Capital or SSF of a substantial number of shares of our common stock could cause the market price of our common stock to decline and adversely affect our ability to remain listed on an exchange and/or raise capital through equity offerings.**

INTER RAO Capital held 4,462,693 shares of common stock as of December 31, 2012, which represented in the aggregate approximately 11.75% of our outstanding common stock. SSF held 8,511,620 shares of common stock as of December 31, 2012, which represented in the aggregate approximately 23.8 % of our outstanding common stock. If INTER RAO Capital or its affiliates sell substantial amounts of our common stock in the public market, the market price of our common stock could decrease significantly.

**Our management will have broad discretion in the use of the net proceeds we receive in this offering and might not apply the proceeds in ways that increase the value of your investment.**

Our management will have broad discretion over the use of our net proceeds from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment and we might not be able to yield a significant return, if any, on any investment of these net proceeds. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our products and cause the price of our common stock to decline.

**There may be future sales or other dilution of our equity, which may adversely affect the market price of our common stock.**

Except as described under "Underwriting," we are not restricted from issuing additional shares of our common stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, our common stock. The market price of our common stock could decline as a result of sales of shares of our common stock or sales of such other securities made after this offering or the perception that such sales could occur.

**The market price of our common stock may be adversely affected by market conditions affecting the stock markets in general, including price and trading fluctuations on the NASDAQ Capital Market.**

Market conditions may result in volatility in the level of, and fluctuations in, the market prices of stocks generally and, in turn, our common stock and sales of substantial amounts of our common stock in the market, in each case being unrelated or disproportionate to changes in our operating performance. The overall weakness in the economy has recently contributed to the extreme volatility of the markets which may have an effect on the market price of our common stock.

**Provisions in our charter documents and Delaware law may discourage or delay an acquisition that stockholders may consider favorable, which could decrease the value of our common stock.**

Our certificate of incorporation, our bylaws, and Delaware corporate 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. We have a shareholders rights plan that may be triggered if a person or group of affiliated or associated persons acquires beneficial ownership of 15% or more of the outstanding shares of our common stock. 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.

## **Investors in this offering will experience immediate and substantial dilution.**

The public offering price of the securities offered pursuant to this prospectus is substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of common stock and warrants in this offering, you will incur immediate and substantial dilution in the pro forma net tangible book value per share of common stock from the price per share that you pay for the common stock. If the holders of outstanding options or warrants exercise those options or warrants at prices below the public offering price, you will incur further dilution. Because the public offering price in this offering is less than \$2.27 per share, the exercise price of our existing 2011 five-year warrants to purchase shares of our common stock, which were reduced from \$3.00 per share to \$2.27 per share in March of 2012, will be further reduced from \$2.27 to \$      per share in accordance with the anti-dilution provisions of such warrants, and the number of shares issuable upon exercise of such warrants would increase from      shares to      shares, both of which could result in further dilution to our stockholders. See the section entitled "Dilution" below for a more detailed discussion of the dilution associated with this offering.

## **If our common stock is not listed on a national securities exchange, U.S. holders of warrants may not be able to exercise their warrants without compliance with applicable state securities laws and the value of your warrants may be significantly reduced.**

If our common stock is delisted from The NASDAQ Stock Market and is not eligible to be listed on another national securities exchange, the exercise of the warrants by U.S. holders may not be exempt from state securities laws. As a result, depending on the state of residence of a holder of the warrants, a U.S. holder may not be able to exercise its warrants unless we comply with any state securities law requirements necessary to permit such exercise or an exemption applies. Although we plan to use our reasonable efforts to assure that U.S. holders will be able to exercise their warrants under applicable state securities laws if no exemption exists, there is no assurance that we will be able to do so. As a result, in the event that our common stock is delisted from The NASDAQ Stock Market and is not eligible to be listed on another securities exchange, your ability to exercise your warrants may be limited. The value of the warrants may be significantly reduced if U.S. holders are not able to exercise their warrants under applicable state securities laws.

## **If our common stock is not listed on a national securities exchange, compliance with applicable state securities laws may be required for subsequent offers, transfers and sales of the shares of common stock and warrants offered hereby.**

The shares of our common stock and the warrants are being offered pursuant to one or more exemptions from registration and qualification under applicable state securities laws. Because our common stock is listed on The NASDAQ Stock Market, we are not required to register or qualify in any state the subsequent offer, transfer or sale of the common stock or warrants. If our common stock is delisted from The NASDAQ Stock Market and is not eligible to be listed on another national securities exchange, subsequent transfers of the shares of our common stock and warrants offered hereby by U.S. holders may not be exempt from state securities laws. In such event, it will be the responsibility of the holder of shares or warrants to register or qualify the shares or the warrants for any subsequent offer, transfer or sale in the United States or to determine that any such offer, transfer or sale is exempt under applicable state securities laws.

**We have not paid cash dividends to our shareholders and currently have no plans to pay future cash dividends.**

We plan to retain earnings to finance future growth and have no current plans to pay cash dividends to shareholders. Because we have not paid cash dividends, holders of our securities will experience a gain on their investment in our securities only in the case of an appreciation of value of our securities. You should neither expect to receive dividend income from investing in our securities nor an appreciation in value.

**There is no public market for the warrants to purchase common stock being offered in this offering.**

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

**Holders of our warrants will have no rights as a common stockholder until such holders exercise their warrants and acquire our common stock.**

Until holders of warrants acquire shares of our common stock upon exercise of the warrants, holders of warrants will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of the warrants, the holders thereof will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.



**The warrants included in this offering may not have any value.**

The warrants will expire on the fifth anniversary of the date they are issued. In the event our common stock price does not exceed the exercise price of the warrants during the period when the warrants are exercisable, the warrants may not have any value.

## FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled Prospectus Summary, Risk Factors, Management's Discussion and Analysis of Financial Condition and Results of Operations and Business, contains 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, continue, estimate, expect, intend, may, plan, projected or the negative of such words or other similar words or phrases. 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 unduly 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:

- we continue to incur losses and might never achieve or maintain profitability;
- we do not have enough cash to fund our operations to profitability and if we are unable to secure additional capital, we may need to reduce and/or cease our operations;
- despite this offering, we will still require significant additional capital funding and such capital may not be available to us.
- the recent restructuring plan we adopted may adversely impact management's ability to meet financial reporting requirements.
- our lack of extensive experience in manufacturing and marketing our products may impact our ability to sustain a profitable commercial market for our new and existing products;
- unit orders will not ship, be installed and/or converted to revenue, in whole or in part;
- pending orders may not convert to purchase orders, in whole or in part;
- if our stock price continues to remain below \$1.00, our common stock may be subject to delisting from The NASDAQ Stock Market;
- the cost and timing of developing, marketing and selling our products and our ability to raise the necessary capital to fund such costs;
- market acceptance of our GenDrive systems;
- our ability to establish and maintain relationships with third parties with respect to product development, manufacturing, distribution and servicing and the supply of key product components;
- the cost and availability of components and parts for our products;
- our ability to develop commercially viable products;
- our ability to reduce product and manufacturing costs;
- our ability to successfully expand our product lines;
- our ability to improve system reliability for our GenDrive systems;
- competitive factors, such as price competition and competition from other traditional and alternative energy companies;
- our ability to protect our intellectual property;
- the cost of complying with current and future federal, state and international governmental regulations; and

other risks and uncertainties referenced under Risk Factors and elsewhere in this prospectus. 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 prospectus or the respective dates of documents incorporated herein or therein that include forward-looking statements.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

## USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock and warrants to purchase common stock by us in this offering will be approximately \$      million based on an assumed public offering price of \$ per share, which was the last reported sale price of our common stock on January      , 2013, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We currently intend to use all of the net proceeds of this offering received by for working capital and other general corporate purposes, including capital expenditures. The amount of what, and timing of when, we actually spend for these purposes may vary significantly and will depend on a number of factors, including our future revenue and cash generated by operations and the other factors described under Risk Factors in this prospectus. Accordingly, our management will have broad discretion in applying a portion of the net proceeds of this offering. Pending these uses, we intend to invest the net proceeds in high quality, investment grade, short-term fixed income instruments which include corporate, financial institution, federal agency or U.S. government obligations.

## PRICE RANGE OF COMMON STOCK

Our common stock has traded on The NASDAQ Stock Market under the symbol PLUG since June 21, 2011 and under the symbol PLUGD prior to June 20, 2011. The following table sets forth, for the periods indicated, the high and low sales prices for our common stock as reported on The NASDAQ Stock Market.

	Sales prices	
	High	Low
2013		
1st Quarter (through January 14, 2013)	\$0.76	\$0.47
2012		
1st Quarter	\$2.60	\$1.26
2nd Quarter	\$1.41	\$1.10
3rd Quarter	\$1.30	\$0.76
4th Quarter	\$0.92	\$0.47
2011		
1st Quarter	\$10.70	\$3.60
2nd Quarter	\$7.80	\$1.91
3rd Quarter	\$2.63	\$1.35
4th Quarter	\$2.71	\$1.50

On January 14, 2013, the last reported closing price of our common stock on The NASDAQ Stock Market was \$0.59. On January 14, 2013, we had approximately 631 holders of record of our common stock.

## 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. We currently intend to retain all available funds and any future earnings to fund the

development and growth of our business. 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. Investors should not purchase our common stock with the expectation of receiving cash dividends.

## CAPITALIZATION

The following table sets forth our capitalization as of September 30, 2012:

on an actual basis;

on a pro forma basis to give further effect to our sale in this offering of \_\_\_\_\_ shares of our common stock at an assumed offering price of \$ \_\_\_\_\_ per share, which was the last reported sale price of our common stock on January \_\_\_\_\_, 2013, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

	<b>As of September 30, 2012</b>	
	<b>(Unaudited)</b>	
	<i>(in thousands)</i>	
	<b>Actual</b>	<b>Pro Forma</b>
Cash and cash equivalents.....	\$ 9,461	\$
Stockholders' equity (deficit):		
Common stock, \$0.01 par value per share; 245,000,000 shares authorized, actual and pro forma; 38,197,255 shares issued and outstanding (including 165,906 shares in treasury), actual; _____ shares issued and outstanding, pro forma.....	\$ 382	
Additional paid-in capital.....	801,352	
Accumulated other comprehensive income.....	1,035	
Accumulated deficit.....	(778,172)	
Less common stock in treasury:		
165,906 shares	(1,552)	
Total stockholders' equity.....	23,045	
Total capitalization.....	\$ 32,506	\$

The number of shares of our common stock to be outstanding after the offering is based on 38,197,255 shares of common stock outstanding as of September 30, 2012 and excludes:

1,999,521 shares of common stock issuable upon exercise of outstanding options as of September 30, 2012 at a weighted average exercise price of \$9.01 per share (of which options to acquire 665,305 shares of common stock are vested as of September 30, 2012);

275,262 shares of common stock issuable upon the exercise of unvested restricted stock awards outstanding as of September 30, 2012;

5,485,229 shares of our common stock reserved for future issuance under our equity incentive plans as of September 30, 2012;

9,421,008 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2012, which number of shares will increase as a result of the offering due to anti-dilution provisions contained in such warrants; and

\_\_\_\_\_ shares of common stock issuable upon the exercise of the warrants to be sold in this offering.

Except as otherwise indicated, all information in this prospectus assumes no exercise by the underwriter of its over-allotment option.

You should read this table in conjunction with the sections of this prospectus entitled Selected Consolidated Financial Data and Management's Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and related notes included elsewhere in this prospectus.

## DILUTION

If you invest in our common stock and warrants, your ownership interest will be diluted by the difference between the price per share you pay and the net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value as of September 30, 2012 was approximately \$17.1 million, or \$0.45 per share of our common stock, based upon 38,031,349 shares of our common stock outstanding. Net tangible book value per share is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of September 30, 2012. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock and warrants in this offering and the net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of \_\_\_\_\_ shares of our common stock and warrants to purchase up to \_\_\_\_\_ shares of our common stock in this offering at the public offering price of \$ \_\_\_\_\_ per combination and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2012 would have been approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and immediate dilution in net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing our common stock and warrants in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per combination	\$
Net tangible book value per share as of September 30, 2012	\$0.45
Increase in net tangible book value per share attributable to this offering	
Adjusted net tangible book value per share as of September 30, 2012 after giving effect to this offering	
Dilution in net tangible book value per share to new investors	

If the underwriter exercises in full its option to purchase \_\_\_\_\_ additional shares of common stock and warrants to purchase up to \_\_\_\_\_ shares of common stock at the public offering price, the as adjusted net tangible book value after this offering would have been \$ \_\_\_\_\_ per share, representing an increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and immediate dilution in net tangible book value of \$ \_\_\_\_\_ per share to new investors purchasing our common stock and warrants in this offering at the public offering price.

The foregoing table and discussion is based on 38,197,255 shares of common stock outstanding as of September 30, 2012 and excludes:

1,999,521 shares of common stock issuable upon exercise of outstanding options as of September 30, 2012 at a weighted average exercise price of \$9.01 per share (of which options to acquire 665,305 shares of common stock are vested as of September 30, 2012);

275,262 shares of common stock issuable upon the exercise of unvested restricted stock awards outstanding as of September 30, 2012;

5,485,229 shares of our common stock reserved for future issuance under our equity incentive plans as of September 30, 2012;

9,421,008 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2012, which number of shares will increase as a result of the offering due to anti-dilution provisions contained in such warrants; and

\_\_\_\_\_ shares of common stock issuable upon the exercise of the warrants to be sold in this offering.



The above share information assumes no exercise by the underwriter of its over-allotment option.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders. Also, as a result of this offering, the exercise price of our existing 2011 five-year warrants to purchase shares of our common stock, which was adjusted from \$3.00 to \$2.27 in March of 2012, will be adjusted downward further from \$2.27 to \$ in accordance with the weighted-average anti-dilution provisions of such warrants, and the number of shares issuable upon exercise of such warrants would increase from shares to shares, both of which could result in further dilution to our stockholders. See Risk Factors Investors in this offering will experience immediate and substantial dilution .

## SELECTED CONSOLIDATED FINANCIAL DATA

The following tables present selected financial data and other operating information for the periods indicated. The consolidated statement of operations and comprehensive income (loss) data for the years ended December 31, 2009, 2010 and 2011 and the balance sheet data as of December 31, 2010 and 2011 have been derived from our audited consolidated financial statements included elsewhere in this prospectus. The consolidated statement of operations and comprehensive income (loss) data for the years ended December 31, 2007 and 2008 and the balance sheet data as of December 31, 2007, 2008 and 2009 and September 30, 2011 have been derived from our audited consolidated financial statements and unaudited interim consolidated financial statements, respectively, that are not included in this prospectus. The consolidated statement of operations and comprehensive income (loss) data for the nine months ended September 30, 2011 and 2012 and the consolidated balance sheet data as of September 30, 2012 have been derived from our unaudited interim consolidated financial statements that are included elsewhere in this prospectus. The unaudited consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements, and in the opinion of management, reflect all adjustments of a normal recurring nature considered necessary to present fairly our financial position for such periods. Our historical results are not necessarily indicative of future operating results, and the interim results set forth below are not necessarily indicative of expected results for the year ended December 31, 2012 or for any future period.

Effective January 1, 2012, the company adopted the Financial Accounting Standards Board's Accounting Standards Update (ASU) No. 2011-5, Comprehensive Income (Topic 220): Presentation of Comprehensive Income, as amended by ASU 2011-12, Comprehensive Income (Topic 220): Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05. These updates revise the manner in which entities present comprehensive income in their financial statements. The statement of comprehensive income (loss) data presented below revises historical information to illustrate the new presentation required by this pronouncement for those periods prior to adoption.

You should read the information presented below in conjunction with our audited consolidated financial statements and related notes and other financial information included herein, and the sections entitled Capitalization, Prospectus Summary, Summary Consolidated Financial Data and Management's Discussion and Analysis of Financial Condition and Results of Operations.

	Years Ended December 31,					Nine Months Ended September 30,	
	2007	2008	2009	2010	2011	2011	2012
	(in thousands, except per share data)						
<b>Statements Of Operations:</b>							
Product and service revenue.....	\$3,082	\$4,667	\$4,833	\$15,739	\$23,223	\$11,927	\$18,712
Research and development contract revenue.....	13,189	13,234	7,460	3,598	3,886	3,342	1,475
Licensed technology revenue.....	-	-	-	136	517	489	-
Total revenue.....	16,271	17,901	12,293	19,473	27,626	15,758	20,187
Cost of product and service revenue.....	9,399	11,442	7,246	23,111	30,670	19,188	28,552
Cost of research and development contract revenue.....	19,045	21,505	12,433	6,371	6,232	5,506	2,390
Research and development expense.....	39,218	34,987	16,324	12,901	5,656	3,648	4,090
Selling, general and administrative expenses.....	19,323	28,333	15,427	25,572	14,546	11,051	10,556
Goodwill impairment charge.....	-	45,843	-	-	-	-	-
Gain on sale of assets.....	-	-	-	(3,217)	(673)	(673)	-
Amortization of intangible assets.....	1,614	2,225	2,132	2,264	2,322	1,755	1,727
Other income (expense), net.....	11,757	4,734	560	570	3,673	4,429	3,740
Net loss.....	(60,571)	(121,700)	(40,709)	(46,959)	(27,454)	(20,286)	(23,388)
Loss per share, basic and diluted.....	\$(6.94)	\$(13.62)	\$(3.15)	\$(3.58)	\$(1.46)	\$(1.16)	\$(0.71)

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Weighted average number of common shares outstanding.....	8,734	8,938	12,911	13,123	18,778	17,442	33,107
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**Statements of Comprehensive Income (Loss) Data:**

Net Loss	\$(60,571)	\$(121,700)	\$(40,709)	\$(46,959)	\$(27,454)	\$(20,286)	\$(23,388)
Other comprehensive (loss) income:							
Foreign currency translation gain (loss).....	7,739	(8,325)	1,294	277	(56)	(74)	107
Unrealized gain (loss) on available-for-sale securities.....	142	156	(131)	(114)	19	19	-
Comprehensive Loss.....	\$(52,690)	\$(129,869)	\$(39,546)	\$(46,796)	\$(27,491)	\$(20,341)	\$(23,281)

**Balance Sheet Data:**

*(at end of the period)*

Unrestricted cash, cash equivalents and available-for-sale securities.....	\$165,701	\$104,688	\$62,541	\$21,359	\$13,857	\$22,802	\$9,461
Trading securities    auction rate debt securities.....	-	52,651	53,397	-	-	-	-
Total assets.....	268,392	209,112	164,185	59,177	55,656	53,312	45,567
Borrowings under line of credit.....	-	62,875	59,375	-	5,405	-	1,000
Current portion of long-term obligations.....	1,384	401	533	-	-	-	-
Long-term obligations.....	4,580	1,313	2,426	3,141	9,577	5,768	6,426
Stockholders' equity.....	248,900	125,864	88,269	42,913	29,036	35,728	23,045
Working capital.....	163,906	86,171	60,009	25,556	22,452	24,543	15,584

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

*The following discussion and analysis of our financial condition and results of operations should be read together with our consolidated financial statements and the related notes and the other financial information included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those discussed below and elsewhere in this prospectus, particularly those under Risk Factors. Dollars in tabular format are presented in thousands, except share and per share data, or otherwise indicated.*

## Overview

We are a leading provider of alternative energy technology focused on the design, development, commercialization and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market. We continue to leverage 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 have made significant progress in our analysis of the material handling market. We believe we have developed reliable products which allow the end customers to eliminate incumbent power sources from their operations, and realize their sustainability objectives through clean energy alternatives.

In October, 2011 we introduced our next generation GenDrive products. These next generation fuel cell units include a simplified architecture featuring 30% fewer components, giving customers greater flexibility in managing their deployments. By the third quarter of 2012, the majority of units produced and shipped were based on the simplified architecture. During the fiscal year ended December 31, 2012, we received new orders from Stihl, Mercedes Benz, Lowes, Carter's and Ace Hardware. We also experienced add-on orders from Walmart, P&G, Coca-Cola, Sysco, Wegmans, Kroger and BMW.

We have experienced and continue to experience negative cash flows from operations and we expect to continue to incur net losses in the foreseeable future. Accordingly, in 2010, we restructured and consolidated our operations to focus on the GenDrive business. This restructuring significantly reduced our operating expenses in 2011. We have since further restructured by adopting a restructuring plan on December 11, 2012, aimed at improving organizational efficiency and conserve working capital needed to support the growth of our GenDrive business. As a result of the recent restructuring, we expect to reduce annual expenses by \$3.0 to \$4.0 million.

As of September 30, 2012, we had approximately \$15.6 million of working capital, which includes \$9.5 million of cash and cash equivalents to fund our future operations. We currently estimate that we had, as of December 31, 2012, cash and cash equivalents of approximately \$9.4 million and accounts payable of approximately \$3.5 million. We also estimate that as of December 31, 2012, of our total accounts payable, approximately \$1.6 million were more than 30 days past due and approximately \$0.3 million were more than 120 days past due. Our future liquidity and capital requirements will depend upon numerous factors, including those identified under the heading Risk Factors above. As a result, we can provide no assurance that we will be able to fund our operations without additional external financing. If adequate funds are not available, we may be required to reduce and/or cease our operations and/or seek bankruptcy protection.

We are party to a Loan and Security Agreement with Silicon Valley Bank, or SVB, dated as of August 9, 2011 and modified most recently on November 29, 2012, which provides us with access of up to \$15 million financing, subject to borrowing base limitations, to support working capital needs. Based on the borrowing base calculation and our current outstanding loan balance, we currently do not have any availability under this facility.

We believe that our current cash, cash equivalents and cash generated from future sales, as well as the cash proceeds from this offering, will provide sufficient liquidity to fund operations through the end of 2013. This projection is based on our current expectations regarding product sales, cost structure, cash burn rate and operating assumptions. To date, we have funded our operations primarily through public and private offerings of our common and preferred stock, our line of credit and maturities and sales of our available-for-sale securities. We anticipate incurring substantial additional losses and may never achieve profitability.

In the event that our operating expenses are higher than anticipated or the gross margins and shipments of our GenDrive products do not increase as we expect, we may be required to implement contingency plans within our control to conserve and/or enhance our liquidity to meet operating needs. Such plans include: our ability to further reduce discretionary expenses, monetize our real estate assets through a sale-leaseback arrangement and obtain additional funding from licensing the use of our technologies. Our cash requirements relate primarily to working capital needed to operate and grow our business, including funding operating expenses, growth in inventory to support both shipments of new units and servicing the installed base, and continued development and expansion of our products. Our ability to achieve profitability and meet future liquidity needs and capital requirements will depend upon numerous factors, including the timing and quantity of product orders and shipments, the timing and amount of our operating expenses; the timing and costs of working capital needs; the timing and costs of building a sales base; the timing and costs of developing marketing and distribution channels; the timing and costs of product service requirements; the timing and costs of hiring and training product staff; the extent to which our products gain market acceptance; the timing and costs of product development and introductions; the extent of our ongoing and any new research and development programs; and changes in our strategy or our planned activities. If we are unable to fund our operations without additional external financing and therefore cannot sustain future operations, we may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. Alternatives we would consider for additional funding include equity or debt financing, a sale-leaseback of our real estate, or licensing of our technology. In addition to raising capital, we may also consider strategic alternatives including business combinations, strategic alliances or joint ventures. Under such conditions, if we are unable to obtain additional capital in 2013, we may not be able to sustain our future operations and may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. After this offering, we cannot assure you that any necessary additional financing will be available on terms favorable to us, or at all. Given the difficult current economic environment, we believe that it could be difficult to raise additional funds and there can be no assurance as to the availability of additional financing or the terms upon which additional financing may be available.

Additionally, even if we raise sufficient capital through additional equity or debt financing, strategic alternatives or otherwise, there can be no assurances that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur additional debt, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. The terms of any debt securities issued could also impose significant restrictions on our operations. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance, and may adversely impact our ability to raise additional funds. Similarly, if our common stock is delisted from the NASDAQ Capital Market, it may limit our ability to raise additional funds. If we raise additional funds through collaborations and/or licensing arrangements, we might be required to relinquish significant rights to our technologies, or grant licenses on terms that are not favorable to us.

## Recent Developments

*Loan and Security Agreement.* On August 9, 2011, we entered into a revolving credit facility arrangement, or the Loan Agreement with SVB providing availability to an additional \$7.0 million to support working capital needs. See "Liquidity and Capital Resources" for further disclosure on the credit facility with SVB. On September 28, 2011, we executed a First Loan Modification Agreement, or the Loan Modification, with SVB, amending the Loan Agreement. The Loan Modification removed the \$750,000 sublimit for outstanding letters of credit, foreign exchange contract financing and amounts utilized for cash management services, making the full \$7.0 million credit facility available for financing accounts receivable and eligible inventory. All remaining terms of the Loan and Security Agreement remain in full force and effect. On March 30, 2012, we executed a Second Loan Modification Agreement with SVB which increased our credit facility, providing us access of up to \$15.0 million financing, subject to borrowing base limitations, to support working capital needs. On November 29, 2012 we executed a Third Loan Modification Agreement with SVB, which, among other things, waived our failure to comply with the Adjusted Quick Ratio financial covenant as of the months ended September 30, 2012 and October 31, 2012, revised the future Adjusted Quick Ratio covenant level and removed our ability to request financing for Inventory Placeholder Invoices. Based on the borrowing base calculation and our outstanding loan balance, we currently have no availability under this facility.

*NASDAQ Notice.* On October 12, 2012, we received a deficiency notice from The NASDAQ Stock Market, or NASDAQ, stating that we no longer comply with NASDAQ Marketplace Rule 5550(a)(2) because the bid price of our common stock closed below the required minimum \$1.00 per share for the previous 30 consecutive business days. The notice also indicated that, in accordance with Marketplace Rule 5810(c)(3)(A), we have a period of 180 calendar days, until April 10, 2013, to regain compliance with Rule 5550(a)(2). If at any time before April 10, 2013 the bid price of our common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days, NASDAQ will notify us that we have regained compliance with Rule 5550(a)(2). In the event we do not regain compliance with Rule 5550(a)(2) prior to the expiration of the 180-day period, NASDAQ will notify us that our common stock is subject to delisting. We may appeal the delisting determination to a NASDAQ hearing panel and the delisting will be stayed pending until the panel's determination. At such hearing, we would present a plan to regain compliance and NASDAQ would then subsequently render a decision. We are currently evaluating our alternatives to resolve the listing deficiency.

*Restructuring.* On December 11, 2012, we adopted a restructuring plan to improve organizational efficiency and conserve working capital needed to support the growth of our GenDrive business. In doing so, 22 full-time positions were eliminated at our U.S. facilities. This workforce reduction was substantially completed on December 13, 2012.

As a result of the restructuring, we expect to reduce annual expenses by \$3.0 to \$4.0 million. We currently estimate that we will incur pre-tax restructuring charges in the fourth quarter resulting from the restructuring of approximately \$600,000 related to severance pay and other related costs. We expect to pay the majority of these restructuring charges within the next few months. The estimates of total charges and cash expenditures that we expect to incur in connection with the restructuring, and the timing thereof, is subject to a number of assumptions, and actual results may materially differ from those stated above.

## Financial Overview

*Product and service revenue.* Product and service revenue relates to revenue recognized from multiple deliverable revenue arrangements. Effective April 1, 2010, we adopted ASU No. 2009-13 on Topic 605, Revenue Recognition Multiple Deliverable Revenue Arrangements retroactive to January 1, 2010. ASU No. 2009-13 amends the FASB ASC to eliminate the residual method of allocation for multiple-deliverable revenue arrangements, and requires that arrangement consideration be allocated at the inception of an arrangement to all deliverables using the relative selling price method (see note 18 of our consolidated financial statements for further discussion of our multiple-deliverable revenue arrangements).

For all product and service revenue transactions entered into prior to the implementation of ASU No. 2009-13, we will continue to defer the 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 which can extend over multiple years. While contract terms for those transactions generally required payment shortly after shipment or delivery and installation of the fuel cell system and were not contingent on the achievement of specific milestones or other substantive performance, the multiple-element revenue obligations within our contractual arrangements were generally not accounted for separately based on our limited experience and lack of evidence of fair value of the undelivered components.

*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 30% to 50% 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. We expect to continue certain research and development contract work that is related to our current product development efforts.

*Licensed technology revenue.* Licensed technology revenue relates to the sale of licensing rights and engineering assistance. This revenue was being amortized over a twelve month period that ended in October 2011.

*Cost of product and service revenue.* Cost of product and service revenue includes the direct material and labor cost as well as an allocation of overhead costs that relate to the manufacturing of products we sell. In addition, cost of product and service revenue also includes the labor and material costs incurred for product maintenance, replacement parts and service under our contractual obligations.

*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.

*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.

*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.

*Gain on Sale of Assets.* Gain on sale of assets represents the gain on sale of leased assets during the nine months ended September 30, 2012, the nine months ended September 30, 2011 and the year ended December 31, 2011, and the sale of inventory, equipment and certain other assets during the year ended December 31, 2010. In December 2010, we assigned all of our rights, title and interest in its leased property to Somerset Capital Group, Ltd., or Somerset. Due to contingent provisions in the agreement, the full amount of the sale could not be recognized at the time. During the quarter ended September 30, 2011 the contingent provisions of the agreement were met, and an additional \$673,000 was recorded as gain on sale of leased assets.

Effective October 26, 2010, we licensed the intellectual property relating to our stationary power products, GenCore and GenSys, to IdaTech plc on a non-exclusive basis. We maintain ownership of, and the right to use, the patents and other intellectual property licensed to IdaTech. As part of the transaction, we also sold inventory, equipment and certain other assets related to our stationary power business. Total consideration for the licensing and assets was \$5 million and was received during October 2010. This consideration was net against costs incurred to close the transaction. Accordingly, \$3.2 million was recorded to gain on sale of assets in 2010.

*Amortization of intangible assets.* Amortization of intangible assets represents the amortization associated with our acquired identifiable intangible assets from Plug Power Canada Inc., including acquired technology and customer relationships, which are being amortized over eight years.

*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/loss from the sale of available-for-sale securities.

*Change in fair value of common stock warrant liability.* We account for common stock warrants in accordance with applicable accounting guidance provided in ASC 815, Derivatives and Hedging Contracts in Entity's Own Equity, as either derivative liabilities or as equity instruments depending on the specific terms of the warrant agreement. Derivative warrant liabilities are valued using the Black-Scholes pricing model at the date of initial issuance and each subsequent balance sheet date. Changes in the fair value of the warrants are reflected in the consolidated statement of operations as change in the fair value of common stock warrant liability.

*Gain on auction rate debt securities repurchase agreement.* In December 2008, we entered into a Repurchase Agreement with the third-party lender which 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 a result of the Repurchase Agreement entered into with a third party lender in December 2008, we reclassified the auction rate debt securities from available-for-sale securities to trading securities. We elected to record this item at its fair value in accordance with FASB ASC No. 825-10-25, Fair Value Option. The third-party lender repurchased the securities on July 1, 2010 in accordance with the Repurchase Agreement. The corresponding Credit Line Agreement was paid in full on July 1, 2010 in conjunction with the repurchase of the auction rate debt securities. The change in fair value of approximately \$6.0 million and \$4.2 million during the years ended December 31, 2010 and 2009, respectively was recorded as a loss in the consolidated statements of operations which is offset by the change in fair value of the auction rate debt securities held as collateral of approximately \$6.0 million and \$4.2 million that is recorded as a gain in the consolidated statements of operations for the years ended December 31, 2010 and 2009, respectively.

*Interest and other expense and foreign currency gain (loss).* Interest and other expense and foreign currency gain (loss) consists of interest related to the Loan and Security Agreement, loan modification fees related to the Credit Line Agreement, and foreign currency exchange gain (loss).

*Income taxes.* We did not report a benefit for federal and state income taxes in the condensed consolidated financial statements for the nine months ended September 30, 2012, the nine months ended September 30, 2011, the year ended December 31, 2011 or the years ended December 31, 2010 and 2009 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 Estimates

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

We believe that the following are our most critical accounting estimates and assumptions we must make in the preparation of our Consolidated Financial Statements and related disclosures:

*Revenue recognition:* Our fuel cell systems are designed to replace incumbent electric power technologies in material handling equipment. 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 and improving reliability.

Effective April 1, 2010, we adopted ASU No. 2009-13 on Topic 605, Revenue Recognition Multiple Deliverable Revenue Arrangements retroactive to January 1, 2010. The objective of this ASU is to address the accounting for multiple-deliverable arrangements to enable vendors to account for products or services (deliverables) separately rather than as a combined unit. Vendors often provide multiple products or services to their customers. Those deliverables often are provided at different points in time or over different time periods. This ASU provides amendments to the criteria in Subtopic 605-25 for separating consideration in multiple-deliverable arrangements. The amendments in this ASU establish a selling price hierarchy for determining the selling price of a deliverable. The selling price used for each deliverable will be based on vendor-specific objective evidence, or VSOE if available, third-party evidence, or TPE if VSOE is not available, or estimated selling price, or ESP if neither VSOE nor TPE is available. The amendments in this ASU also replace the term fair value in the revenue allocation guidance with selling price to clarify that the allocation of revenue is based on entity-specific assumptions rather than assumptions of a marketplace participant and expands the disclosure requirements related to a vendor's multiple-deliverable revenue arrangements.

We enter into multiple-deliverable revenue arrangements that may contain a combination of fuel cell systems or equipment, installation, service, maintenance, fueling and other support services. We were previously prohibited from separating these multiple deliverables into individual units of accounting without VSOE of fair value or other TPE of fair value. This evidence was not available due to our limited experience and lack of evidence of fair value of the undelivered components of the sale. Without this level of evidence, we had to treat each sale as a single unit of accounting and defer the revenue recognition of each sale, recognizing revenue over a straight-line basis as the continued service, maintenance and other support obligations expired. Under ASU No. 2009-13, the requirement to have VSOE or TPE in order to recognize revenue has been modified, and it now allows the vendor to make its best estimate of the standalone selling price of deliverables when more objective evidence of selling price is not available.

For all product and service revenue transactions entered into prior to the implementation of ASU No. 2009-13, we will continue to defer the 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 which extend over multiple years. While contract terms for those transactions generally required payment shortly after shipment or delivery and installation of the fuel cell system and were not contingent on the achievement of specific milestones or other substantive performance, the multiple-element revenue obligations within our contractual arrangements were generally not accounted for separately based on our limited experience and lack of evidence of fair value of the undelivered components. See Note 18 of our consolidated financial statements for further discussion of our multiple-deliverable revenue arrangements.

*Product warranty reserve:* The product and service revenue contracts entered into as of January 1, 2010 generally provide a one to two-year product warranty to customers from date of shipment. We currently estimate the costs of satisfying warranty claims based on an analysis of past experience and provide for future claims in the period the revenue is recognized. We carefully monitor the warranty work requested by our customers and management believe that our current warranty reserve appears adequate as of September 30, 2012. Our product and service warranty reserve as of September 30, 2012 was approximately \$3.0 million and is included in product warranty reserve in the consolidated balance sheets.

In addition to the standard product warranty, we have entered into certain contracts with customers that include extended warranty and maintenance terms of five to ten years from the date of installation. These contracts are accounted for as a deliverable in accordance with ASU 2009-13, and accordingly, revenue generated from these transactions is deferred and recognized in income over the warranty period. The fair value of the extended warranty and maintenance deliverable has been estimated using the projected cash outflows to meet the obligations in the related contract. Projected cash outflows have been determined using estimated product run hours, failure rates and other assumptions based on our historical experience. For more detailed information, see the Risk Factor - Certain

GenDrive component quality issues have resulted in adjustments to our warranty reserves, which negatively impacted our results and delayed our new order momentum, and unanticipated future product reliability and quality issues could impair our ability to service long term warranty and maintenance contracts profitably.

*Valuation of long-lived assets:* We assess the impairment of long-lived assets, including identifiable intangible assets, whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important that could trigger an impairment review include, but are not limited to, the following:

- 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, 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 FASB ASC No. 350-35-30-14, Intangibles - Goodwill and Other and FASB ASC No. 360-10-35-15, 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.

*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 our actual stock prices over an historical period equal to the expected life of the options, which represents our best estimate of expected volatility.

**Expected option life** Our estimate of an expected option life was calculated in accordance with the simplified method for calculating the expected term assumption. The simplified method is a calculation based on the contractual life and vesting terms of the associated options.

**Risk-free interest rate** We use the yield on zero-coupon U.S. Treasury securities having a maturity date 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. FASB ASC No. 718-10-55, Compensation - Stock Compensation Overall Implementation and Guidance Illustrations, 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.

## **Comparison of Nine Months Ended September 30, 2012 and Nine Months Ended September 30, 2011**

*Product and service revenue.* Product and service revenue for the nine months ended September 30, 2012 increased \$6.8 million, or 57.1%, to \$18.7 million from \$11.9 million for the nine months ended September 30, 2011. During the nine months ended September 30, 2012, we shipped 873 fuel cell systems to end customers as compared to 412 fuel cell systems shipped during the nine months ended September 30, 2011. During the nine months ended September 30, 2012, and September 30, 2011, we deferred \$3.3 million and \$1.1 million in revenue, respectively, due to contingent provisions in our agreements, as well as certain deliverables where the criteria for recognition have not yet been met. Additionally, in the nine months ended September 30, 2012, we recognized approximately \$1.7 million of deferred revenue in connection with deliverables that met the criteria for recognition, whereas in the nine months ended September 30, 2011, we recognized approximately \$1.1 million of deferred revenue associated with deliverables that met the criteria for recognition.

*Research and development contract revenue.* Research and development contract revenue for the nine months ended September 30, 2012 decreased approximately \$1.8 million, or 54.5%, to \$1.5 million from \$3.3 million for the nine months ended September 30, 2011. The decrease was primarily related to fewer active projects in 2012. Additionally, in the nine months ended September 30, 2011, we shipped 40 fuel cell systems under two separate Department of Defense contracts.

*Licensed technology revenue.* Licensed technology revenue for the nine months ended September 30, 2011 was approximately \$489,000. There was no licensed technology revenue in 2012.

*Cost of product and service revenue.* Cost of product and service revenue for the nine months ended September 30, 2012 increased approximately \$9.4 million, or 49.0%, to \$28.6 million from \$19.2 million for the nine months ended September 30, 2011. The increase in the cost of product and service revenue primarily resulted from \$3.3 million in additional expenses for unanticipated warranty claims arising from GenDrive component quality issues that were identified during the quarter ended September 30, 2012. Additionally, during the nine months ended September 30, 2012, we shipped 873 fuel cell systems to end customers as compared to 412 fuel cell systems shipped during the nine months ended September 30, 2011.

*Cost of research and development contract revenue.* Cost of research and development contract revenue for the nine months ended September 30, 2012 decreased approximately \$3.1 million, or 56.4%, to \$2.4 million from \$5.5 million for the nine months ended September 30, 2011. The decrease was primarily a result of fewer active contracts in 2012, coupled with a lower percentage of cost sharing on active contracts in 2012. Additionally, in the nine months ended September 30, 2011, we shipped 40 fuel cell systems under two separate Department of Defense contracts.

*Research and development expense.* Research and development expense for the nine months ended September 30, 2012 increased approximately \$500,000, or 13.9%, to \$4.1 million from \$3.6 million for the nine months ended September 30, 2011. This increase in expense was a result of a decrease in engineering personnel charging time to government programs due to fewer government contracts during 2012.

*Selling, general and administrative expenses.* Selling, general and administrative expenses for the nine months ended September 30, 2012 decreased approximately \$500,000, or 4.5%, to \$10.6 million from \$11.1 million for the nine months ended September 30, 2011. The decrease was primarily the result of restructuring charges of approximately \$474,000 recorded during 2011, coupled with a decrease in professional fees incurred during 2012. These expenses were partly offset by an increase in travel expenses, and a decline in selling, general and administrative expenses charged to government programs due to fewer government contracts during 2012.

*Amortization of intangible assets.* Amortization of intangible assets decreased to approximately \$1.7 million for the nine months ended September 30, 2012, compared to approximately \$1.8 million for the nine months ended September 30, 2011. The decrease was related to foreign currency fluctuations.

*Interest and other income and net realized losses from available-for-sale securities.* Interest and other income and net realized losses from available-for-sale securities for the nine months ended September 30, 2012 decreased approximately \$50,000, or 22.6%, to \$171,000 from \$221,000 for the nine months ended September 30, 2011. The decrease was primarily related to a decrease in rental income, partially offset by a realized loss from available-for-sale securities recorded in the first quarter of 2011.

*Change in fair value of common stock warrant liability.* The change in fair value of common stock warrant liability for the nine months ended September 30, 2012 decreased \$500,000 or 11.9%, to \$3.7 million from \$4.2 million for the nine months ended September 30, 2011. These variances were primarily due to changes in our common stock share price, and changes in volatility of our common stock, which are significant inputs to the Black-Scholes valuation model.

*Interest and other expense and foreign currency gain (loss).* Interest and other expense and foreign currency gain (loss) for the nine months ended September 30, 2012 and 2011 was approximately \$(158,000) and \$3,000, respectively. Interest and other expense related to the Credit Line Agreement was approximately \$153,000 and \$0, respectively, for the nine months ended September 30, 2012 and 2011.

## **Comparison of the Year Ended December 31, 2011 and Year Ended December 31, 2010**

*Product and service revenue.* Product and service revenue for the year ended December 31, 2011 increased \$7.5 million, or 47.6%, to \$23.2 million from \$15.7 million for the year ended December 31, 2010. This increase was primarily related to increased shipments during the current year. In the product and service revenue category, there were 984 fuel cell shipments for the year ended December 31, 2011 as compared to 562 fuel cell systems shipped for the year ended December 31, 2010.

*Research and development contract revenue.* Research and development contract revenue for the year ended December 31, 2011 increased \$288,000, or 8.0%, to \$3.9 million from \$3.6 million for the year ended December 31, 2010. The increase was primarily related to two contracts that began in 2011, partially offset by the completion of contracts from prior years. In the research and development category, during the twelve months ended December 31, 2011 we shipped 40 GenDrive fuel cell systems under government programs.

*Cost of product and service revenue.* Cost of product and service revenue for the year ended December 31, 2011 increased \$7.6 million, or 32.7%, to \$30.7 million from \$23.1 million for the year ended December 31, 2010. The increase was directly related to increased fuel cell shipments to end customers. In the cost of product and service revenue category, there were 984 fuel cell shipments for the year ended December 31, 2011 and 562 fuel cell systems shipped for the year ended December 31, 2010. The increase also included an allocation of overhead costs charged to cost of product and service revenue as a result of increased sales and a focus on commercial production of our product. Accordingly, some of these costs were included in research and development expense until the second quarter of 2010, due to our focus on research and development at that time.

*Cost of research and development contract revenue.* Cost of research and development contract revenue for the year ended December 31, 2011 decreased \$139,000, or 2.2%, to \$6.2 million from \$6.4 million for the year ended



December 31, 2010. This decrease was primarily related to two new contracts that began in 2011, partially offset by the completion of contracts from prior years.

*Research and development expense.* Research and development expense for the year ended December 31, 2011 decreased \$7.2 million, or 56.2%, to \$5.7 million from \$12.9 million for the year ended December 31, 2010. This decline was primarily a result of our 2010 restructuring, which was focused on the commercialization of our GenDrive product. Prior to this restructuring our focus had been on research and development.

*Selling, general and administrative expenses.* Selling, general and administrative expenses for the year ended December 31, 2011 decreased \$11.0 million, or 43.1%, to \$14.6 million from \$25.6 million for the year ended December 31, 2010. This decrease was primarily a result of our May 2010 restructuring plan, including \$8.1 million in charges recorded in 2010 for this restructuring, and a \$2.1 million write-off of assets from Plug Power Canada.

*Amortization of intangible assets.* Amortization of intangible assets remained stable at \$2.3 million for the years ended December 31, 2011 and December 31, 2010.

*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 decreased to \$248,000 for the year ended December 31, 2011 from \$1.1 million for the year ended December 31, 2010. This decrease was primarily related to the sale of trading securities and available-for-sale securities during 2011 and 2010.

*Interest and other expense.* Interest and other expense for the year ended December 31, 2011 was approximately \$22,000, compared to approximately \$487,000 for the year ended December 31, 2010. The decline was primarily related to the extinguishment of the Credit Line Agreement effective July 1, 2010.

## **Comparison of the Year Ended December 31, 2010 and Year Ended December 31, 2009**

*Product and service revenue.* Product and service revenue for the year ended December 31, 2010 increased \$10.9 million, or 225.7%, to \$15.7 million from \$4.8 million for the year ended December 31, 2009. Approximately \$10.5 million of the increase was related to the adoption of ASU No. 2009-13.

*Research and development contract revenue.* Research and development contract revenue for the year ended December 31, 2010 decreased \$3.9 million, or 51.8%, to \$3.6 million from \$7.5 million for the year ended December 31, 2009. The decrease was primarily related to having fewer active contracts in 2010.

*Cost of product and service revenue.* Cost of product and service revenue for the year ended December 31, 2010 increased \$15.9 million, or 218.9%, to \$23.1 million from \$7.2 million for the year ended December 31, 2009. The increase was primarily related to increased product and service fuel cell system shipments to end customers. In the cost of product and service revenue category, there were 562 fuel cell system shipments for the year ended December 31, 2010, as compared to 117 for the year ended December 31, 2009. This does not include additional shipments of 98 and 140 fuel cell shipments, respectively, that were being accounted for under a lease arrangement (until we subsequently sold the lease). Cost recognized on leased products were recorded on the consolidated balance sheets as investment in leased property and depreciated over the lease term. The increase in cost of product and service revenue was also due to an allocation of overhead costs charged to cost of product and service revenue as a result of increased sales and a focus on commercial production of our product. Accordingly, some of these costs were included in research and development expense until the second quarter of 2010, due to our focus on research and development at that time.

*Cost of research and development contract revenue.* Cost of research and development contract revenue for the year ended December 31, 2010 decreased \$6.1 million, or 48.8%, to \$6.4 million from \$12.4 million for the year ended December 31, 2009. This decrease was primarily related to having fewer active contracts in 2010.

*Research and development expense.* Research and development expense for the year ended December 31, 2010 decreased \$3.4 million, or 21.0%, to \$12.9 million from \$16.3 million for the year ended December 31, 2009. This decrease was primarily a result of our 2010 restructuring, and corresponding wind-down of our operations in Plug Power Energy India Private Limited, Plug Power Canada and Plug Power Holland organizations. The decrease was also due to a higher allocation of overhead costs charged to cost of product and service revenue as a result of increased sales and a focus on commercial production of our product. Accordingly, some of these costs were previously included in research and development expense due to our focus on research and development at that time.

*Selling, general and administrative expenses.* Selling, general and administrative expenses for the year ended December 31, 2010 increased \$10.1 million, or 65.8%, to \$25.6 million from \$15.4 million for the year ended December 31, 2009. This increase was primarily a result of the corporate restructuring plan announced in May 2010, which totaled \$8.1 million and a \$2.1 million write-off of assets from Plug Power Canada.

*Amortization of intangible assets.* Amortization of intangible assets increased to \$2.3 million for the year ended December 31, 2010, compared to \$2.1 million for the year ended December 31, 2009. The increase was related to

foreign currency fluctuations.

*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 decreased to \$1.1 million for the year ended December 31, 2010 from \$1.7 million for the year ended December 31, 2009. This decrease was primarily related to lower cash balances coupled with lower yields on our investments due to a declining interest rate environment offset by increased rental income received from our Latham facility. Interest income on trading securities and available-for-sale securities for the year ended December 31, 2010 was approximately \$352,000 and \$179,000, respectively. Interest income on trading securities and available-for-sale securities for the year ended December 31, 2009 was approximately \$906,000 and \$307,000, respectively.

*Interest and other expense.* Interest and other expense for the year ended December 31, 2010 was approximately \$487,000, compared to approximately \$1.1 million for the year ended December 31, 2009. Interest expense related to the Credit Line Agreement was approximately \$305,000 and \$915,000, respectively, for the years ended December 31, 2010 and 2009, respectively.

## **Liquidity and Capital Resources**

We have experienced recurring operating losses and as of September 30, 2012, we had an accumulated deficit of approximately \$778.2 million. Substantially all of our accumulated deficit has resulted from costs incurred in connection with our operating expenses, research and development expenses and from general and administrative costs associated with our operations. To date, we have funded our operations primarily through public and private offerings of our common and preferred stock, our line of credit and maturities and sales of our available-for-sale securities. We anticipate incurring substantial additional losses and may never achieve profitability.

As of September 30, 2012, we had approximately \$15.6 million of working capital, which includes \$9.5 million of cash and cash equivalents to fund our future operations. Additionally, as of March 30, 2012, we executed a Second Loan Modification Agreement with SVB which increased our credit facility, providing us access of up to \$15 million in financing, subject to borrowing base limitations, to support working capital needs. On November 29, 2012 we executed a Third Loan Modification Agreement with SVB, which, among other things, waived our failure to comply with the Adjusted Quick Ratio financial covenant as of the months ended September 30, 2012 and October 31, 2012, revised the future Adjusted Quick Ratio covenant level and removed our ability to request financing for Inventory Placeholder Invoices. Based on the borrowing base calculation and our outstanding loan balance, we currently have no availability under this facility.

We believe that our current cash, cash equivalents and cash generated from future sales, as well as the cash proceeds from this offering, will provide sufficient liquidity to fund operations through the end of 2013. This projection is based on our current expectations regarding product sales, cost structure, cash burn rate and operating assumptions. In the event that our operating expenses are higher than anticipated or the gross margins and shipments of our GenDrive products do not increase as we expect, we may be required to implement contingency plans within our control to conserve and/or enhance our liquidity to meet operating needs. Such plans include: our ability to further reduce discretionary expenses, monetize our real estate assets through a sale-leaseback arrangement and obtain additional funding from licensing the use of our technologies. Our cash requirements relate primarily to working capital needed to operate and grow our business, including funding operating expenses, growth in inventory to support both shipments of new units and servicing the installed base, and continued development and expansion of our products. Our ability to achieve profitability and meet future liquidity needs and capital requirements will depend upon numerous factors, including the timing and quantity of product orders and shipments, the timing and amount of our operating expenses; the timing and costs of working capital needs; the timing and costs of building a sales base; the timing and costs of developing marketing and distribution channels; the timing and costs of product service requirements; the timing and costs of hiring and training product staff; the extent to which our products gain market acceptance; the timing and costs of product development and introductions; the extent of our ongoing and any new research and development programs; and changes in our strategy or our planned activities. As a result, we can provide no assurance that we will be able to fund our operations without additional external financing.

Alternatives we would consider for additional funding include equity or debt financing, a sale-leaseback of our real estate, or licensing of our technology. In addition to raising capital, we may also consider strategic alternatives including business combinations, strategic alliances or joint ventures. Under such conditions, if we are unable to obtain additional capital in 2013, we may not be able to sustain our future operations and may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. After this offering, we cannot assure you that any necessary additional financing will be available on terms favorable to us, or at all. Given the difficult current economic environment, we believe that it could be difficult to raise additional funds and there can be no assurance as to the availability of additional financing or the terms upon which additional financing may be available. Additionally, even if we raise sufficient capital through equity or debt financing, strategic alternatives or otherwise, there can be no assurances that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur additional debt, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. The terms of any debt securities issued could also impose significant restrictions on our operations. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance, and may adversely impact our ability to raise additional funds. Similarly, if our common stock is delisted from the NASDAQ Capital Market, it may limit our ability to raise additional funds. If we raise additional funds through collaborations and/or licensing arrangements, we might be required to relinquish significant rights to our technologies, or grant licenses on terms that

are not favorable to us.

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

<i>(in thousands)</i>	Years ended or at			Nine months ended or at	
	December 31,			September 30,	
	2009	2010	2011	2011	2012
Cash and cash equivalents at end of period	\$ 14,581	\$ 10,955	\$ 13,857	\$ 22,802	\$ 9,461
Trading securities auction rate debt securities at end of period	53,397	-	-	-	-
Available-for-sale securities at end of period	47,960	10,403	-	-	-
Borrowings under line of credit at end of period	59,375	-	5,405	-	1,000
Working capital at end of period	60,009	25,556	22,452	24,543	15,584
Net loss	40,709	46,959	27,454	20,286	23,388
Net cash used in operating activities	38,228	40,770	33,310	19,152	15,548
Purchase of property, plant, and equipment	533	1,100	1,326	1,156	292

Effective July 1, 2010, all auction rate debt securities were repurchased at par by the third-party lender holding the collateral under the Repurchase Agreement, which resulted in a corresponding reduction in amounts outstanding and the extinguishment of the Credit Line Agreement. See Management's Discussion and Analysis of Financial Condition and Results of Operations Results of Operations Gain on auction rate debt securities repurchase agreement, as well as note 7 of our consolidated financial statements.

We are a party to a loan and security agreement, as amended, the Loan Agreement with Silicon Valley Bank, or SVB, providing us with access to up to \$15.0 million of financing in the form of revolving loans, letters of credit, foreign exchange contracts and cash management services such as merchant services, direct deposit of payroll, business credit card and check cashing services.

Advances under the Loan Agreement cannot exceed a borrowing base limit calculated using an advanced rate of 80% on our eligible accounts receivable and an advanced rate of 25% on our eligible inventory (subject to a limit of the lesser of \$3 million and 30% of all outstanding advances), subject to certain reserves established by SVB and other adjustments.

Interest on advances of credit under the Loan Agreement for: financed accounts receivables are equal to SVB's prime rate, which is currently 3.25% per annum, plus 3.0% per annum or if we maintain at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 1.50% per annum; and financed inventory is equal to SVB's prime rate plus 5.25% per annum or if we maintain at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 3.25% per annum. The minimum monthly interest charge is \$6,000 per month.

The Loan Agreement is secured by substantially all of our properties, rights and assets, including substantially all of our equipment, inventory, receivables, intellectual property and general intangibles.

The Loan Agreement includes customary representations and warranties for credit facilities of this type. In addition, the Loan Agreement contains a number of covenants that will impose significant operating and financial restrictions on our operations, including restrictions pertaining to, among other things: the condition of inventory; maintenance of an adjusted quick ratio of at least 1.50 to 1.0; intellectual property right protection and registration; dispositions of assets; changes in business, management, ownership or business locations; mergers, consolidations or acquisitions; incurrence or assumption of indebtedness; incurrence of liens on any of our property; paying dividends or making distributions on, or redemptions, retirements or repurchases of, capital stock; transactions with affiliates; and

payments on or amendments to subordinated debt. At September 30, 2012 we were in compliance with all covenants except the Adjusted Quick Ratio covenant.

The Loan Agreement also contains events of default customary for credit facilities of this type with, in some cases, corresponding grace periods, including, failure to pay any principal or interest when due, failure to comply with covenants, any material adverse change occurring, an attachment, levy or restraint on our business, certain bankruptcy or insolvency events, payment defaults relating to, or acceleration of, other indebtedness or that could result in a material adverse change to our business, we or our subsidiaries becoming subject to judgments, claims or liabilities in an amount individually or in aggregate in excess of \$150,000, any misrepresentations, or any revocation, invalidation, breach or invalidation of any subordinated debt.

On November 29, 2012 we executed a Third Loan Modification Agreement with SVB, which, among other things, waived our failure to comply with the Adjusted Quick Ratio financial covenant as of the months ended September 30, 2012 and October 31, 2012, revised the future Adjusted Quick Ratio covenant level and removed our ability to request financing for Inventory Placeholder Invoices.

The Loan Agreement will expire on March 29, 2013. The Loan Agreement may be terminated prior to March 29, 2013; however, we would be required to pay a \$150,000 early termination fee in connection with a termination by us for any reason or by SVB upon notice and after the occurrence and during the continuance of an event of default. Based on the borrowing base calculation and our outstanding loan balance, we currently have no availability under this facility.

As of December 31, 2012, \$3.4 million was outstanding under the loan agreement. This amount was subsequently paid in full in January, 2013.

In September 2011, we signed a letter of credit with SVB in the amount of \$525,000. The standby letter of credit is required by the agreement negotiated between Air Products and Chemicals, Inc., or Air Products, and us to supply hydrogen infrastructure and hydrogen to Central Grocers at their distribution center. There are no collateral requirements associated with this letter of credit.

## Cash and Cash Equivalents

During the nine months ended September 30, 2012, cash used for operating activities was \$15.5 million, consisting primarily of a net loss of \$23.4 million, offset by changes in operating assets and liabilities of \$6.8 million, and net non-cash expenses in the amount of \$1.1 million, including \$3.2 million for amortization and depreciation, \$1.5 million for stock based compensation, \$58,000 for loss on disposal of property, plant, and equipment, offset by a \$3.7 million reduction for the change in fair value of common stock warrant liability. Cash used in investing activities for the nine months ended September 30, 2012 was \$234,000, consisting of purchases of property, plant, and equipment of \$292,000, offset by proceeds from the disposal of property, plant and equipment of \$58,000. Cash provided by financing activities for the nine months ended September 30, 2012 was approximately \$11.4 million consisting primarily of \$17.2 million in proceeds from the public offering offset by \$1.4 million in public offering costs and \$4.4 million in net repayment of borrowings under line of credit.

## Financing Activities

On May 31, 2011, we completed an underwritten public offering of 8,265,000 shares of its common stock and warrants to purchase an aggregate of 7,128,563 shares of common stock (including warrants to purchase an aggregate of 929,813 shares of common stock purchased by the underwriter pursuant to the exercise of its over-allotment option). Net proceeds, after underwriting discounts and commissions and other fees and expenses payable by Plug Power, were \$18,289,883 (of this amount \$8,768,143 in fair value was recorded as common stock warranty liability at issuance date). The shares and the warrants were sold together as a fixed combination, with each combination consisting of one share of common stock and 0.75 of a warrant to purchase one share of common stock, at a price to the public of \$2.42 per fixed combination. The warrants are exercisable upon issuance and will expire on May 31, 2016. The exercise price of the warrants upon issuance was \$3.00 per share of common stock and is subject to weighted average anti-dilution provisions in the event of issuance of additional shares of common stock and certain other conditions, as further described in the warrant agreement. Additionally, in the event of a sale of the Company, and under certain conditions, each warrant holder has the right to require us to purchase such holder's warrants at a price determined using a Black-Scholes option pricing model. As a result of the March 28 and 29, 2012 public offerings described below and pursuant to the effect of the anti-dilution provisions, the exercise price of the warrants was reduced to \$2.27 per share of common stock. Simultaneously with the adjustment to the exercise price, the number of common stock shares that may be purchased upon exercise of the warrants was increased to 9,421,008 shares and we expect that the exercise price of the warrants will be reduced and the number of shares issuable upon exercise of these warrants will be increased as a result of this offering.



On June 8, 2011, we sold 836,750 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$1,874,990.

On July 1, 2011, we sold 231,000 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$527,626.

On March 28, 2012, we completed an underwritten public offering of 13,000,000 shares of common stock. The shares were sold at \$1.15 per share for gross proceeds of approximately \$15.0 million. Net proceeds, after underwriting discounts and commissions and other estimated fees and expenses payable by us, were approximately \$13.6 million.

On March 29, 2012, we sold 1,950,000 additional shares of common stock, pursuant to the underwriter's exercise of its over-allotment option in connection with our recently announced public offering, resulting in additional net proceeds to the Company of \$2,085,525.

## **Income Taxes**

Under Internal Revenue Code (IRC) Section 382, the use of loss carryforwards may be limited if a change in ownership of a company occurs. If it is determined that due to transactions involving our shares owned by its 5 percent or greater shareholders a change of ownership has occurred under the provisions of IRC Section 382, our Federal and state net operating loss carryforwards could be subject to significant IRC Section 382 limitations.

Based upon an IRC Section 382 study, a Section 382 ownership change occurred in 2011 that resulted in approximately \$675 million of Federal and state net operating loss carryforwards being subject to IRC Section 382 limitations and as a result of IRC Section 382 limitations, approximately \$618 million of the net operating loss carryforwards will expire prior to utilization. As a result of the IRC Section 382 limitations, these net operating loss carryforwards that will expire unutilized are not reflected in our gross deferred tax asset as of December 31, 2011.

The ownership change in 2011 also resulted in Net Unrealized Built in Losses per IRS Notice 2003-65 which should result in Recognized Built in Losses during the five year recognition period of approximately \$9.4 million. This will translate into unfavorable book to tax add backs in our 2011 to 2016 U.S. corporate income tax returns that resulted in a gross deferred tax liability of \$3.6 million at the time of the ownership change and \$2.6 million at December 31, 2011 with a corresponding reduction to the valuation allowance. This gross deferred tax liability will offset certain existing gross deferred tax assets (i.e. capitalized research expense). This has no impact on our current financial position, results of operations, or cash flows because of the full valuation allowance.

As a result of certain equity transactions by five percent stockholders, a Section 382 ownership change occurred during March 2012 that resulted in all but approximately \$14.9 million of the our Federal and state net operating loss carry-forwards expiring prior to utilization, which resulted in the our gross deferred tax asset and related valuation allowance decreasing by approximately \$24.6 million. The ownership change also resulted in Net Unrealized Built in Losses per IRS Notice 2003-65 which should result in Recognized Built in Losses during the five year recognition period of approximately \$36.5 million. This will translate into unfavorable book to tax add backs in the our 2012 to 2017 U.S. corporate income tax returns that would result in a gross deferred tax liability of \$13.9 million at the time of the ownership change with a corresponding reduction to the valuation allowance. This gross deferred tax liability will offset certain existing gross deferred tax assets (i.e. capitalized research expense). These decreases would have no impact on our financial position, results of operations, or cash flows. However, these potential future tax benefits would no longer be available to us.

## Contractual Obligations

Contractual obligations as of December 31, 2011, 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>	<b>&gt; 5 Years</b>
Operating lease obligations.....	2,913,968	730,531	850,297	631,923	701,217
Purchase obligations (A).....	6,121,642	6,121,642	-	-	-
Other long-term obligations (B),(C).....	114,703	114,703	-	-	-
Line of credit (D).....	5,405,110	5,405,110	-	-	-
	<b>\$ 14,555,423</b>	<b>\$ 12,371,986</b>	<b>\$ 850,297</b>	<b>\$ 631,923</b>	<b>\$ 701,217</b>

(A) *Ballard* - During 2010, we signed a supply agreement with Ballard Power Systems, or Ballard, which continues through December 31, 2014. Under this agreement, Ballard will serve as the exclusive supplier of fuel cell stacks for the GenDrive product line for North America and select European countries. An addendum to this agreement was signed on June 30, 2011. We have contractual obligations under this addendum to purchase 3,250 fuel cell stacks between the dates of July 2, 2011 and December 31, 2012. We also have contractual obligations related to building maintenance.

(B) *NYSERDA* - We have 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 17 (Commitments and Contingencies) of the Consolidated

Financial Statements for more detail.

- (C) *GE* - We have a contractual obligation pursuant to a development collaboration agreement with General Electric Company, or GE. We and GE agreed to extend the terms of the agreement such that our remaining obligation to purchase approximately \$363,000 of services as of December 31, 2009 under the agreement became due and payable; however, we and GE entered into a Lease Agreement for space in our Latham, New York facility whereby the parties mutually agreed that the amount owed by us to GE under the development collaboration agreement would be offset by the rent owed by GE to us each month. 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 17 (Commitments and Contingencies) of the Consolidated Financial Statements for more detail.
- (D) *SVB* - We entered into a revolving credit facility arrangement with SVB on August 9, 2011, and as a result of the Second Loan Modification Agreement entered into with SVB on March 30, 2012, the revolving credit facility now provides availability of up to \$15.0 million, subject to borrowing base limitations, to support working capital needs. See Loan and Security Agreement for additional information regarding the revolving credit facility.

## Off-Balance Sheet Arrangements

***None.***

## Quantitative and Qualitative Disclosures about Market Risk

The following discussion should be read together with our consolidated financial statements and related notes to consolidated financial statements included elsewhere in this prospectus.

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.

As of December 31, 2010, all of our operations had been relocated to the United States. A portion of our total financial performance for 2011 was attributable to activities related to the winding up of operations in both Canada and India. Our exposure to changes in foreign currency rates was primarily related to short-term inter-company transactions with our previous Canadian and Indian subsidiaries and from client receivables in different currencies. As exchange rates vary, our results can be affected.

In addition, we may source inventory among our 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. We mitigate this risk through local sourcing efforts.

## **BUSINESS**

### **Background**

We are a leading provider of alternative energy technology focused on the design, development, commercialization and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market.

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 liquid petroleum gas, or LPG, 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 concentrate our efforts on developing, manufacturing and selling our hydrogen-fueled PEM GenDrive products on commercial terms for industrial off-road (forklift or material handling) applications, with a focus on multi-shift high volume manufacturing and high throughput distribution sites.

We have previously invested in development and sales activities for low-temperature remote-prime power GenSys products and our GenCore product, which is a hydrogen fueled PEM fuel cell system to provide back-up power for critical infrastructure. While Plug Power will continue to service and support GenSys and/or GenCore products on a limited basis, our main focus is our GenDrive product line.

We sell our products worldwide, with a primary focus on North America, through our direct product sales force, original equipment manufacturers, or OEMs, and their dealer networks. We sell to businesses, government agencies and commercial consumers.

### **Business Strategy**

We are committed to developing effective, economical and reliable fuel cell products and services for businesses, government agencies and commercial consumers. Building on our substantial fuel cell application and product integration experience, we are focused on generating 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 have made significant progress in our analysis of the material handling market. We believe we have developed reliable products which allow the end customers to eliminate incumbent power sources from their operations, and realize their sustainability objectives through clean energy alternatives.

Our strategy is to focus our resources on the material handling market with our GenDrive product line, which represents an alternative to lead-acid battery configurations. Our strategy also includes the following objectives: decrease product costs by leveraging the supply chain, lower manufacturing costs, improve system reliability, expand our sales network to effectively reach more of our targeted customers and provide customers with high-quality products, service and post-sales support experience.

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

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 and expertise in power electronics, controls, and software design.

## Products

We sell and continue to develop a range of fuel cell products to replace lead-acid batteries in material handling vehicles and industrial trucks for some of North America's largest distribution and manufacturing businesses. Our primary product line is GenDrive, a hydrogen fueled PEM fuel cell system to provide power to industrial vehicles. We are focusing our efforts on material handling applications (forklifts) at multi-shift high volume manufacturing and high throughput distribution sites where our products and services provide a unique combination of productivity, flexibility and environmental benefits. In October, 2011 we introduced our next generation GenDrive products. These next generation fuel cell units include a simplified architecture featuring 30% fewer components and a scalable design for low power applications, giving customers greater flexibility in managing their deployments. By the third quarter of 2012, the majority of units produced and shipped were based on the simplified architecture. During the fiscal year ended December 31, 2012, we received new orders from Stihl, Mercedes Benz, Lowe's, Carter's and Ace Hardware. We also experienced add-on orders from Walmart, P&G, Coca-Cola, Sysco, Wegmans, Kroger and BMW.

We continue to develop and monitor future iterations of our products aligned with our evolving product roadmap. According to Fuel Cells Bulletin, an industry publication, we had 85% world-wide market share in the fuel cell powered material handling industry as of September 2010.

## Product Support & Services

To promote fuel cell adoption and maintain post-sale customer satisfaction, we offer a range of service and support options. These options include installation, commissioning, remote monitoring, product manuals, as well as on-site technical support.

Additionally, GenDrive product support and services may also include customer training and using service personnel from lift truck dealer networks. Such personnel may assist with the commissioning and installation of GenDrive products and, in some cases, regularly scheduled preventative maintenance.

## Markets/Geography & Order Status

Our commercial sales for GenDrive products are in the material handling market, which primarily consist of large fleet, multi-shift operations in high-volume manufacturing and high-throughput distribution centers. In 2012, all of our GenDrive product installations were in North America.

We shipped 873 units and received 353 orders for our GenDrive product during the nine months ended September 30, 2012, representing \$9.7 million in orders from material handling customers. We shipped 1,024 units and received 2,503 orders for our GenDrive product during the year ended December 31, 2011, representing \$46.1 million in orders from material handling customers; \$18.1 million of which were received during the fourth quarter. Backlog on December 31, 2012 is estimated to have been 1,319 units, representing approximately \$26.2 million in value. Backlog on December 31, 2011 was 1,969 units representing approximately \$36.0 million in value. Backlog on December 31, 2010 was 527 units representing approximately \$12.8 million in value including approximately \$700,000 related to 20 units that were awarded under a government project.

The following table sets forth certain shipment, order and backlog information (in units):

	<b>Years Ended</b>		<b>Nine Months</b>
	<b>December 31,</b>		<b>ended</b>
	<b>2010</b>	<b>2011</b>	<b>September 30</b>
Product Shipments	552	1,024	873
Lease Shipments	98	-	-
Cancellations/Adjustments	(20)	(37)	-
Orders	543	2,503	353
Backlog	527	1,969	1,449

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 generally occur between ninety days and twenty-four months from the date of acceptance of the order.

The assembly of GenDrive products that we sell is performed 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., Canada and China.

We intend to focus our efforts on developing, manufacturing and selling our GenDrive products and do not expect to develop or manufacture GenSys or GenCore products in the near term. The company took no GenCore or GenSys orders in 2012 and did not ship any of these products in 2012.



## Distribution, Marketing and Strategic Relationships

We have developed strategic relationships with well-established companies in key areas including distribution, service, marketing, supply, technology development and product development. We sell our products worldwide, with a primary focus on North America, through our direct product sales force, OEMs and their dealer networks.

## Competition

We are confronted by aggressive competition in all areas of our business. The markets we address for motive power are characterized by the presence of well-established battery and combustion generator products in addition to several competing fuel cell companies. Over the past several years, there has been price competition in these markets. The principal competitive factors in the markets in which we operate include price, product features, including size and weight, relative price and performance, product quality and reliability, design innovation, marketing and distribution capability, service and support and corporate reputation.

In the material handling market, we believe our GenDrive products have an advantage over lead-acid batteries for customers who run high-throughput distribution centers with 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, are intellectual property that can be protected. Our intellectual property 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 being our employee, which are related to or result from work or research that we perform, will remain our sole and exclusive property.

During 2012, the U.S. Patent and Trademark Office, or USPTO, issued two new patents to us and we have a total of 159 issued patents currently active with the USPTO. At the close of 2012, we had approximately 9 U.S. patent applications pending. The number of pending patent applications decreased in 2012 relative to 2011. Additionally, we have six trademarks registered with the USPTO.

In October 2010, we licensed the intellectual property relating to its stationary power products, GenCore and GenSys, to IdaTech plc on a non-exclusive basis. We maintain ownership of, and the right to use, the patents and other intellectual property licensed to IdaTech. As part of the transaction, we also sold inventory, equipment and certain other assets related to its stationary power business. Total consideration for the licensing and assets was \$5 million and was received during October 2010. The consideration was subject to reduction by a maximum of \$1 million in the event that we did not deliver certain of the assets sold. As of December 31, 2010, \$1.0 million was included in assets held for sale and \$1.0 million was included in other current liabilities in the consolidated balance sheets. Upon

delivery of those certain assets in the quarter ended June 30, 2011 the \$1.0 million in consideration was released.

We formed a joint venture company based in France with Axane, S.A. under the name Hypulsion to develop and sell hydrogen fuel cell systems for the European material handling market. As part of the formation of Hypulsion, we and Hypulsion entered into a License Agreement dated as of February 29, 2012 under which we granted a license to Hypulsion of certain intellectual property.

## Government Regulation

Our products and their installations are 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.

In addition, product safety standards have been established by the American National Standards Institute, or ANSI, covering the overall fuel cell system. The class 1, 2 and 3 GenDrive products are designed with the intent of meeting the requirements of UL 2267 Fuel Cell Power Systems for Installation in Industrial Electric Trucks and NFPA 505 Fire Safety Standard for Powered Industrial Trucks . The hydrogen tanks used in these systems have been either certified to ANSI/CSA NGV2-2007 Compressed Natural Gas Vehicle Fuel Containers or ISO/TS 15869 Gaseous hydrogen and hydrogen blends-Land vehicle fuel tanks . A limited production of our class 1 GenDrive product was approved by a European Notified Body to carry the CE Mark. We will continue to design our GenDrive products to meet ANSI and/or other standards in 2013. We will also pursue the approval to carry the CE Mark for class 1, 2 and 3 GenDrive Products from a European Notified Body. The hydrogen tanks used in these systems will be certified to the Pressure Equipment Directive by a European Notified Body. 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 may seek to impose regulations or competitors may seek to influence regulations through lobbying efforts.

## 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 2010, we signed a supply agreement with Ballard Power Systems, or Ballard, which continues through December 31, 2014. An addendum to this agreement was signed on June 30, 2011. Under this agreement, Ballard will serve as the exclusive supplier of fuel cell stacks for Plug Power's GenDrive product line for North America and select European countries. In the fourth quarter of 2012, Ballard had temporarily stopped shipping fuel cell stacks for our GenDrive product line due to a dispute with us, but we have since resolved this dispute and we are once again in good standing with Ballard as our supplier.

We believe there are a few component suppliers and manufacturing vendors whose loss to us could have a material adverse effect upon our business and financial condition. Such vendors include Ballard and Air Squared, Inc. 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 \$5.7 million, \$12.9 million and \$16.3 million in 2011, 2010 and 2009, respectively. We also had cost of research and development contract revenue of \$6.2 million, \$6.4 million and \$12.4 million in 2011, 2010 and 2009, 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, 2012, we had 156 employees, including 6 temporary employees. On December 11, 2012, we adopted a restructuring plan to improve organizational efficiency and conserve working capital needed to support the growth of our GenDrive business. In doing so, 22 full-time positions were eliminated at our U.S. facilities. This workforce reduction was substantially completed on December 13, 2012. As a result of the restructuring, we expect to reduce annual expenses by \$3.0 to \$4.0 million.

## Facilities

Our principal offices are located in Latham, New York. At our 36-acre campus, we own a 140,000 square foot facility that includes our general office building, our manufacturing facility, and our research and development center. We believe that this facility is sufficient to accommodate our anticipated production volumes for at least the next two years.



## Legal Proceedings

In July 2008, Sorooof Trading Development Company Ltd., or Sorooof, filed a demand for arbitration against GE Fuel Cell Systems, LLC, or GEFCS, claiming breach of a distributor agreement and seeking damages of \$3 million. Prior to GEFCS' dissolution in 2006, we held a 40% membership interest and GE Microgen, Inc., or GEM, held a 60% membership interest in GEFCS. In January 2010, Sorooof requested, and GEM and Plug Power Inc. agreed, that the arbitration proceeding be administratively closed pending final resolution of the matter in United States District Court, Southern District of New York. On January 22, 2010, Sorooof filed a complaint in United States District Court, Southern District of New York naming, among others, Plug Power Inc., GEFCS, and GEM as defendants. On January 24, 2012, following a motion for judgment on the pleadings and motion for summary judgment, the Court dismissed with prejudice four of Sorooof's claims and dismissed without prejudice two of Sorooof's claims. The Court also dismissed with prejudice all claims against GEFCS. Sorooof filed an amended complaint on May 14, 2012 against us, GEM, and General Electric Company, re-pleading the two claims that were dismissed without prejudice. On December 12, 2012, the parties participated in a court settlement conference with the presiding judge at the United States District Court for the Southern District of New York. The case was not resolved at the settlement conference and discovery continues. Accordingly, we believe that it is too early to determine whether there is likely exposure to an adverse outcome and whether or not the probability of an adverse outcome is more than remote. We, GEFCS, GEM and General Electric Company, or GE, are party to an agreement under which we agreed to indemnify such parties for up to \$1 million of certain losses related to the Sorooof distributor agreement. GE has made a claim for indemnification against us under this agreement for all losses it may suffer as a result of the Sorooof dispute. To the extent that the dispute results in an adverse outcome for us or for any of the parties for which we have agreed to indemnify, we could suffer financially as a result of the damages we would have to pay on our behalf or that of our indemnitees.

# MANAGEMENT

## Executive Officers and Directors

The following table sets forth certain information about our executive officers, key employees and directors as of the date of this prospectus.

Name	Age	Position(s)
<i>Executive Officers</i>		
Andrew Marsh	56	President, Chief Executive Officer and Director
Gerald A. Anderson	55	Chief Financial Officer
Gerard L. Conway, Jr.	48	General Counsel, Corporate Secretary and Senior Vice President
Erik Hansen	41	Senior Vice President
Adrian Corless	46	Chief Technology Officer, Senior Vice President
<i>Directors</i>		
George C. McNamee(1)	66	Chairman of the Board
Gary K. Willis(1)(2)	67	Director
Maureen O. Helmer(2)(3)	56	Director
Evgeny Rasskazov	28	Director
Larry G. Garberding(2)(3)	74	Director
Douglas T. Hickey(1)(2)(3)	57	Director
Evgeny Miroshnichenko	32	Director

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

(3) Member of the Nominating and Corporate Governance Committee.

*Andrew J. Marsh* has served as our Chief Executive Officer, President and member of the Board of Directors since April 8, 2008. Previously, Mr. Marsh was a co-founder of Valere Power, where he served as CEO and a member of the company's board of directors from the company's inception in 2001 through its sale to Eltek ASA in 2007. Under his leadership, Valere grew into a profitable global operation with over 200 employees and \$90 million in revenues derived from the sale of DC power products to the telecommunications sector. During Mr. Marsh's tenure, Valere Power received many awards such as the Tech Titan award as the fastest growing technology company in the Dallas Fort Worth area and the Red Herring Top 100 Innovator Award. Prior to founding Valere, he spent almost 18 years with Lucent Bell Laboratories in a variety of sales and technical management positions. Mr. Marsh is a member of the board of directors of the California Hydrogen Business Council, a non-profit group comprised of organizations and individuals in the business of hydrogen. Mr. Marsh holds a Bachelor of Science in Electrical Engineering Technology from Temple University, a Master of Science in Electrical Engineering from Duke University and a Masters of Business Administration from Southern Methodist University. We believe Mr. Marsh's qualifications to sit on our Board include his record of success in leadership positions in technology companies having attributes similar to our Company, his extensive experience in management positions as well as his educational background in engineering and business administration.



*Gerald A. Anderson* joined Plug Power as Chief Financial Officer in July 2007 and, since March 2009, has also served as our Senior Vice President. He is responsible for managing all aspects of our financial, manufacturing operations and information services operations. Prior to joining Plug Power, Mr. Anderson was the Treasurer and Director of Finance for Intermagnetics General Corporation. Utilizing an acquisition growth strategy, he managed finance, treasury, risk management and business valuation functions for the medical device manufacturing company. Prior to that, he was Chief Financial Officer for J Management Company. In addition to managing finance, controllership, merger and acquisition and treasury functions, he also helped set the strategic direction of the company. Earlier in his career, Mr. Anderson spent 15 years with KeyCorp, eventually as Senior Vice President, Director of Business Analysis and Management Reporting. He has thirty years of financial experience. Mr. Anderson is a Director of the Cloud Institute for Sustainability Education, a New York City nonprofit organization. He holds a Bachelor of Science degree in Business Administration, with a concentration in Accounting, from the University of Arizona.

*Gary K. Willis* has been our director since 2003. Mr. Willis joined Zygo Corporation's Board of Directors in June 2009 after retiring as Chairman of the Board of Directors in November 2000, having served in that capacity since November 1998. Zygo Corporation is a provider of metrology, optics, optical assembly, and systems solutions to the semiconductor, optical manufacturing, and industrial/automotive markets. Mr. Willis had been a director of Zygo Corporation since February 1992 and also served as President from 1992 to 1999 and as Chief Executive Officer from 1993 to 1999. Prior to joining Zygo Corporation, Mr. Willis served as the President and Chief Executive Officer of The Foxboro Company, a manufacturer of process control instruments and systems. Mr. Willis is also a director of Rofin-Sinar Technologies, Inc. and Middlesex Health Services, Inc. Mr. Willis holds a Bachelor of Science degree in Mechanical Engineering from Worcester Polytechnic Institute. We believe Mr. Willis' qualifications to sit on our Board include his extensive experience in management and director positions with similar companies as well as his educational background in mechanical engineering.

*Gerard L. Conway, Jr.* has served as General Counsel and Corporate Secretary since September 2004 and, since March 2009, has also served as our Senior Vice President. In that capacity, Mr. Conway is responsible for advising us on legal issues such as corporate law, securities, contracts, strategic alliances and intellectual property. He also serves as the Compliance Officer for securities matters affecting us. During his tenure, Mr. Conway served as Vice President of Government Relations from 2005 to June 2008 and in that capacity he advocated on energy issues, policies, legislation and regulations on the state, federal, national and international levels on our behalf and the alternative energy sector. Prior to his appointment to his current positions, Mr. Conway served as our Associate General Counsel and Director of Government Relations beginning in July 2000. Prior to joining Plug Power, Mr. Conway spent four years as an Associate with Featherstonhaugh, Conway, Wiley & Clyne, LLP, where he concentrated in government relations, business and corporate law. Mr. Conway has more than nineteen years of experience in general business, corporate real estate and government relations. Mr. Conway holds a Bachelor of Arts degree in English and Philosophy from Colgate University and a Juris Doctorate from Boston University School of Law.

*Erik Hansen* joined Plug Power Inc. as Vice President of Business Development in 2008 and was appointed Senior Vice President in October of 2009. Mr. Hansen is responsible for directing our sales efforts. Mr. Hansen has more than 15 years of experience with cutting edge technologies related to energy storage systems. Prior to joining Plug Power, he was General Manager of Sales and Systems Engineering for Cobasys LLC in Orion, Michigan, where he worked for eight years. In that role, Mr. Hansen led the decision-making and strategic planning for the manufacture and sales of advanced energy storage solutions for both the transportation and uninterruptible power systems. Mr. Hansen holds a Bachelor of Science degree in Electrical Engineering and a Bachelor of Science degree in Computer Engineering, both from West Virginia University.

*Adrian Corless* joined Plug Power in April 2007 as Vice President of Technology and was appointed Chief Technology officer in June 2008. In February 2010, Mr. Corless was appointed Senior Vice President and Chief Technology Officer and is currently responsible for the development of Plug Power's products as well as guiding Plug



Power's overall technology and Intellectual Property strategies. Prior to joining Plug Power, Mr. Corless was the Chief Technical Officer of Cellex Power Products and was responsible for the technical aspects of the product development process. Prior to joining Cellex, Mr. Corless worked for Ballard Power Systems Inc. and Excellsis Inc. latterly as Program Manager for the Phase 4 fuel cell bus program. Mr. Corless is an active participant in the Industrial Truck Association, an executive board member of the Canadian Hydrogen and Fuel Cell Association, a Technical Advisory Board member for the NRC Institute for Fuel Cell Innovation, and a member of both UL and CSA standards development committees. Mr. Corless holds a Masters of Applied Science degree in Mechanical Engineering from the University of Victoria and is a Registered Professional Engineer in British Columbia, Canada.

*Maureen O. Helmer* has been our director since 2004. Maureen O. Helmer is currently a member of the law firm Hiscock & Barclay LLP and is the Chair of the firm's Regulatory Practice Group. Prior to her joining Hiscock & Barclay LLP, Ms. Helmer was a member of Green & Seifter Attorneys, PLLC. From 2003 through 2006 she practiced as a partner in the law firm of Couch White, LLP and then as a solo practitioner. In addition to serving as Chair of the New York State Public Service Commission from 1998 to 2003, Ms. Helmer also served as Chair of the New York State Board on Electric Generation Siting and the Environment. Ms. Helmer has advised international energy, telecommunications and industrial companies on policy and government affairs issues. Prior to her appointment as Chair, Ms. Helmer served as Commissioner of the Public Service Commission from 1997 until 1998 and was General Counsel to the Department of the Public Service Commission from 1995 through 1997. From 1984 through 1995, Ms. Helmer held several positions in the New York Legislature. She also served as a board member of the New York State Energy Research and Development Authority, the New York State Environmental Board and the New York State Disaster Preparedness Commission during her tenure as Chair of the PSC. In addition, she was Vice Chair of the Electricity Committee of the National Association of Regulatory Utility Commissioners and a member of the NARUC Board of Directors. She was also appointed to serve as a member of the New York State Cyber-Security Task Force. Ms. Helmer earned her Bachelor of Science from the State University at Albany and her Juris Doctorate from the University of Buffalo law school. She is admitted to practice law in New York. We believe Ms. Helmer's qualifications to sit on our Board include her long history of experience with energy regulation, policy and government affairs and advising energy and industrial companies.

*George C. McNamee* serves as Chairman of our Board of Directors and has served as such since 1997. Mr. McNamee is a Director of iRobot Corporation. He was previously Chairman of First Albany Companies (now GLCH) and a Managing Partner of FA Tech Ventures, an information and energy technology venture capital firm. Mr. McNamee's background in investment banking has given him broad exposure to many financing and merger and acquisition issues. As an executive, he has dealt with rapid-growth companies, technological change, crisis management, team building and strategy. As a public company director, Mr. McNamee has led board special committees, chaired audit committees, chaired three boards and has been an active lead director. Mr. McNamee has previously served on public company boards, including Mechanical Technology Inc. and Home Shopping Network. He has been an early stage investor, director and mentor for private companies that subsequently went public including MapInfo (now Pitney Bowes), META Group (now Gartner Group) and iRobot. He served as a NYSE director from 1999 to 2004 and chaired its foundation. In the aftermath of the 1987 stock market crash, he chaired the Group of Thirty Committee to reform the Clearance and Settlement System. Mr. McNamee has been active as a director or trustee of civic organizations including The Albany Academies and Albany Medical Center, whose finance Committee he chaired for a dozen years. He is also a director of several private companies, a member of the Yale Development Board and a Trustee of The American Friends of Eton College. He received his Bachelor of Arts degree from Yale University. We believe Mr. McNamee's qualifications to sit on our Board include his experience serving on countless boards, his background in investment banking and experience with the financial sector and its regulatory bodies.

*Larry G. Garberding* has served as director since 1997. Mr. Garberding was a Director and Executive Vice President and Chief Financial Officer of DTE Energy Company and the Detroit Edison Company from 1990 until retiring in 2001. Mr. Garberding was a Certified Public Accountant, a partner with a major public accounting firm, and has been on the board of several corporations, having had responsibility for financial, operational, regulatory and sales activities. Mr. Garberding is currently a director of Altarum Institute, a non-profit research and innovations institute and Intermap Technologies Corporation, a digital mapping company. Mr. Garberding received a Bachelor of Science degree in Industrial Administration from Iowa State University. We believe Mr. Garberding's qualifications to sit on our Board include his extensive experience with power and energy companies and his background in accounting, financing and operations.

*Douglas T. Hickey* has served as director since October 2011. Mr. Hickey previously served on our Board of Directors from September 1, 2000 to April 24, 2006. Mr. Hickey most recently was Managing Director at Hummer

Winblad Venture Partners (HWVP), one of the nation's leading software venture capital firms. Prior to joining HWVP in 2001, Mr. Hickey served as CEO for Critical Path, Inc. During his time there, the company grew revenue from less than \$1M to more than \$150M and earned Forbes.com Number-One Fastest Growing Company Award in 2000. Mr. Hickey previously held the CEO and President position for Global Center Inc. At Global Center, he grew the company's revenue from zero to more than \$50M of recurring revenue and achieved profitability. His focus of the company's strategy enabled rapid growth, securing customers like Yahoo, Netscape and Oracle, ultimately leading to our successful sale to Frontier Communications, (NYSE:FRO). Prior to Global Center, Mr. Hickey was CEO and President of MFS DataNet, the leading supplier of data related services to internet service providers and enterprise customers worldwide. MFS grew to more than \$1 billion in revenue and subsequently completed a successful IPO and trade sale. We believe Mr. Hickey's qualifications to sit on our Board include his extensive corporate leadership experience and his proven background growing company revenues.

*Evgeny Rasskazov* has been a director since October 2011. Mr. Rasskazov is the Head of Department for target capital structure for INTER RAO, or the Group. He is responsible for the Group's projects and initiatives in equity capital markets, optimization of the Group's capital structure and management of equity participations in the asset portfolio. Mr. Rasskazov has extensive experience in investment banking and corporate finance projects, developed through positions held previously in global investment banking firms Merrill Lynch and Barclays Capital. We believe Mr. Rasskazov's qualifications to sit on our Board include his experience with corporate financing and investment banking as well as his background in equity capital markets.

*Evgeny Miroshnichenko* has been a director since October 2011. Mr. Miroshnichenko is the Director for Strategic Development for INTER RAO. He is responsible for organization of strategic management process, development and implementation of corporate strategy, realization of strategic projects, as well as management of financial investments of the Group. Mr. Miroshnichenko has also built solid experience in corporate governance as he has held director positions in Boards of Directors in a number of Russian electricity companies. We believe Mr. Miroshnichenko's qualifications to sit on our Board include his experience with strategic corporate projects and background in financial investment management and corporate governance.

## Composition of our Board of Directors

The number of our directors is fixed at eight (8), and the Board of Directors currently consists of eight (8) members. The Board of Directors is divided into three classes, with three directors in Class I, two directors in Class II, and three (3) directors in Class III. Directors in Classes I, II and III serve for three-year terms with one class of directors being elected by our stockholders at each Annual Meeting of Stockholders. Our directors are divided among the three classes as follows:

- The Class I directors are Andrew Marsh, Gary K. Willis and Maureen O. Helmer, and their terms will expire at the annual general meeting of stockholders to be held in 2015;
- The Class II directors are George C. McNamee and Mr. Evgeny Rasskazov, and their terms will expire at the annual general meeting of stockholders to be held in 2013; and
- The Class III directors are Larry G. Garberding, Mr. Douglas T. Hickey and Mr. Evgeny Miroschnichenko, and their terms will expire at the annual general meeting of stockholders to be held in 2014.
- We expect that additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

The Board of Directors has determined that Ms. Helmer and Messrs. Garberding, McNamee, Willis, Hickey, Rasskazov and Miroschnichenko are independent directors as defined in Rule 5605(a)(2) under the Marketplace Rules of the NASDAQ, or the NASDAQ Rules.

## Board Leadership Structure and Board's Role in Risk Oversight

The Board of Directors administers its risk oversight function directly and through its Audit Committee and Corporate Governance and Nominating Committee. The Board and each of these Committees regularly discuss with management our major risk exposures, their potential financial impact on Plug Power and the steps we take to manage them. The Audit Committee is responsible for oversight of Company risks relating to accounting matters, financial reporting and legal and regulatory compliance, while the Corporate Governance and Nominating Committee is responsible for oversight of risks relating to management and Board succession planning, stakeholder responses to our ethics and business practices.

The Chief Financial Officer and the General Counsel report to the Board of Directors regarding ongoing risk management activities at the regularly scheduled, quarterly Board of Directors meetings and may report on risk management activities more frequently, as appropriate. Additionally, risk management is a standing agenda item for the regularly scheduled, quarterly Audit Committee meetings.

## Committees of our Board of Directors

### Audit Committee

The Audit Committee consists of Messrs. Garberding (Chair), Willis and Hickey, and Ms. Helmer.

Our Board of Directors has determined that each of the members of our Audit Committee is an independent director as defined in the NASDAQ Rules and the applicable rules of the Securities and Exchange Commission, or SEC. In addition, the Board of Directors has made a determination that Mr. Garberding qualifies as an audit committee financial expert as defined in the applicable rules of the SEC. Mr. Garberding's designation by the Board as an audit

committee financial expert is not intended to be a representation that he is an expert for any purpose as a result of such designation, nor is it intended to impose on him any duties, obligations, or liability greater than the duties, obligations or liability imposed on him as a member of the Audit Committee and the Board in the absence of such designation.

The Audit Committee's primary responsibility is to have oversight of our accounting and financial reporting processes and audits of our financial statements. In accordance with the Audit Committee's charter, management has the primary responsibility for the financial statements and the financial reporting process, including maintaining an adequate system of internal controls over financial reporting. Our independent auditors, KPMG LLP, or KPMG, report directly to the Audit Committee and are responsible for performing an independent audit of our consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). The Audit Committee, among other matters, is responsible for (i) appointing our independent auditors, (ii) evaluating such independent auditors' qualifications, independence and performance, (iii) determining the compensation for such independent auditors, and (iv) approving all audit and non-audit services. Additionally, the Audit Committee is responsible for oversight of our accounting and financial reporting processes and audits of our financial statements including the work of the independent auditors. The Audit Committee reports to the Board of Directors with regard to:

- the scope of the annual audit;
- fees to be paid to the auditors;
- the performance of our independent auditors;
- compliance with accounting and financial policies; and
- our procedures and policies relative to the adequacy of internal accounting controls.

## Compensation Committee

The Compensation Committee consists of Messrs. Willis (Chair), McNamee and Hickey, each of whom is an independent director under the NASDAQ Rules. The Compensation Committee's primary responsibilities include: discharging the responsibilities of our Board of Directors relating to compensation of our executive officers, providing oversight of our benefit, perquisite and employee equity programs, and reviewing the adequacy of our management succession plans.

## Corporate Governance and Nominating Committee

The Corporate Governance and Nominating Committee, or the Governance Committee, consists of Ms. Helmer (Chair) and Messrs. Garberding and Hickey, each of whom is an independent director under the NASDAQ Rules. The Governance Committee's responsibilities include establishing criteria for Board and committee membership, considering director nominations consistent with the requirement that a majority of the Board be comprised of independent directors as defined in the NASDAQ Rules, identifying individuals qualified to become board members, and selecting the director nominees for election at each Annual Meeting of Stockholders. The Governance Committee is also responsible for developing and recommending to the Board a set of corporate governance guidelines applicable to us and periodically reviewing such guidelines and recommending any changes thereto.

## Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee is or has at any time during the past year been one of our officers or employees. None of our executive officers currently serves or in the past year has served as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more executive officers serving as a member of our board of directors or as a member of our compensation committee.



# EXECUTIVE COMPENSATION

## Compensation Discussion and Analysis

### Overview

We provide what we believe is a competitive total compensation package to our executive management team through a combination of base salary, annual incentive bonuses, long-term equity incentive compensation, and broad-based benefits programs. We place emphasis on pay-for-performance based incentive compensation, which is designed to reward our executives based on the achievement of predetermined performance goals. This Compensation Discussion and Analysis explains our compensation objectives, policies and practices with respect to our Chief Executive Officer, Chief Financial Officer, the other three most highly-compensated executive officers and an additional individual for whom disclosure would have been provided but for the fact that he was not serving as an executive officer at the end of the last completed fiscal year as determined in accordance with applicable SEC rules, who are collectively referred to as the Named Executive Officers.

### Objectives of Our Executive Compensation Programs

Our compensation programs for our named executive officers are designed to achieve the following objectives:

- Attract and retain talented and experienced executives;
- Motivate and reward executives whose knowledge, skills and performance are critical to our success;
- Provide a competitive compensation package which is weighted towards pay-for-performance and in which total compensation is primarily determined by Company and individual results and the creation of shareholder value;
- Ensure fairness among the executive management team by recognizing the contributions each executive makes to our success; and
- Motivate our executives to manage our business to meet our short- and long-term objectives and reward them for meeting these objectives.

### Our Executive Compensation Programs

Our executive compensation primarily consists of base salary, annual incentive bonuses, long-term equity incentive compensation and broad-based benefits programs. Consistent with the emphasis we place on pay-for-performance based incentive compensation, long-term equity incentive compensation in the form of stock options and restricted stock constitute a significant portion of our total executive compensation.

Within the context of the overall objectives of our compensation programs, our Compensation Committee determined the specific amounts of compensation to be paid to each of our executives in 2012 based on a number of factors, including:

- Its understanding of the amount of compensation generally paid by similarly situated companies to their executives with similar roles and responsibilities;



- Our executives' performance during 2012 in general and as measured against predetermined performance goals;
- The nature, scope and level of our executives' responsibilities;
- Our executives' effectiveness in leading our initiatives to increase customer value, productivity and revenue growth;
- The individual experience and skills of, and expected contributions from, our executives;
- The executives' contribution to our commitment to corporate responsibility, including the executives' success in creating a culture of unyielding integrity and compliance with applicable law and our ethics policies;
- The amounts of compensation being paid to our other executives;
- The executives' contribution to our financial results;

- Our executives' historical compensation at our Company; and
- Any contractual commitments we have made to our executives regarding compensation.

Each of the primary elements of our executive compensation is discussed in detail below, including a description of the particular element and how it fits into our overall executive compensation. Compensation paid to our named executive officers in 2012 is discussed under each element. In the descriptions below, we have identified particular compensation objectives which we have designed our executive compensation programs to serve; however, we have designed our compensation programs to complement each other and to collectively serve all of our executive compensation objectives described above. Accordingly, whether or not specifically mentioned below, we believe that, as a part of our overall executive compensation, each element to a greater or lesser extent serves each of our objectives.

## Base Salary

We pay our executives a base salary which we review and determine annually. We believe that a competitive base salary is a necessary element of any compensation program designed to attract and retain talented and experienced executives. We also believe that attractive base salaries can motivate and reward executives for their overall performance. Base salaries are, in part, established based on the individual experience, skills, expected contributions of our executives, and our executives' performance during the prior year.

In 2012 the base salaries for our executives was as follows: Mr. Marsh's base salary increased from \$375,000 to \$450,000 per year, Mr. Anderson's base salary increased from \$300,000 to \$330,000 per year, Mr. Conway's base salary increased from \$200,000 to \$250,000 per year, Mr. Corless' base salary increased from \$215,000 to \$230,000 per year, and Mr. Hansen's base salary was \$230,000 per year. Our executives' base salaries reflect the initial base salaries that we negotiated with each of our executives at the time of his or her initial employment or promotion and our subsequent adjustments to these amounts to reflect market increases, the growth and stage of development of our Company, our executives' performance and increased experience, any changes in our executives' roles and responsibilities, and other factors. The initial base salaries that we negotiated with our executives were based on our understanding of the market at the time, the individual experience and skills of, and expected contribution from, each executive, the roles and responsibilities of the executive, the base salaries of our existing executives, and other factors.

## Annual Incentive Bonuses

Our named executive officers are eligible to receive annual incentive bonuses based on our pay-for-performance incentive compensation program. They are eligible to receive annual incentive bonuses primarily based upon their performance as measured against predetermined individual performance goals, including financial measures, achievement of strategic objectives, and other factors. The primary objective of this program is to motivate and reward our named executive officers for meeting individual performance goals. We do not believe that every important aspect of executive performance is capable of being specifically quantified in a predetermined performance goal. For example, events outside of our control may occur after we have established the named executive officers' individual performance goals for the year that require our named executive officers to focus their attention on different or other strategic initiatives; thus, the individual performance goals may be modified during the fiscal year by the President and Chief Executive Officer, or the Board of Directors in the case of the President and Chief Executive Officer himself, to account for such events beyond our control.

Within our pay-for-performance incentive compensation program, specific performance attainment levels are indicated for each performance goal. These performance attainment levels correlate to potential award amounts that

are calculated as a percent of each executive's base salary.

We established attainment levels for each of our executives, other than Mr. Marsh, as 10%, 20% or 30% of his or her base salary. Since the annual incentive bonus is payable based on the achievement of each of the different levels of performance, the executive officer may earn between 0% and 30% of his base salary given his actual performance. The 20% attainment level is considered the target level for each performance goal because it is challenging for the executive to attain, and the executive would meet expectations if he achieved this level. The 10% attainment level is considered the threshold level for each performance goal because although still challenging, it is the minimum acceptable performance level. The 30% attainment level is considered the maximum, or stretch, level for each performance goal because it is most challenging for the executive to attain, and the executive would have to exceed expectations to achieve this level. Our maximum and threshold performance attainment levels are determined in relation to our target attainment levels and are intended to provide for correspondingly greater or lesser incentives in the event that performance is within an appropriate range above or below the target performance attainment level.

We also established attainment levels for our Chief Executive Officer as 17%, 34% or 50% of his base salary. Since the annual incentive bonus is payable based on the achievement of each of the different levels of performance, the Chief Executive Officer may earn between 0% and 50% of his base salary given his actual performance. The 34% attainment level is considered the target level for each performance goal because it is challenging for the Chief Executive Officer to attain, and the executive would meet expectations if he achieved this level. The 17% attainment level is considered the threshold level for each performance goal because although still challenging, it is the minimum acceptable performance level. The 50% attainment level is considered the maximum, or stretch, level for each performance goal because it is most challenging for the Chief Executive Officer to attain, and the Chief Executive Officer would have to exceed expectations to achieve this level. Our maximum and threshold performance attainment levels are determined in relation to our target attainment levels and are intended to provide for correspondingly greater or lesser incentives in the event that performance is within an appropriate range above or below the target performance attainment level.

As a way of linking each executive's performance to corporate-wide strategy, the executives' individual performance goals directly correlate to our corporate milestones, which management recommends to the Board of Directors and the Board of Directors approves after appropriate discussion and review. The executives' individual performance goals are determined in the same way as the corporate milestones such that management reviews how each executive may contribute to the corporate milestones and recommends individual performance goals to the Board of Directors. The Board of Directors, after appropriate discussion and review, ultimately approves the individual performance goals. Because disclosure of the specific individual performance goals would give competitors information that could be leveraged for competitive advantage, we do not disclose these specific individual performance goals or our executives' actual performance against such goals. Generally the individual performance goals, as well as the corporate milestones, include, but are not limited to, one or more of the following categories: annual shipment targets, revenue, gross margin on product sales, EBITAS and decreases in costs of business operations.

Initially, the CEO, and other members of management as appropriate, make a recommendation to the Compensation Committee of the Board of Directors for each executive's potential award amount based on his level of attainment of each of his individual performance goals (with the exception of the CEO himself whose level of attainment is evaluated by the Compensation Committee directly). Ultimately, the Board of Directors, after review and discussion and recommendation from the Compensation Committee, determines the final achieved level of attainment for each executive's individual performance goals. In 2012, no bonuses related to performance goals accrued to any of our named executive officers.

## **Long-Term Equity Incentive Compensation**

We grant long-term equity incentive awards in the form of stock options and restricted stock to executives as part of our total compensation package. Consistent with our emphasis on pay-for-performance based incentive compensation, these awards represent a significant portion of total executive compensation. Based on the stage of our Company's development and the incentives we aim to provide to our executives, we have chosen to use either stock options or a combination of stock options and restricted stock as our long-term equity incentive awards. Our decisions regarding the amount and type of long-term equity incentive compensation and relative weighting of these awards among total executive compensation have also been based on our understanding of market practices of similarly situated companies and our negotiations with our executives in connection with their initial employment or promotion by our Company.

Additionally, the Board adopted stock ownership guidelines for named executives, effective as of August 15, 2005, which are also considered when granting long-term equity incentive awards to executives. These guidelines provide a target level of Company equity holdings with which named executives are expected to comply within five (5) years from the latter of the effective date of the guidelines or the date the individual is first appointed as an executive. The

target stock holdings are determined as a multiple of the named executive's base salary and then converted to a fixed number of shares. The named executive's base salary is multiplied by five (5) for Chief Executive Officer and by three (3) for all other named executives; that product is divided by Plug Power's 200-day average common stock price as reported by the NASDAQ Capital Market; and finally that amount is then rounded to the nearest 100 shares. The following count towards satisfaction of these stock ownership guidelines: (i) shares owned outright by the executive or his or her immediate family members residing in the same household; (ii) stock held in the Plug Power Inc. Savings and Retirement Plan (401K Plan); (iii) restricted stock issued as part of an executive's annual or other bonus whether or not vested; (iv) shares acquired upon the exercise of employee stock options; (v) shares underlying unexercised employee stock options as part of the Plug Power Inc. Employee Stock Option Plan (ESOP) times a factor of thirty-three percent; and (vi) shares held in trust.

Stock option awards provide our executive officers with the right to purchase shares of our common stock at a fixed exercise price typically for a period of up to ten years, subject to continued employment with our Company. Stock options are earned on the basis of continued service and generally vest over three years, beginning with one-third vesting on the first anniversary of the grant date, one-third vesting on the second anniversary of the grant date and the final one-third vesting on the third anniversary of the grant date, subject to acceleration in certain circumstances. Stock option awards are made pursuant to our 2011 Stock Option and Incentive Plan. Except as may otherwise be provided in the applicable stock option award agreement, stock option awards become fully exercisable upon a change of control under the 2011 Stock Option and Incentive Plan. The exercise price of each stock option granted under our 2011 Stock Option and Incentive Plan is the closing price of our common stock on the NASDAQ Capital Market as of the effective date of each grant.

Grants to new hires and grants relating to an existing executive officer's promotion may be made on a periodic basis. All grants to executive officers are approved by the Compensation Committee. We consider a number of factors in determining the number of stock options, if any, to grant to our executives, including:

- the number of shares subject to, and exercise price of, outstanding options, both vested and unvested, held by our named executive officers;
- the vesting schedule of the unvested stock options held by our named executive officers; and
- the amount and percentage of our total equity on a diluted basis held by our named executive officers.

Restricted stock awards provide our executive officers with shares of our stock that they may retain or trade; however, all executive officers must trade within their rights according to our Insider Trading Policy. The restricted stock is intended to be a long-term incentive alternative to the stock option awards that may be appropriate for executive officers based on their performance and their critical skills. Restricted stock awards may vest over three years, beginning with one-third vesting one year after the date of grant, then pro-rata vesting monthly thereafter. Restricted stock awards are made pursuant to our 2011 Stock Option and Incentive Plan.

On May 16, 2012, the stockholders approved an amendment to the 2011 Plan, to increase the number of shares of the Company's common stock authorized for issuance under the 2011 Plan from 1,000,000 to 6,500,000.

On October 28, 2009, the Compensation Committee recommended and the Board of Directors approved a Long Term Incentive (LTI) Plan pursuant to the terms of our 1999 Stock Option and Incentive Plan. Designed as an incentive vehicle to support employee efforts, the LTI Plan sought to increase shareholder value by encouraging Plug Power employees to continue to work diligently to further our long term goals.

Under the LTI Plan, a select group of critical employees received a Restricted Stock Unit Award Agreement (Agreement) awarding a one time grant of restricted stock units (RSUs) calculated using a multiple of the selected employee's base salary. According to the Agreement, the restrictions on each participant's RSU allocation will lapse over a three year period upon successful completion of weighted performance-based metrics. Specifically, restrictions on 25% of RSUs are tied to our achievement of revenue targets, while the restrictions on 75% of RSUs are tied to our achievement of earnings before interest expense, taxes, depreciation, amortization and non-cash charges for equity compensation (measurement referred to in the Agreement as EBITDAS) targets. Intended to supplement the annual employee incentive plan payout, the total number of RSUs on which restrictions shall lapse each year will vary depending on our progress achieving the corresponding threshold, target or stretch goals.

Pursuant to the terms of the Agreement, in the event stretch revenue and EBITDAS metrics were reached during each of the three years of the grant period commencing on January 1, 2010, we could have issued a maximum of 8,667,666 shares to LTI Plan participants, which would represent approximately 4.4% of total currently outstanding shares. Restrictions on these shares only lapse in the event we perform at the articulated performance metrics.

In 2010, 2011 and 2012, no threshold, target or stretch revenue and EBITDAS performance-based metrics were reached. Accordingly, no restrictions lapsed with respect to the 2010, 2011 and 2012 performance periods and all of the total awarded RSUs for the Named Executive Officers were forfeited.

## **Broad-Based Benefits**

All full-time employees, including our named executive officers, may participate in our health and welfare benefit programs, including medical, dental, and vision care coverage, disability insurance and life insurance, and our 401(k) plan.

## **Our Executive Compensation Process**

The Compensation Committee of our Board of Directors is responsible for determining the compensation for our named executive officers. The Compensation Committee is composed entirely of non-employee directors who are independent as that term is defined in the applicable NASDAQ rules. In determining executive compensation, our Compensation Committee annually reviews the performance of our executives with our Chief Executive Officer, and our Chief Executive Officer makes recommendations to our Compensation Committee with respect to the appropriate base salary, annual incentive bonuses and performance measures, and grants of long-term equity incentive awards for each of our executives. The Chairman of the Compensation Committee makes recommendations to the Compensation Committee with regards to the Chief Executive Officer's compensation. The Compensation Committee makes its determination regarding executive compensation and then recommends such determination to the Board of Directors. The Board of Directors ultimately approves executive compensation.

As a result, the total amount of compensation that we paid to our executives, the types of executive compensation programs we maintained, and the amount of compensation paid to our executives under each program has been determined by our Compensation Committee and Board of Directors based on their understanding of the market, experience in making these types of decisions, and judgment regarding the appropriate amounts and types of executive compensation to provide.

## Summary Compensation

The following table sets forth information concerning compensation for services rendered in all capacities awarded to, earned by or paid in the last three fiscal years to our Named Executive Officers.

Name and Principal Position	Year	Salary (\$)	Bonus Awards (\$)	Option Awards (\$)	Non-Equity		Total (\$)	
					Incentive Plan Compensation (\$)	All Other Compensation (\$)		
		(1)	(2)	(3)	(4)	(5)		
Andrew Marsh	2012	443,654	-	-	-	14,758	(5)	458,412
President, Chief Executive Officer and Director	2011	375,000	-	740,588	121,125	14,276	(5)	1,250,989
	2010	375,000	-	-	-	12,526	(5)	387,526
Gerald A. Anderson	2012	327,462	-	-	-	10,002	(6)	337,464
Chief Financial Officer and Senior Vice President	2011	300,000	-	421,708	57,000	9,507	(6)	788,215
	2010	258,654	-	-	-	12,526	(6)	271,180
Gerard L. Conway, Jr.	2012	245,769	-	-	-	180	(7)	245,949
General Counsel, Corporate Secretary and	2011	200,000	-	245,130	38,000	180	(7)	483,310
Senior Vice President	2010	200,000	-	-	-	180	(7)	200,180
Erik J. Hansen	2012	230,000	43,700	-	-	11,399	(8)	285,099
Senior Vice President	2011	230,000	-	245,130	251,700	175,784	(8)	902,614
	2010	209,034	-	-	-	9,346	(8)	218,380
Adrian Corless	2012	228,731	-	-	-	27,180	(9)	255,911
Chief Technology Officer, Senior Vice President	2011	215,000	-	245,130	40,850	5,215	(9)	506,195
	2010	215,827	-	-	-	61,122	(9)	276,949

- (1) This column represents the dollar amount of base salary actually paid to executives.
- (2) This column represents the dollar amount of bonuses paid to executives in 2012.
- (3) This column represents the aggregate grant date fair value of the option award computed in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures. For additional information on the valuation assumptions with respect to option awards, refer to note 14 of our consolidated financial statements. These amounts reflect our accounting expense for these awards, and do not correspond to the actual value that will be recognized by the named executives.
- (4) This column represents the dollar amount of bonuses paid to executives in 2012 under a non-equity incentive plan earned in 2011.
- (5) Includes our share of contributions on behalf of Mr. Marsh to the Plug Power 401(k) savings plan in the amount of \$14,242, \$13,760, and \$12,250 in the years ended 2012, 2011 and 2010, respectively, payments of \$516, \$516 and \$276 for supplemental life insurance premiums in the years ended 2012, 2011 and 2010.
- (6) Includes our share of contributions on behalf of Mr. Anderson to the Plug Power 401(k) savings plan in the amount of \$9,486, \$9,231, and \$12,250 in the years ended 2012, 2011 and 2010, respectively, and payments of \$516, \$276 and \$276 for supplemental life insurance premiums in the years ended 2012, 2011 and 2010, respectively.





- (7) Includes payments of \$180, \$180 and \$180 for supplemental life insurance premiums in the years ended 2012, 2011 and 2010, respectively.
- (8) Includes our share of contributions on behalf of Mr. Hansen to the Plug Power 401(k) savings plan in the amount of \$11,279, \$9,246, and \$9,346 in the years ended 2012, 2011 and 2010, respectively, payment of \$166,418 for moving and relocation expenses in 2011, and payment of \$120, \$120 and \$0 for supplemental life insurance premiums in the years ended 2012, 2011 and 2010, respectively.
- (9) Includes payments of \$180, \$180 and \$120 for supplemental life insurance premiums in the years ended 2012, 2011 and 2010, respectively, as well as a stipend of \$5,035 and \$61,002 related to moving and relocation expenses in 2011 and 2010, respectively, and approximately \$27,000 in moving and relocation expenses in 2012.

## Grants of Plan-Based Awards Table

There were no equity awards granted to the named executive officers in 2012.

## Employment Agreements

We and Mr. Marsh are parties to an employment agreement which renews automatically for successive one-year terms unless Mr. Marsh or we gives notice to the contrary. Mr. Marsh receives an annual base salary of \$450,000 and is eligible to: (i) receive an annual incentive bonus of up to an amount equal to fifty percent (50%) of his annual base salary; (ii) participate in all savings and retirement plans; and (iii) participate in all benefit and executive perquisites. Mr. Marsh's employment may be terminated by us for Cause, as defined in the agreement, or by Mr. Marsh for Good Reason, as defined in the agreement, or without Good Reason upon written notice of termination to us. If Mr. Marsh's employment is terminated by us for any reason other than Cause, death or disability, or in the event that Mr. Marsh terminates his employment with us and is able to establish Good Reason, we are obligated to pay Mr. Marsh the sum of the following amounts:

- (i) any earned but unpaid annual base salary,
- (ii) incentive bonus earned but not yet paid,
- (iii) unpaid expense reimbursements,
- (iv) accrued but unused vacation, plus
- (v) any benefits that may have vested under any of our employee benefit plan through the date of termination; plus:
  - (a) one (1) times annual base salary and
  - (b) one (1) times the annual incentive bonus for the immediately preceding fiscal year.

In addition, Mr. Marsh is entitled to fully vest as of the date of termination in any outstanding restricted stock, stock options and other stock awards previously granted that would have vested had he remained an employee for an additional twelve (12) months following the date of termination. Furthermore, we are required to continue paying health insurance and other benefits to Mr. Marsh and his eligible family members for twelve (12) months following his termination. The agreement also provides, among other things, that if, within twelve (12) months after a Change in Control, as defined in the agreement, we terminate such executive's employment without Cause, then such executive shall be entitled to:

- (i) receive a lump sum payment equal to three (3) times the sum of (1) his current annual base salary plus (2) his average annual incentive bonus over the three (3) fiscal years prior to the Change in Control (or his annual incentive bonus for the fiscal year immediately preceding to the Change of Control, if higher),
- (ii) continued vesting of his stock options and other stock-based awards for twelve (12) months following the Change of Control as if he had remained an active employee, and
- (iii) receive benefits, including health and life insurance for twelve (12) months following the Change of Control.

We and Mr. Anderson are parties to an employment agreement pursuant to which Mr. Anderson receives an annual base salary of \$330,000. Mr. Anderson's employment may be terminated by us for Cause, as defined in the agreement, or by Mr. Anderson for Good Reason, as defined in the agreement, or without Good Reason upon written notice of termination to us. If Mr. Anderson's employment is terminated by us for any reason other than Cause, death or disability, we are obligated to accelerate vesting in his options by twelve (12) months following the termination, and also pay Mr. Anderson a lump sum equal to the sum of:

- (i) two (2) times his current annual base salary and
- (ii) his annual bonus for the fiscal year immediately prior to such termination

The agreement also provides, among other things, that if, within twelve (12) months after a Change in Control, as defined in the agreement, we terminate such executive's employment without Cause, then such executive shall be entitled to:

- (i) receive a lump sum payment equal to two (2) times the sum of (1) his annual base salary in effect immediately prior to the terminating event, plus (2) his annual bonus for the fiscal year immediately prior to the terminating event;
- (ii) Accelerate vesting in his options for twelve months following the terminating event; and
- (iii) receive benefits, including health and life insurance for twelve (12) months following the terminating event.

We and Messrs. Conway, Hansen and Corless are parties to Executive Employment Agreements pursuant to which if any of their employment is terminated by us for any reason other than Cause, as defined in the agreement, death or disability, or in the event that any terminates his employment with us and is able to establish Good Reason, as defined in the agreement, we are obligated to pay each the sum of the following amounts:

- (i) any earned but unpaid annual base salary,
- (ii) incentive bonus earned but not yet paid,
- (iii) unpaid expense reimbursements,
- (iv) accrued but unused vacation, plus
- (v) any benefits that may have vested under any of our employee benefit plan through the date of termination; plus (a) one (1) times annual base salary.

In addition, each is entitled to exercise any vested stock options for twelve (12) months following the date of termination. Furthermore, we are required to continue paying health insurance and other benefits to each and his eligible family members for twelve (12) months following his termination. The Executive Employment Agreements also provide, among other things, that if, within twelve (12) months after a Change in Control, as defined in the agreement, we terminate such executive's employment without Cause, then such executive shall be entitled to:

- (i) receive a lump sum payment equal to the sum of (1) his average annual base salary over the three (3) fiscal years immediately prior to the Change of Control (or the executive's annual base salary in effect immediately prior to the Change of Control, if higher) and (2) his average annual bonus over the three (3) fiscal years prior to the Change in Control (or the executive's annual bonus in effect immediately prior to the Change of Control, if higher),
- (ii) continued vesting of his stock options for twelve (12) months following the Change of Control as if he had remained an active employee, and
- (iii) receive benefits, including health and life insurance for twelve (12) months following the Change of Control.

## 2012 Stock Option Grants

There were no equity awards granted to the named executive officers in 2012.

## Outstanding Equity Awards at 2012 Fiscal Year-End

The following table provides information on the holdings of stock options by the Named Executive Officers as of December 31, 2012. For additional information about the option awards and stock awards, see the description of equity incentive compensation in the section titled Compensation Discussion and Analysis.

Name	Option Awards		Option Exercise Price (\$)	Option Expiration Date
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable		
Andrew Marsh	40,000		35.80	04/08/18
	250		9.50	05/20/19
	35,529	71,071	6.10	04/13/21
	66,660	133,340	2.17	12/13/21
Gerald A. Anderson	4,500		33.30	07/09/17
	2,700		26.00	01/24/18
	250		9.50	05/20/19
	21,864	43,736	6.10	04/13/21
Gerard L. Conway, Jr.	33,330	66,670	2.17	12/13/21
	800		67.30	12/22/13
	1,200		53.90	01/28/15
	3,000		55.80	02/01/16
	3,000		37.50	02/14/17
	2,700		26.00	01/24/18
	250		9.50	05/20/19
	13,665	27,335	6.10	04/13/21
Erik J. Hansen	16,665	33,335	2.17	12/13/21
	5,000		8.60	10/29/18
	250		9.50	05/20/19
	13,665	27,335	6.10	04/13/21
Adrian Corless	16,665	33,335	2.17	12/13/21
	3,000		32.40	04/04/17
	2,700		24.20	07/30/18
	250		9.50	05/20/19
	13,665	27,335	6.10	04/13/21
	16,665	33,335	2.17	12/13/21

## Option Exercises and Stock Vested in Fiscal 2012

There were no option exercises or stock awards vested during the year for the named executive officers.

## Potential Payments Upon Termination or Change-in-Control

We and Messrs. Marsh, Anderson, Conway, Hansen and Corless are parties to employment agreements, respectively, that provide for a potential payment upon termination for other than Cause as discussed above in *Employment Agreements*.

Such payments by us to any of Messrs. Marsh, Anderson, Conway, Hansen, or Corless are subject to the executive signing a general release of claims in a form and manner satisfactory to us and in no event is the executive entitled to receive any such payment after he breaches the Employee Patent, Confidential Information and Non-Compete Agreement referenced in the executive's respective agreement or any non-compete, non-solicit or non-disclosure covenants in any agreement between us and such executive. We agreed to provide severance payments to such executives in these circumstances based on our negotiations with each of our executives at the time they joined our company, or as negotiated subsequent to hiring, and in order to provide a total compensation package that we believed to be competitive. Additionally, we believe that providing severance upon a termination without cause can help to encourage our executives to take the risks that we believe are necessary for our company to succeed and also recognizes the longer hiring process typically involved in hiring a senior executive.

The following are excerpts of the definitions of Cause and Terminating Events from the Employment Agreements referenced above.

Cause shall mean (i) a willful act of dishonesty by the Executive with respect to any matter involving us or any subsidiary or affiliate, or (ii) conviction of the Executive of a crime involving moral turpitude, (iii) the failure to perform to the reasonable satisfaction of the Board a substantial portion of the Executive's duties and responsibilities assigned or delegated under this Agreement (other than any such failure after the Executive gives notice of termination for Good Reason), which failure continues, in the reasonable judgment of the Board, after written notice given to the Executive by the Board. For purposes of this definition (i) hereof, no act, or failure to act, on the Executive's part shall be deemed willful unless done, or omitted to be done, by the Executive without reasonable belief that the Executive's act, or failure to act, was in our best interests and the best interests of our subsidiaries and affiliates. Cause may also include (i) the failure or refusal of the named executive to render services to us in accordance with his obligations under the employment agreement or a determination by us that the named executive has failed to perform the duties of his employment; (ii) disloyalty, gross negligence, dishonesty, breach of fiduciary duty or breach of the terms of the employment agreement or the other agreements executed in connection therewith; (iii) the commission by the named executive of an act of fraud, embezzlement or disregard of our rules or policies or the commission by the named executive of any other action which injures us; (iv) acts which, in the judgment of our board of directors, would tend to generate adverse publicity toward us; (v) the commission, or plea of nolo contendere, by the named executive of a felony; (vi) the commission of an act which constitutes unfair competition with us or which induces any of our customers to breach a contract with us; or (vii) a breach by the named executive of the terms of the non-competition and non-solicitation agreement or the employee nondisclosure and developments agreement between us and the named executive.

Terminating Event shall mean a termination by us of the employment of the Executive with us for any reason other than (i) a willful act of dishonesty by the Executive with respect to any matter involving us or any subsidiary or affiliate, or (ii) conviction of the Executive of a crime involving moral turpitude, or (iii) the gross or willful failure by the Executive to substantially perform the Executive's duties with us, which failure is not cured within thirty (30) days

after a written demand for substantial performance is received by the Executive from our Board of Directors (the Board ) which specifically identifies the manner in which the Board believes the Executive has not substantially performed the Executive's duties, or (iv) the failure by the Executive to perform his full-time duties with us by reason of his death or Disability. For purposes of clauses (i) and (iii) of this Section 1(a), no act, or failure to act, on the Executive's part shall be deemed willful unless done, or omitted to be done, by the Executive without reasonable belief that the Executive's act, or failure to act, was in the best interests of us and the interests of our subsidiaries and affiliates. For purposes of this Agreement, Disability shall mean the Executive's incapacity due to physical or mental illness which has caused the Executive to be absent from the full-time performance of his duties with us for a period of six (6) consecutive months if we shall have given the Executive a Notice of Termination and, within thirty (30) days after such Notice of Termination is given, the Executive shall not have returned to the full-time performance of his duties.

If Mr. Marsh had been terminated without cause on December 31, 2012, the approximate value of the severance package, including, as mentioned above in *Employment Agreements*, salary, benefits and equity awards, under his employment agreement would have been \$733,492. This includes an acceleration of any remaining unvested options granted to such named executive under the 1999 Stock Option and Incentive Plan and the 2011 Stock Option and Incentive Plan. If Mr. Anderson, Conway, Hansen or Corless had been terminated without cause on December 31, 2012, the approximate value of the severance packages, including, as mentioned above in *Employment Agreements*, salary, benefits and equity awards, under the employment agreement for such named executive would have been for Mr. Anderson \$810,742, for Mr. Conway \$311,359, for Mr. Hansen \$504,222 and Mr. Corless \$293,054.



We and Messrs. Marsh, Anderson, Conway, Hansen, and Corless are parties to employment agreements, respectively, that provide for a potential payment upon a Change of Control, as discussed above in *Employment Agreements*. Such payments by us to the executive are subject to the executive signing a general release of claims in a form and manner satisfactory to us and in no event is Messrs. Marsh, Anderson, Conway, Hansen or Corless entitled to receive any such payment after he breaches the Employee Patent, Confidential Information and Non-Compete Agreement referenced in the executives respective agreement or any non-compete, non-solicit or non-disclosure covenants in any agreement between us and such executive.

The following is an excerpt of the definition of Change of Control from the Employment Agreements referenced above.

Change in Control shall be deemed to have occurred in any one of the following events:

- (i) any person, as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act), (other than us, any of our subsidiaries, any trustee, fiduciary or other person or entity holding securities under any of our employee benefit plan or our trust or any of our subsidiaries, INTER RAO Capital, together with all Affiliates and Associates (as such terms are hereinafter defined) of such person, shall become the beneficial owner (as such term is defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of our securities representing 25% or more of the then our outstanding shares of common stock (the Stock) (other than as a result of an acquisition of securities directly from us); or
- (ii) persons who, as of the effective date of this Agreement (the Effective Date), constitute our Board of Directors (the Incumbent Directors) cease for any reason, including, without limitation, as a result of a tender offer, proxy contest, merger or similar transaction, to constitute at least a majority of the Board, provided that any person becoming our director subsequent to the Effective Date shall be considered an Incumbent Director if such person's election was approved by or such person was nominated for election by either (A) a vote of at least a majority of the Incumbent Directors or (B) a vote of at least a majority of the Incumbent Directors who are members of a nominating committee comprised, in the majority, of Incumbent Directors; but provided further, that any such person whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of members of the Board of Directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board, including by reason of agreement intended to avoid or settle any such actual or threatened contest or solicitation, shall not be considered an Incumbent Director; or
- (iii) Upon (A) the consummation of any consolidation or merger where our shareholders, immediately prior to the consolidation or merger, did not, immediately after the consolidation or merger, beneficially own (as such term is defined in Rule 13d-3 of the Exchange Act), directly or indirectly, shares representing in the aggregate more than 50% of the voting shares of the corporation issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), (B) the consummation of any sale, lease, exchange or other transfer (in one transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of our assets or (C) the completion of a liquidation or dissolution that has been approved by our stockholders; or
- (iv) INTER RAO Capital, together with all Affiliates and Associates (as such terms are hereinafter defined) of such person, shall become the beneficial owner (as such term is defined in Rule 13d-3 of the Exchange Act), directly or indirectly, of our securities representing 50% or more of the then outstanding Stock (other than as a result of an acquisition of securities directly from us).

For purposes of this Agreement, **Affiliate** and **Associate** shall have the respective meanings ascribed to such terms in Rule 12b-2 of the Exchange Act, as in effect on the date of this Agreement; provided, however, that no person who is our director or officer shall be deemed an Affiliate or an Associate of any other of our director or officer solely as a result of his position as our director or officer.

Notwithstanding the foregoing, a **Change in Control** shall not be deemed to have occurred for purposes of the foregoing clauses (i) or (iv) solely as the result of an acquisition of securities by us which, by reducing the number of shares of Stock outstanding, increases the proportionate number of shares of Stock beneficially owned by any person to 25% or more (or 50% or more in the case of clause (iv)) of the shares of Stock then outstanding; provided, however, that if any such person shall at any time following such acquisition of securities by us become the beneficial owner of any additional shares of Stock (other than pursuant to a stock split, stock dividend, or similar transaction) and such person immediately thereafter is the beneficial owner of 25% or more (or 50% or more in the case of clause (iv)) of the shares of Stock then outstanding, then a **Change in Control** shall be deemed to have occurred for purposes of the foregoing clause (i) or (iv), as applicable.

Change-in-control may also generally mean any of the following: (1) a sale or other disposition of all or substantially all of our assets; or (2) a merger or consolidation after which our voting securities outstanding immediately before the transaction cease to represent at least a majority of the combined voting power of the successor entity's outstanding voting securities immediately after the transaction. We agreed to provide payments to these executives in these circumstances in order to provide a total compensation package that we believed to be competitive. Additionally, the primary purpose of our equity-based incentive awards is to align the interests of our executives and our stockholders and provide our executives with strong incentives to increase stockholder value over time. As change-in-control transactions typically represent events where our stockholders are realizing the value of their equity interests in our Company, we believe it is appropriate for our executives to share in this realization of stockholder value, particularly where their employment is terminated in connection with the change-in-control transaction. We believe that this will also help to better align the interests of our executives with our stockholders in pursuing and engaging in these transactions.

If a change-in-control had occurred on December 31, 2012 and on that date Messrs. Marsh, Anderson, Conway, Hansen or Corless had been terminated without Cause, experienced a material negative change in his or her compensation or responsibilities or was required to be based at a location more than fifty (50) miles from his or her current work location, the value of the change-of-control provisions, including, as mentioned above, salary, benefits, vested equity awards and expected bonus, under the employment or executive severance agreements for each such named executive would have been as follows: Mr. Marsh \$1,849,780, Mr. Anderson \$705,986, Mr. Conway \$333,748, Mr. Hansen \$527,766 and Mr. Corless \$316,598.

## Director Compensation

The Compensation Committee periodically reviews our Non-Employee Director Compensation Plan, or our Director Compensation Plan, to ensure that the compensation aligns the directors' interests with the long-term interests of the stockholders and that the structure of the compensation is simple, transparent and easy for stockholders to understand. The Compensation Committee also considers whether our Director Compensation Plan fairly compensates our directors when considering the work required in a company of the our size and scope. Employee directors do not receive additional compensation for their services as directors. The following is a summary of our Director Compensation Plan:

Pursuant to the current form of our Director Compensation Plan, upon initial election or appointment to the Board of Directors, new non-employee directors receive non-qualified stock options to purchase 65,000 shares (50,000 shares for any new non-employee Chairman) of Common Stock with an exercise price equal to fair market value on the date of grant and that are fully vested on the first anniversary of the date of the grant. Each year of a non-employee director's tenure, the director will receive non-qualified options to purchase 10,000 shares (15,000 shares for any non-employee Chairman), plus non-qualified options to purchase an additional 5,000 shares if the director serves as chairman of the Audit Committee and non-qualified options to purchase an additional 2,000 shares if the director serves as chairman of any other committee, including the Compensation Committee and the Corporate Governance and Nominating Committee. These annual options, with an exercise price equal to fair market value on the grant date, fully vest on the first anniversary of the date of the grant.

In addition, under the current form of our Director Compensation Plan each non-employee director is paid an annual retainer of \$40,000 (\$85,000 for any non-employee Chairman) for their services. Committee members receive additional annual retainers in accordance with the following table:

<b>Committee</b>	<b>Non-Employee</b>	<b>Non-Employee</b>
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	<b>Chairman</b>	<b>Director</b>
Audit Committee	\$20,000	\$15,000
Compensation Committee	15,000	5,000
Corporate Governance and Nominating Committee	10,000	5,000

These additional payments for service on a committee are due to the workload and broad-based responsibilities of the committees. The total amount of the annual retainers are paid in a combination of fifty percent (50%) cash and fifty percent (50%) Common Stock, with an option to receive up to one hundred percent (100%) Common Stock, at the election of the non-employee director. At the Board's discretion, directors may receive a greater portion of the foregoing amounts, up to eighty percent (80%), in cash. All such stock shall be fully vested at the time of issuance and is valued at its fair market value on the date of issuance. Non-employee directors are also reimbursed for their direct expenses associated with their attendance at board meetings.

## Non-Employee Director Compensation Table

The following table provides information for non-employee directors who served during Fiscal 2012.

Name	<b>Fees Earned or Paid in</b>			
	<b>Cash (\$)</b>	<b>Stock Awards (1) (\$)</b>	<b>Option Awards (2) (\$)</b>	<b>Total (\$)</b>
Douglas Hickey	35,000	35,000	9,960	79,960
Evgeny Miroshnichenko	4,022	4,022	-	8,044
Evgeny Rasskazov	4,022	4,022	-	8,044
Gary Willis	35,000	35,000	9,960	79,960
George McNamee	72,000	18,000	12,450	102,450
Larry Garberding	32,500	32,500	12,450	77,450
Maureen Helmer	30,000	30,000	8,300	68,300

(1) This column represents the dollar amount recognized for financial statement reporting purposes with respect to the 2012 fiscal year for the fair value of restricted stock earned in 2011. Fair value is calculated using the closing price of Plug Power stock on the date of grant. Stock awards granted to directors vest immediately.

- a. Douglas Hickey has no unexercised stock awards. Stock awards earned by Mr. Hickey in 2012 include 6,890 shares granted on April 2, 2012 with a grant date fair value of \$1.27, 7,675 shares granted July 2, 2012 with a grant date fair value of \$1.14, 10,542 shares granted October 1, 2012 with a grant date fair value of \$0.83, and 17,500 shares granted on January 2, 2013 with a grant date fair value of \$0.50.
- b. Evgeny Miroshnichenko has no unexercised stock awards. Stock awards earned by Mr. Miroshnichenko in 2012 include 8,043 shares granted on January 2, 2013 with a grant date fair value of \$0.50.
- c. Evgeny Rasskazov has no unexercised stock awards. Stock awards earned by Mr. Rasskazov in 2012 include 8,043 shares granted on January 2, 2013 with a grant date fair value of \$0.50.
- d. Gary Willis has no unexercised stock awards. Stock awards earned by Mr. Willis in 2012 include 6,890 shares granted on April 2, 2012 with a grant date fair value of \$1.27, 7,675 shares granted July 2, 2012 with a grant date fair value of \$1.14, 10,542 shares granted October 1, 2012 with a grant date fair value of \$0.83, and 17,500 shares granted on January on 2, 2013 with a grant date fair value of \$0.50.
- e. George McNamee has no unexercised stock awards. Stock awards earned by Mr. McNamee in 2012 include 3,543 shares granted on April 2, 2012 with a grant date fair value of \$1.27, 3,947 shares granted July 2, 2012 with a grant date fair value of \$1.14, 5,422 shares granted October 1, 2012 with a grant date fair value of \$0.83, and 9,000 shares granted on January on 2, 2013 with a grant date fair value of \$0.50.
- f. Larry Garberding has no unexercised stock awards. Stock awards earned by Mr. Garberding in 2012 include 6,398 shares granted on April 2, 2012 with a grant date fair value of \$1.27, 7,127 shares granted July 2, 2012 with a grant date fair value of \$1.14, 9,789 shares granted October 1, 2012 with a grant date fair value of \$0.83, and 16,250 shares granted on January on 2, 2013 with a grant date fair value of \$0.50.
- g. Maureen Helmer has no unexercised stock awards. Stock awards earned by Ms. Helmer in 2012 include 5,906 shares granted on April 2, 2012 with a grant date fair value of \$1.27, 6,579 shares granted July 2, 2012 with a grant date fair value of \$1.14, 9,036 shares granted October 1, 2012 with a grant date fair value of \$0.83, and 15,000 shares granted on January on 2, 2013 with a grant date fair value of \$0.50.



(2) This column represents the aggregate grant date fair value of the option award computed in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures. For additional information on the valuation assumptions with respect to option awards, refer to note 14 of the Company's consolidated financial statements in the Form 10-K for the year ended December 31, 2011, as filed with the SEC. These amounts reflect the Company's accounting expense for these awards, and do not correspond to the actual value that will be recognized by the named executives.

- a. Douglas Hickey has 81,000 unexercised option awards including 55,336 unvested awards. Option awards for 2012 include 12,000 shares granted on May 16, 2012 with a grant date fair value of \$0.83.
- b. Gary Willis has 101,600 unexercised option awards including 55,336 unvested awards. Option awards for 2012 include 12,000 shares granted on May 16, 2012 with a grant date fair value of \$0.83.
- c. George McNamee has 118,500 unexercised option awards including 58,336 unvested awards. Option awards for 2012 include 15,000 shares granted on May 16, 2012 with a grant date fair value of \$0.83.
- d. Larry Garberding has 106,000 unexercised option awards including 58,336 unvested awards. Option awards for 2012 include 15,000 shares granted on May 16, 2012 with a grant date fair value of \$0.83.
- e. Maureen Helmer has 98,200 unexercised option awards including 53,336 unvested awards. Option awards for 2012 include 15,000 shares granted on May 16, 2012 with a grant date fair value of \$0.83.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

We are party to a Standstill and Support Agreement with JSC INTER RAO Capital, or INTER RAO Capital, which, as of November 19, 2012, directly owned (through nominee accounts) approximately 11.8% of the outstanding shares of our common stock. The Standstill and Support Agreement provides for certain voting support arrangements, director designation rights and standstill arrangements.

Our Board of Directors' related party transaction policy requires that our General Counsel, together with outside counsel as necessary, evaluate potential transaction before we enter into any agreements with a related party. Certain transactions may require the Board of Directors' and its Audit Committee's approval. The policy defines a related party as: our directors or executive officers, our director nominees, security holders known to Plug Power to beneficially own more than 5% of any class of Plug Power's voting securities, or the immediate family members of any of the persons enumerated above.

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1 For purposes of this policy, a person's immediate family should include such person's child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law or any other person (other than a tenant or employee) sharing the household of such person.



## PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of Common Stock as of September 30, 2012, before and after giving effect to this offering (except as otherwise indicated) by:

- all persons known by us to have beneficially owned 5% or more of the Common Stock;
- each of our directors;
- the named executive officers; and
- all directors and executive officers as a group.

Beneficial ownership is determined in accordance with Rule 13d-3 under the Exchange Act. Except as otherwise indicated in the footnotes to the following table, we believe, based on the information provided to us, that the persons named in the following table have sole vesting and investment power with respect to the shares they beneficially own, subject to applicable community property laws. The beneficial ownership of the stockholders listed below is based on publicly available information and from representations of such stockholders.

In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included the shares the person has the right to acquire within 60 days of the date above, including through the exercise of any option, warrant or other right or conversion of any security. The shares that a stockholder has the right to acquire within 60 days, however, are not included in the computation of the percentage ownership of any other stockholder.

We have based our calculation of the percentage of beneficial ownership prior to this offering on 38,197,255 shares of our common stock deemed to be outstanding as of September 30, 2012, including 165,906 shares of common stock in treasury. The calculation of the percentage of beneficial ownership after this offering gives effect to the issuance by us of \_\_\_\_\_ shares of common stock and warrants to purchase \_\_\_\_\_ shares of common stock in this offering. The percentage ownership information assumes no exercise of the underwriter's over-allotment option.

<u>Name and Address of Beneficial Owner</u>	<u>Shares Beneficially Owned</u>		
	<u>Number</u>	<u>Percentage (%) of</u>	
		<u>Voting Power</u>	<u>Before this Offering</u>
Austin W. Marxe & David M. Greenhouse (1)	8,511,620	23.8%	
JSC INTER RAO Capital (2)	4,462,693	11.75%	
Entities affiliated with Interinvest Corporation Inc. (3)	3,115,845	8.2%	
George C. McNamee (4)	136,671	*	
Andrew Marsh (5)	123,712	*	
Gary K. Willis (6)	52,631	*	
Larry G. Garberding (7)	52,375	*	
Gerald A. Anderson (8)	50,296	*	
Maureen O. Helmer (9)	48,932	*	
Gerard L. Conway, Jr. (10)	36,127	*	
Erik J. Hansen (11)	31,795	*	
Adrian Corless (12)	29,987	*	
Douglas T. Hickey (13)	9,375	*	
Evgeny Rasskazov (2)	-	*	
Evgeny Miroshnichenko (2)	-	*	
All executive officers and directors as a group (12 persons)	571,901	1.5%	

\* Represents less than 1% of the outstanding shares of Common Stock

- 1) Information is based on a Schedule 13D filed with the SEC on April 2, 2012 by Austin W. Marx & David M. Greenhouse, which is located at 527 Madison Ave., New York, New York 10022. Of the 8,511,620 shares beneficially owned, Austin W. Marx & David M. Greenhouse share sole voting power over 8,511,620 shares. According to the 13D, Messrs. Marx and Greenhouse also beneficially own warrants to purchase 2,120,000 shares of common stock (which number of shares has been increased to 2,801,762 as a result of an anti-dilution adjustment), but such warrants are not currently exercisable and are not included in the 8,511,620 shares reflected in the table.
- 2) The address for JSC INTER RAO Capital, or INTER RAO Capital, is 27 Bolshaya Pirogovskaya Street, Moscow, 119435, Russia. The Company and INTER RAO Capital are parties to a Standstill and Support Agreement, which provides for certain voting support arrangements, director designation rights and standstill arrangements. In a Schedule 13D filed with the SEC on November 20, 2012, INTER RAO Capital reported that it is a wholly-owned subsidiary of Joint Stock Co INTER RAO UES, or INTER RAO UES. By virtue of its ownership interest in INTER RAO Capital, INTER RAO UES may be deemed to have shared power to vote or direct the voting of and the shared power to dispose or direct the disposition of the Common Stock owned by INTER RAO Capital. the power to vote, or direct the voting of, and the power to dispose, or direct the disposition of, the shares of Common Stock held by OGK-3, and as such could be deemed the beneficial owner of such shares of Common Stock. Mr. Evgeny Rasskazov, one of our directors, is the Director for Strategic Development for INTER RAO UES, and Mr. Evgeny Miroschnichenko, another of our directors, is the Head of Department for target capital structure for INTER RAO UES.
- 3) Consists of (i) 2,664,345 shares held by Interinvest Corporation Inc., (ii) 1,500 shares held by Interinvest Consulting Corporation of Canada Limited, (iii) 1,500 shares held by Interinvest (Bermuda) Ltd. and (iv) 40,000 shares held by Hans P. Black. Information is based on a Schedule 13D/A filed with the SEC on October 4, 2012. Each of these persons may be deemed to have the shared power to vote or to direct the vote of (and the shared power to dispose of or direct the disposition of) the 3,115,845 shares of Common Stock held. The principal business address of Interinvest Corporation Inc. is 192 South Street, Suite 600, Boston, MA 02111. The principal business address of Interinvest (Bermuda) Ltd. is The LOM Bldg, 27 Reid Street, Hamilton HM 11, Bermuda. The principal business address of Interinvest Consulting Corporation of Canada Limited is 3655 rue Redpath, Montreal, QC H3G 2W8. The principal business address of Hans P. Black is 3655 rue Redpath, Montreal, QC H3G 2W8.
- 4) Includes 40,500 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$22.46.
- 5) Includes 75,779 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$21.79.
- 6) Includes 24,725 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$23.08.
- 7) Includes 27,500 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$27.09.
- 8) Includes 29,314 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$12.14.
- 9) Includes 23,200 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$23.71.

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- 10) Includes 24,615 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$22.52.
- 11) Includes 18,915 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$6.81.
- 12) Includes 19,615 share of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$12.66.
- 13) Includes 5,000 shares of Common Stock issuable upon exercise of outstanding options at a weighted average exercise price of \$67.22.

# DESCRIPTION OF SECURITIES

## General

Our authorized capital stock consists of 245,000,000 shares of common stock, \$0.01 par value per share, and 5,000,000 shares of preferred stock, \$0.01 par value per share. As of December 31, 2012, there were 38,293,987 shares of our common stock outstanding and no shares of preferred stock outstanding. In this offering, we are offering \_\_\_\_\_ shares of common stock and warrants to purchase up to \_\_\_\_\_ shares of common stock. Each share of common stock is being sold together with \_\_\_\_\_ of a warrant to purchase one share of common stock at an exercise price of \$ \_\_\_\_\_. The shares of common stock and warrants will be issued separately. This prospectus also relates to the offering of shares of our common stock upon exercise, if any, of the warrants.

The following summary description of our securities is based on the provisions of our amended and restated certificate of incorporation and amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law. This information is qualified entirely by reference to the applicable provisions of our amended and restated certificate of incorporation, amended and restated bylaws and the Delaware General Corporation Law. For information on how to obtain copies of our amended and restated certificate of incorporation and amended and restated bylaws, which are exhibits to the registration statement of which this prospectus is a part, see [Where You Can Find Additional Information](#) and [Incorporation of Certain Information by Reference](#).

## Common Stock

Holders of shares of our common stock are entitled to one vote for each share held of record on all matters to be voted on by stockholders, including the election of directors. Our amended and restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Because of this, the holders of a majority of our common stock entitled to vote in any election of directors can elect all of the directors standing for election. Subject to the preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock. Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

## Preferred Stock

Pursuant to our amended and restated certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or NASDAQ rules), to designate and issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series, and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

## **Delaware Anti-Takeover Law and Provisions of our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws**

*Delaware Anti-Takeover Law.* We are subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits a public Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66- 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and

the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or any entity or person affiliated with or controlling or controlled by the entity or person.

*Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws.* Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;

provide that the authorized number of directors may be changed only by resolution of the board of directors;

provide that all vacancies, including newly created directorships, may, except as otherwise required by law and subject to the rights of the holders of any series of preferred stock, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;

divide our board of directors into three classes;

require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;

provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and also specify requirements as to the form and content of a stockholder's notice;

do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose); and

provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officer, our president or by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require approval by the holders of at least 66- 2/3% of our then outstanding common stock.



## Shareholder Rights Plan

On June 22, 2009, we adopted a shareholder rights plan, the purpose of which is, among other things, to enhance our Board's ability to protect stockholder interests and to ensure that stockholders receive fair treatment in the event any coercive takeover attempt is made in the future. The shareholder rights plan was amended on March 23, 2012. The shareholder rights plan could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, us or a large block of our common stock. The following summarizes material terms of the shareholder rights plan and the associated preferred share purchase rights. This description is subject to the detailed provisions of, and is qualified by reference to, the shareholder rights agreement which has been filed as an exhibit to our Registration Statement on Form 8-A dated June 24, 2009, and the amendment to the shareholder rights agreement, which has been filed as an exhibit to our Registration Statement on Form 8-A/A, dated March 26, 2012, each as previously filed with the Commission.

Each outstanding share of our common stock evidences one preferred share purchase right. Under the terms of the shareholder rights agreement, each preferred share purchase right entitles the registered holder to purchase from us one ten-thousandth of a share (each, a unit) of our Series A Junior Participating Cumulative Preferred Stock, par value \$0.01 per share, at a cash exercise price of \$6.50 per unit, subject to adjustment. Initially, the preferred share purchase rights are not exercisable and are attached to and trade with all shares of common stock. The preferred share purchase rights will separate from the common stock and will become exercisable upon the earlier of:

the close of business on the tenth calendar day following the first public announcement that a person or group of affiliated or associated persons has acquired beneficial ownership of 15% or more of the outstanding shares of common stock, other than as a result of repurchases of stock by us or certain inadvertent actions by a stockholder, or  
the close of business on the tenth business day (or such later day as the Board of Directors may determine) following the commencement of a tender offer or exchange offer that could result upon its consummation in a person or group becoming the beneficial owner of 15% or more of the outstanding shares of common stock.

With respect to any person who beneficially owned 15% or more of the outstanding shares of common stock as of June 23, 2009, such person's share ownership will not cause the preferred share purchase rights to be exercisable unless:

such person acquires beneficial ownership of shares of common stock representing more than an additional 0.5% of the outstanding shares of common stock held by such person as of June 23, 2009; or  
if after June 23, 2009 such person reduces its beneficial ownership of shares of common stock and such person subsequently acquires beneficial ownership of more than an additional 0.5% of the common stock.

In the event that a person or group of affiliated or associated persons has acquired beneficial ownership of 15% or more of the outstanding shares of common stock, proper provision will be made so that each holder of a preferred share purchase right (other than an acquiring person or its associates or affiliates, whose preferred share purchase rights shall become null and void) will thereafter have the right to receive (a subscription right) upon exercise, in lieu of a number of units, that number of shares of our common stock (or, in certain circumstances, including if there are insufficient shares of common stock to permit the exercise in full of the preferred share purchase rights, units of preferred stock, other securities, cash or property, or any combination of the foregoing) having a market value of two times the exercise price of the preferred share purchase rights.

In the event that, at any time following the date that a person or group of affiliated or associated persons has acquired beneficial ownership of 15% or more of the outstanding shares of common stock:

we consolidate with, or merge with and into, any other person, and we are not the continuing or surviving corporation,

any person consolidates with us, or merges with and into us and we are the continuing or surviving corporation of such merger and, in connection with such merger, all or part of the shares of common stock are changed into or exchanged for stock or other securities of any other person or cash or any other property, or

50% or more of our assets or earning power is sold, mortgaged or otherwise transferred, each holder of a preferred share purchase right (other than an acquiring person or its associates or affiliates, whose preferred share purchase rights shall become null and void) will thereafter have the right to receive (a merger right), upon exercise, common stock of the acquiring company having a market value equal to two times the exercise price of the preferred share purchase rights. The holder of a preferred share purchase right will continue to have this merger right whether or not such holder has exercised its subscription right. Preferred share purchase rights that are or were beneficially owned by an acquiring person may (under certain circumstances specified in the shareholder rights agreement) become null and void.

The preferred share purchase rights may be redeemed in whole, but not in part, at a price of \$0.001 per preferred share purchase right (payable in cash, common stock or other consideration deemed appropriate by the Board of Directors) by the Board of Directors only until the earlier of:

the time at which any person becomes an acquiring person; or  
the expiration date of the shareholder rights agreement.

Immediately upon the action of the Board of Directors ordering redemption of the preferred share purchase rights, the preferred share purchase rights will terminate and thereafter the only right of the holders of preferred share purchase rights will be to receive the redemption price.

The shareholder rights agreement requires an independent committee of the Board of Directors to review at least once every three years whether maintaining the shareholder rights agreement continues to be in the best interests of our stockholders.

The shareholder rights agreement may be amended by the Board of Directors in its sole discretion at any time prior to the time at which any person becomes an acquiring person. After such time the Board of Directors may, subject to certain limitations set forth in the shareholder rights agreement, amend the shareholder rights agreement only to cure any ambiguity, defect or inconsistency, to shorten or lengthen any time period, or to make changes that do not adversely affect the interests of preferred share purchase rights holders (excluding the interests of an acquiring person or its associates or affiliates). In addition, the Board of Directors may at any time prior to the time at which any person becomes an acquiring person, amend the shareholder rights agreement to lower the threshold at which a person becomes an acquiring person to not less than the greater of:

the sum of 0.001% and the largest percentage of the outstanding common stock then owned by any person,  
and  
10%.

Until a preferred share purchase right is exercised, the holder will have no rights as our stockholder (beyond those as an existing stockholder), including the right to vote or to receive dividends. While the distribution of the preferred share purchase rights will not be taxable to stockholders or to us, stockholders may, depending upon the circumstances, recognize taxable income in the event that the preferred share purchase rights become exercisable for units, other securities of ours, other consideration or for common stock of an acquiring company.

The preferred share purchase rights will expire at the close of business on June 23, 2019, unless previously redeemed or exchanged by us.

We amended our shareholder rights agreement on March 23, 2012 to exempt affiliates and associates of AWM Investments Company, including but not limited to Special Situations Technology Fund, L.P., Special Situations Technology Fund II, L.P., and Special Situations Private Equity Fund, L.P. (collectively, SSF), from purchasing shares of common stock in an underwritten offering of our common stock that was consummated on March 28, 2012, so long as such purchasers and their affiliates and associates did not at any time beneficially own shares of our common stock equaling or exceeding three percent more than the percentage of the then outstanding shares of common stock beneficially owned by such purchasers and their affiliates and associates immediately following the closing of the offering. As a result of the amendment, such ownership by any such purchasers did not trigger the exercisability of the preferred share purchase rights under the shareholder rights agreement that would give each holder the right to receive upon exercise one ten-thousandth of a share of our Series A Junior Participating Cumulative

Preferred Stock.

## **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc. The transfer agent and registrar's address is Broadridge Corporate Issuer Solutions, Inc., P.O. Box 1342, Brentwood NY 11717.

## Warrants

The material terms and provisions of the warrants being issued in this offering are summarized below. The following description is subject to, and qualified in its entirety by, the form of common stock purchase warrant, which will be filed as an exhibit to the registration statement, of which this prospectus is a part. You should review a copy of the form of common stock purchase warrant for a complete description of the terms and conditions applicable to the warrants.

*Term.* The warrants are exercisable beginning on the date of original issuance and at any time up to the date that is 5 years after such date.

*Anti-Dilution Protection.* The warrants contain weighted average anti-dilution protection upon the issuance of any common stock, securities convertible into common stock or certain other issuances at a price below the then-existing exercise price of the warrants, with certain exceptions. The terms of the warrants, including these antidilution protections, may make it difficult for us to raise additional capital at prevailing market terms in the future.

*Exercise Price.* The exercise price of the warrants is \$      per share of common stock. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, stock issuances, reclassifications or similar events affecting our common stock, as well as the anti-dilution protection described above.

*Exercisability.* Holders may exercise the warrants beginning on the date of issuance and at any time during the applicable term of the warrant. The warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the warrant to the extent that the holder would own more than 4.9% of the outstanding common stock after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's warrants up to 9.9% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants.

*Cashless Exercise.* If, at the time a holder exercises its warrant, there is no effective registration statement registering, or the prospectus contained therein is not available for an issuance of the shares underlying the warrant to the holder, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the warrant.

*Transferability.* Subject to applicable laws and the restriction on transfer set forth in the warrant, the warrant may be transferred at the option of the holder upon surrender of the warrant to us together with the appropriate instruments of transfer.

*Authorized Shares.* During the period the warrants are outstanding, we will reserve from its authorized and unissued common stock a sufficient number of shares to provide for the issuance of shares of common stock underlying the warrants upon the exercise of the warrants.

*Exchange Listing.* We do not plan on making an application to list the warrants on the NASDAQ Capital Market, any national securities exchange or other nationally recognized trading system.

*Fundamental Transactions.* In the event of any fundamental transaction, as described in the warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a warrant, the holder shall have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of Plug Power, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the warrant is exercisable immediately prior to such event. In addition, in the event of a fundamental transaction in which the amount of the alternate consideration is less than the exercise price of the warrant, then we or any successor entity shall pay at the holder's option, exercisable at any time concurrently with or within ninety (90) days after the consummation of the fundamental transaction, an amount of cash equal to the value of the warrant as determined in accordance with the Black Scholes option pricing model.

*Right as a Stockholder.* Except as otherwise provided in the warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their warrants.

*Waivers and Amendments.* Any term of the warrants issued in the offering may be amended or waived with our written consent and the written consent of the holder of the warrant.

*Enforceability of Rights by Holders of Warrants.* Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

## UNDERWRITING

We have entered into an underwriting agreement with Roth Capital Partners, LLC with respect to the shares of common stock and warrants, subject to this offering. Subject to certain conditions, we have agreed to sell to the underwriter, and the underwriter has agreed to purchase, the number of shares of common stock and corresponding warrants provided below opposite its name.

<b>Underwriter</b>	<b>Number of Shares of Common Stock</b>	<b>Number of Warrants</b>
Roth Capital Partners, LLC		

The underwriter is offering the shares of common stock and corresponding warrants, subject to its acceptance of the shares of common stock and corresponding warrants from us and subject to prior sale. The underwriting agreement provides that the obligation of the underwriter to pay for and accept delivery of the shares of common stock and corresponding warrants offered by this prospectus is subject to the approval of certain legal matters by its counsel and to certain other conditions. The underwriter is obligated to take and pay for all of the shares of common stock and warrants if any such shares and warrants are taken. However, the underwriter is not required to take or pay for the shares of common stock and/or warrants covered by the underwriter's over-allotment option described below.

### Over-Allotment Option

We have granted the underwriter an option, exercisable for 45 days from the date of this prospectus, to purchase up to an aggregate of \_\_\_\_\_ additional shares of common stock and/or additional warrants to purchase up to \_\_\_\_\_ shares of common stock to cover over-allotments, if any, at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. The underwriter may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock and the warrants offered by this prospectus.

### Commission and Expenses

The underwriter has advised us that it proposes to offer the shares of common stock and warrants to the public at the initial public offering prices set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of \$ \_\_\_\_\_ per share of common stock and corresponding warrant. After this offering, the initial public offering price and concession may be changed by the underwriter. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus. The per share of common stock and corresponding warrant are offered by the underwriter as stated herein, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. The underwriter has informed us that it does not intend to confirm sales to any accounts over which it exercises discretionary authority.



The following table shows the underwriting discounts and commissions payable to the underwriter by us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriter's over-allotment option to purchase additional shares and/or warrants.

	Per Share of Common Stock and Corresponding Warrant	Total Without Exercise of Over-Allotment Option	Total With Exercise of Over-Allotment Option
Public offering price	\$	\$	\$
Underwriting discounts and commissions payable by us	\$	\$	\$

We estimate that expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately \$ . We have agreed to reimburse the underwriter for certain out-of-pocket expenses not to exceed \$50,000 for all expenses, including legal fees and expenses.

## Indemnification

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act, and liabilities arising from breaches of representations and warranties contained in the underwriting agreement, or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

## Lock-up Agreements

We, our officers and certain directors have agreed, subject to certain exceptions, for a period of 90 days after the date of the underwriting agreement, not to offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of, directly or indirectly any shares of common stock or any securities convertible into or exchangeable for our common stock either owned as of the date of the underwriting agreement or thereafter acquired without the prior written consent of the underwriter. This 90-day period may be extended if (1) during the last 17 days of the 90-day period, we issue an earnings release or material news or a material event regarding us occurs or (2) prior to the expiration of the 90-day period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day period, then the period of such extension will be 18 days, beginning on the issuance of the earnings release or the occurrence of the material news or material event. If after any announcement described in clause (2) of the preceding sentence, we announce that we will not release earnings results during the 16-day period, the lock-up period shall expire the later of the expiration of the 90-day period and the end of any extension of such period made pursuant to clause (1) of the preceding sentence. The underwriter may, in its sole discretion and at any time or from time to time before the termination of the lock-up period, without notice, release all or any portion of the securities subject to lock-up agreements.

## Electronic Distribution

This prospectus in electronic format may be made available on websites or through other online services maintained by the underwriter, or by its affiliates. Other than this prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of this prospectus, the related registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

## Price Stabilization, Short Positions and Penalty Bids

In connection with the offering the underwriter may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any covered short position by either exercising its over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of shares of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If the underwriter sells more shares than could be covered by the over-allotment

option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

- Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. Neither we nor the underwriter makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriter makes any representations that the underwriter will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

## Listing and Transfer Agent

Our common stock is listed on the NASDAQ Capital Market and trades under the symbol PLUG. The transfer agent of our common stock is Broadridge Corporate Issuer Solutions, Inc.

We do not plan on making an application to list the warrants on the NASDAQ Capital Market, any national securities exchange or other nationally recognized trading system. We will act as the registrar and transfer agent for the warrants.

## Other

The underwriter and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services it has received and, may in the future receive, customary fees. Except for services provided in connection with this offering, the underwriter has not provided any investment banking or other financial services during the 180-day period preceding the date of this prospectus and we do not expect to retain the underwriter to perform any investment banking or other financial services for at least 90 days after the date of this prospectus.

## Notice to Investors

### Notice to Investors in the United Kingdom

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State ) an offer to the public of any securities which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any such securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- (b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- (c) by the underwriter to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive); or
- (d) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of these securities shall result in a requirement for the publication by the issuer or the underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer to the public in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any such securities to be offered so as to enable an investor to decide to purchase any such securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in

that Member State and the expression Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

The underwriter has represented, warranted and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the FSMA)) received by it in connection with the issue or sale of any of the securities in circumstances in which section 21(1) of the FSMA does not apply to the issuer; and

(b) it has complied with and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

## European Economic Area

In particular, this document does not constitute an approved prospectus in accordance with European Commission's Regulation on Prospectuses no. 809/2004 and no such prospectus is to be prepared and approved in connection with this offering. Accordingly, in relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (being the Directive of the European Parliament and of the Council 2003/71/EC and including any relevant implementing measure in each Relevant Member State) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of securities to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to such securities which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of securities to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in the last annual or consolidated accounts; or
- in any other circumstances which do not require the publication by the Issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer of securities to the public in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State. For these purposes the shares and warrants offered hereby are securities.

## LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon by Goodwin Procter LLP, Boston, Massachusetts. Certain legal matters will be passed upon for the underwriter by Lowenstein Sandler LLP, New York, New York.

## EXPERTS

The consolidated financial statements of Plug Power Inc. and subsidiaries as of December 31, 2011 and 2010, and for each of the years in the three-year period ended December 31, 2011, have been included herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing.

The audit report covering the December 31, 2011 consolidated financial statements refers to a change in the method of accounting for revenue arrangements with multiple-deliverables entered into or substantially modified after January 1, 2010.

## WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of a registration statement that we have filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules of the SEC. We are a public company and file proxy statements, annual, quarterly and special reports and other information with the SEC. The registration statement, such reports and other information can be inspected and copied at the Public Reference Room of the SEC located at 100 F Street, N.E., Washington D.C. 20549. Copies of such materials, including copies of all or any portion of the registration statement, can be obtained from the Public Reference Room of the SEC at prescribed rates. You can call the SEC at 1-800-SEC-0330 to obtain information on the operation of the Public Reference Room. Such materials may also be accessed electronically by means of the SEC's home page on the Internet ([www.sec.gov](http://www.sec.gov)).

**PLUG POWER INC.**  
**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

<b>Audited Consolidated Financial Statements:</b>	<b>Page</b>
<u>Report of Independent Registered Public Accounting Firm</u>	F-1
<u>Consolidated Balance Sheets as of December 31, 2011 and 2010</u>	F-2
<u>Consolidated Statements of Operations for the years ended December 31, 2011, 2010 and 2009</u>	F-3
<u>Consolidated Statements of Cash Flows for the years ended December 31, 2011, 2010 and 2009</u>	F-4
<u>Consolidated Statements of Stockholders' Equity and Comprehensive Loss for the years ended December 31, 2011, 2010 and 2009</u>	F-5
<u>Notes to Consolidated Financial Statements</u>	F-6
<u>Schedule II Valuation and Qualifying Accounts</u>	F-35
<b>Unaudited Consolidated Interim Financial Statements:</b>	<b>Page</b>
<u>Condensed Consolidated Balance Sheets as of September 30, 2012 and December 31, 2011</u>	FF-1
<u>Condensed Consolidated Statements of Operations for the three months and nine months ended September 30, 2012 and 2011</u>	FF-2
<u>Condensed Consolidated Statements of Comprehensive Income (Loss) for the three months and nine months ended September 30, 2012 and 2011</u>	FF-3
<u>Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2012 and 2011</u>	FF-4
<u>Notes to Condensed Consolidated Financial Statements</u>	FF-5

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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 (the Company) as of December 31, 2011 and 2010, and the related consolidated statements of operations, cash flows, and stockholders' equity and comprehensive loss for each of the years in the three-year period ended December 31, 2011. In connection with our audits of the consolidated financial statements, we also have audited the consolidated financial statement schedule II, Valuation and Qualifying Accounts. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule 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 as of December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related consolidated financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

As discussed in Note 18 to the consolidated financial statements, the Company changed its method of accounting for revenue arrangements with multiple-deliverables entered into or substantially modified after January 1, 2010 to adopt Accounting Standards Update No. 2009-13 on Topic 605, *Revenue Recognition Multiple-Deliverable Revenue Arrangements*.

/S/ KPMG LLP

Albany, New York

March 30, 2012

F-1

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**PLUG POWER INC. AND SUBSIDIARIES****CONSOLIDATED BALANCE SHEETS**

	December 31, 2011	December 31, 2010
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 13,856,893	\$ 10,955,403
Available-for-sale securities	-	10,403,315
Accounts receivable, less allowance of \$0 in 2011 and \$10,160 in 2010	13,388,909	4,196,361
Inventory	10,354,707	10,539,116
Assets held for sale	-	1,000,000
Prepaid expenses and other current assets	1,894,014	1,584,466
<b>Total current assets</b>	<b>39,494,523</b>	<b>38,678,661</b>
Restricted cash	-	525,000
Property, plant and equipment, net	8,686,840	9,838,631
Investment in leased property, net	-	263,239
Intangible assets, net	7,474,636	9,871,394
<b>Total assets</b>	<b>\$ 55,655,999</b>	<b>\$ 59,176,925</b>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 4,668,721	\$ 3,560,048
Accrued expenses	3,172,998	4,336,229
Product warranty reserve	1,210,909	862,480
Borrowings under line of credit	5,405,110	-
Current portion long term debt	-	9,956
Deferred revenue	2,505,175	2,452,840
Other current liabilities	80,000	1,901,372
<b>Total current liabilities</b>	<b>17,042,913</b>	<b>13,122,925</b>
Common stock warrant liability	5,320,990	-
Deferred revenue	3,036,829	1,896,910
Other liabilities	1,219,602	1,243,728
<b>Total liabilities</b>	<b>26,620,334</b>	<b>16,263,562</b>
Stockholders' equity:		
Common stock, \$0.01 par value per share; 245,000,000 shares authorized;		
Issued (including shares in treasury):		
22,924,411 at December 31, 2011 and 13,369,924 at December 31, 2010	229,244	133,699
Additional paid-in capital	784,213,871	770,863,164
Accumulated other comprehensive income	928,744	965,868
Accumulated deficit	(754,783,812)	(727,329,858)
Less common stock in treasury, at cost:		
165,906 shares at December 31, 2011 and 180,449 shares at December 31, 2010	(1,552,382)	(1,719,510)
<b>Total stockholders' equity</b>	<b>29,035,665</b>	<b>42,913,363</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$ 55,655,999</b>	<b>\$ 59,176,925</b>

See accompanying notes to consolidated financial statements.

F-2

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## PLUG POWER INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF OPERATIONS

For the years ended December 31, 2011, 2010 and 2009

	Twelve months ended		
	2011	December 31,	
		2010	2009
Product and service revenue	\$ 23,223,265	\$ 15,738,841	\$ 4,832,773
Research and development contract revenue	3,886,114	3,597,870	7,459,783
Licensed technology revenue	516,563	135,938	-
Total revenue	27,625,942	19,472,649	12,292,556
Cost of product and service revenue	30,669,602	23,111,151	7,246,453
Cost of research and development contract revenue	6,232,210	6,370,797	12,433,361
Research and development expense	5,655,748	12,901,170	16,324,373
Selling, general and administrative expenses	14,545,965	25,572,364	15,426,806
Gain on sale of assets	(673,358)	(3,217,594)	-
Amortization of intangible assets	2,322,876	2,263,627	2,132,333
Operating loss	(31,127,101)	(47,528,866)	(41,270,770)
Interest and other income and net realized losses			
from available-for-sale securities	248,430	1,056,932	1,689,299
Change in fair value of common stock warrant liability	3,447,153	-	-
Change in fair value of auction rate securities repurchase agreement -		(5,977,822)	(4,246,524)
Net trading gain	-	5,977,822	4,246,524
Interest and other expense and foreign currency gain (loss)	(22,436)	(486,987)	(1,127,081)
Net loss	\$ (27,453,954)	\$ (46,958,921)	\$ (40,708,552)
Loss per share:			
Basic and diluted	\$ (1.46)	\$ (3.58)	\$ (3.15)
Weighted average number of common shares			
outstanding	18,778,066	13,123,162	12,911,066

Note Share and per share information for the prior periods has been retroactively adjusted to reflect the May 19, 2011 one-for-ten reverse stock split of the Company's common stock.

See accompanying notes to consolidated financial statements.

F-3

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## PLUG POWER INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

For the years ended December 31, 2011, 2010 and 2009

	Twelve months ended December 31,		
	2011	2010	2009
<b>Cash Flows From Operating Activities:</b>			
Net loss	\$ (27,453,954)	\$ (46,958,921)	\$ (40,708,552)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation of property, plant and equipment, and investment in leased property	2,322,876	4,969,263	3,634,668
Amortization of intangible assets	2,322,876	2,263,627	2,132,333
Stock-based compensation	1,452,259	1,174,576	1,928,501
Loss on disposal of property, plant and equipment	308,621	86,794	504,397
(Gain) loss on sale of leased assets	(673,358)	290,491	-
Provision for bad debts	-	10,160	92,560
Realized loss on available for sale securities	22,421	-	-
Net unrealized gains on trading securities	-	(5,977,822)	(4,246,524)
Change in fair value of auction rate debt securities repurchase agreement	-	5,977,822	4,246,524
Gain on repayable government assistance	-	-	(324,300)
Change in fair value of common stock warrant liability	(3,447,153)	-	-
Changes in operating assets and liabilities:			
Accounts receivable	(9,192,901)	(2,193,325)	65,440
Inventory	1,438,195	(4,409,582)	(95,935)
Prepaid expenses and other current assets	(310,089)	1,624,422	(684,277)
Accounts payable, accrued expenses, product warranty reserve and other liabilities	(1,010,536)	2,618,994	(3,944,407)
Deferred revenue	1,192,255	(246,968)	(828,675)
Net cash used in operating activities	(33,310,067)	(40,770,469)	(38,228,247)
<b>Cash Flows From Investing Activities:</b>			
Purchase of property, plant and equipment	(1,326,144)	(1,100,478)	(532,960)
Investment in leased property, net	-	(2,233,334)	(2,461,526)
Restricted cash	525,000	1,740,405	(2,265,405)
Proceeds from disposal of property, plant and equipment	46,650	121,564	223,000
Proceeds from sale of leased assets	673,358	3,221,168	-
Proceeds from trading securities	-	59,375,001	3,500,000
Proceeds from maturities and sales of available-for-sale securities	10,399,396	79,754,039	137,555,930
Purchases of available-for-sale securities	-	(42,311,734)	(161,803,208)
Net cash provided by (used in) investing activities	10,318,260	98,566,631	(25,784,169)
<b>Cash Flows From Financing Activities:</b>			
Purchase of treasury stock	(158,492)	(441,506)	(534,418)
Proceeds from issuance of common stock and warrants	22,583,877	-	-
Proceeds from stock option exercises and employee stock purchase plan	-	-	76,493
Stock issuance costs	(1,891,378)	-	-

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Proceeds (repayment) of borrowings under line of credit	5,405,110	(59,375,000)	(3,500,000)
Proceeds from long-term debt	-	-	1,793,461
Principal payments on long-term debt	(9,956)	(1,561,371)	(229,602)
Net cash provided by (used in) financing activities	25,929,161	(61,377,877)	(2,394,066)
Effect of exchange rate changes on cash	(35,864)	(43,865)	142,965
Increase (decrease) in cash and cash equivalents	2,901,490	(3,625,580)	(66,263,517)
<b>Cash and cash equivalents, beginning of period</b>	10,955,403	14,580,983	80,844,500
<b>Cash and cash equivalents, end of period</b>	\$ 13,856,893	\$ 10,955,403	\$ 14,580,983

See accompanying notes to consolidated financial statements.



## PLUG POWER INC. AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY AND COMPREHENSIVE LOSS

For the years ended December 31, 2011, 2010 and 2009

	Common Stock		Additional Paid-in-Capital	Comprehensive Income (Loss)	Accumulated Other Treasury Stock	
	Shares	Amount			Shares	Amount
<b>December 31, 2008</b>	12,816,400	\$ 1,281,640	\$ 765,347,706	\$ (359,253)	40,211	\$ (743,586)
Net loss	-	-	-	-	-	-
Foreign currency translation gain	-	-	-	1,293,770	-	-
Unrealized loss on available-for-sale securities, net of reclassification	-	-	-	-	-	-
adjustments for realized net losses and gains	-	-	-	(131,308)	-	-
<b>Total comprehensive loss</b>						
Stock based compensation	221,900	22,190	2,264,858	-	-	-
Stock issued under employee stock purchase plan	20,824	2,083	196,008	-	-	-
Purchase of treasury stock	-	-	-	-	58,409	(534,418)
<b>December 31, 2009</b>	13,059,124	\$ 1,305,913	\$ 767,808,572	\$ 803,209	98,620	\$ (1,278,004)
Net loss	-	-	-	-	-	-
Foreign currency translation gain	-	-	-	276,959	-	-
Unrealized loss on available-for-sale securities, net of reclassification	-	-	-	-	-	-
adjustments for realized net losses and gains	-	-	-	(114,300)	-	-
<b>Total comprehensive loss</b>						
Stock based compensation	310,800	31,079	1,851,299	-	-	-
Reclassification adjustment - stock split	-	(1,203,293)	1,203,293	-	-	-
Purchase of treasury stock	-	-	-	-	81,829	(441,506)
<b>December 31, 2010</b>	13,369,924	\$ 133,699	\$ 770,863,164	\$ 965,868	180,449	\$ (1,719,510)
Net loss	-	-	-	-	-	-
Foreign currency translation loss	-	-	-	(55,626)	-	-
Unrealized loss on available-for-sale securities, net of reclassification	-	-	-	-	-	-
adjustments for realized net losses and gains	-	-	-	18,502	-	-
<b>Total comprehensive loss</b>						
Stock based compensation	221,737	2,217	1,848,330	-	833	(3,030)
Public offering common stock, net	9,332,750	93,328	11,831,027	-	-	-
Issuance of treasury shares	-	-	(328,650)	-	(35,000)	328,650
Purchase of treasury shares	-	-	-	-	19,624	(158,492)
<b>December 31, 2011</b>	22,924,411	\$ 229,244	\$ 784,213,871	\$ 928,744	165,906	\$ (1,552,382)

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Note Share and per share information for the prior periods has been retroactively adjusted to reflect the May 19, 2011 one-for-ten reverse stock split of the Company's common stock.

See accompanying notes to consolidated financial statements.

F-5

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Nature of Operations**

*Description of Business*

Plug Power Inc., or the Company, is a leading provider of alternative energy technology focused on the design, development, commercialization and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market.

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 liquid petroleum gas (LPG), 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 concentrate our efforts on developing, manufacturing and selling our hydrogen-fueled PEM GenDrive<sup>®</sup> products on commercial terms for industrial off-road (forklift or material handling) applications, with a focus on multi-shift high volume manufacturing and high throughput distribution sites.

We have previously invested in development and sales activities for low-temperature remote-prime power GenSys<sup>®</sup> products and our GenCore<sup>®</sup> product, which is a hydrogen fueled PEM fuel cell system to provide back-up power for critical infrastructure. While Plug Power will continue to service and support GenSys and/or GenCore products on a limited basis, our main focus is our GenDrive product line.

We sell our products worldwide, with a primary focus on North America, through our direct product sales force, original equipment manufacturers (OEMs) and their dealer networks. We sell to business, industrial and government customers.

We were organized in the State of Delaware on June 27, 1997 and became a public company 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 acquired all the issued and outstanding equity of Cellex Power Products, Inc. (Cellex) and General Hydrogen Corporation (General Hydrogen). Through these acquisitions, and our continued GenDrive product development efforts, Plug Power became the first fuel cell company to offer a complete suite of products; Class 1 - sit-down counterbalance trucks, Class 2 stand-up reach trucks and Class 3 rider pallet trucks.

Effective April 1, 2010, the Company was no longer considered a development stage enterprise since its principal operations began to provide more than insignificant revenues as the Company received orders from repeat customers, increased its customer base and had a significant backlog. Prior to April 1, 2010, the Company was considered a development stage enterprise because substantially all of our resources and efforts were 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.

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

*Liquidity*

We have experienced recurring operating losses and as of December 31, 2011, we had an accumulated deficit of approximately \$754.8 million. Substantially all of our losses resulted from costs incurred in connection with our manufacturing operations, research and development expenses and from general and administrative costs associated with our operations. To date, we have funded our operations primarily through private and public offerings of our common and preferred stock, our line of credit and maturities and sales of our available-for-sale securities. We anticipate incurring substantial additional losses and may never achieve profitability. Our May 2010 restructuring plan, which involved focusing on our GenDrive business and consolidating our operations into our Latham, New York facility, was expected to reduce these losses going forward. This restructuring significantly reduced our operating expenses in 2011.



**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

As of December 31, 2011, we had approximately \$22.5 million of working capital, which includes \$13.9 million of cash and cash equivalents to fund our future operations. Additionally, on August 9, 2011, we entered into a revolving credit facility arrangement with Silicon Valley Bank (SVB) providing availability to an additional \$7 million to support working capital needs. The Loan Agreement will expire on August 8, 2012. See Note 8, Loan and Security Agreement, for additional information regarding the revolving credit facility. On March 28, 2012 and March 29, 2012, the Company completed a public offering of common stock, with net proceeds totaling \$15.7 million. See Note 22, Subsequent Events, for additional information regarding the public offering. We believe that our current cash, cash equivalents and cash generated from future sales, in conjunction with the availability of the credit facility, will provide sufficient liquidity to fund operations through the end of 2012. This projection is based on our current expectations regarding product sales, cost structure, cash burn rate and operating assumptions. In the event that our operating expenses are higher than anticipated or the gross margins and shipments of our GenDrive products do not increase as we expect, we may be required to implement contingency plans within our control to conserve and/or enhance our liquidity to meet operating needs. Such plans include: our ability to further reduce discretionary expenses, monetize our real estate assets through a sale-leaseback arrangement and obtain additional funding from licensing the use of our technologies. Our cash requirements relate primarily to working capital needed to operate and grow our business, including funding operating expenses, growth in inventory to support both shipments of new units and servicing the installed base, and continued development and expansion of our products. Our ability to achieve profitability and meet future liquidity needs and capital requirements will depend upon numerous factors, including the timing and quantity of product orders and shipments, the timing and amount of our operating expenses; the timing and costs of working capital needs; the timing and costs of building a sales base; the timing and costs of developing marketing and distribution channels; the timing and costs of product service requirements; the timing and costs of hiring and training product staff; the extent to which our products gain market acceptance; the timing and costs of product development and introductions; the extent of our ongoing and any new research and development programs; and changes in our strategy or our planned activities. As a result, we can provide no assurance that we will be able to fund our operations beyond 2012 without additional external financing. We continue to evaluate opportunities to raise additional capital to fund our business beyond 2012. Alternatives the Company would consider include equity or debt financings, strategic alliances or joint ventures. If we are unable to obtain additional capital prior to the end of 2012, we may not be able to sustain our future operations beyond the first quarter of 2013 and may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. We cannot assure you that any necessary additional financing will be available on terms favorable to us, or at all. Given the difficult current economic environment, we believe that it could be difficult to raise additional funds and there can be no assurance as to the availability of additional financing or the terms upon which additional financing may be available. Additionally, even if we raise sufficient capital through equity or debt financing, strategic alliances or otherwise, there can be no assurances that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur additional debt, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. The terms of any debt could also impose significant restrictions on our operations. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance, and may adversely impact our ability to raise additional funds. If we raise additional funds through collaborations and/or licensing arrangements, we might be required to relinquish significant rights to our technologies, or grant licenses on terms that are not favorable to us.

***Public Offering***

Refer to Note 12, Stockholders' Equity, for information regarding our 2011 public offering.

**PLUG POWER INC. AND SUBSIDIARIES**  
**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 as of December 31, 2010 consisted of U.S. Treasury securities. The Company classified these securities as available-for-sale.

Available-for-sale securities are recorded at fair value. 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.

*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 the applicable contract. Accounts receivable are stated at the amount billed to customers. 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, and no extended payment agreements have been granted. 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, 2011 and 2010, inventory on consignment was valued at approximately \$178,000 and \$725,000, respectively.

*Intangible Assets*

Intangible assets with estimable useful lives are amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment when certain triggering events occur. 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.

*Product and Service Revenue*

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Effective April 1, 2010, the Company adopted Accounting Standards Update (ASU) ASU No. 2009-13 on Topic 605, Revenue Recognition Multiple Deliverable Revenue Arrangements retroactive to January 1, 2010. The objective of this ASU is to address the accounting for multiple-deliverable arrangements to enable vendors to account for products or services (deliverables) separately rather than as a combined unit. Vendors often provide multiple products or services to their customers. Those deliverables often are provided at different points in time or over different time periods. This ASU provides amendments to the criteria in Subtopic 605-25 for separating consideration in multiple-deliverable arrangements. The amendments in this ASU establish a selling price hierarchy for determining the selling price of a deliverable. The selling price used for each deliverable will be based on vendor-specific objective evidence (VSOE) if available, third-party evidence (TPE) if VSOE is not available, or estimated selling price (ESP) if neither VSOE nor TPE is available. The amendments in this ASU also replace the term fair value in the revenue allocation guidance with selling price to clarify that the allocation of revenue is based on entity-specific assumptions rather than assumptions of a marketplace participant and expands the disclosure requirements related to a vendor's multiple-deliverable revenue arrangements.

F-8

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The Company enters into multiple-deliverable revenue arrangements that may contain a combination of fuel cell systems or equipment, installation, service, maintenance, fueling and other support services. The Company was previously prohibited from separating these multiple deliverables into individual units of accounting without VSOE of fair value or other TPE of fair value. This evidence was not available due to our limited experience and lack of evidence of fair value of the undelivered components of the sale. Without this level of evidence, the Company had to treat each sale as a single unit of accounting and defer the revenue recognition of each sale, recognizing revenue over a straight-line basis as the continued service, maintenance and other support obligations expired. Under ASU No. 2009-13, the requirement to have VSOE or TPE in order to recognize revenue has been modified, and it now allows the vendor to make its best estimate of the standalone selling price of deliverables when more objective evidence of selling price is not available.

Prior to the adoption of ASU No. 2009-13, the Company applied the guidance within FASB ASC No. 605-10-S99, Revenue Recognition Overall - SEC Materials, in the evaluation of its contracts to determine when to properly recognize revenue. Under FASB ASC No. 605-10-S99 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 collectability is reasonably assured.

The Company's initial sales of products were 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. While contract terms generally stipulated 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 stipulated that payment is not contingent on the achievement of specific milestones or other substantive performance, the multiple obligations within the Company's contractual arrangements were not accounted for separately based on the Company's limited commercial experience and lack of evidence of fair value of the separate elements. As a result, the Company deferred recognition of product and service revenue and recognized revenue on a straight-line basis over the stated contractual terms, as the continued service, maintenance and other support obligations expired, which were generally for periods of twelve (12) to thirty (30) months or which may have extended over multiple years.

For all product and service revenue transactions entered into prior to the implementation of ASU No. 2009-13, the Company will continue to defer the 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 which extend over multiple years.

See Note 18, Multiple-Deliverable Revenue Arrangements for further discussion of our multiple-deliverable revenue arrangements.

The product and service revenue contracts entered into since January 1, 2010 generally provide a one to two year product warranty to customers from date of installation. We currently estimate the costs of satisfying warranty claims based on an analysis of past experience and provide for future claims in the period the revenue is recognized. The Company carefully monitors the warranty work requested by its customers and management believes that its current warranty reserve appears adequate as of December 31, 2011. The Company's product and service warranty as of December 31, 2011 is approximately \$1,211,000 and is included in product warranty reserve in the consolidated balance sheets.

F-9

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The Company has also sold products with extended warranties that generally provide for a five to ten year warranty from the date of installation. These types of contracts are accounted for as a deliverable in accordance with ASU No. 2009-13, and accordingly, revenue generated from these transactions is deferred and recognized in income over the warranty period.

In the case of the Company's limited consignment sales, the Company does not begin recognizing revenue 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, 2011 and 2010, the Company had unbilled amounts from product and service revenue in the amount of approximately \$0 and \$107,000, respectively and is included in other current assets in the consolidated balance sheets. At December 31, 2011 and 2010, the Company had customer deposits from product and service revenue, representing deposits in advance of performance of the allowable work, in the amount of approximately \$0 and \$576,000, respectively and is included in other current liabilities in the consolidated balance sheets. At December 31, 2011 and 2010, the Company had deferred product and service revenue in the amount of \$5.5 million and \$4.3 million, respectively and is included in deferred revenue in the consolidated balance sheets.

***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 30% to 50% 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. All allowable work performed through the end of each calendar quarter is billed, subject to limitations in the respective contracts. We expect to continue research and development contract work that is directly related to our current product development efforts. At December 31, 2011 and 2010, the Company had unbilled amounts from research and development contract revenue in the amount of approximately \$252,000 and \$457,000, respectively and is included in other current assets in the consolidated balance sheets. Unbilled amounts at December 31, 2011 are expected to be billed during the first quarter of 2012. At December 31, 2011 and 2010, 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 \$0 and \$297,000, respectively and is included in other current liabilities in the consolidated balance sheets.

***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***

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 undiscounted 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. Fair value is determined through various valuation techniques, including discounted cash flow models, quoted market values and third party independent appraisals, as considered necessary. 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.

F-10

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

*Stock Split*

The financial statements for all prior periods have been retroactively adjusted to reflect the May 19, 2011 one-for-ten reverse stock split of the Company's common stock. See Note 12, Stockholders' Equity, for more detail.

*Common Stock Warrant Accounting*

We account for common stock warrants in accordance with applicable accounting guidance provided in ASC 815, Derivatives and Hedging Contracts in Entity's Own Equity, as either derivative liabilities or as equity instruments depending on the specific terms of the warrant agreement. In compliance with applicable securities law, registered common stock warrants that require the issuance of registered shares upon exercise and do not sufficiently preclude an implied right to cash settlement are accounted for as derivative liabilities. We classify these derivative warrant liabilities on the condensed consolidated balance sheets as a long term liability, which is revalued at fair value at each balance sheet date subsequent to the initial issuance. We use the Black-Scholes pricing model to value the derivative warrant liability. The Black-Scholes pricing model, which is based, in part, upon unobservable inputs for which there is little or no market data, requires the Company to develop its own assumptions. The Company used the following assumptions for its common stock warrants. The risk-free interest rate for May 31, 2011 (issuance date) and December 31, 2011 were .75% and .33%, respectively. The volatility of the market price of the Company's common stock for May 31, 2011 (issuance date) and December 31, 2011 were 94.4% and 78.6%, respectively. The expected average term of the warrant used for both periods was 2.5 years. There was no expected dividend yield for the warrants granted. As a result, if factors change and different assumptions are used, the warrant liability and the change in estimated fair value could be materially different. Changes in the fair value of the warrants are reflected in the consolidated statement of operations as change in fair value of common stock warrant liability.

*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 basis 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 accounts for uncertain tax positions in accordance with FASB ASC No. 740-10-25, Income Taxes - Overall - Recognition. The Company must 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.

*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.

F-11

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

***Research and Development***

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

***Stock-Based Compensation***

The Company maintains employee stock-based compensation plans, which are described more fully in Note 13, Employee Benefit Plans.

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 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 Cost of product and service revenue, 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, based upon 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. Excess tax benefits are recognized in the period in which the tax deduction is realized through a reduction of taxes payable. No tax benefit or expense for stock-based compensation has been recorded during the years ended December 31, 2011, 2010 and 2009 since the Company remains in a NOL position.

***Per Share Amounts***

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. 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 common stock 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. This is computed by dividing net earnings by the combination of dilutive common share equivalents, which is comprised of shares issuable under outstanding warrants, 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. All share information for the prior periods has been retroactively adjusted to reflect the May 19, 2011 one-for-ten reverse stock split of the Company's common stock.

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

	Year Ended December 31,		
	2011	2010	2009
<b>Numerator:</b>			
Net loss	\$ (27,453,954)	\$ (46,958,921)	\$ (40,708,552)
<b>Denominator:</b>			
Weighted average number of common shares outstanding	18,778,066	13,123,162	12,911,066

F-12

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The dilutive potential common shares are summarized as follows:

		At December 31,	
	2011	2010	2009
Stock options outstanding	1,948,997	432,846	598,129
Unvested restricted stock	280,771	437,958	868,267
Common stock warrants	7,128,563	57,143	57,143
Number of dilutive potential common shares	9,358,331	927,947	1,523,539

***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.

***Subsequent Events***

See Note 22, Subsequent Events, of the Consolidated Financial Statements for an evaluation of subsequent events and transactions through the date of this filing.

***Recent Accounting Pronouncements***

In May 2011, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2011-04, Fair Value Measurement (Topic 820), which provides common fair value measurement and disclosure requirements in accordance with GAAP and International Financial Reporting Standards (IFRS). The amendments explain how to measure fair value and will improve the comparability of fair value measurement presented and disclosed in financial statements prepared in accordance with GAAP and IFRS. This authoritative guidance is to be applied prospectively and is effective during interim and annual periods beginning after December 15, 2011. The Company is currently evaluating the impact, if any, of this new accounting update and plans to adopt this new standard on January 1, 2012 and does not believe adoption of this new standard will have a material effect on its consolidated financial position, consolidated results of operations, and liquidity.

In June and December 2011, the FASB issued ASU No. 2011-05 and ASU No. 2011-12, Comprehensive Income (Topic 220), requiring entities to present net income and other comprehensive income in either a single continuous statement or in two separate, but consecutive, statements of net income and other comprehensive income. This authoritative guidance eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholders' equity. This authoritative guidance is to be applied retrospectively and is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. The Company does not believe the adoption of this new standard will have a material effect on its consolidated financial position, consolidated results of operations, and liquidity.

***Correction of Immaterial Error***

Subsequent to the original issuance of these consolidated financial statements, the Company identified an immaterial error related to the presentation of deferred revenue within the consolidated balance sheets as of December 31, 2011 and 2010. Such error has been corrected in the accompanying consolidated balance sheets through a reduction to deferred revenue within current liabilities and a corresponding increase to deferred revenue within non-current liabilities in the amounts of \$3,036,829 and \$1,896,910 as of December 31, 2011 and 2010, respectively. This correction does not affect previously reported total liabilities in the accompanying consolidated balance sheets, and had no effect on the previously reported consolidated statements of operations, stockholders' equity and comprehensive loss, or cash flows for any period.

### 3. Fair Value Measurements

The Company complies with the provisions of FASB ASC No. 820, Fair Value Measurements and Disclosures (ASC 820), in measuring fair value and in disclosing fair value measurements. ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements required under other accounting pronouncements. FASB ASC No. 820-10-35, Fair Value Measurements and Disclosures- Subsequent Measurement (ASC 820-10-35), clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820-10-35-3 also requires that a fair value measurement reflect the assumptions market participants would use in pricing an asset or liability based on the best information available. Assumptions include the risks inherent in a particular valuation technique (such as a pricing model) and/or the risks inherent in the inputs to the model.

F-13

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

ASC 820-10-35 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.

As of December 31, 2011, the Company no longer held any trading securities - auction rate debt securities since they were repurchased in July, 2010 at par by the third-party lender holding the collateral under the Repurchase Agreement which resulted in a corresponding reduction in amounts outstanding and the extinguishment of the Credit Line Agreement.

**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The following tables summarize the basis used to measure certain financial assets at fair value on a recurring basis in the consolidated balance sheets:

**Basis of Fair Value Measurements**

		Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Balance at December 31, 2011	Total			
Common stock warrant liability	\$ 5,320,990	\$-	\$-	\$5,320,990

		Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Balance at December 31, 2010	Total			
Available-for-sale securities - U.S. treasury securities	\$ 10,403,315	\$10,403,315	\$-	\$-

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):

	Fair Value Measurement Using Significant Unobservable Inputs
<u>Common stock warrant liability</u>	
Beginning of period - January 1, 2011	\$ -
Issuance of common stock warrants	8,768,143
Change in fair value of common stock warrants	(3,447,153)
Fair value of common stock warrant liability at December 31, 2011	\$ 5,320,990
	Fair Value Measurement Using Significant Unobservable Inputs
<u>Trading securities - auction rate debt securities</u>	
Beginning of period - January 1, 2010	\$ 53,397,179
Sale of trading securities for the year ended December 31, 2010	(59,375,001)
Net trading gain for the year ended December 31, 2010	5,977,822
Fair value of trading securities - auction rate debt securities at December 31, 2010	\$ -
	Fair Value

	Measurement Using Significant Unobservable Inputs
<u>Auction rate debt securities repurchase agreement</u>	
Beginning of period - January 1, 2010	\$ 5,977,822
Change in fair value of auction rate debt securities repurchase agreement for the year ended December 31, 2010	(5,977,822)
Fair value of auction rate debt securities repurchase agreement at December 31, 2010	\$ -

F-15

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

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

Available-for-sale securities (Level 1): Available-for-sale securities represent U.S. treasury securities, where fair value is based on quoted market prices.

Common stock warrant liability (Level 3): For our common stock warrants, fair value is based on the Black-Scholes pricing model which is based, in part, upon unobservable inputs for which there is little or no market data, requiring the Company to develop its own assumptions.

Trading securities – auction rate debt securities and auction rate debt securities repurchase agreement (Level 3): 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. These securities were redeemed at par in July 2010.

**4. Available-for-Sale Securities**

There were no available-for-sale securities as of December 31, 2011. The amortized cost and fair value of the Company's available-for-sale securities as of December 31, 2010 were as follows:

Balance at December 31, 2010	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury Securities	\$ 10,421,817	\$ -	\$ 18,502	\$ 10,403,315

The above table includes two securities where the current fair value was less than the related amortized cost at December 31, 2010. These unrealized losses did not reflect any deterioration of the credit worthiness of the issuers of the securities. All securities were investment grade. The unrealized losses on these temporarily impaired securities was a result of changes in interest rates for fixed-rate securities where the interest rate received was less than the current rate available for new offerings of similar securities and changes in market spreads as a result of shifts in supply and demand. There were no unrealized losses in the available-for-sale securities portfolio at December 31, 2009. The contractual maturities of available-for-sale securities were all in the year ended December 31, 2011 for balances as of December 31, 2010, and December 31, 2010 for balances as of December 31, 2009.

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

	2011	2010	2009
Proceeds on sales	\$ -	\$ 14,975,693	\$ 3,699,149

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Proceeds on maturities	-	64,778,346	133,856,781
Gross realized gains	-	-	-
Gross realized losses	-	-	-

F-16

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

**5. Property, Plant and Equipment**

Property, plant and equipment at December 31, 2011 and 2010 consist of the following:

	December 31, 2011	December 31, 2010
Land	\$ 90,000	\$ 90,000
Buildings	15,332,232	14,557,080
Building improvements	4,939,283	6,843,954
Software, machinery and equipment	13,941,438	13,608,624
	34,302,953	35,099,658
Less accumulated depreciation	(25,616,113)	(25,261,027)
Property, plant, and equipment, net	\$ 8,686,840	\$ 9,838,631

Depreciation expense was \$2.1million, \$5.0 million and \$3.6 million for the years ended December 31, 2011, 2010 and 2009, respectively.

In the fourth quarter of 2010, we abandoned our facility in Richmond, B.C. As a result, in accordance with ASC No. 360-10-35-47, Long-Lived Assets to Be Abandoned, we recorded depreciation expense in the amount of \$2.1 million.

**6. Intangible Assets**

Intangible assets, consisting of acquired technology and customer relationships related to the Cellex and General Hydrogen acquisitions during the year ended December 31, 2007 are amortized using a straight-line method over their useful lives of eight years. On January 1, 2008, General Hydrogen (Canada) Corporation, Plug Power Canada Inc. and Cellex Power Products, Inc. amalgamated as Plug Power Canada Inc.

The gross carrying amount and accumulated amortization of the Company's acquired identifiable intangible assets as of December 31, 2011 are as follows:

	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Effect of Foreign Currency Translation	Total
Acquired Technology	8 years	\$15,900,000	\$ (9,974,597)	\$ 1,132,529	\$ 7,057,932
Customer Relationships	8 years	1,000,000	(583,296)	-	416,704
		\$16,900,000	\$ (10,557,893)	\$ 1,132,529	\$ 7,474,636

The gross carrying amount and accumulated amortization of the Company's acquired identifiable intangible assets as of December 31, 2010 are as follows:

	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Effect of Foreign Currency Translation	Total
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Acquired Technology	8 years	\$15,900,000	\$ (7,776,713)	\$ 1,206,411	\$ 9,329,698
Customer Relationships	8 years	1,000,000	(458,304)	-	541,696
		\$16,900,000	\$ (8,235,017)	\$ 1,206,411	\$ 9,871,394

F-17

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

Amortization expense for acquired identifiable intangible assets for the years ended December 31, 2011, 2010, and 2009 was \$2.3 million, \$2.3 million, and \$2.1 million, respectively. Estimated amortization expense for subsequent years is as follows:

2012	\$ 2,277,773
2013	2,277,773
2014	2,277,773
2015	641,317
Total	\$ 7,474,636

**7. 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. The Company's auction rate debt securities included in trading securities on the consolidated balance sheet at December 31, 2009 was pledged as collateral for the Credit Line Agreement. As of December 31, 2008, the Company had drawn down \$62.9 million on this line of credit. During the years ended December 31, 2010 and 2009, \$59.4 million and \$3.5 million, respectively of auction rate debt securities were sold by the third-party lender holding the collateral which resulted in a corresponding reduction in amounts outstanding under the Credit Line Agreement. The Credit Line Agreement had 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 1.2% at December 31, 2009. Interest expense on the advances on the Credit Line Agreement was approximately \$305,000 and \$915,000 for the years ended December 31, 2010 and 2009, respectively.

The advances on the Credit Line Agreement were repayable on demand by the third-party lender. If the third-party lender had exercised its right to demand repayment of the advances under the Credit Line Agreement prior to June 30, 2010 (the date upon which the Company could first exercise its rights under the Repurchase Agreement discussed below), the third-party lender was 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 was \$59.4 million at December 31, 2009.

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 elected to record this item at its fair value in accordance with ASC No. 825-10-25 to allow consistent treatment of this repurchase agreement and the underlying collateral. At December 31, 2009, the fair value of this item was approximately \$6.0 million and was recorded as an asset on the consolidated balance sheets. The change in the fair value of the Repurchase Agreement for the years ended December 31, 2010 and 2009 was \$6.0 million and \$4.2 million, respectively, and is recorded as a realized loss on the consolidated statements of operations.

Effective July 1, 2010, all auction rate debt securities were repurchased at par by the third-party lender holding the collateral under the Repurchase Agreement which resulted in a corresponding reduction in amounts outstanding and the extinguishment of the Credit Line Agreement.

**8. Loan and Security Agreement**

On August 9, 2011, the Company entered into a loan and security agreement, as amended on September 28, 2011, (the Loan Agreement) with Silicon Valley Bank (SVB) providing that in return for paying an up-front fee of \$52,250 the Company has access to up to \$7 million of financing in the form of (i) revolving loans, (ii) letters of credit, (iii) foreign exchange contracts and (iv) cash management services such as merchant services, direct deposit of payroll, business credit card and check cashing services. Advances under the Loan Agreement cannot exceed a borrowing base limit calculated using (A) an advanced rate of 80% on the Company's eligible accounts receivable and (B) an advanced rate of 25% on the Company's eligible inventory (subject to a limit of the lesser of (a) \$2 million and (b) 30% of all outstanding advances), subject to certain reserves established by SVB and other adjustments.





**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

Interest on advances of credit under the Loan Agreement for: (i) financed accounts receivables is equal to (a) SVB's prime rate, which is currently 3.25% per annum, plus 3.0% per annum or (b) if the Company maintains at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 1.50% per annum; and (ii) financed inventory is equal to (a) SVB's prime rate plus 5.25% per annum or (b) if the Company maintains at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 3.25% per annum. The minimum monthly interest charge is \$4,000 per month. The Loan Agreement will be used by the Company to support its current working capital needs.

The Loan Agreement is secured by substantially all of the Company's properties, rights and assets, including substantially all of its equipment, inventory, receivables, intellectual property and general intangibles.

The Loan Agreement includes customary representations and warranties for credit facilities of this type. In addition, the Loan Agreement contains a number of covenants that impose significant operating and financial restrictions on the Company's operations, including restrictions pertaining to, among other things: (i) the condition of inventory; (ii) maintenance of an adjusted quick ratio of at least 1.50 to 1.0; (iii) intellectual property right protection and registration; (iv) dispositions of assets; (v) changes in business, management, ownership or business locations; (vi) mergers, consolidations or acquisitions; (vii) incurrence or assumption of indebtedness; (viii) incurrence of liens on any of the Company's property; (ix) paying dividends or making distributions on, or redemptions, retirements or repurchases of, capital stock; (x) transactions with affiliates; and (xi) payments on or amendments to subordinated debt. As of December 31, 2011, the Company is in compliance with these covenants.

The Loan Agreement also contains events of default customary for credit facilities of this type with, in some cases, corresponding grace periods, including, (i) failure to pay any principal or interest when due, (ii) failure to comply with covenants, (iii) any material adverse change occurring, (iv) an attachment, levy or restraint on our business, (v) certain bankruptcy or insolvency events, (vi) payment defaults relating to, or acceleration of, other indebtedness or that could result in a material adverse change to the Company's business, (vii) the Company or its subsidiaries becoming subject to judgments, claims or liabilities in an amount individually or in aggregate in excess of \$150,000 (viii) any misrepresentations, or (ix) any revocation, invalidation, breach or invalidation of any subordinated debt. As of December 31, 2011, the Company is in compliance with all debt covenants.

The Loan Agreement will expire on August 8, 2012. The Loan Agreement may be terminated prior to August 8, 2012; however, the Company would be required to pay a \$70,000 early termination fee in connection with a termination (i) by the Company for any reason or (ii) by SVB upon notice and after the occurrence and during the continuance of an event of default.

As of December 31, 2011 \$5,405,110 was outstanding under the loan agreement and was recorded as borrowings under line of credit on the consolidated balance sheets.

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In September 2011, the Company signed a letter of credit with Silicon Valley Bank in the amount of \$525,000. The standby letter of credit is required by the agreement negotiated between Air Products and Chemicals, Inc. (Air Products) and the Company to supply hydrogen infrastructure and hydrogen to Central Grocers at their distribution center. There are no collateral requirements associated with this letter of credit.

F-19

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

**9. Accrued Expenses**

Accrued expenses at December 31, 2011 and 2010 consist of:

	2011	2010
Accrued payroll and compensation related costs	\$ 1,687,965	\$ 869,545
Accrued restructuring costs	109,978	1,392,568
Accrued dealer commissions and customer rebates	132,850	492,700
Accrued software costs	-	542,500
Other accrued liabilities	1,242,205	1,038,916
Total	\$ 3,172,998	\$ 4,336,229

**10. Restructuring Charges**

On May 25, 2010, the Company adopted a restructuring plan to focus and align the Company on its GenDrive business. As part of this plan, the Company has consolidated all operations to its Latham, New York headquarters. The Company recorded restructuring charges and revisions to previous estimates in the amount of \$452,054 and \$8,096,868 within selling, general and administrative expenses in the consolidated statement of operations for the years ended December 31, 2011 and December 31, 2010, respectively.

The accrued restructuring charges relating to the May 2010 restructuring are comprised of the following at December 31, 2011:

	Accrued restructuring charges at January 1, 2011	Adjustments to, additional accrued restructuring charges, or non-cash charges	Cash payments	Accrued restructuring charges at December 31, 2011
Net lease obligations	\$ 687,696	\$ 452,054	\$ (1,139,750)	\$ -
Total	\$ 687,696	\$ 452,054	\$ (1,139,750)	\$ -

During 2008, the Company adopted two restructuring plans to focus the Company on becoming a market and sales driven organization, to drive revenue growth, improve organizational efficiency and to position the Company for long-term profitability. As part of the plans, the Company implemented reductions in workforce, terminated purchase commitments, charged off inventory related to lapsed product lines, cut back discretionary spending, and deferred non-strategic projects. The Company recorded restructuring charges and revisions to previous estimates in the amount of (\$220,000), (\$504,847) and \$210,038 within selling, general and administrative expenses in the consolidated statement of operations for the years ended December 31, 2011, December 31, 2010 and December 31, 2009, respectively. At December 31, 2011, \$109,978 remains in accrued expenses on the consolidated balance sheets.

The accrued restructuring charges relating to the two 2008 restructurings are comprised of the following at December 31, 2011:

	Restructuring charges at January 1, 2011	Additional accrued restructuring charges, or non-cash charges	Cash payments	Restructuring charges at December 31, 2011
Contract cancellations	\$ 547,356	\$ (220,000)	\$ (217,378)	\$ 109,978
Net lease obligations	157,516	-	(157,516)	-

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Total	\$	704,872	\$	(220,000)	\$	(374,894)	\$	109,978
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F-20

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

**11. Income Taxes**

The components of (loss) before income taxes and the provision for income taxes for the years ended December 31, 2011, 2010 and 2009 are as follows:

Loss before income taxes:	2011	2010	2009
United States	\$ (25,483,000)	\$ (38,567,000)	\$ (39,363,000)
Foreign	(1,971,000)	(8,392,000)	(1,346,000)
	\$ (27,454,000)	\$ (46,959,000)	\$ (40,709,000)

There was no current income tax expense for the years ended December 31, 2011, 2010 and 2009. 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.

Effective 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.

The significant components of U.S. deferred income tax expense (benefit) for the years ended December 31, 2011, 2010 and 2009 are as follows:

	2011	2010	2009
Deferred tax expense (benefit)	\$ 17,774,374	\$ (652,367)	\$ (1,679,144)
Net operating loss carryforward expired (generated)	187,596,630	(14,168,304)	(14,972,768)
Valuation allowance (decrease) increase	(205,371,004)	14,820,671	16,651,912
Provision for Income taxes	\$ -	\$ -	\$ -

The significant components of Foreign deferred income tax expense (benefit) for the years ended December 31, 2011, 2010 and 2009 are as follows:

	2011	2010	2009
Deferred tax benefit	\$ (1,268,116)	\$ (822,713)	\$ (1,633,336)
Net operating loss carryforward expired (generated)	496,400	(1,080,779)	147,019
Valuation allowance increase	771,716	1,903,492	1,486,317
Provision for Income taxes	\$ -	\$ -	\$ -

F-21

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

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

	2011	2010	2009
U.S. Federal statutory tax rate	(35.0%)	(35.0%)	(35.0%)
Deferred state taxes, net of federal benefit	(3.1%)	(2.4%)	(2.9%)
Common stock warrant liability	(4.4%)	0.0%	0.0%
Other, net	0.6%	(2.7%)	(0.8%)
Change to uncertain tax positions	(57.5%)	1.6%	0.0%
Foreign tax rate differential	0.8%	2.2%	0.2%
Expiring attribute carryforward	5.4%	1.2%	0.0%
Adjustments to open deferred tax balance	(1.7%)	0.3%	(4.3%)
Writeoff of tax attributes due to imposition of Section 382 limitation	840.9%	0.0%	0.0%
Tax credits	(0.3%)	(0.6%)	0.7%
Change in valuation allowance	(745.7%)	35.4%	42.1%
	0.0%	0.0%	0.0%

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, 2011 and 2010 are as follows:

	U.S.		Foreign	
	Years ended December 31, 2011	2010	Years ended December 31, 2011	2010
Intangible assets	\$ 199,980	\$ 270,278	\$ 324,654	\$ (28,763)
Non-employee stock based compensation	(1,555,822)	(1,792,727)	-	-
Gain on auction rate debt securities repurchase agreement	-	(2,271,572)	-	-
Impairment loss on available-for-sale securities	-	2,271,572	-	-
Deferred revenue	2,105,962	1,652,905	-	-
Other reserves and accruals	1,120,831	669,061	-	206,184
Capital loss carryforwards	-	5,883,890	-	-
Research and development tax credit carryforwards	73,722	9,833,063	1,533,281	1,512,346
Property, plant and equipment	1,126,531	753,930	528,596	521,379
Amortization of stock-based compensation	7,900,080	7,490,246	-	-
Capitalized research & development expenditures	15,162,000	17,328,000	4,759,800	3,667,068
Section 382 recognized built in loss	(1,819,014)	-	-	-
Net operating loss carryforwards	30,271,381	217,868,010	3,462,252	3,958,652
Total deferred tax asset	54,585,651	259,956,656	10,608,583	9,836,866
Valuation allowance	(54,585,651)	(259,956,656)	(10,608,583)	(9,836,866)
Net deferred tax assets	\$ -	\$ -	\$ -	\$ -



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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, 2011 and 2010 of approximately \$65.2 million and \$269.8 million, respectively. A reconciliation of the current year change in valuation allowance is as follows:

	Total	U.S.	Foreign
Increase in valuation allowance for current year increase in net operating losses:	\$ 8,982,432	\$ 8,799,089	\$ 183,343
Decrease in valuation allowance for 382 limitations on tax attributes:	(212,112,671)	(212,112,671)	-
Decrease in valuation allowance for current year net decrease in deferred tax assets other than net operating losses:	(2,279,655)	(2,057,422)	(222,233)
Increase in valuation allowance as a result of foreign currency fluctuation	136,168	-	136,168
Increase in valuation allowance due to current year change of deferred tax assets as the result of uncertain tax positions.	674,438	-	674,438
Net (decrease) increase in valuation allowance	\$ (204,599,288)	\$ (205,371,004)	\$ 771,716

F-22

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

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, 2011 and December 31, 2010 are \$1.9 million and \$14.3 million, respectively 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.

Before the imposition of IRC Section 382 limitations described below, at December 31, 2011, the Company has unused Federal and State net operating loss carryforwards of approximately \$703 million, of which \$70.3 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 \$585.9 million was generated by the Company during the period October 1, 1999 through December 31, 2011. The net operating loss carryforwards if unused will expire at various dates from 2012 through 2031. In 2011, net operating loss carryforwards of \$3.9 million acquired as part of the H Power transaction expired.

Under Internal Revenue Code (IRC) Section 382, the use of loss carryforwards may be limited if a change in ownership of a company occurs. If it is determined that due to transactions involving the Company's shares owned by its 5 percent or greater shareholders a change of ownership has occurred under the provisions of IRC Section 382, the Company's Federal and state net operating loss carryforwards could be subject to significant IRC Section 382 limitations.

Based upon an IRC Section 382 study, a Section 382 ownership change occurred in 2011 that resulted in approximately \$675 million of Federal and state net operating loss carryforwards being subject to IRC Section 382 limitations and as a result of IRC Section 382 limitations, approximately \$618 million of the net operating loss carryforwards will expire prior to utilization. As a result of the IRC Section 382 limitations, these net operating loss carryforwards that will expire unutilized are not reflected in the Company's gross deferred tax asset as of December 31, 2011.

The ownership change also resulted in Net Unrealized Built in Losses per IRS Notice 2003-65 which should result in Recognized Built in Losses during the five year recognition period of approximately \$7 million. This will translate into unfavorable book to tax add backs in the Company's 2011 to 2016 U.S. corporate income tax returns that resulted in a gross deferred tax liability of \$2.6 million at the time of the ownership change and \$1.8 million at December 31, 2011 with a corresponding reduction to the valuation allowance. This gross deferred tax liability will offset certain existing gross deferred tax assets (i.e. capitalized research expense). This has no impact on the Company's current financial position, results of operations, or cash flows because of the full valuation allowance.

IRC Section 382 also limits the ability for a Company to utilize capital loss and research credit carryforwards. Approximately \$15.5 million of Federal capital loss carryforwards are subject to IRC Section 382 limitations and as a result of the IRC Section 382 limitations, the entire \$15.5 million will expire prior to utilization. Approximately \$15.5 million of Research Credit are subject to IRC Section 382 limitations and as a result of the IRC Section 382 limitations, the entire \$15.5 million will expire prior to utilization. At December 31, 2011 the Company has US Federal Research and Experimentation credit carryforwards of approximately \$0.1 million that were generated after the IRC Section 382 ownership change and will be available to offset future income tax that will expire in 2031.

At December 31, 2011, the Company has unused foreign net operating loss carryforwards of approximately \$17.4 million. The net operating loss carryforwards if unused will expire at various dates from 2014 through 2031. At December 31, 2011 the company has Scientific Research and Experimental Development expenditures of \$21.8 million available to offset future taxable income. These expenditures have no expiry date. At December 31, 2011 the company has Canadian ITC credit carryforwards of \$2.4 million available to offset future income tax. These credit carryforwards if unused will expire at various dates from 2012 through 2027. Approximately \$3.6 million of the foreign net operating loss carryforwards, approximately \$2.8 million of the Scientific Research and Experimental Development expenditures and \$0.8 million 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, 2011.

The Company intends to reinvest indefinitely any unrepatriated foreign earnings. As of December 31, 2011, the Company has no unrepatriated foreign earnings.



**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

	2011	2010	2009
Unrecognized tax benefits balance at beginning of year	\$ 17,893,011	\$ 18,570,177	\$ 18,149,125
Additions for tax positions of prior years	-	-	-
Reductions based on tax positions related to the current year	-	-	-
Reductions for tax positions of prior years	(15,874,599)	(716,419)	(55,884)
Settlements	-	-	-
Currency Translation	27,940	39,253	476,936
Unrecognized tax benefits balance at end of year	\$ 2,046,352	\$ 17,893,011	\$ 18,570,177

The Company recognizes accrued interest and penalties related to unrecognized tax benefits as a component of income tax expense. During the year ended December 31, 2011, the Company recognized \$0 in interest and penalties. The Company had \$1.2 million in interest and penalties accrued at December 31, 2011.

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 2008 to 2011. Open tax years in the foreign jurisdictions range from 2004 to 2011. However, upon examination in subsequent years, if net operating loss 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, 2011, 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.

## 12. Stockholders Equity

On May 19, 2011, the Company implemented a one-for-ten reverse stock split of its common stock. As a result of the reverse stock split, each ten (10) outstanding shares of pre-split common stock were automatically combined into one (1) share of post-split common stock. Fractional shares received cash and proportional adjustments were made to the Company's outstanding stock options and other equity awards and to the Company's equity compensation plans to reflect the reverse stock split. The financial statements for all prior periods have been retroactively adjusted to reflect this stock split for both common stock issued and options outstanding.

On May 31, 2011, the Company completed an underwritten public offering of 8,265,000 shares of its common stock and warrants to purchase an aggregate of 7,128,563 shares of common stock (including warrants to purchase an aggregate of 929,813 shares of common stock purchased by the underwriter pursuant to the exercise of its over-allotment option). The shares and the warrants were sold together as a fixed combination, with each combination consisting of one share of common stock and 0.75 of a warrant to purchase one share of common stock, at a price to the public of \$2.42 per fixed combination. Net proceeds, after underwriting discounts and commissions and other fees and expenses payable by Plug Power, were \$18,289,883 (of this amount \$8,768,143 in fair value was recorded as common stock warranty liability at issuance date). The warrants are exercisable upon issuance and will expire on May 31, 2016. The exercise price of the warrants is \$3.00 per share of common stock. The warrants include weighted-average anti-dilution protection and, in the event of a sale of the Company, and under certain conditions, each warrant holder has the right to require the Company to purchase such holder's warrants at a price determined using a Black-Scholes option pricing model.

On June 8, 2011, the Company sold 836,750 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$1,874,990.

On July 1, 2011, the Company sold 231,000 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$527,626.



**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

***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, 2011 and 2010, there were no shares of preferred stock issued and outstanding.

The Company has registered Series A Junior Participating Cumulative Preferred Stock, par value \$.01 per share. As of December 31, 2011 and 2010, there were no shares of Series A Junior Participating Cumulative 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, 2011 and 2010 there were 22,758,505 and 13,189,475, respectively shares of common stock issued and outstanding.

**13. Employee Benefit Plans**

***1999 Employee Stock Purchase Plan***

In 1999, the Company adopted the 1999 Employee Stock Purchase Plan (the Plan) under which employees were eligible to purchase shares of the Company's common stock at a discount through periodic payroll deductions. The Plan was intended to meet the requirements of Section 423 of the Internal Revenue Code. Purchases occurred 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, whichever was lower. Participants could 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 reserved 1,000,000 shares of common stock for issuance under the Plan. The Company issued 0, 0 and 208,240 shares of stock under the Plan during 2011, 2010 and 2009, respectively.

Under FASB ASC No. 718, Compensation - Stock Compensation, the 15% discount and the look-back feature are considered compensatory items for which expense must be recognized. The Company valued Plan shares as a combination position consisting of 15% of a share of non-vested stock and 85% of a six-month stock option. The value of the non-vested stock was 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 was 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 was recognized on a straight-line basis over the offering period.

Effective July 1, 2009, the Company suspended this plan. Factors taken into consideration were the expense of administering the plan, participation rate and the introduction of the Company-wide stock option grant as an alternative means of promoting employee stock ownership.

**Stock Option Plan**

***2011 Stock Option and Incentive Plan***

On May 12, 2011, the Company's stockholders approved the 2011 Stock Option and Incentive Plan (the 2011 Plan). The 2011 Plan provides for the issuance of up to a maximum number of shares of common stock equal to the sum of (i) 1,000,000, plus (ii) the number of shares of common stock underlying any grants pursuant to the 2011 Plan or the Plug Power Inc. 1999 Stock Option and Incentive Plan that are forfeited, canceled, repurchased or are terminated (other than by exercise). The shares may be issued pursuant to stock options, stock appreciation rights, restricted stock awards and certain other equity-based awards granted to employees, directors and consultants of the Company. No grants may be made under the 2011 Plan after May 12, 2021. Equity awards granted prior to May 12, 2011, were made under the 1999 Stock Option and Incentive Plan.



**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

At December 31, 2011 there were approximately 1.9 million options granted and outstanding and 219,000 options available to be issued under the 2011 Stock Option Plan. The 2011 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 three years and expire ten years after issuance. Options granted to members of the Board generally vest one year after issuance. To date, options granted under the 2011 Stock Option Plan have vesting provisions ranging from immediate vesting to three years in duration and expire ten years after issuance.

Compensation cost associated with employee stock options represented approximately \$952,000 of the total share-based payment expense recorded for the year ended December 31, 2011. The Company estimates the fair value of stock options and shares issued under the employee stock purchase plan using a Black-Scholes valuation model, 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 1,618,400, 150,000 and 1,375,500 options granted during the years ended December 31, 2011, 2010 and 2009, respectively were as follows:

	<b>2011</b>	<b>2010</b>	<b>2009</b>
Dividend yield:	0%	0%	0%
Expected term of options (years):	6	6	6
Risk free interest rate:	1.16%-2.61%	1.52%-2.93%	1.79%-2.80%
Volatility:	74%-79%	94%-95%	85%-89%

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

A summary of stock option activity for the year December 31, 2011 is as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms	Aggregate Intrinsic Value
Options outstanding at December 31, 2010	432,846	\$ 43.16	5.3	\$ -
Granted	1,618,400	3.71	10.0	-
Exercised	-	-	-	-
Forfeited	(39,578)	-	-	-
Expired	(62,671)	-	-	-
Options outstanding at December 31, 2011	1,948,997	\$ 9.84	8.8	-
Options exercisable at December 31, 2011	339,536	38.72	5.0	-
Options unvested at December 31, 2011	1,609,461	3.74	9.6	-





**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The weighted average grant date fair value of options granted during the years ended December 31, 2011, 2010 and 2009 was \$3.58, \$3.80 and \$6.60, respectively. There were no stock options exercised during the year ended December 31, 2011. As of December 31, 2011, there was approximately \$3,384,000 of unrecognized compensation cost related to stock option awards to be recognized over the next three years. The total fair value of stock options that vested during the years ended December 31, 2011 and 2010 was approximately \$952,000 and \$247,000, respectively.

Restricted stock awards vest in equal installments over a period of one to three 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 \$10,000 associated with its restricted stock awards in 2011. As of December 31, 2011, there was no unrecognized compensation cost related to restricted stock awards to be recognized over the next three years.

A summary of restricted stock activity for the year ended December 31, 2011 is as follows:

	Shares	Aggregate Intrinsic Value
Unvested restricted stock at December 31, 2010	437,958	\$ 893,434
Granted	50,942	103,922
Forfeited	(157,187)	(320,661)
Vested	(50,942)	(103,922)
Unvested restricted stock at December 31, 2011	280,771	\$ 572,773

For the years ended December 31, 2011, 2010, and 2009, the Company recorded expense of approximately \$1.5 million, \$1.2 million, and \$1.9 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 133,748, 90,166 and 60,755 shares of common stock to the Plug Power Inc. 401(k) Savings & Retirement Plan during 2011, 2010 and 2009, respectively. These shares have been adjusted to reflect the May 19, 2011 one-for-ten stock split of the Company's common stock.

The Company's expense for this plan, including the issuance of shares, was approximately \$374,000, \$441,000 and \$534,000 for years ended December 31, 2011, 2010 and 2009, respectively.

***Long Term Incentive Plan***

On October 28, 2009, the Compensation Committee recommended and the Board of Directors approved a Long Term Incentive (LTI) Plan pursuant to the terms of the Company's 1999 Stock Option and Incentive Plan. Designed as an incentive vehicle to support employee efforts, the LTI Plan seeks to increase shareholder value by encouraging Plug Power employees to continue to work diligently to further the Company's long term goals.

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Under the LTI Plan, a select group of critical employees received a Restricted Stock Unit Award Agreement (Agreement) awarding a one-time grant of restricted stock units (RSUs) calculated using a multiple of the selected employee's base salary. According to the Agreement, the restrictions on each participant's RSU allocation will lapse over a three year period upon successful completion of weighted performance-based metrics. Specifically, restrictions on 25% of RSUs are tied to the Company's achievement of revenue targets, while the restrictions on 75% of RSUs are tied to the Company's achievement of earnings before interest expense, taxes, depreciation, amortization and non-cash charges for equity compensation (measurement referred to in the Agreement as EBITDAS) targets. Intended to supplement the annual employee incentive plan payout, the total number of RSUs lapsing each year will vary depending on the Company's progress achieving the corresponding threshold, target or stretch goals.

F-27

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

In the event stretch revenue and EBITDAS metrics are reached during the next year of the grant period ending December 31, 2012, the Company could issue a maximum of 280,771 shares to LTI Plan participants, currently representing approximately 1.2% of total outstanding shares. Restrictions on these shares only lapse in the event the Company performs at the articulated performance metrics.

In 2011 and 2010, no threshold, target or stretch revenue and EBITDAS performance-based metrics were reached. Accordingly, no restrictions have lapsed, and 20% and 25% of the total awarded RSUs were forfeited for the 2011 and 2010 fiscal years, respectively. Therefore, no expense was recorded during the years ended December 31, 2011 and December 31, 2010, respectively, associated with these awards.

**14. 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, 2011 and 2010, the Company had no payables due to DTE under this commission provision and no outstanding receivables from DTE.

**15. Fair Value of Financial Instruments**

The following disclosure of the estimated fair value of financial instruments is made in accordance with the provision of ASC No. 825-10-65, Financial Instruments - Transition and Open Effective Date Information (ASC 825-10-65). 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, accounts payable and borrowings under line of credit:*  
The carrying amounts reported in the consolidated balance sheets approximate fair value because of the short maturities of these instruments.

**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

**16. 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, 2011, 2010 and 2009:

	2011	2010	2009
Stock-based compensation accrual impact, net	\$ 395,257	\$ 707,802	\$ 480,145
Change in unrealized loss/gain on available for sale securities	18,502	(114,300)	(131,308)
Cash paid for interest	12,634	471,386	999,665
Transfer of property, plant and equipment to assets held for sale	-	768,779	-
Transfer of investment in leased property to inventory	253,786	-	-

**17. Commitments and Contingencies**

*Alliances and development agreements*

*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 this agreement, the Company and GE (through its Global Research unit) 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 development collaboration agreement such that the Company was obligated to purchase \$1 million of services from GE in connection with this collaboration prior to December 31, 2009. As of December 31, 2009, the approximately \$363,000 obligation remaining under the extended development collaboration agreement became due and payable; however, the Company and GE d/b/a GE Global Research entered into a Lease Agreement dated October 6, 2009 for space in the Company's Latham, New York facility whereby the parties mutually agreed that pursuant to section 4 of the Lease Agreement the amount owed by the Company to GE under the development collaboration agreement would be offset by the rent owed by GE to the Company each month. 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. As of December 31, 2011 and 2010, approximately \$110,000 and \$209,000, respectively, have been recorded as accrued expenses in the consolidated balance sheets related to the development collaboration agreement.

*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. For the years ended December 31, 2011 and December 31, 2010, amounts payable under this agreement were approximately \$5,000 and \$4,000, respectively.

**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

*Leases*

As of December 31, 2011 and 2010, the Company has no capital leases outstanding. The Company has several non-cancelable operating leases, primarily for hydrogen infrastructure and fork lift trucks that expire over the next five years. Portions of certain properties are subleased for periods expiring in various years through 2011.

Future minimum lease payments under non-cancelable operating leases (with initial or remaining lease terms in excess of one year) as of December 31, 2011 are:

Year ending December 31,	Operating leases
2012	\$ 730,531
2013	522,557
2014	327,740
2015	316,823
2016 and thereafter	1,016,317
Total future minimum lease payments	\$ 2,913,968

Minimum future rental income receivable under subleases from non-cancelable operating leases were \$0 and \$153,932 as of December 31, 2011 and 2010, respectively.

Rental expense for all operating leases for the years ended December 31, 2011, 2010 and 2009 were as follows:

	2011	2010	2009
Minimum rentals	\$ 887,000	\$ 2,153,000	\$ 1,819,000
Sublease rental income	(161,000)	(269,000)	(5,000)
	\$ 726,000	\$ 1,884,000	\$ 1,814,000

*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 with and government agencies. To mitigate credit risk, the Company performs appropriate evaluation of a prospective customer's financial condition.

At December 31, 2011, five customers comprise approximately 83.0% of the total accounts receivable balance, with each customer individually representing 27.0%, 17.3%, 16.4%, 12.1% and 10.2% of total accounts receivable, respectively. At December 31, 2010, five customers comprise approximately 83.6% of the total accounts receivable balance, with each customer individually representing 33.7%, 33.5%, 6.7%, 6.0% and 3.6% of total accounts receivable, respectively.

For the year ended December 31, 2011, contracts with three customers comprise approximately 39.0% of total consolidated revenues, with each customer individually representing 14.5%, 14.0% and 10.5%, of total consolidated revenues, respectively. For the year ended December 31, 2010, contracts with two customers and one federal government agency comprised 42.0% of total consolidated revenues, with each customer individually representing 18.7%, 10.0% and 13.3% of total consolidated revenues, respectively.

The Company has cash deposits in excess of federally insured limits. The amount of such deposits is essentially all cash at December 31, 2011.



**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

*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.

*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 Walmart.

*Hydrogen Payment Agreement*

Pursuant to the agreement negotiated between Air Products and the Company to supply hydrogen infrastructure and hydrogen to Central Grocers at their distribution center, the Company has an obligation to purchase hydrogen from and pay a monthly service charge of \$23,300 for hydrogen infrastructure to Air Products for the full term of the contract. Amendment No. 1 to the Hydrogen Payment Agreement became effective April 1, 2010 and increased the monthly service charge to \$25,971 to accommodate for the addition of two dispensers and associated piping.

**18. Multiple-Deliverable Revenue Arrangements**

The Company enters into multiple-deliverable revenue arrangements that may contain a combination of fuel cell systems or equipment, installation, service, maintenance, fueling and other support services. The delivered item, equipment, does have value to the customer on a standalone basis and could be separately sold by another vendor. In addition, the Company does not include a right of return on its products. The majority of the Company's multiple-deliverable revenue arrangements ship complete within the same quarter.

Under the guidance of the FASB ASU No. 2009-13, in an arrangement with multiple-deliverables, the delivered items will be considered a separate unit of accounting if the following criteria are met:

- ◆ The delivered item or items have value to the customer on a standalone basis.
- ◆ If the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item or items is considered probable and substantially in the control of the vendor.

Deliverables not meeting the criteria for being a separate unit of accounting are combined with a deliverable that does meet that criterion. The appropriate allocation of arrangement consideration and recognition of revenue is then determined for the combined unit of accounting.

The Company allocates arrangement consideration to each deliverable in an arrangement based on its relative selling price. The Company determines selling price using vendor-specific objective evidence (VSOE), if it exists, otherwise third-party evidence (TPE). If neither VSOE nor TPE of selling price exists for a unit of accounting, the Company uses estimated selling price (ESP).

VSOE is generally limited to the price that a vendor charges when it sells the same or similar products or services on a standalone basis. TPE is determined based on the prices charged by competitors of the Company for a similar deliverable when sold separately. The Company generally expects that it will not be able to establish VSOE or TPE for certain deliverables due to the lack of standalone sales and the nature of the markets in which the Company competes, and, as such, the Company typically will determine selling price using ESP.

F-31

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

The objective of ESP is to determine the price at which the Company would transact if the product or service were sold by the Company on a standalone basis. The Company's determination of ESP may involve a weighting of several factors based on the specific facts and circumstances of the arrangement. Specifically, the Company may consider the cost to produce the deliverable, the anticipated margin on that deliverable, the selling price and profit margin for similar parts, the Company's ongoing pricing strategy and policies, the value of any enhancements that have been built into the deliverable and the characteristics of the varying markets in which the deliverable is sold, as applicable. The Company will determine ESP for deliverables in future agreements based on the specific facts and circumstances of the arrangement.

As noted above, in determining selling price, TPE is generally not readily available due to a lack of a competitive environment in selling fuel cell technology. However, when determining selling price for certain deliverables such as service and maintenance, if available, the Company utilizes prices charged by its competitors as TPE when estimating its costs for labor hours.

Each deliverable within the Company's multiple-deliverable revenue arrangements is accounted for as a separate unit of accounting under the guidance of ASU No. 2009-13. Once a standalone selling price for all the deliverables that meet the separation criteria has been met, whether by VSOE, TPE or ESP, the relative selling price method is used to proportionately allocate the sale consideration to each element of the arrangement. The Company plans to analyze the selling prices used in its allocation of arrangement consideration at a minimum on an annual basis. Selling prices will be analyzed on a more frequent basis if a significant change in the Company's business necessitates a more timely analysis or if the Company experiences significant variances in its selling prices.

For all product and service revenue transactions entered into prior to the implementation of ASU No. 2009-13, the Company will continue to defer the 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 which extend over multiple years. While contract terms for those transactions generally required payment shortly after shipment or delivery and installation of the fuel cell system and were not contingent on the achievement of specific milestones or other substantive performance, the multiple-element revenue obligations within our contractual arrangements were generally not accounted for separately based on our limited experience and lack of evidence of fair value of the undelivered components.

**19. Licensing Agreement**

On October 26, 2010, the Company licensed the intellectual property relating to its stationary power products, GenCore and GenSys, to IdaTech plc on a non-exclusive basis. Plug Power maintains ownership of, and the right to use, the patents and other intellectual property licensed to IdaTech. As part of the transaction, Plug Power also sold inventory, equipment and certain other assets related to its stationary power business. Total consideration for the licensing and assets was \$5 million and was received during October 2010. The consideration was subject to reduction by a maximum of \$1 million in the event that the Company did not deliver certain of the assets sold. As of December 31, 2010, \$1.0 million was included in assets held for sale and \$1.0 million was included in other current liabilities in the consolidated balance sheets. Upon delivery of those certain assets in the quarter ended June 30, 2011 the \$1.0 million in consideration was released.

**20. Geographic Information**

The following is a summary of revenue for the years ended December 31, 2011, 2010 and 2009, based on physical location of the subsidiary making the sale:

**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

	2011		2010		2009	
	Product and service and licensed technology revenue	Research and development contract revenue	Product and service and licensed technology revenue	Research and development contract revenue	Product and service revenue	Research and development contract revenue
United States	\$ 23,739,828	\$ 3,886,114	\$ 15,740,087	\$ 3,463,508	\$ 4,683,627	\$ 7,269,404
Canada	-	-	134,692	134,362	149,146	190,379
Total	\$ 23,739,828	\$ 3,886,114	\$ 15,874,779	\$ 3,597,870	\$ 4,832,773	\$ 7,459,783

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, 2011 and 2010, are as follows:

	2011	2010
United States	\$ 11,561,840	\$ 13,839,370
Canada	4,599,636	6,133,894
Total	\$ 16,161,476	\$ 19,973,264

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

	Quarters ended			
	March 31, 2011	June 30, 2011	September 30, 2011	December 31, 2011
Product and service revenue	\$ 4,993	\$ 2,621	\$ 4,313	\$ 11,296
Research and development contract revenue	785	1,563	994	544
Licensed technology revenue	163	163	163	28
Net loss	(7,243)	(6,753)	(6,291)	(7,167)
Loss per share:				
Basic and Diluted	(0.55)	(0.41)	(0.28)	(0.32)
	Quarters ended			
	March 31, 2010	June 30, 2010	September 30, 2010	December 31, 2010
Product and service revenue	\$ 3,163	\$ 2,326	\$ 4,795	\$ 5,455
Research and development contract revenue	1,208	778	957	655
Licensed technology revenue	-	-	-	136
Net loss	(10,558)	(18,516)	(9,292)	(8,593)
Loss per share:				
Basic and Diluted	(0.81)	(1.41)	(0.71)	(0.65)

Note: Per share information for the prior periods has been retroactively adjusted to reflect the May 19, 2011 one-for-ten reverse stock split of the Company's common stock.

**22. Subsequent Events**

The Company has evaluated subsequent events and transactions through the date of this filing for potential recognition or disclosure in the financial statements and has noted no other subsequent events requiring recognition or disclosure other than as stated below:

F-33

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**PLUG POWER INC. AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)**

On January 24, 2012, the Company entered into a Master and Shareholders' Agreement with Axane, S.A., a subsidiary of Air Liquide, pursuant to which the Company and Axane formed a joint venture company based in France under the name Hypulsion (the "JV"). The principal purpose of the JV will be to develop and sell hydrogen fuel cell systems for the European material handling market. On February 29, 2012, the Company completed the formation of the JV and the Company and the JV entered into a Contribution and License Agreement and a Supply and Engineered Services Agreement.

On March 23, 2012, the Company and Broadridge Corporate Issuer Solutions, Inc., as rights agent, entered into Amendment No. 3 (the Rights Amendment) to the Shareholders Rights Agreement, dated as of June 23, 2009 (as amended, the Rights Agreement). The Rights Amendment provides that, generally, any beneficial ownership of shares of our common stock by affiliates and associates of AWM Investments Company, including but not limited to Special Situations Technology Fund, L.P., Special Situations Technology Fund II, L.P., and Special Situations Private Equity Fund, L.P., (collectively, SSF) will not cause the preferred stock purchase rights to become exercisable under the Rights Agreement, so long as SSF and their affiliates and associates do not at any time beneficially own shares of our common stock equaling or exceeding three percent more than the percentage of the then outstanding shares of common stock beneficially owned by SSF and their affiliates and associates immediately following the closing of our public offering on March 28, 2012.

On March 28, 2012, the Company complete an underwritten public offering of 13,000,000 shares of common stock. The shares were sold at \$1.15 per share for gross proceeds of approximately \$15.0 million. Net proceeds, after underwriting discounts and commissions and other estimated fees and expenses payable by the Company, were approximately \$13.6 million. The Company intends to use the net proceeds of the offering for general corporate purposes, which may include working capital, capital expenditures, research and development expenditures, commercial expenditures, acquisitions of new technologies or businesses that are complementary to its current technologies or business focus, and investments. In connection with the offering, the Company has granted the underwriter a 45-day option to purchase up to an additional 1,950,000 shares of common stock to cover over-allotments.

On March 29, 2012, the Company sold 1,950,000 additional shares of common stock, pursuant to the underwriter's exercise of its over-allotment option in connection with the Company's recently announced public offering, resulting in additional net proceeds to the Company of \$2,085,525.



PLUG POWER INC. AND SUBSIDIARIES

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

	Balance at Beginning of Period	Additions Charged to Cost and Expenses	Deductions (Describe)		Balance at End of Period
<u>December 31, 2011</u>					
Deducted from liability accounts:					
Product warranty reserve	862,480	1,021,100	672,671	(a)	1,210,909
<u>December 31, 2010</u>					
Deducted from liability accounts:					
Product warranty reserve	-	1,004,822	142,342	(a)	862,480
(a) Cost of warranty performed					

F-35

**Plug Power Inc. and Subsidiaries**  
**Condensed Consolidated Balance Sheets**  
**(Unaudited)**

	September 30 2012	December 31, 2011
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 9,461,404	\$ 13,856,893
Accounts receivable, less allowance of \$0 at September 30, 2012 and December 31, 2011	7,661,038	13,388,909
Inventory	13,005,120	10,354,707
Prepaid expenses and other current assets	1,552,429	1,894,014
Total current assets	31,679,991	39,494,523
Property, plant, and equipment (net of accumulated depreciation of \$26,913,460 at September 30, 2012 and \$25,616,113 at December 31, 2011)	7,404,490	8,686,840
Note Receivable	585,611	-
Intangible assets, net	5,896,909	7,474,636
Total assets	\$ 45,567,001	\$ 55,655,999
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 5,541,807	\$ 4,668,721
Accrued expenses	2,075,772	3,172,998
Product warranty reserve	2,968,613	1,210,909
Borrowings under line of credit	1,000,000	5,405,110
Deferred revenue	4,175,560	2,505,175
Other current liabilities	334,085	80,000
Total current liabilities	16,095,837	17,042,913
Common stock warrant liability	1,594,323	5,320,990
Deferred revenue	3,567,583	3,036,829
Other liabilities	1,264,621	1,219,602
Total liabilities	22,522,364	26,620,334
Stockholders' equity:		
Common stock, \$0.01 par value per share; 245,000,000 shares authorized;		
Issued (including shares in treasury):		
38,197,255 at September 30, 2012 and 22,924,411 at December 31, 2011	381,973	229,244
Additional paid-in capital	801,351,649	784,213,871
Accumulated other comprehensive income	1,035,329	928,744
Accumulated deficit	(778,171,932)	(754,783,812)
Less common stock in treasury:		
165,906 shares at September 30, 2012 and December 31, 2011	(1,552,382)	(1,552,382)
Total stockholders' equity	23,044,637	29,035,665
Total liabilities and stockholders' equity	\$ 45,567,001	\$ 55,655,999

**The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.**

FF-1

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**Plug Power Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Operations**  
**(Unaudited)**

	Three months ended		Nine months ended	
	September 30		September 30	
	2012	2011	2012	2011
Product and service revenue	\$ 4,273,385	\$ 4,312,885	\$ 18,711,555	\$ 11,927,135
Research and development contract revenue	502,269	994,244	1,475,338	3,342,187
Licensed technology revenue	-	163,125	-	489,375
Total revenue	4,775,654	5,470,254	20,186,893	15,758,697
Cost of product and service revenue	10,848,860	7,565,994	28,552,076	19,187,617
Cost of research and development contract revenue	791,322	1,695,171	2,389,844	5,505,767
Research and development expense	1,284,975	1,478,847	4,089,509	3,647,821
Selling, general and administrative expenses	3,053,434	3,606,505	10,556,495	11,051,020
Gain on sale of leased assets	-	(673,358)	-	(673,358)
Amortization of intangible assets	578,090	584,606	1,726,854	1,754,568
Operating loss	(11,781,027)	(8,787,511)	(27,127,885)	(24,714,738)
Interest and other income and net realized losses				
from available-for-sale securities	80,046	99,740	171,260	220,862
Change in fair value of common stock warrant liability	1,434,866	2,414,267	3,726,667	4,204,787
Interest and other expense and foreign currency gain (loss)	59,349	(17,042)	(158,162)	2,675
Net loss	\$ (10,325,464)	\$ (6,290,546)	\$ (23,388,120)	\$ (20,286,414)
Loss per share:				
Basic and diluted	\$ (0.27)	\$ (0.28)	\$ (0.71)	\$ (1.16)
Weighted average number of common shares				
outstanding	37,977,052	22,676,114	33,107,175	17,441,767

**The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.**



**Plug Power Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Comprehensive Income (Loss)**  
**(Unaudited)**

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2012	2011	2012	2011
Net Loss	\$ (10,325,464)	\$ (6,290,546)	\$ (23,388,120)	\$ (20,286,414)
Other comprehensive (loss) income:				
Foreign currency translation gain (loss)	110,625	(160,205)	106,585	(74,173)
Unrealized gain on available-for-sale securities	-	-	-	18,502
Comprehensive Loss	\$ (10,214,839)	\$ (6,450,751)	\$ (23,281,535)	\$ (20,342,085)

**The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.**

**Plug Power Inc. and Subsidiaries****Condensed Consolidated Statements of Cash Flows  
(Unaudited)**

	<b>Nine months ended</b>	
	<b>September 30,</b>	
	<b>2012</b>	<b>2011</b>
<b>Cash Flows From Operating Activities:</b>		
Net loss	\$ (23,388,120)	\$ (20,286,414)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation of property, plant and equipment	1,459,159	1,600,143
Amortization of intangible assets	1,726,854	1,754,568
Stock-based compensation	1,500,352	1,602,097
Loss on disposal of property, plant and equipment	57,680	308,902
Gain on sale of leased assets	-	(673,358)
Realized loss on available for sale securities	-	22,421
Change in fair value of common stock warrant liability	(3,726,667)	(4,204,787)
Changes in operating assets and liabilities:		
Accounts receivable	5,728,228	(1,028,099)
Inventory	(2,650,413)	5,303,221
Prepaid expenses and other current assets	341,585	(180,390)
Issuance of note receivable	(585,611)	-
Accounts payable, accrued expenses, product warranty reserve and other liabilities	1,787,625	(2,914,462)
Deferred revenue	2,201,139	(456,295)
Net cash used in operating activities	(15,548,189)	(19,152,453)
<b>Cash Flows From Investing Activities:</b>		
Purchase of property, plant, and equipment	(292,389)	(1,156,163)
Restricted cash	-	525,000
Proceeds from sale of leased assets	-	673,358
Proceeds from disposal of property, plant and equipment	57,900	45,000
Proceeds from maturities and sales of available-for-sale securities	-	10,399,396
Net cash (used in) provided by investing activities	(234,489)	10,486,591
<b>Cash Flows From Financing Activities:</b>		
Purchase of treasury stock	-	(158,492)
Proceeds from issuance of common stock	17,192,500	22,583,877
Stock issuance costs	(1,402,230)	(1,891,378)
Repayments under line of credit, net	(4,405,110)	-
Principal payments on long-term debt	-	(9,956)
Net cash provided by financing activities	11,385,160	20,524,051
Effect of exchange rate changes on cash	2,029	(11,407)
(Decrease) increase in cash and cash equivalents	(4,395,489)	11,846,782
<b>Cash and cash equivalents, beginning of period</b>	<b>13,856,893</b>	<b>10,955,403</b>
<b>Cash and cash equivalents, end of period</b>	<b>\$ 9,461,404</b>	<b>\$ 22,802,185</b>

**The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.**

FF-4

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## 1. Nature of Operations

### *Description of Business*

Plug Power Inc., or the Company, is a leading provider of alternative energy technology and is involved in the design, development, commercialization and manufacture of fuel cell systems for the industrial off-road (forklift or material handling) market.

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 liquid petroleum gas (LPG), 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 concentrate our efforts on developing, manufacturing and selling our hydrogen-fueled PEM GenDrive<sup>®</sup> products on commercial terms for industrial off-road (forklift or material handling) applications, with a focus on multi-shift high volume manufacturing and high throughput distribution sites.

We have previously invested in development and sales activities for low-temperature remote-prime power GenSys<sup>®</sup> products and our GenCore<sup>®</sup> product, which is a hydrogen fueled PEM fuel cell system to provide back-up power for critical infrastructure. While Plug Power will continue to service and support GenSys and/or GenCore products on a limited basis, our main focus is our GenDrive product line.

We sell our products worldwide, with a primary focus on North America, through our direct product sales force, original equipment manufacturers (OEMs) and their dealer networks. We sell to business, industrial and government customers.

We were organized in the State of Delaware on June 27, 1997 and became a public company 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 acquired all the issued and outstanding equity of Cellex Power Products, Inc. (Cellex) and General Hydrogen Corporation (General Hydrogen). Through these acquisitions, and our continued GenDrive product development efforts, Plug Power became the first fuel cell company to offer a complete suite of products: Class 1 - sit-down counterbalance trucks, Class 2 stand-up reach trucks and Class 3 rider pallet trucks.

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

### *Liquidity*

As of September 30, 2012, we had approximately \$15.6 million of working capital, which includes \$9.5 million of cash and cash equivalents to fund our future operations. Additionally, as of March 30, 2012, we executed a Second Loan Modification Agreement with Silicon Valley Bank which increased our credit facility, providing us access of up to \$15 million in financing, subject to borrowing base limitations, to support working capital needs. Based on the borrowing base calculation and our current outstanding loan balance, the availability under this facility at September 30, 2012 was approximately \$1.9 million (see Note 4, Loan and Security Agreement, of the condensed consolidated financial statements). We believe that our current cash, cash equivalents and cash generated from future sales, in conjunction with the availability of the credit facility, will provide sufficient liquidity to fund operations into 2013. This projection is based on our current expectations regarding product sales, cost structure, cash burn rate and operating assumptions.

FF-5

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In the event that our operating expenses are higher than anticipated or the gross margins and shipments of our GenDrive products do not increase as we expect, we may be required to implement contingency plans within our control to conserve and/or enhance our liquidity to meet operating needs. Such plans include: our ability to further reduce discretionary expenses, monetize our real estate assets through a sale-leaseback arrangement and obtain additional funding from licensing the use of our technologies. Our cash requirements relate primarily to working capital needed to operate and grow our business, including funding operating expenses, growth in inventory to support both shipments of new units and servicing the installed base, and continued development and expansion of our products. Our ability to achieve profitability and meet future liquidity needs and capital requirements will depend upon numerous factors, including the timing and quantity of product orders and shipments, the timing and amount of our operating expenses; the timing and costs of working capital needs; the timing and costs of building a sales base; the timing and costs of developing marketing and distribution channels; the timing and costs of product service requirements; the timing and costs of hiring and training product staff; the extent to which our products gain market acceptance; the timing and costs of product development and introductions; the extent of our ongoing and any new research and development programs; and changes in our strategy or our planned activities. As a result, we can provide no assurance that we will be able to fund our operations without additional external financing.

Alternatives we would consider for additional funding include equity or debt financing, a sale-leaseback of our real estate, or licensing of our technology. In addition to raising capital, we may also consider strategic alternatives including business combinations, strategic alliances or joint ventures. Under such conditions, if we are unable to obtain additional capital in 2013, we may not be able to sustain our future operations and may be required to delay, reduce and/or cease our operations and/or seek bankruptcy protection. We cannot assure you that any necessary additional financing will be available on terms favorable to us, or at all. Given the difficult current economic environment, we believe that it could be difficult to raise additional funds and there can be no assurance as to the availability of additional financing or the terms upon which additional financing may be available. Additionally, even if we raise sufficient capital through equity or debt financing, strategic alternatives or otherwise, there can be no assurances that the revenue or capital infusion will be sufficient to enable us to develop our business to a level where it will be profitable or generate positive cash flow. If we raise additional funds through the issuance of equity or convertible debt securities, the percentage ownership of our stockholders could be significantly diluted, and these newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. If we incur additional debt, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. The terms of any debt securities issued could also impose significant restrictions on our operations. Broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance, and may adversely impact our ability to raise additional funds. Similarly, if our common stock is delisted from the NASDAQ Capital Market, it may limit our ability to raise additional funds (see Note 14, Subsequent Events). If we raise additional funds through collaborations and/or licensing arrangements, we might be required to relinquish significant rights to our technologies, or grant licenses on terms that are not favorable to us.

## **2. Basis of Presentation**



**Principles of Consolidation:** The accompanying unaudited condensed interim consolidated financial statements include the financial statements of the Company 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 period consolidated financial statements to conform to current period presentation.

**Interim Financial Statements:** The accompanying unaudited condensed interim consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (SEC). In the opinion of management, all adjustments, which consist solely of normal recurring adjustments, necessary to present fairly, in accordance with U.S. generally accepted accounting principles (GAAP), the financial position, results of operations and cash flows for all periods presented, have been made. The results of operations for the interim periods presented are not necessarily indicative of the results that may be expected for the full year.

Certain information and footnote disclosures normally included in annual consolidated financial statements prepared in accordance with U.S. generally accepted accounting principles have been condensed or omitted. These unaudited condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K filed for the fiscal year ended December 31, 2011.

The information presented in the accompanying condensed consolidated balance sheet as of December 31, 2011 has been derived from the Company's December 31, 2011 audited consolidated financial statements. All other information has been derived from the Company's unaudited condensed consolidated financial statements as of September 30, 2012 and for the three and nine months ended September 30, 2012 and 2011.

***Use of Management Estimates:*** The unaudited condensed interim consolidated financial statements have been prepared in conformity with GAAP, 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.

***Significant Accounting Policies:***

Warrant accounting

We account for common stock warrants in accordance with applicable accounting guidance provided in Accounting Standards Codification (ASC) 815, Derivatives and Hedging—Contracts in Entity's Own Equity, as either derivative liabilities or as equity instruments depending on the specific terms of the warrant agreement. In compliance with applicable securities law, registered common stock warrants that require the issuance of registered shares upon exercise and do not sufficiently preclude an implied right to cash settlement are accounted for as derivative liabilities. We classify these derivative warrant liabilities on the condensed consolidated balance sheets as a long term liability, which is revalued at each balance sheet date subsequent to the initial issuance. We use the Black-Scholes pricing model to value the derivative warrant liability. The Black-Scholes pricing model, which is based, in part, upon unobservable inputs for which there is little or no market data, requires the Company to develop its own assumptions.

The Company used the following assumptions for its common stock warrants. The risk-free interest rate for May 31, 2011 (issuance date), December 31, 2011, and September 30, 2012 were .75%, .33% and .30%, respectively. The volatility of the market price of the Company's common stock for May 31, 2011, December 31, 2011 and September 30, 2012 were 94.4%, 78.6%, and 76.2%, respectively. The expected average term of the warrant used for all periods was 2.5 years. There was no expected dividend yield for the warrants granted. As a result, if factors change and different assumptions are used, the warrant liability and the change in estimated fair value could be materially different. Generally, as the market price of our common stock increases, the fair value of the warrant increases, and conversely, as the market price of our common stock decreases, the fair value of the warrant decreases. Also, a significant increase in the volatility of the market price of the Company's common stock, in isolation, would result in a significantly higher fair value measurement; and a significant decrease in volatility would result in a significantly lower fair value measurement. Changes in the fair value of the warrants are reflected in the condensed consolidated

statement of operations as change in fair value of common stock warrant liability.

#### Joint Venture

We account for investments in joint ventures in which we have significant influence in accordance with applicable accounting guidance in Subtopic 323-10, *Investments - Equity Method and Joint Ventures - Overall*. On February 29, 2012 we completed the formation of our joint venture with Axane, S.A., a subsidiary of Air Liquide, under the name HyPulsion (the JV). The principal purpose of the JV is to develop and sell hydrogen fuel cell systems for the European material handling market. Axane contributed cash at the closing and will make additional fixed cash contributions in 2013 and 2014 in exchange for 55% ownership of the JV, subject to certain conditions. We contributed to the JV the right to use our technology, including design and technology know-how on GenDrive systems, in exchange for 45% ownership of the JV. Accordingly, we will share in 45% of the profits from the JV. We have not contributed any cash to the JV and we are not obligated to contribute any cash. We have an option in the future to contribute cash and become a majority owner of the JV.

F-7

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In accordance with the equity method of accounting, the Company will increase its investment in the JV by its share of any earnings, and decrease its investment in the JV by its share of any losses. Losses in excess of the investment must be restored from future profits before we can recognize our proportionate share of profits. As of September 30, 2012, the Company had a zero basis for its investment in the JV.

***Recent Accounting Pronouncements:***

There are no recently issued accounting standards with pending adoptions that the Company's management currently anticipates will have any material impact upon its financial statements.

**3. Multiple-Deliverable Revenue Arrangements**

The Company enters into multiple-deliverable revenue arrangements that may contain a combination of fuel cell systems or equipment, installation, service, maintenance, fueling and other support services. The delivered item, equipment, does have value to the customer on a standalone basis and could be separately sold by another vendor. In addition, the Company does not include a right of return on its products.

Under the guidance of the Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2009-13, in an arrangement with multiple-deliverables, the delivered items will be considered a separate unit of accounting if the following criteria are met:

- The delivered item or items have value to the customer on a standalone basis.
- If the arrangement includes a general right of return relative to the delivered item(s), delivery or performance of the undelivered item or items is considered probable and substantially in the control of the vendor.

Deliverables not meeting the criteria for being a separate unit of accounting are combined with a deliverable that does meet that criterion. The appropriate allocation of arrangement consideration and recognition of revenue is then determined for the combined unit of accounting.

The Company allocates arrangement consideration to each deliverable in an arrangement based on its relative selling price. The Company determines selling price using vendor-specific objective evidence (VSOE), if it exists, otherwise third-party evidence (TPE). If neither VSOE nor TPE of selling price exists for a unit of accounting, the Company uses estimated selling price (ESP).

VSOE is generally limited to the price that a vendor charges when it sells the same or similar products or services on a standalone basis. TPE is determined based on the prices charged by competitors of the Company for a similar

deliverable when sold separately. The Company generally expects that it will not be able to establish VSOE or TPE for certain deliverables due to the lack of standalone sales and the nature of the markets in which the Company competes, and, as such, the Company typically will determine selling price using ESP.

The objective of ESP is to determine the price at which the Company would transact if the product or service were sold by the Company on a standalone basis. The Company's determination of ESP may involve a weighting of several factors based on the specific facts and circumstances of the arrangement. Specifically, the Company may consider the cost to produce the deliverable, the anticipated margin on that deliverable, the selling price and profit margin for similar parts, the Company's ongoing pricing strategy and policies, the value of any enhancements that have been built into the deliverable and the characteristics of the varying markets in which the deliverable is sold, as applicable. The Company will determine ESP for deliverables in future agreements based on the specific facts and circumstances of the arrangement.

As noted above, in determining selling price, TPE is generally not readily available due to a lack of a competitive environment in selling fuel cell technology. However, when determining selling price for certain deliverables such as service and maintenance, if available, the Company utilizes prices charged by its competitors as TPE when estimating its costs for labor hours.

FF-8

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Each deliverable within the Company's multiple-deliverable revenue arrangements is accounted for as a separate unit of accounting under the guidance of ASU No. 2009-13. Once a standalone selling price for all the deliverables that meet the separation criteria has been met, whether by VSOE, TPE or ESP, the relative selling price method is used to proportionately allocate each element of the arrangement to the sale consideration. The Company plans to analyze the selling prices used in its allocation of arrangement consideration at a minimum on an annual basis. Selling prices will be analyzed on a more frequent basis if a significant change in the Company's business necessitates a more timely analysis or if the Company experiences significant variances in its selling prices.

For all product and service revenue transactions entered into prior to the implementation of ASU No. 2009-13, the Company will continue to defer the 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 which extend over multiple years. While contract terms for those transactions generally required payment shortly after shipment or delivery and installation of the fuel cell system and were not contingent on the achievement of specific milestones or other substantive performance, the multiple-element revenue obligations within our contractual arrangements were generally not accounted for separately based on our limited experience and lack of evidence of fair value of the undelivered components. We recognized revenue related to these transactions of approximately \$51,000 and \$152,000 during the three and nine months ended September 30, 2012, respectively. At September 30, 2012, and December 31, 2011, there was approximately \$758,000 and \$910,000, respectively, included in deferred revenue in the condensed consolidated balance sheets related to these transactions.

#### **4. Loan and Security Agreement**

The Company is party to a loan and security agreement, as amended, (the Loan Agreement) with Silicon Valley Bank (SVB) providing the Company with access to up to \$15,000,000 of financing in the form of (i) revolving loans, (ii) letters of credit, (iii) foreign exchange contracts and (iv) cash management services such as merchant services, direct deposit of payroll, business credit card and check cashing services.

Advances under the Loan Agreement cannot exceed a borrowing base limit calculated using (A) an advanced rate of 80% on the Company's eligible accounts receivable and (B) an advanced rate of 25% on the Company's eligible inventory (subject to a limit of the lesser of (a) \$3 million and (b) 30% of all outstanding advances), subject to certain reserves established by SVB and other adjustments.

Interest on advances of credit under the Loan Agreement for: (i) financed accounts receivables are equal to (a) SVB's prime rate, which is currently 3.25% per annum, plus 3.0% per annum or (b) if the Company maintains at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 1.50% per annum; and (ii) financed inventory is equal to (a) SVB's prime rate plus 5.25% per annum or (b) if the Company maintains at all times during any month an adjusted quick ratio of 2.0 to 1.0, then SVB's prime rate plus 3.25% per annum. The minimum monthly interest charge is \$6,000 per month. The Loan Agreement will be used by the Company to support its current working capital needs.

The Loan Agreement is secured by substantially all of the Company's properties, rights and assets, including substantially all of its equipment, inventory, receivables, intellectual property and general intangibles.

The Loan Agreement includes customary representations and warranties for credit facilities of this type. In addition, the Loan Agreement contains a number of covenants that will impose significant operating and financial restrictions on the Company's operations, including restrictions pertaining to, among other things: (i) the condition of inventory; (ii) maintenance of an adjusted quick ratio of at least 1.50 to 1.0; (iii) intellectual property right protection and registration; (iv) dispositions of assets; (v) changes in business, management, ownership or business locations; (vi) mergers, consolidations or acquisitions; (vii) incurrence or assumption of indebtedness; (viii) incurrence of liens on any of the Company's property; (ix) paying dividends or making distributions on, or redemptions, retirements or repurchases of, capital stock; (x) transactions with affiliates; and (xi) payments on or amendments to subordinated debt. At September 30, 2012 the Company was in compliance with all covenants except the adjusted quick ratio covenant. Silicon Valley Bank has waived our noncompliance with this covenant as of September 30, 2012.

FF-9

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The Loan Agreement also contains events of default customary for credit facilities of this type with, in some cases, corresponding grace periods, including, (i) failure to pay any principal or interest when due, (ii) failure to comply with covenants, (iii) any material adverse change occurring, (iv) an attachment, levy or restraint on our business, (v) certain bankruptcy or insolvency events, (vi) payment defaults relating to, or acceleration of, other indebtedness or that could result in a material adverse change to the Company's business, (vii) the Company or its subsidiaries becoming subject to judgments, claims or liabilities in an amount individually or in aggregate in excess of \$150,000 (viii) any misrepresentations, or (ix) any revocation, invalidation, breach or invalidation of any subordinated debt.

The Loan Agreement will expire on March 29, 2013. The Loan Agreement may be terminated prior to March 29, 2013; however, the Company would be required to pay a \$150,000 early termination fee in connection with a termination (i) by the Company for any reason or (ii) by SVB upon notice and after the occurrence and during the continuance of an event of default. As of September 30, 2012, \$1,000,000 was outstanding under the loan agreement and was recorded as borrowings under line of credit on the condensed consolidated balance sheets. Based on the borrowing base calculation and our current outstanding loan balance, the availability under this facility at September 30, 2012 was approximately \$1.9 million.

## **5. Stockholders Equity**

On May 12, 2011, the Company's stockholders approved the 2011 Stock Option and Incentive Plan (the 2011 Plan). The 2011 Plan provides for the issuance of up to a maximum number of shares of common stock equal to the sum of (i) 1,000,000, plus (ii) the number of shares of common stock underlying any grants pursuant to the 2011 Plan or the Plug Power Inc. 1999 Stock Option and Incentive Plan that are forfeited, canceled, repurchased or are terminated (other than by exercise). The shares may be issued pursuant to stock options, stock appreciation rights, restricted stock awards and certain other equity-based awards granted to employees, directors and consultants of the Company. No grants may be made under the 2011 Plan after May 12, 2021. On May 16, 2012, the stockholders approved an amendment to the 2011 Plan, to increase the number of shares of the Company's common stock authorized for issuance under the 2011 Plan from 1,000,000 to 6,500,000.

On May 31, 2011, the Company completed an underwritten public offering of 8,265,000 shares of its common stock and warrants to purchase an aggregate of 7,128,563 shares of common stock (including warrants to purchase an aggregate of 929,813 shares of common stock purchased by the underwriter pursuant to the exercise of its over-allotment option). Net proceeds, after underwriting discounts and commissions and other fees and expenses payable by Plug Power, were \$18,289,883 (of this amount \$8,768,143 in fair value was recorded as common stock warranty liability at issuance date). The shares and the warrants were sold together as a fixed combination, with each combination consisting of one share of common stock and 0.75 of a warrant to purchase one share of common stock, at a price to the public of \$2.42 per fixed combination. The warrants are exercisable upon issuance and will expire on May 31, 2016. The exercise price of the warrants upon issuance was \$3.00 per share of common stock and is subject to weighted average anti-dilution provisions in the event of issuance of additional shares of common stock and certain other conditions, as further described in the warrant agreement. Additionally, in the event of a sale of the Company, and under certain conditions, each warrant holder has the right to require the Company to purchase such holder's warrants at a price determined using a Black-Scholes option pricing model. As a result of the March 28 and 29, 2012 public offerings and pursuant to the effect of the anti-dilution provisions, the exercise price of the warrants was reduced to \$2.27 per share of common stock. Simultaneously with the adjustment to the exercise price, the number of common stock shares that may be purchased upon exercise of the warrants was increased to 9,421,008 shares.



On June 8, 2011, the Company sold 836,750 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$1,874,990.

On July 1, 2011, the Company sold 231,000 additional shares of common stock, pursuant to the underwriter's partial exercise of its over-allotment option, resulting in additional net proceeds to Plug Power of \$527,626.

FF-10

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On March 28, 2012, the Company completed an underwritten public offering of 13,000,000 shares of its common stock. The shares were sold at \$1.15 per share. Net proceeds, after underwriting discounts and commissions and other fees and expenses payable by Plug Power were \$13,704,745.

On March 29, 2012, the Company sold 1,950,000 additional shares of common stock at \$1.15 per share, pursuant to the underwriter's exercise of its over-allotment option in connection with the March 28, 2012 underwritten public offering, resulting in additional net proceeds to Plug Power of \$2,085,525.

Changes in stockholders' equity for the nine months ended September 30, 2012 are as follows:

	Common Stock		Accumulated		Treasury Stock		Total	Stockholders'
	Shares	Amount	Other	Comprehensive	Shares	Amount		
		Additional Paid-in-Capital	Income			Deficit		
<b>December 31, 2011</b>	22,924,433	1229,244	\$ 784,213,871	\$ 928,744	165,906	\$ (1,552,382)	\$ (754,783,812)	\$ 29,035,665
Net loss	-	-	-	-	-	-	(23,388,120)	(23,388,120)
Foreign currency translation gain	-	-	-	106,585	-	-	-	106,585
Stock based compensation	322,844	3,229	1,497,008	-	-	-	-	1,500,237
Public offering common stock, net	14,950,000	9,500	15,640,770	-	-	-	-	15,790,270
<b>September 30, 2012</b>	38,197,255	5381,973	\$ 801,351,649	\$ 1,035,329	165,906	\$ (1,552,382)	\$ (778,171,932)	\$ 23,044,637

## 6. Earnings 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. Diluted earnings per share reflects the potential dilution that could occur if securities or other contracts to issue common stock (such as 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. This is computed by dividing net earnings by the combination of dilutive common share equivalents, which is

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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:

	Three Months Ended		Nine Months Ended	
	September 30, 2012	2011	September 30, 2012	2011
Numerator:				
Net loss	\$ (10,325,464)	\$ (6,290,546)	\$ (23,388,120)	\$ (20,286,414)
Denominator:				
Weighted average number of common shares outstanding	37,977,052	22,676,114	33,107,175	17,441,767

FF-11

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The potential dilutive common shares are summarized as follows:

	At September 30, 2012	2011
Stock options outstanding	1,999,521	1,344,665
Unvested restricted stock	275,262	408,388
Common stock warrants (1)	9,421,008	7,128,563
Number of dilutive potential common shares	11,695,791	8,881,616

- (1) On May 31, 2011, the Company granted 7,128,563 warrants as part of an underwritten public offering. As a result of the March 28 and 29, 2012 public offerings described in Note 5, the number of warrants increased to 9,421,008.

## 7. Inventory

Inventory as of September 30, 2012 and December 31, 2011 consisted of the following:

	September 30, 2012	December 31, 2011
Raw materials and supplies	\$ 9,479,058	\$ 9,159,004
Work-in-process	18,584	462,832
Finished goods	3,507,478	732,871
	\$ 13,005,120	\$ 10,354,707

Finished goods inventory at September 30, 2012 includes approximately \$3 million related to 245 units shipped to a customer site during the quarter in connection with a customer lease agreement that was not yet complete.

## 8. Intangible Assets

The gross carrying amount and accumulated amortization of the Company's acquired identifiable intangible assets related to Plug Power Canada Inc. as of September 30, 2012 are as follows:

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	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Effect of Foreign Currency Translation	Total
Acquired Technology	8 years	\$ 15,900,000	\$ (11,607,664)	\$ 1,281,656	\$ 5,573,992
Customer Relationships	8 years	1,000,000	(677,083)	-	322,917
		\$ 16,900,000	\$ (12,284,747)	\$ 1,281,656	\$ 5,896,909

FF-12

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The gross carrying amount and accumulated amortization of the Company's acquired identifiable intangible assets related to Plug Power Canada Inc. as of December 31, 2011 are as follows:

	Weighted Average Amortization Period	Gross Carrying Amount	Accumulated Amortization	Effect of Foreign Currency Translation	Total
Acquired Technology	8 years	\$ 15,900,000	\$ (9,974,597)	\$ 1,132,529	\$ 7,057,932
Customer Relationships	8 years	1,000,000	(583,296)	-	416,704
		\$ 16,900,000	\$ (10,557,893)	\$ 1,132,529	\$ 7,474,636

## 9. Income Taxes

Under Internal Revenue Code (IRC) Section 382, the use of net operating loss carry-forwards, capital loss carry-forwards and other tax credit carry-forwards may be limited if a change in ownership of a company occurs. If it is determined that due to transactions involving the Company's shares owned by its five percent stockholders a change of ownership has occurred under the provisions of IRC Section 382, the Company's net operating loss, capital loss and tax credit carry-forwards could be subject to significant IRC Section 382 limitations.

Prior to March 2011, the Company had approximately \$703 million in Federal and state net operating loss carry-forwards and \$15.6 million in Federal research and experimentation tax credit carry-forwards. A Section 382 ownership change occurred during March 2011 that resulted in approximately \$675 million of Federal and state net operating loss carry-forwards being subject to IRC Section 382 limitations and as a result of IRC Section 382 limitations, approximately \$618 million of the net operating loss carry-forwards and \$15.6 million of the Federal research and experimentation tax credit carry-forwards will expire prior to utilization. As a result of the IRC Section 382 limitations, these net operating loss and tax credit carry-forwards that will expire unutilized were not reflected in the Company's gross deferred tax asset as of December 31, 2011. The ownership change also resulted in Net Unrealized Built in Losses per IRS Notice 2003-65 which should result in Recognized Built in Losses during the five year recognition period of approximately \$9.4 million. This will translate into unfavorable book to tax add backs in the Company's 2011 to 2016 U.S. corporate income tax returns that resulted in a gross deferred tax liability of \$3.6 million at the time of the ownership change and \$2.6 million at December 31, 2011 with a corresponding reduction to the valuation allowance. This gross deferred tax liability will offset certain existing gross deferred tax assets (i.e. capitalized research expense). This had no impact on the Company's current financial position, results of operations, or cash flows because of the full valuation allowance.

As a result of certain equity transactions by five percent stockholders, a Section 382 ownership change occurred during March 2012 that resulted in all but approximately \$14.9 million of the Company's Federal and state net operating loss carry-forwards expiring prior to utilization, which resulted in the Company's gross deferred tax asset and related valuation allowance decreasing by approximately \$24.6 million. The ownership also resulted in Net Unrealized Built in Losses per IRS Notice 2003-65 which should result in Recognized Built in Losses during the five year recognition period of approximately \$36.5 million. This will translate into unfavorable book to tax add backs in the Company's 2012 to 2017 U.S. corporate income tax returns that would result in a gross deferred tax liability of \$13.9 million at the time of the ownership change with a corresponding reduction to the valuation allowance. This gross deferred tax liability will offset certain existing gross deferred tax assets (i.e. capitalized research expense). These decreases would have no impact on the Company's financial position, results of operations, or cash flows. However, these potential future tax benefits would no longer be available to the Company.

## 10. Note Receivable

On May 25, 2012, we executed a \$663,359 Promissory Note with Forem Energy Group, maturing on May 25, 2022. This note is unsecured and bears interest at an annual rate of 2.9%. Accordingly, receivables relating to this agreement in the amount of \$585,611 and \$63,398 have been recorded as note receivable and current portion note receivable (prepaid expenses and other current assets), respectively, in the condensed consolidated balance sheets as of September 30, 2012.

## 11. Fair Value

The Company complies with the provisions of FASB ASC No. 820, Fair Value Measurements and Disclosures (ASC 820), in measuring fair value and in disclosing fair value measurements. ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements required under other accounting pronouncements. FASB ASC No. 820-10-35, Fair Value Measurements and Disclosures- Subsequent Measurement (ASC 820-10-35), clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820-10-35-3 also requires that a fair value measurement reflect the assumptions market participants would use in pricing an asset or liability based on the best information available. Assumptions include the risks inherent in a particular valuation technique (such as a pricing model) and/or the risks inherent in the inputs to the model.

ASC 820-10-35 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.



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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.

The following tables summarize the basis used to measure certain financial assets and liabilities at fair value on a recurring basis in the condensed consolidated balance sheets:

		Quoted Prices in Active Markets for Identical Items (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Balance at September 30, 2012	Total			
Common stock warrant liability	\$ 1,594,323	\$ -	\$ -	\$ 1,594,323

The following tables show reconciliations of the beginning and ending balances for liabilities measured at fair value on a recurring basis using significant unobservable inputs (i.e. Level 3) for the nine months ended September 30, 2012:

Common stock warrant liability	Fair Value Measurement Using Significant Unobservable Inputs
Beginning of period - January 1, 2012	\$ 5,320,990
Change in fair value of common stock warrants	(3,726,667)
Fair value of common stock warrant liability at September 30, 2012	\$ 1,594,323

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

**Common stock warrant liability:** For our level 3 securities, which represent common stock warrants, fair value is based on the Black-Scholes pricing model which is based, in part, upon unobservable inputs for which there is little or no market data, requiring the Company to develop its own assumptions.

The following disclosure of the estimated fair value of financial instruments is made in accordance with the provision of ASC 825-10-65, Financial Instruments, which requires disclosures about fair value of financial instruments in interim financial statements as well as in annual financial statements. 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, accounts payable and borrowings under line of credit:* The carrying amounts reported in the condensed consolidated balance sheets approximate fair value because of the short maturities of these instruments.

## **12. Commitments and Contingencies**

In September 2011, the Company signed a letter of credit with Silicon Valley Bank in the amount of \$525,000. The standby letter of credit is required by an agreement negotiated between Air Products and Chemicals, Inc. (Air Products) and the Company to supply hydrogen infrastructure and hydrogen to Central Grocers at their distribution center. There are no collateral requirements associated with this letter of credit.

The Equipment Sale Agreement Addendum No. 1 between Ballard and the Company was executed on June 30, 2011. This addendum relates to a committed purchase by the Company of a total of 3,250 Ballard fuel cell stacks between the dates of July 1, 2011 and December 31, 2012. The amount of this commitment was approximately \$9.4 million. As of September 30, 2012, the Company had purchased 2,347 stacks, and has a remaining commitment of approximately \$2.2 million. In conjunction with this agreement, the Company paid a one-time non-recurring

engineering fee of \$450,000 to Ballard to be used at Ballard's sole discretion for the purposes of product development, cost reduction and production implementation. This fee is being amortized to research and development expense over a period of eighteen months.

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 with and with government agencies. To mitigate credit risk, the Company performs appropriate evaluation of a prospective customer's financial condition.

At September 30, 2012, four customers comprise approximately 79.4% of the total accounts receivable balance, with each customer individually representing 61.0%, 8.8%, 5.0%, and 4.6% of total accounts receivable, respectively. At December 31, 2011, five customers comprise approximately 83.0% of the total accounts receivable balance, with each customer individually representing 27.0%, 17.3%, 16.4%, 12.1%, and 10.2% of total accounts receivable, respectively.

For the nine months ended September 30, 2012, contracts with three customers comprise approximately 55.5% of total consolidated revenues, with each customer representing 25.8%, 19.4%, and 10.3%, respectively. For the nine months ended September 30, 2011, contracts with two customers and two federal government agencies comprised approximately 63.7% of total consolidated revenues, with each customer representing 22.5%, 20.7%, 10.5%, and 10.0%, respectively.

FF-15

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The product and service revenue contracts we entered into generally provide a one to two-year product warranty to customers from date of installation. We currently estimate the costs of satisfying warranty claims based on an analysis of past experience and provide for future claims in the period the revenue is recognized. Factors that affect our warranty liability include the number of installed units, estimated material costs, estimated travel, and labor costs. During the quarters ended September 30, 2012, and September 30, 2011, we adjusted our reserve for additional warranty claims arising from GenDrive component quality issues that were identified during the quarter. These are isolated quality issues that were identified in GenDrive units that are currently being used at customer sites. These units will be retro-fitted with replacement components that will improve the reliability of our GenDrive products for our customers.

The following table summarizes product warranty activity recorded during the nine months ended September 30, 2012 and 2011:

	September 30, 2012	September 30, 2011
Beginning balance - January 1	\$ 1,210,919	\$ 862,480
Additions for current year deliveries	399,623	569,452
Reductions for payments made	(1,915,253)	(398,966)
Reserve Adjustment	3,273,324	561,750
Ending balance - September 30	\$ 2,968,613	\$ 1,594,716

### 13. 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 nine months ended September 30, 2012 and 2011:

	September 30, 2012	September 30, 2011
Stock-based compensation accrual impact, net	\$ (115)	\$ (211,614)
Change in unrealized gain on available-for-sale securities	-	18,502
Transfer of investment in leased property to inventory	-	263,239
Transfer of assets held for sale to inventory	-	1,000,000

### 14. Subsequent Events

The Company has evaluated subsequent events and transactions through the date of this filing for potential recognition or disclosure in the financial statements and has noted no other subsequent events requiring recognition or disclosure other than as stated below.

On October 12, 2012, the Company received a deficiency notice from The Nasdaq Stock Market ("Nasdaq") stating that it no longer complies with Nasdaq Marketplace Rule 5550(a)(2) because the bid price of the Company's common stock closed below the required minimum \$1.00 per share for the previous 30 consecutive business days. The notice also indicated that, in accordance with Marketplace Rule 5810(c)(3)(A), Plug Power has a period of 180 calendar days, until April 10, 2013, to regain compliance with Rule 5550(a)(2). If at any time before April 10, 2013 the bid price of the Company's common stock closes at \$1.00 per share or more for a minimum of 10 consecutive business days, Nasdaq will notify the Company that it has regained compliance with Rule 5550(a)(2). In the event the Company does not regain compliance with Rule 5550(a)(2) prior to the expiration of the 180-day period, Nasdaq will notify the Company that its common stock is subject to delisting. The Company may appeal the delisting determination to a Nasdaq hearing panel and the delisting will be stayed pending until the panel's determination. At such hearing, the Company would present a plan to regain compliance and Nasdaq would then subsequently render a decision. The Company is currently evaluating its alternatives to resolve the listing deficiency.

FF-16

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*Shares of Common Stock*  
*Warrants to Purchase*      *Shares of Common Stock*  
  
, 2013

## **Roth Capital Partners**

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**PART II****INFORMATION NOT REQUIRED IN THE PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the estimated costs and expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the offering of the securities being registered. All the amounts shown are estimates, except for the SEC registration fee.

SEC registration fee	\$ 2,728
FINRA filing fee	3,500
Accounting fees and expenses	*
Legal fees and expenses	*
Transfer Agent fees and expenses	*
Printing and miscellaneous expenses	*
Total	*
	\$ *

\* The amount of securities and number of offerings are indeterminable and the expenses cannot be estimated at this time.

**Item 14. Indemnification of Directors and Officers.**

In accordance with Section 145 of the Delaware General Corporation Law, Article VII of our amended and restated certificate of incorporation provides that no director of Plug Power shall be personally liable to Plug Power or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to Plug Power or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases, or (4) for any transaction from which the director derived an improper personal benefit. In addition, our amended and restated certificate of incorporation provides that if the Delaware General Corporation Law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Article V of our amended and restated by-laws provides for indemnification by Plug Power of its officers and certain non-officer employees under certain circumstances against expenses, including attorneys fees, judgments, fines and amounts paid in settlement, reasonably incurred in connection with the defense or settlement of any threatened, pending or completed legal proceeding in which any such person is involved by reason of the fact that such person is or was an officer or employee of the registrant if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of Plug Power, and, with respect to criminal actions or proceedings, if such person had no reasonable cause to believe his or her conduct was unlawful.

In addition, we have entered into indemnification agreements with each of our directors. The indemnification agreements require, among other matters, that we indemnify our directors to the fullest extent permitted by law and advance to the director s all related expenses, subject to reimbursement if it is subsequently determined that indemnification is not permitted. Under these agreements, we must also indemnify and advance all expenses incurred by directors seeking to enforce their rights under the indemnification agreements and may cover directors under directors and officers liability insurance.

### **Item 15. Recent Sales of Unregistered Securities**

In the three years preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act:

During the years ended December 31, 2010, 2011 and 2012, we issued 90,166 shares, 133,748 shares and 403,579 shares, respectively, of 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.



## **Grants and Exercises of Stock Options; Awards of Restricted Stock; Awards of Restricted Preferred Stock**

Since December 31, 2008, we have granted stock options to purchase an aggregate of 1,957,675 shares of our common stock, with exercise prices ranging from \$0.83 to \$40.40 per share, to employees, directors and consultants pursuant to our stock option plans. From December 31, 2008 to December 31, 2012, we have issued and sold an aggregate of 393 shares of our common stock upon exercise of stock options granted pursuant to our stock plans for an aggregate consideration of \$3,930. Since December 31, 2008, we have issued an aggregate of 625,196 shares of our common stock to employees, directors and consultants in connection with awards of restricted stock pursuant to our option plans for no cash consideration. The issuance of common stock upon exercise of the options and the issuance of common stock in connection with awards of restricted stock were exempt either pursuant to Rule 701, as a transaction pursuant to a compensatory benefit plan, or pursuant to Section 4(2), as a transaction by an issuer not involving a public offering. The common stock issued upon exercise of options are deemed restricted securities for the purposes of the Securities Act.

## **Item 16. Exhibits and Financial Statement Schedules**

### **(a) Exhibits.**

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated herein by reference.

### **(b) Financial Statement Schedule.**

The financial statement schedule can be found in the consolidated financial statements section of this registration statement under the heading "Schedule II Valuation and Qualifying Accounts" and is incorporated herein by reference.

## **Item 17. Undertakings**

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

The Registrant hereby undertakes that:

(a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(b) For the purpose of determining any liability under the Securities Act each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

II-2

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Latham, State of New York, on the 15th day of January, 2013.

PLUG POWER INC.

By: /s/ Andrew Marsh

Name: Andrew Marsh

Title: President, Chief Executive Officer and Director

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby severally constitutes and appoints Andrew Marsh and Gerard A. Anderson, and each of them, as his true and lawful attorneys in fact and agents, with full power of substitution and resubstitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments (including post effective amendments, exhibits thereto and other documents in connection therewith) to this registration statement and any subsequent registration statement filed by the registrant pursuant to Rule 462(b) of the Securities Act of 1933, as amended, which relates to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys in fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature

Title

Date

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<i>/s/ Andrew Marsh</i> <b>Andrew Marsh</b>	President, Chief Executive Officer and Director (Principal Executive Officer)	January 15, 2013
<i>/s/ Gerald A. Anderson</i> <b>Gerald A. Anderson</b>	Chief Financial Officer (Principal Financial Officer)	January 15, 2013
<i>/s/ George C. McNamee</i> <b>George C. McNamee</b>	Chairman of the Board of Directors	January 15, 2013
<i>/s/ Larry G. Garberding</i> <b>Larry G. Garberding</b>	Director	January 15, 2013
<i>/s/ Douglas T. Hickey</i> <b>Douglas T. Hickey</b>	Director	January 15, 2013
<i>/s/ Gary K. Willis</i> <b>Gary K. Willis</b>	Director	January 15, 2013
<i>/s/ Maureen O. Helmer</i> <b>Maureen O. Helmer</b>	Director	January 15, 2013

II-3

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## EXHIBIT INDEX

Exhibit No.	Description of the Document
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of Plug Power Inc. (7)
3.2	Third Amended and Restated By-laws of Plug Power Inc. (8)
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation of Plug Power Inc. (7)
3.4	Certificate of Designations, Preferences and Rights of a Series of Preferred Stock of Plug Power Inc. classifying and designating the Series A Junior Participating Cumulative Preferred Stock. (9)
3.5	Second Certificate of Amendment of Amended and Restated Certificate of Incorporation of Plug Power Inc. (13)
4.1	Specimen certificate for shares of common stock, \$.01 par value, of Plug Power. (2)
4.2	Shareholder Rights Agreement, dated as of June 23, 2009, between Plug Power Inc. and Registrar and American Stock Transfer & Trust Company, LLC, as Rights Agent. (9)
4.3	Amendment No. 1 To Shareholder Rights Agreement. (11)
4.4	Amendment No. 2 To Shareholder Rights Agreement. (17)
4.5	Amendment No. 3 To Shareholder Rights Agreement. (19)
4.6	Form of Common Stock Purchase Warrant issued by Plug Power Inc. in May 2011. (14)
4.7*	Form of Common Stock Purchase Warrant.
5.1*	Opinion of Goodwin Procter LLP.
10.1	Employee Stock Purchase Plan. (2)
10.2	Severance Agreement, dated as of July 12, 2007, by and between Plug Power Inc. and Gerald A. Anderson. (4)
10.3	Executive Severance Agreement, dated as of July 7, 2007, by and between Plug Power Inc. and Gerald A. Anderson. (4)
10.4	Indemnification Agreement, dated as of July 9, 2007, by and between Plug Power Inc. and Gerald A. Anderson. (4)
10.5	Registration Rights Agreement, dated as of June 29, 2006, by and between Plug Power Inc. and Smart Hydrogen Inc. (1)
10.6	Form of Indemnification Agreement entered into with each director. (1)
10.7	Plug Power Executive Incentive Plan. (3)
10.8	Employment Agreement, dated as of April 7, 2008, by and between Andrew Marsh and Plug Power Inc. (5)
10.9	Executive Employment Agreement, dated as of May 5, 2008, by and between Gerard L. Conway, Jr. and Plug Power Inc. (6)
10.10	Executive Employment Agreement, dated as of October 28, 2009, by and between Erik J. Hansen and Plug Power Inc. (10)
10.11	Executive Employment Agreement, dated as of February 9, 2010, by and between Adrian Corless and Plug Power Inc. (10)
10.12	Standstill and Support Agreement, dated as of May 6, 2011 among Plug Power Inc., OJSC INTER RAO UES and OJSC Third Generation Company of the Wholesale Electricity Market . (11)
10.13	Master and Shareholders Agreement, dated as of January 24, 2012, by and between Axane S.A. and Plug Power, Inc. (18)
10.14	License Agreement dated as of February 29, 2012, by and between Hypulsion, S.A.S. and Plug Power Inc. (18)
10.15	2011 Stock Option and Incentive Plan. (12)
10.16	Form of Incentive Stock Option Agreement. (15)
10.17	Form of Non-Qualified Stock Option Agreement for Employees. (15)
10.18	Form of Non-Qualified Stock Option Agreement for Independent Directors. (15)
10.19	Form of Restricted Stock Award Agreement. (15)
10.20	Loan and Security Agreement, dated as of August 9, 2011, by and between Plug Power Inc. and Silicon Valley Bank. (15)
10.21	First Loan Modification Agreement, dated as of September 28, 2011, by and between Plug Power Inc. and Silicon Valley Bank. (16)
10.22	Second Loan Modification Agreement dated March 30, 2012, by and between Plug Power Inc. and Silicon Valley Bank. (20)

II-4

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10.23	Amendment No. 1 to the 2011 Stock Option and Incentive Plan. (21)
10.24	Executive Employment Agreement dated as of June 21, 2012, by and between Gerald A. Anderson and Plug Power Inc. (22)
10.25	Joinder and Release Agreement dated as of September 27, 2012 among Plug Power Inc., OJSC INTER RAO UES , OJSC INTER RAO Capital and OJSC Third Generation Company of the Wholesale Electricity Market . (23)
10.26	Third Loan Modification Agreement dated November 29, 2012, by and between Plug Power Inc. and Silicon Valley Bank. (24)
23.1	Consent of KPMG LLP. (25)
23.2	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema Document
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB**	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document

- (1) Incorporated by reference to our current Report on Form 8-K dated June 29, 2006.
- (2) Incorporated by reference to our Registration Statement on Form S-1/A (File Number 333-86089).
- (3) Incorporated by reference to our current Report on Form 8-K dated February 15, 2007.
- (4) Incorporated by reference to our current Report on Form 8-K dated July 9, 2007.
- (5) Incorporated by reference to our current Report on Form 8-K dated April 2, 2008.
- (6) Incorporated by reference to our Form 10-Q for the period ended June 30, 2008.
- (7) Incorporated by reference to our Form 10-K for the period ended December 31, 2008.
- (8) Incorporated by reference to our current Report on Form 8-K dated October 28, 2009.
- (9) Incorporated by reference to our Registration Statement on Form 8-A dated June 24, 2009.
- (10) Incorporated by reference to our current Report on Form 8-K dated October 28, 2009.
- (11) Incorporated by reference to our current Report on Form 8-K dated May 6, 2011.
- (12) Incorporated by reference to our current Report on Form 8-K dated May 12, 2011.
- (13) Incorporated by reference to our current Report on Form 8-K dated May 19, 2011.
- (14) Incorporated by reference to our current Report on Form 8-K dated May 24, 2011.
- (15) Incorporated by reference to our Form 10-Q for the period ended June 30, 2011.
- (16) Incorporated by reference to our current Report on Form 8-K dated September 28, 2011.
- (17) Incorporated by reference to our current Report on Form 8-K dated March 16, 2012.
- (18) Incorporated by reference to our current Report on Form 8-K dated March 21, 2012.
- (19) Incorporated by reference to our current Report on Form 8-K dated March 26, 2012.
- (20) Incorporated by reference to our current Report on Form 8-K dated April 3, 2012.
- (21) Incorporated by reference to our current Report on Form 8-K dated May 18, 2012.
- (22) Incorporated by reference to our current Report on Form 8-K dated June 21, 2012.
- (23) Incorporated by reference to our Schedule 13D dated November 19, 2012.
- (24) Incorporated by reference to our current Report on Form 8-K dated November 29, 2012.
- (25) Filed herewith.

\* To be filed by amendment.

\*\* Furnished herewith. XBRL (Extensible Business Reporting Language) information is furnished and not filed or a part of registration statement or prospectus for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, and is not otherwise subject to liability under the Sections.

