

MECHANICAL TECHNOLOGY INC

Form S-1

March 27, 2008

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**As filed with the Securities and Exchange Commission on March 27, 2008**

**Registration No. 333-**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**Form S-1  
REGISTRATION STATEMENT  
UNDER THE SECURITIES ACT OF 1933**

**MECHANICAL TECHNOLOGY, INCORPORATED**  
*(Exact name of registrant as specified in its charter)*

**New York**  
*(State of  
incorporation)*

**3829, 3629**  
*(Primary Standard Industrial  
Classification Code No.)*

**14-1462255**  
*(I.R.S. Employer  
Identification No.)*

**431 New Karner Road  
Albany, New York 12205  
(518) 533-2200**

*(Address, including zip code and telephone number, including area code of registrant's principal executive offices)*

**Cynthia A. Scheuer  
Vice President, CFO & Secretary  
431 New Karner Road  
Albany, New York 12205  
(518) 533-2200**

*(Address, including zip code and telephone number, including area code of registrant's principal executive offices)*

*with copies to:*

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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this registration statement becomes effective.

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. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer  Smaller reporting company   
(Do not check if a smaller reporting company)

### CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Maximum Aggregate Offering Price (1)(2)	Registration Fee
Units, each consisting of shares of common stock and warrants to purchase common stock	\$30,000,000	\$1,179
Warrants included as part of the units	(3)	(3)
Total Registration Fee	\$30,000,000	\$1,179

- (1) Includes the offering price of the units (consisting of shares and warrants) that the underwriters have the option to purchase to cover over-allotments, if any.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee, pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- (3) Pursuant to Rule 457(g), no separate registration fee is required for the warrants because we are registering those securities in the same registration statement as the underlying 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 which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said**

**Section 8(a), may determine.**

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**The information in this prospectus is not complete and may be changed. We may not sell 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 an offer to buy these securities in any state where the offer or sale is not permitted.**

Subject to Completion, Dated March 27, 2008

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

We are offering \_\_\_\_\_ shares of our common stock and warrants to purchase \_\_\_\_\_ shares of our common stock in \_\_\_\_\_ units. For each unit purchased in the offering, investors will receive \_\_\_\_\_ shares of common stock and warrants to purchase \_\_\_\_\_ shares of our common stock at an exercise price of \$ \_\_\_\_\_ per share. Upon the closing of the offering, the units will separate and the common stock and warrants will be issued separately. The warrants may be exercised at any time during the period commencing on the closing date of this offering and ending on the fifth anniversary of the closing date. Our common stock trades on The Nasdaq Global Market under the symbol MKTY. The last reported sale price of our common stock on The Nasdaq Global Market on March 20, 2008 was \$0.68 per share.

**Investing in our securities involves risks.  
See Risk Factors beginning on page 6 of this prospectus.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Unit	Total
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds to us (before expenses)	\$	\$

We have granted the underwriters a 30-day option to purchase up to an additional \_\_\_\_\_ units (consisting of \_\_\_\_\_ shares and warrants) to cover over-allotments.

The underwriters expect to deliver the shares and warrants to purchasers on or about \_\_\_\_\_, 2008.

**Merriman Curhan Ford & Co.**

**The date of this prospectus is           , 2008**

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information that is different. We are offering to sell, and seeking offers to buy, units only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of units. It is important for you to read and consider all information contained in this prospectus in making your investment decision. You should also read and consider the information in the documents we have referred you to in **Where You Can Find Additional Information** below.

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Unless the context requires otherwise, in this prospectus the terms **we**, **us**, and **our** refer to Mechanical Technology, Incorporated, a New York corporation, **MTI Micro** refers to MTI MicroFuel Cells Inc., a Delaware corporation and our majority owned subsidiary, and **MTI Instruments** refers to MTI Instruments, Inc., a New York corporation and our wholly owned subsidiary. We have a registered trademark in the United States for **Mobion**. Other trademarks, trade names, and service marks used in this prospectus are the property of their respective owners.



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**PROSPECTUS SUMMARY**

*This summary provides an overview of selected information contained elsewhere in this prospectus and does not contain all of the information you should consider in making an investment decision. You should read carefully the entire prospectus, including the section entitled Risk Factors, beginning on page 6 and our financial statements and the related notes included elsewhere in this prospectus, before making an investment decision.*

**Our Company**

We are developing and commercializing off-the-grid rechargeable portable power source products that generate electrical power, using up to 100% methanol as fuel, for consumer electronic devices. Our portable power source products, utilizing our patented, proprietary direct methanol fuel cell technology platform called Mobion, offer a compelling alternative to lithium-ion and similar rechargeable battery systems currently used by original equipment manufacturers, or OEMs, in many handheld electronic devices, such as mobile phones, digital cameras, and portable media players. We believe our rechargeable portable power source products will offer substantial advantages, such as smaller size, lower weight, longer power life, higher reliability, and greater convenience of use, without the environmental concerns of lithium-ion batteries. Our portable power solution can be implemented as three different product options: a compact external charging device, a snap-on or attached power accessory, or an embedded fuel cell power solution. We have strategic arrangements with Samsung Electronics and the Duracell division of the Gillette Company and intend to commercialize Mobion products in 2009. According to Frost and Sullivan, the global rechargeable battery market for portable electronic devices exceeds \$5 billion.

We also design, manufacture, and sell high-performance test and measurement instruments and systems serving primarily the general dimensional gauging, semiconductor, and aviation industries. These products consist of electronic, computerized gauging instruments for position, displacement and vibration applications for the design, manufacturing and test markets; semiconductor products for wafer characterization; and engine balancing and vibration analysis systems for military and commercial aircraft.

**Our Markets and Opportunities**

Consumers demand portable electronics that offer an enhanced experience through expanded memory, improved display technologies, constant connectivity, robust software, and a reduced form factor. In addition, technological advances in semiconductor manufacturing, LED displays, memory costs and availability, wireless technologies, and software applications have resulted in a dramatic increase in the number of portable electronic devices, their usage, and power requirements. As a result of these consumer demands and technological advances, there are a number of handheld electronic devices that have been introduced into the market. This trend towards increased functionality in portable electronic devices has led to a power gap, which is the disparity between a device's power supply, typically a rechargeable lithium-ion battery, and its power need. This power gap leads to a need for the end user to plug-in their devices to the electrical grid on a regular basis, which limits their ability to use these electronic devices where and when the need arises.

Improvements in rechargeable battery technology have not kept pace with the evolution of consumer electronic device performance. Over the last ten years, device performance as measured by silicon processor speed has increased by a factor of 128 times, while the energy density of lithium-ion technology has only doubled. In addition to their performance shortfalls, lithium-ion battery technology poses an environmental risk as the various heavy metals incorporated in these batteries require special disposal to prevent contamination of waste disposal sites.

OEMs are actively seeking improved power sources to replace existing rechargeable lithium-ion batteries and to power additional improvements to their mobile electronic devices.

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**Our Solution and Strategies**

At the core of our solution is our proprietary Mobion Chip engine, a design architecture that embodies a reduction in the size, complexity, and cost of fuel cell construction, which results in a reliable, manufacturable, and affordable power solution that we believe provides improved energy density and portability over competing rechargeable battery technologies. Our proprietary fuel cell power solution consists of two primary components integrated in an easily manufactured device: the direct methanol fuel cell power engine, which we refer to as our Mobion Chip, and the methanol replacement cartridge. Our current Mobion Chip weighs less than one ounce and is small enough to fit in the palm of one's hand. For these reasons, we believe that our Mobion platform is ideally suited to provide a replacement for rechargeable lithium-ion batteries. Based upon our ability to provide a compact, efficient, clean, safe, and long-lasting power source for lower power applications, we intend to initially target power solutions for handheld consumer electronic applications. Our goal is to become a leading provider of portable power for handheld electronic devices. Key elements of our strategy designed to achieve this objective include the following:

*Business Focus.* We are focusing our efforts on the development and commercialization of our portable power source products. We believe this business provides a higher potential, higher growth opportunity than our test and measurement instrumentation business.

*Design for Mass Manufacturing.* Our portable power source products will be manufactured using standard processes, such as injection molding and automated test and assembly, which are broadly employed throughout the electronics manufacturing industry. In preparing Mobion for commercialization, our current Mobion Chip is injection molded and is being designed for mass manufacturing.

*Outsource Manufacturing.* We plan to outsource manufacturing to expand rapidly and diversify our production capacity. This strategy will allow us to maintain a variable cost model in which we do not incur most of our manufacturing costs until our proprietary fuel cell power solution has been shipped and billed to our customers.

*Utilize our Technology to Provide Compelling Products.* We plan to utilize our intellectual property portfolio and technological expertise to develop and offer portable power source products across multiple electronic device markets. We intend to employ our technological expertise to reduce the overall size and weight of our portable power source products while increasing their ease of manufacturing, power capacity, and power duration, and decreasing their cost.

*Capitalize on Growth Markets.* We intend to capitalize on the growth of the electronic device markets, including new products that may be brought about by the convergence of computing, communications, and entertainment devices. We believe our portable power source products will address the growing need for portability, connectivity, and functionality in the evolving electronic device markets. We plan to offer these power solutions to OEM customers to enable them to offer products that have advantages in terms of size, weight, power duration, and environmental friendliness.

*Develop Strong Customer Relationships.* We plan to develop strong and long-lasting customer relationships with leading electronic device OEMs and to provide them with power solutions for their products. We believe that our portable power source products will enable our OEM customers to deliver an enhanced user experience and to differentiate their products from those of their competitors. We will attempt to enhance the competitive position of our customers by providing them with innovative, distinctive, and high-quality portable power supply products on a timely and cost-effective basis.

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**Our Competitive Strengths**

We believe that our portable power source products will offer the following advantages:

*Off-the-grid power source.* Our products provide users of consumer electronic devices with extended mobility by providing power without having to attach to a wall outlet to recharge their devices.

*Small size and low weight.* The dimensions of our products will enable our OEM customers to reduce the overall size and weight of their products.

*Power density.* Our products will have power density of over 50 mW/cm<sup>2</sup> and high energy efficiencies of 1.4 Wh/cc of methanol.

*Power duration.* Our products will offer longer run time than currently available portable charging systems.

*Ease of manufacturing.* Our products will be manufactured using traditional injection molding techniques that will easily transfer to mass manufacturing production lines.

*Safety.* Our products will utilize methanol fuel, which does not require storage under pressure or at low temperatures.

*Environmentally friendly.* Our products will utilize fully biodegradable methanol fuel.

**Corporate Information**

We were incorporated in New York in 1961. We operate two businesses: our new energy business that is conducted through MTI Micro, a majority owned subsidiary, and our test and measurement instrument business that is conducted through MTI Instruments, a wholly owned subsidiary. We maintain our principal executive offices at 431 New Karner Road, Albany, New York 12205, and our telephone number is (518) 533-2200. Our website is located at [www.mechtech.com](http://www.mechtech.com). The information contained in, or that can be accessed through, our website does not constitute part of this prospectus.

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**The Offering**

Securities Offered	units. Each unit will consist of shares of our common stock and warrants to purchase shares of common stock.
Common Stock	shares.
Warrants	Warrants to purchase shares of common stock. The warrants will be exercisable on or after the closing date of this offering through and including the fifth anniversary of the closing date and will be exercisable at a price of \$ per share of common stock.
Common Stock to be outstanding after this offering	shares.
Over-allotment Option	units (consisting of shares and warrants).
Use of Proceeds	We expect to use the net proceeds from this offering for research, design, tooling and capital expenditures to support the commercialization of our Mobion portable power source products, and working capital needs and general corporate purposes. We believe the net proceeds of this offering will provide sufficient funds to commercialize our portable power source products. See Use of Proceeds.
Risk Factors	You should carefully consider all of the information contained in this prospectus, and in particular, you should evaluate the specific risks set forth under Risk Factors.
Nasdaq Global Market Symbol	MKTY

The number of shares of our common stock to be outstanding after this offering is based on 38,179,888 shares issued and outstanding as of December 31, 2007, but does not include the following:

1,265,733 shares of common stock reserved for future issuance under our equity incentive plans. As of December 31, 2007, there were 6,213,566 options outstanding and 5,000 shares of restricted stock issued under our equity incentive plans;

3,027,778 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2007, with an exercise price of \$2.27 per share; and

shares of common stock that will be issued upon exercise of warrants at an exercise price of \$ per share sold as part of the units in this offering.

Except as otherwise indicated, the information contained in this prospectus

does not include any adjustment in the number of shares of our common stock issued and outstanding as a result of the proposed eight-to-one reverse stock split of common stock that has been submitted to our stockholders for approval at a meeting to be held during May 2008, pursuant to which every eight shares of common stock will be combined into one share of common stock; and

assumes no exercise of the underwriters' option to purchase from us an aggregate of            additional units (consisting of            shares of common stock and warrants to purchase an additional            shares of common stock).

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The following table sets forth our summary consolidated financial data for the fiscal years ended December 31, 2005, 2006 and 2007, which was derived from our audited consolidated financial statements included elsewhere in this prospectus. You should read the following summary consolidated financial data together with the information under Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements (including the related notes thereto).

	<b>Years Ended December 31,</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Statement of Operations Data (in thousands except share and per share data):</b>			
Product revenue	\$6,012	\$7,667	\$9,028
Gross profit on product revenue	3,631	4,767	5,598
Funded research and development revenue	1,829	489	1,556
Research and product development expenses	9,671	12,921	11,765
Operating loss	(15,098)	(17,737)	(13,349)
Net loss	\$(15,094)	\$(13,667)	\$(9,575)
Net loss per share (basic and diluted)	\$(0.49)	\$(0.43)	\$(0.25)
Weighted average common shares outstanding (basic and diluted)	30,737,608	31,622,345	38,108,377

	<b>December 31, 2007</b>	
	<b>Actual</b>	<b>As Adjusted (1)</b>
<b>Balance Sheet Data (in thousands):</b>		
Cash and cash equivalents	\$ 7,650	\$
Securities available for sale (2)	4,492	
Working capital	11,347	
Total assets	18,716	
Current liabilities	3,866	
Long-term liabilities	904	
Total stockholders' equity (3)	13,803	

- (1) The as adjusted column reflects the sale of \_\_\_\_\_ units by us in this offering at an assumed public offering price of \$ \_\_\_\_\_ per unit, which is the last reported sale price of our common stock on The Nasdaq Global Market on March 20, 2008, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and after giving effect to our receipt of the estimated net proceeds. A \$1.00 increase (decrease) in the assumed public offering price of \$ \_\_\_\_\_ per unit would increase (decrease) each of cash and equivalents, working capital, total assets, and total stockholders' equity by \$ \_\_\_\_\_ million, assuming the number of units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

- (2) Represents shares of Plug Power Inc., or Plug Power, a Nasdaq-listed company, held for sale by us, classified as current assets, and such amount reflects the fair value of these shares. Through the sale of Plug Power shares, we generated proceeds of \$6.2 million during 2006 and \$5.1 million during 2007 that we have used to fund the development and commercialization of our portable power source business.
- (3) Our ownership percentage of MTI Micro will increase as a result of this offering since proceeds from the offering will be used to make further investments in MTI Micro. Over the last three years, we have increased our ownership in MTI Micro from 89% in 2004 to 96% in 2007.



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**RISK FACTORS**

*Investing in our securities involves a high degree of risk. You should carefully consider the following risk factors and all other information contained in this prospectus before purchasing our securities. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties of which we are unaware, or that we currently deem immaterial, also may become important factors that affect us. If any of the following risks occur, our business, financial condition, or results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you may lose some or all of your investment.*

**Risks Related to Our Business and Industry**

**We have incurred recurring net losses and anticipate continued net losses as we execute our commercialization plan for our portable power source business.**

We have incurred recurring net losses, including net losses of \$15.1 million in 2005, \$13.7 million in 2006, and \$9.6 million in 2007, which includes a net gain of \$2.5 million from the sale of securities available for sale and a net gain of \$3.0 million on derivatives in 2007. As a result of ongoing operating losses, we had an accumulated deficit of approximately \$105.1 million as of December 31, 2007. We expect to continue to make significant expenditures and incur substantial expenses as we develop and commercialize our proposed portable power source products; develop our manufacturing, sales, and distribution networks; implement internal systems and infrastructure; and hire additional personnel. As a result, we expect to continue to incur continued significant losses as we execute our plan to commercialize our portable power source business and may never achieve or maintain profitability. We will be unable to satisfy our current obligations solely from cash generated from operations or become profitable until we successfully commercialize our portable power source business. If we continue to incur substantial losses and are unable to secure additional sources of funding, we could be forced to discontinue or curtail our business operations; sell assets at unfavorable prices; or merge, consolidate, or combine with a company with greater financial resources in a transaction that may be unfavorable to us.

**We have received a going concern report from our independent auditors.**

Our auditors have included an explanatory paragraph in their opinion that accompanies our audited consolidated financial statements as of December 31, 2007, indicating that our recurring losses from operations, net capital deficiency, and current liquidity position raise substantial doubt about our ability to continue as a going concern. The accompanying consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

**Our common stock may be delisted from The Nasdaq Global Market, which may adversely affect our ability to raise capital and stockholders' ability to sell their shares.**

Nasdaq notified us on January 9, 2008 that our common stock could be delisted from The Nasdaq Global Market for failure to maintain a minimum bid price of \$1.00 and that we had until July 7, 2008 to regain compliance with the listing standards of such market. To regain compliance, the closing bid price of our common stock must meet or exceed \$1.00 per share for a minimum of 10 consecutive business days. If compliance is not regained, Nasdaq will notify us of its determination to delist our common stock, which we may appeal to its listings qualification panel. We may alternatively apply to transfer our common stock to The Nasdaq Capital Market if we satisfy all of its requirements, other than the minimum bid price, for initial inclusion on such market. If we elect to apply for such a transfer and if such application is approved, we will be afforded the remainder of a second 180 calendar day-period to

regain compliance with the minimum bid price rule while

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listed on The Nasdaq Capital Market. A delisting from The Nasdaq Global Market may result in a decline of the price of our common stock and adversely affect our ability to raise capital through the sale of common stock.

**We currently derive all of our product revenue from our test and measurement instrumentation business, but our principal focus is the development and commercialization of our portable power source business.**

We currently derive all of our product revenue from our test and measurement instrumentation business, but our principal focus is the development and commercialization of our portable power source business. Our test and measurement instrumentation business is subject to a number of risks, including the following:

a slow down or cancellation of sales to the military as a result of a potential redeployment of governmental funding;

a failure to expand or maintain the business as a result of competition, a lack of brand awareness, or market saturation; and

an inability to launch new products as a result of intensive competition, uncertainty of new technology development, and developmental timelines.

In addition, our test and measurement instrumentation products can be sold in quantity to a relatively few number of customers, resulting in a customer concentration risk. The loss of any significant portion of such customers or a material adverse change in the financial condition of any one of these customers could have a material adverse effect on our business.

**We have not generated any product revenue from our portable power source business and currently have no portable power source commercial products.**

We have not generated any product revenue from our portable power source business and currently have no portable power source commercial products. The successful development and commercialization of our portable power source products will depend on a number of factors, including the following:

continuing our research and development efforts;

finalizing the design of our portable power source products;

securing OEM customers to incorporate our portable power source products into products sold by them;

arranging for adequate manufacturing capabilities; and

completing, refining, and managing our supply chain and distribution channels.

Additionally, our technology is new and complex, and there may be technical barriers to the development of our portable power source products. The development of our portable power source products may not succeed or may be significantly delayed. Our portable power source products will be produced through manufacturing arrangements that have not been finalized or tested on a commercial scale. If we fail to successfully develop or experience significant delays in the development of our portable power source products, or if there are significant delays in commercialization, we are unlikely to recover those losses, thus making it impossible for us to become profitable through the sales of these products. This would materially and adversely affect our business and financial condition. If adequate funds are not available, we may have to delay development or commercialization of our portable power

source products or license to third parties the rights to commercialize products or technologies that we would otherwise seek to commercialize. Any of these factors could harm our business and financial condition.

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Any revenue derived in the relatively near-term relating to our portable power source business likely will result from governmental contracts or other governmental funding. We can offer no assurance that we will be able to secure continued government funding. The loss of such contracts or the inability to obtain additional contracts could materially harm our business.

**Although we believe the net proceeds of this offering will provide sufficient funds to commercialize our portable power source products, it is possible that additional funds will be required and we have no commitments for additional financing.**

Although we believe the net proceeds of this offering will provide sufficient funds to commercialize our portable power source products, it is possible that we may need to raise capital above the net proceeds of this offering to fund the commercialization of our portable power source business. We have no commitments for any additional financing should the need arise. If we are unable to secure any necessary additional financing or to raise funds from the sale of our test and measurement instrumentation business should we determine to do so, we may need to delay further commercialization plans. In order to conserve cash and extend operations while we pursue any additional necessary financing, we would be required to reduce operating expenses. There is no assurance that funds raised in any such financing will be sufficient, that the financing will be available on terms favorable to us or to existing stockholders and at such times as required, or that we will be able to obtain the additional financing required for the continued operation and growth of our business. If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity financing may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets or delay, reduce the scope of or eliminate some or all of our research and development programs.

A primary asset of our company is the Plug Power common stock we own. As of December 31, 2007, we owned 1,137,166 shares of Plug Power common stock. Plug Power common stock is traded on The Nasdaq Global Market. The market price of our Plug Power common stock may fluctuate as a result of market conditions and other factors over which we have no control. Fluctuations in the market price of Plug Power's common stock may result in a reduction of resources available to fund operations, which could result in our requiring additional funding sooner than anticipated.

**If current U.S. Department of Transportation, Federal Aviation Administration, and certain international regulations do not change, passengers will be unable to carry methanol in the passenger compartments of airplanes, which would adversely affect our sales and results of operations.**

Current airline and Federal Aviation Administration regulations and certain international laws, regulations, and treaties limit the amount and concentration of methanol that any passenger can carry onboard passenger planes. We believe that these regulations must change for mass commercialization of Mobion technology products to be possible. The implementation by the U.S. Department of Transportation, the Federal Aviation Administration, and other similar international bodies of regulatory changes approved by the International Civil Aviation Organization will permit direct methanol fuel cell systems and refill cartridges to be carried in the passenger compartment of airplanes. If these regulations are not implemented, it would materially and adversely affect our ability to achieve mass commercialization of Mobion technology products and have a material adverse effect on our business plans, prospects, results of operations, and financial condition.

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### **Our portable power source products may not be accepted by the market.**

Any portable power source products that we develop may not achieve market acceptance. The development of a successful market for our proposed portable power source products and our ability to sell those products at favorable prices may be adversely affected by a number of factors, many of which are beyond our control, including the following:

our failure to produce portable power source products that compete favorably against other products on the basis of price, quality, performance, and life;

competition from conventional lithium-ion or other rechargeable battery systems;

the ability of our technologies and product solutions to address the needs of the electronic device markets, the requirements of OEMs, and the preferences of end users;

our ability to provide OEMs with portable power source products that provide advantages in terms of size, weight, peak power, power duration, reliability, durability, performance, and value-added features compared to alternative solutions; and

our failure to develop and maintain successful relationships with OEMs, manufacturers, distributors, and others as well as strategic partners.

Target markets for our proposed portable power source products, such as those for mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, personal digital assistants, or PDAs, and global positioning systems, or GPS devices, are volatile, cyclical, and rapidly changing and could continue to utilize existing technology or adopt other new competing technologies. The market for certain of these products depends in part upon the development and deployment of wireless and other technologies, which may or may not address the needs of users of these new products.

Many manufacturers of portable electronic devices have well-established relationships with competitive suppliers. Penetrating these markets will require us to offer better performance alternatives to existing solutions at competitive costs. The failure of any of our target markets to continue to expand, or our failure to penetrate these markets to a significant extent, will impede our sales growth. We cannot predict the growth rate of these markets or the market share we will achieve in these markets in the future.

If our proposed portable power source products fail to gain market acceptance, it could materially and adversely affect our business and financial condition.

### **Market acceptance of our customers' products that utilize our portable power source products may decline or may not develop and, as a result, our sales will be harmed.**

We currently do not anticipate selling our portable power source products directly to end users. Instead, we plan to produce portable power source products that our OEM customers incorporate into their products. As a result, the success of our proposed portable power source products will depend upon the widespread market acceptance of the products of our OEM customers. We will not control or influence the manufacture, promotion, distribution, or pricing of the products that incorporate our portable power source products. Instead, we will depend on our OEM customers to manufacture and distribute products incorporating our portable power source products and to generate consumer demand through their marketing and promotional activities. Even if our technologies and products successfully meet our customers' price and performance goals, our sales would be harmed if our OEM customers do not achieve

commercial success in selling their products to consumers that incorporate our portable power source products.

Any lack of adoption in the use of our portable power source products by OEM customers in the electronic device markets, the reduced demand for our OEM customers' products, or a slowdown in their markets would adversely affect our sales.

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**If we fail to build and maintain relationships with our customers and do not satisfy our customers, we may lose future sales and our revenue may stagnate or decline.**

Because our success depends on the widespread market acceptance of our customers' products, we must develop and maintain our relationships with leading global OEMs of electronic devices, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, PDAs, and GPS devices. In addition, we must identify areas of significant growth potential in other markets, establish relationships with OEMs in those markets, and assist them in developing products that use our portable power source products and technologies. Our failure to identify potential growth opportunities, particularly in new markets, or establish and maintain relationships with OEMs in those markets, would prevent our business from growing in those markets.

Our ability to meet the expectations of our customers will require us to provide portable power source products for customers on a timely and cost-effective basis and to maintain customer satisfaction with our product solutions. We must match our design and production capacity with customer demand, maintain satisfactory delivery schedules, and meet specific performance goals. If we are unable to achieve these goals for any reason, our customers could reduce their purchases from us and our sales would decline or fail to develop.

Our customer relationships also can be affected by factors affecting our customers that are unrelated to our performance. These factors can include a myriad of situations, including business reversals of customers, determinations by customers to change their product mix or abandon business segments, or mergers, consolidations, or acquisitions involving our customers.

**We have no experience manufacturing portable power source products on a commercial scale.**

To date, we have focused primarily on research, development, and pilot production, and we have no experience manufacturing any portable power source products on a commercial scale. Our pilot production efforts to date have been limited in scale. It is our intent to manufacture our portable power source products through OEM customers and third-party manufacturers. Failure to secure manufacturing capabilities could materially and adversely affect our business and financial condition.

**We will rely on others for our production, and any interruptions of these arrangements could disrupt our ability to fill our customers' orders.**

We plan to rely on others for all of our production requirements for our portable power source products. The majority of this manufacturing is anticipated to be conducted in Asia by manufacturing subcontractors that also perform services for numerous other companies. We do not expect to have a guaranteed level of production capacity with any of our manufacturing subcontractors. Qualifying new manufacturing subcontractors is time consuming and might result in unforeseen manufacturing and operating problems. The loss of any relationships with our manufacturing subcontractors or assemblers or their inability to conduct their manufacturing and assembly services for us as anticipated in terms of cost, quality, and timeliness could adversely affect our ability to fill customer orders in accordance with required delivery, quality, and performance requirements. If this were to occur, the resulting decline in revenue would harm our business.

**We will depend on third parties to maintain satisfactory manufacturing yields and delivery schedules, and their inability to do so could increase our costs, disrupt our supply chain, and result in our inability to deliver our portable power source products, which would adversely affect our results of operations.**

We will depend on our manufacturing subcontractors to maintain high levels of productivity and satisfactory delivery schedules for our portable power source products from manufacturing and assembly facilities likely located primarily



in Asia. We plan to provide our manufacturing subcontractors with rolling forecasts of our production requirements. We do not, however, anticipate

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having long-term agreements with any of our manufacturing subcontractors that guarantee production capacity, prices, lead times, or delivery schedules. Our manufacturing subcontractors will serve other customers, many of which will have greater production requirements than we do. As a result, our manufacturing subcontractors could determine to prioritize production capacity for other customers or reduce or eliminate deliveries to us on short notice. We may experience lower than anticipated manufacturing yields and lengthening of delivery schedules. Lower than expected manufacturing yields could increase our costs or disrupt our supply chain. We may encounter lower manufacturing yields and longer delivery schedules while commencing volume production of any new products. Any of these problems could result in our inability to deliver our product solutions in a timely manner and adversely affect our operating results.

### **We plan to rely on third-party suppliers for most of our manufacturing equipment.**

We plan to rely on third-party suppliers for most of the manufacturing equipment necessary to produce our portable power source products. The failure of suppliers to supply manufacturing equipment in a timely manner or on commercially reasonable terms could delay our commercialization plans and otherwise disrupt our production schedules or increase our manufacturing costs. Further, our orders with certain of our suppliers may represent a very small portion of their total orders. As a result, they may not give priority to our business, leading to potential delays in or cancellation of our orders. If any single-source supplier were to fail to supply our needs on a timely basis or cease providing us with key components, we would be required to substitute suppliers. We may have difficulty identifying a substitute supplier in a timely manner and on commercially reasonable terms. If this were to occur, our business would be harmed.

### **Shortages of components and raw materials may delay or reduce our sales and increase our costs, thereby harming our results of operations.**

The inability to obtain sufficient quantities of components and other materials, including platinum and ruthenium, necessary for the production of our portable power source products could result in reduced or delayed sales or lost orders. Any delay in or loss of sales could adversely impact our operating results. Many of the materials used in the production of our portable power source products will be available only from a limited number of foreign suppliers, particularly component suppliers located in Asia. In most cases, neither we nor our manufacturing subcontractors will have long-term supply contracts with these suppliers. As a result, we will be subject to economic instability in these Asian countries as well as to increased costs, supply interruptions, and difficulties in obtaining materials. Our customers also may encounter difficulties or increased costs in obtaining the materials necessary to produce their products into which our product solutions are incorporated.

From time to time, materials and components necessary for our portable power source products or in other aspects of our customers' products may be subject to allocation because of shortages of these materials and components. Shortages in the future could cause delayed shipments, customer dissatisfaction, and lower revenue.

### **We will be subject to lengthy development periods and product acceptance cycles, which can result in development and engineering costs without any future revenue.**

We plan to provide portable power source solutions that are incorporated by OEMs into the products they sell. OEMs will make the determination during their product development programs whether to incorporate our portable power source solutions or pursue other alternatives. This process may require us to make significant investments of time and resources in the design of portable customer-specific power source solutions well before our customers introduce their products incorporating our product solutions and before we can be sure that we will generate any significant sales to our customers or even recover our investment. During a customer's entire product development process, we will face the risk that our portable power source products will fail to meet



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our customer's technical, performance, or cost requirements or that our products will be replaced by competing products or alternative technological solutions. Even if we complete our design process in a manner satisfactory to our customer, the customer may decide to delay or terminate its product development efforts. The occurrence of any of these events could cause sales to not materialize, to be deferred, or to be cancelled, which would adversely affect our operating results.

### **We will not have long-term purchase commitments from our customers, and their ability to cancel, reduce, or delay orders could reduce our revenue and increase our costs.**

Customers for our portable power source products will not provide us with firm, long-term volume purchase commitments, but instead will issue purchase orders to buy a specified number of units. As a result, customers may be able to cancel purchase orders or reduce or delay orders at any time. The cancellation, delay, or reduction of customer purchase orders could result in reduced revenue, excess inventory, and unabsorbed overhead. We currently have no presence in the electronic device markets. Our success in the electronic device markets will require us to establish the value added proposition of our products to OEMs that have traditionally used other portable power solutions. All of the markets we plan to serve are subject to severe competitive pressures, rapid technological change and product obsolescence, which may increase our inventory and overhead risks, resulting in increased costs.

### **Variability of customer requirements resulting in cancellations, reductions, or delays may adversely affect our operating results.**

We will be required to provide rapid product turnaround and respond to short lead times. A variety of conditions, both specific to individual customers and generally affecting the demand for OEMs' products, may cause customers to cancel, reduce, or delay orders. Cancellations, reductions, or delays by a significant customer or by a group of customers could adversely affect our operating results. Customers may require rapid increases in production, which could strain our resources and reduce our margins.

### **If we are unable to adequately protect our intellectual property, our competitors and other third parties could produce products based on our intellectual property, which would substantially impair our ability to compete.**

Our success and ability to compete depends in part upon our ability to maintain the proprietary nature of our technologies. We rely on a combination of patent, trade secret, copyright, and trademark law and license agreements, as well as nondisclosure agreements, to protect our intellectual property. These legal means, however, afford only limited protection and may not be adequate to protect our intellectual property rights. We cannot be certain that we were the first creator of inventions covered by pending patent applications or the first to file patent applications on these inventions. In addition, we cannot be sure that any of our pending patent applications will issue. The United States Patent and Trademark Office, or other foreign patent and trademark offices may deny or significantly narrow claims made under our patent applications and, even if issued, these patents may be successfully challenged, designed around, or may otherwise not provide us with any commercial protection.

We may in the future need to assert claims of infringement against third parties to protect our intellectual property. Regardless of the final outcome, any litigation to enforce our intellectual property rights in patents, copyrights, or trademarks could be highly unpredictable and result in substantial costs and diversion of resources, which could have a material and adverse effect on our business and financial condition. In the event of an adverse judgment, a court could hold that some or all of our asserted intellectual property rights are not infringed, or are invalid or unenforceable, and could award attorneys' fees to the other party.

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**We may become subject to claims of infringement or misappropriation of the intellectual property rights of others, which could prohibit us from selling our products, require us to obtain licenses from third parties or to develop non-infringing alternatives, and subject us to substantial monetary damages and injunctive relief.**

We may receive notices from third parties that the manufacture, use, or sale of any products we develop infringes upon one or more claims of their patents. Moreover, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that materially and adversely affect our business. Third parties could also assert infringement or misappropriation claims against us with respect to our future product offerings, if any. Whether or not such claims are valid, we cannot be certain that we have not infringed the intellectual property rights of such third parties. Any infringement or misappropriation claim could result in significant costs, substantial damages, and our inability to manufacture, market, or sell any of our product offerings that are found to infringe. Even if we were to prevail in any such action, the litigation could result in substantial cost and diversion of resources that could materially and adversely affect our business. If a court determined, or if we independently discovered, that our product offerings violated third-party proprietary rights, there can be no assurance that we would be able to re-engineer our product offerings to avoid those rights or obtain a license under those rights on commercially reasonable terms, if at all. As a result, we could be prohibited from selling products that are found to infringe upon the rights of others. Even if obtaining a license were feasible, it may be costly and time-consuming. A court could also enter orders that temporarily, preliminarily, or permanently enjoin us from making, using, selling, offering to sell, or importing our portable power source products, or could enter orders mandating that we undertake certain remedial activities. Further, a court could order us to pay compensatory damages for such infringement, plus prejudgment interest, and could in addition treble the compensatory damages and award attorneys' fees. These damages could materially and adversely affect our business and financial condition.

**Confidentiality agreements with employees and others may not adequately prevent disclosure of our trade secrets and other proprietary information, which could limit our ability to compete.**

We rely on trade secrets to protect our proprietary technology and processes. Trade secrets are difficult to protect. We enter into confidentiality and intellectual property assignment agreements with our employees, consultants, and other advisors. These agreements generally require that the other party keep confidential and not disclose to third parties confidential information developed by the party or made known to the party by us during the course of the party's relationship with us. However, these agreements may not be honored and enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time-consuming, and the outcome is unpredictable. The failure to obtain and maintain trade secret protection could adversely affect our competitive position.

**Our efforts to develop new technologies may not result in commercial success, which could cause a decline in our revenue and could harm our business.**

Our research and development efforts with respect to our technologies may not result in customer or market acceptance. Some or all of those technologies may not successfully make the transition from the research and development lab to cost-effective production as a result of technology problems, competitive cost issues, yield problems, and other factors. Even when we successfully complete a research and development effort with respect to a particular technology, our customers may decide not to introduce or may terminate products utilizing the technology for a variety of reasons, including the following:

difficulties with other suppliers of components for the products;

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superior technologies developed by our competitors and unfavorable comparisons of our solutions with these technologies;

price considerations; and

lack of anticipated or actual market demand for the products.

The nature of our business will require us to make continuing investments for new technologies. Significant expenses relating to one or more new technologies that ultimately prove to be unsuccessful for any reason could have a material adverse effect on us. In addition, any investments or acquisitions made to enhance our technologies may prove to be unsuccessful. If our efforts are unsuccessful, our business could be harmed.

**We may not be able to enhance our product solutions and develop new product solutions in a timely manner.**

Our future operating results will depend to a significant extent on our ability to provide new portable power source products that compare favorably with alternative solutions on the basis of time to introduction, cost, performance, and end-user preferences. Our success in attracting customers and developing business will depend on various factors, including the following:

innovative development of new portable power source products for customer products;

utilization of advances in technology;

maintenance of quality standards;

efficient and cost-effective solutions; and

timely completion of the design and introduction of new portable power source products.

Our inability to commercialize our proposed portable power source solutions and develop new product solutions on a timely basis could harm our operating results and impede our growth.

**If we do not keep pace with technological innovations, our products may not be competitive and our revenue and operating results may suffer.**

Technological advances, the introduction of new products, and new design techniques could adversely affect our business prospects unless we are able to adapt to the changing conditions. Technological advances could render our proposed portable power source products obsolete, and we may not be able to respond effectively to the technological requirements of evolving markets. As a result, we will be required to expend substantial funds for and commit significant resources to

continue research and development activities on portable power source products;

hire additional engineering and other technical personnel; and

purchase advanced design tools and test equipment.

Our business could be harmed if we are unable to develop and utilize new technologies that address the needs of our customers, or our competitors do so more effectively than we do.

**New technology solutions that achieve significant market share could harm our business.**

New portable power source solutions could be developed. Existing electronic devices also could be modified to allow for a different power source solution. Our business could be harmed if our products become noncompetitive as a result of a technological breakthrough that allows a new power source solution to displace our solution and achieve significant market acceptance.

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**Our inability to respond to changing technologies will harm our business.**

The electronics industry is subject to constant technological change. Our future success will depend on our ability to respond appropriately to changing technologies and changes in product function and quality. If we rely on products and technologies that are not attractive to consumers, we may not be successful in capturing or retaining any significant market share. In addition, any new technologies utilized in our portable power source products may not perform as expected or as desired, in which event our adoption of such products or technologies may harm our business.

**International sales and manufacturing risks could adversely affect our operating results.**

We anticipate that the manufacturing and assembly operations for our portable power source products will be conducted primarily in Asia by manufacturing subcontractors. We also believe that many of our OEM customers will be located and much of our sales and distribution operations will be conducted in Asia. These international operations will expose us to various economic, political, and other risks that could adversely affect our operations and operating results, including the following:

difficulties and costs of staffing and managing a multi-national organization;

unexpected changes in regulatory requirements;

differing labor regulations;

potentially adverse tax consequences;

tariffs and duties and other trade barrier restrictions;

possible employee turnover or labor unrest;

greater difficulty in collecting accounts receivable;

the burdens and costs of compliance with a variety of foreign laws;

potentially reduced protection for intellectual property rights; and

political or economic instability in certain parts of the world.

The risks associated with international operations could negatively affect our operating results.

**Our business may suffer if international trade is hindered, disrupted, or economically disadvantaged.**

Political and economic conditions abroad may adversely affect the foreign production and sale of our portable power source products. Protectionist trade legislation in either the United States or foreign countries, such as a change in the current tariff structures, export or import compliance laws, or other trade policies, could adversely affect our ability to sell our portable power source products in foreign markets and to obtain materials or equipment from foreign suppliers.

Changes in policies by the U.S. or foreign governments resulting in, among other things, higher taxation, currency conversion limitations, restrictions on the transfer of funds, or the expropriation of private enterprises also could have



a material adverse effect on us. Any actions by countries in which we conduct business to reverse policies that encourage foreign investment or foreign trade also could adversely affect our operating results. In addition, U.S. trade policies, such as most favored nation status and trade preferences for certain Asian nations, could affect the attractiveness of our products to our U.S. customers and adversely impact our operating results.

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**Our operating results could be adversely affected by fluctuations in the value of the U.S. dollar against foreign currencies.**

We plan to transact our portable power source business predominantly in U.S. dollars and bill and collect our sales in U.S. dollars. A weakening of the dollar could cause our overseas vendors to require renegotiation of either the prices or currency we pay for their goods and services. In the future, customers may negotiate pricing and make payments in non-U.S. currencies.

If our overseas vendors or customers require us to transact business in non-U.S. currencies, fluctuations in foreign currency exchange rates could affect our cost of goods, operating expenses, and operating margins and could result in exchange losses. In addition, currency devaluation can result in a loss to us if we hold deposits of that currency. Hedging foreign currencies can be difficult, especially if the currency is not freely traded. We cannot predict the impact of future exchange rate fluctuations on our operating results.

**We expect that a majority of our manufacturing subcontractors will be located in Asia, increasing the risk that a natural disaster, labor strike, war, or political unrest in those countries would disrupt our operations.**

We expect that a majority of our manufacturing subcontractors will be located in Asia. Events out of our control, such as earthquakes, fires, floods, or other natural disasters, or political unrest, war, labor strikes, or work stoppages in Asia could disrupt their operations, which would impact our business. In addition, there is political tension between Taiwan and China that could lead to hostilities. If any of these events occur, we may not be able to obtain alternative manufacturing capacity. Failure to secure alternative manufacturing capacity could cause a delay in the shipment of our products, which would cause our revenue to fluctuate or decline.

**Continuing uncertainty of the U.S. economy may have serious implications for the growth and stability of our business and may negatively affect our stock price.**

The revenue growth and profitability of our business will depend significantly on the overall demand for electronic devices. Softening demand in these markets caused by ongoing economic uncertainty may result in decreased revenue or earnings levels or growth rates. The U.S. economy has been historically cyclical, and market conditions continue to be challenging, which has resulted in individuals and companies delaying or reducing expenditures. Further delays or reductions in spending could have a material adverse effect on demand for our products, and consequently on our business, financial condition, results of operations, prospects, and stock price.

**The electronics industry is cyclical and may result in fluctuations in our operating results.**

The electronics industry has experienced significant economic downturns at various times. These downturns are characterized by diminished product demand, accelerated erosion of average selling prices, and production overcapacity. In addition, the electronics industry is cyclical in nature. We will seek to reduce our exposure to industry downturns and cyclicity by providing design and production services for leading companies in rapidly expanding industry segments. We may, however, experience substantial period-to-period fluctuations in future operating results because of general industry conditions or events occurring in the general economy.

**Our strategic alliances may not achieve their objectives, and their failure to do so could impede our growth.**

Our prospects depends to a significant extent on our strategic alliances with Samsung and Duracell. In addition, we plan to explore additional strategic alliances designed to enhance or complement our technology or to work in conjunction with our technology; to provide necessary know-how, components, or supplies; and to develop, introduce, and distribute products utilizing our technology. Any strategic alliances may not achieve their intended objectives,

may be cancelled by

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either party, and parties to our strategic alliances may not perform as contemplated. The failure of our current alliances or our inability to form additional alliances may impede our ability to introduce new products and enter new markets.

**Product liability claims against us could result in adverse publicity and potentially significant monetary damages.**

As a seller of consumer products using a flammable material such as methanol, we will face an inherent risk of exposure to product liability claims in the event that injuries result from product usage by customers. It is possible that our products could result in injury, whether by product malfunctions, defects, improper installation, or other causes. If such injuries or claims of injuries were to occur, we could incur monetary damages and our business could be adversely affected by any resulting negative publicity. The successful assertion of product liability claims against us could result in potentially significant monetary damages and, if our insurance protection is inadequate to cover these claims, could require us to make significant payments from our own resources.

**We expect to face intense competition that could result in failing to gain market share and suffering reduced revenue from our portable power source products.**

We plan to serve intensely competitive markets that are characterized by price erosion, rapid technological change, and competition from major domestic and international companies. This intense competition could result in pricing pressures, lower sales, reduced margins, and lower market share. Most of our competitors have greater market recognition, larger customer bases, and substantially greater financial, technical, marketing, distribution, and other resources than we possess and that afford them competitive advantages. As a result, they may be able to devote greater resources to the promotion and sale of products, to negotiate lower prices for raw materials and components, to deliver competitive products at lower prices, and to introduce new product solutions and respond to customer requirements more quickly than we can. Our competitive position could suffer if one or more of our customers determine not to utilize our portable power source products and instead decide to contract with our competitors or to use alternative technologies.

Our ability to compete successfully will depend on a number of factors, both within and outside our control. These factors include the following:

our success in designing and introducing new portable power source products;

our ability to predict the evolving needs of our customers and to assist them in incorporating our technologies into their new products;

our ability to meet our customer's requirements for small size, low weight, peak power, long power duration, ease of use, reliability, durability, and small form factor;

the quality of our customer services;

the rate at which customers incorporate our products into their own products;

product or technology introductions by our competitors; and

foreign currency fluctuations, which may cause a foreign competitor's products to be priced significantly lower than our products.

**We depend on key personnel who would be difficult to replace, and our business will likely be harmed if we lose their services or cannot hire additional qualified personnel.**

Our success will depend substantially on the efforts and abilities of our senior management and key personnel. The competition for qualified management and key personnel, especially engineers, is intense. Although we maintain non-competition and non-disclosure covenants with most of our key personnel, we do not have employment agreements with most of them. The loss of

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services of one or more of our key employees or the inability to hire, train, and retain key personnel, especially engineers and technical support personnel, and capable sales and customer-support employees outside the United States, could delay the development and sale of our products, disrupt our business, and interfere with our ability to execute our business plan.

**Our operating results may experience significant fluctuations.**

In addition to the variability resulting from the short-term nature of our customers' commitments, other factors will contribute to significant periodic and seasonal quarterly fluctuations in our results of operations. These factors include the following:

- the cyclical nature of the markets we serve;
- the timing and size of orders;
- the volume of orders relative to our capacity;
- product introductions and market acceptance of new products or new generations of products;
- evolution in the life cycles of our customers' products;
- timing of expenses in anticipation of future orders;
- changes in product mix;
- availability of manufacturing and assembly services;
- changes in cost and availability of labor and components;
- timely delivery of product solutions to customers;
- pricing and availability of competitive products;
- introduction of new technologies into the markets we serve;
- pressures on reducing selling prices;
- our success in serving new markets; and
- changes in economic conditions.

Accordingly, you should not rely on period-to-period comparisons as an indicator of our future performance. Negative or unanticipated fluctuations in our operating results may result in a decline in the price of our stock.

**Risks Related to this Offering**

**As a new investor, you will incur substantial dilution in net tangible book value as a result of this offering.**

The assumed public offering price will be substantially higher than the net tangible book value per share of our outstanding shares of common stock. If you purchase securities in this offering, your interest will be diluted by the amount by which the offering price per share exceeds our pro forma net tangible book value per share following the offering. Net tangible book value equals total tangible assets minus total liabilities. As of December 31, 2007, our net tangible book value per share was \$0.33. After giving effect to this offering and assuming an initial offering price of \$ , our pro forma net tangible book value per share would be \$ , or \$ if the underwriters exercise their over-allotment option in full. The exercise of outstanding options and

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warrants and future equity issuances, including future public offerings or future private placements of equity securities and any additional shares issued in connection with acquisitions, could result in further dilution to investors.

**You may not be able to resell your shares at or above the price you pay for them in this offering.**

Our common stock is currently traded on The Nasdaq Global Market. The daily trading volume of our common stock is relatively low. During the year ended December 31, 2007, the daily volume for our common stock was as low as 30,755 and as high as 1,245,611 and averaged 159,950 shares per day as reported by Nasdaq. Because of this limited trading volume, stockholders may be unable to sell their shares. Moreover, sales or purchases of relatively small blocks of stock can have a significant impact on the price at which our stock is traded. The market price of our common stock also has fluctuated substantially in the past and is likely to continue to be highly volatile and subject to wide fluctuations in the future. For example, as of December 31, 2007, the 52-week high closing sales price of our common stock was \$1.80 per share, which compares to a 52-week low closing sales price of our common stock of \$0.71 per share. These fluctuations have occurred in the past and may occur in the future in response to various factors, many of which we cannot control, including the following:

actual or anticipated changes in our operating results;

variations in our quarterly results;

changes in expectations relating to our products, plans, and strategic position or those of our competitors or customers;

announcements of technological innovations or new products by our competitors, our customers, or us;

market conditions within our market;

price and volume fluctuations in the overall stock market from time to time;

significant volatility in the market price and trading volume of technology companies in general and alternative energy companies in particular;

changes in investor perceptions;

the level and quality of any research analyst coverage of our common stock;

changes in earnings estimates or investment recommendations by securities analysts or our failure to meet such estimates;

the financial guidance we may provide to the public, any changes in such guidance, or our failure to meet such guidance;

various market factors or perceived market factors, including rumors, whether or not correct, involving us, our customers, our subcontractors, or our competitors;

introductions of new products or new pricing policies by us or by our competitors;

acquisitions or strategic alliances by us or by our competitors;



litigation involving us, our industry, or both;

regulatory developments in the United States or abroad;

the gain or loss of significant customers;

the gain or loss of significant orders;

recruitment or departure of key personnel;

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developments with respect to intellectual property rights;

market conditions in our industry, the industries of our customers, and economy as a whole;

acquisitions or strategic alliances by us or our competitors; and

general global economic and political instability.

In addition, the market prices of securities of technology companies have experienced significant price and volume fluctuations that often have been unrelated or disproportionate to their operating performance. In the past, companies that have experienced volatility in the market price of their securities have been the subject of securities class action litigation. If we were the object of a securities class action litigation, it could result in substantial losses and divert management's attention and resources from other matters. As a result of the foregoing and other factors, you may not be able to resell your shares of common stock at or above the price you paid.

**Sales of large numbers of shares could adversely affect the price of our common stock.**

All of the 38,179,888 shares of our common stock outstanding as of December 31, 2007 are eligible for resale in the public markets. Of these shares, 965,850 shares held by affiliates are eligible for resale in the public markets subject to compliance with the volume and manner of sale requirements of Rule 144 under the Securities Act of 1933, as amended, and the balance of the shares are eligible for resale in the public markets either as unrestricted shares or pursuant to Rule 144. In general, under Rule 144 as currently in effect, any person (or persons whose shares are aggregated for purposes of Rule 144) who beneficially owns restricted securities with respect to which at least six months has elapsed since the later of the date the shares were acquired from us, or from an affiliate of ours, is entitled to sell within any three-month period a number of shares that does not exceed the greater of 1% of the then outstanding shares of our common stock and the average weekly trading volume in common stock during the four calendar weeks preceding such sale. Sales under Rule 144 also are subject to certain manner-of-sale provisions and notice requirements and to the availability of current public information about us. A person who is not an affiliate, who has not been an affiliate within three months prior to sale, and who beneficially owns restricted securities with respect to which at least six months has elapsed since the later of the date the shares were acquired from us, or from an affiliate of ours, is entitled to sell such shares under Rule 144 without regard to any of the volume limitations or other requirements described above. Sales of substantial amounts of common stock in the public market could adversely affect prevailing market prices.

**We do not expect to pay any dividends for the foreseeable future.**

We do not anticipate paying any dividends to our stockholders for the foreseeable future. Accordingly, you may have to sell some or all of your common stock in order to generate cash flow from your investment. You may not receive a gain on your investment when you sell our common stock and may lose some or all of the amount of your investment. Any determination to pay dividends in the future will be made at the discretion of our board of directors and will depend on our results of operations, financial conditions, contractual restrictions, restrictions imposed by applicable law, and other factors our board of directors deems relevant.

**If our securities become ineligible for trading on Nasdaq, they might be subject to Rule 15g-9 of the Securities Exchange Act of 1934, which imposes additional sales practice requirements on broker-dealers that sell such securities to persons other than established customers and accredited investors.**

While our common stock is now listed on The Nasdaq Global Market, continued listing on Nasdaq will depend on our ability to meet certain eligibility requirements established from time to time by The Nasdaq Global Market. Loss of Nasdaq eligibility could result from material operating

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losses, or if the market price of our common stock falls below \$1.00 per share for a substantial period of time. For transactions covered by the rule, the broker-dealer must make a special suitability determination for the purchaser and receive the purchaser's written consent to the transaction prior to the sale. The rule may adversely affect the ability of broker-dealers to sell our securities, and consequently may limit the public market for, and the trading price of, our common stock.

**We have broad discretion over the use of the net proceeds from this offering and could spend the proceeds in ways with which you might not agree.**

We have broad discretion to allocate the net proceeds of this offering, and you will be relying on the judgment of our management regarding the application of those proceeds. We currently expect to use these proceeds to conduct research and development, and the commercialization of our portable power source products. The timing and amount of our actual expenditures, however, are subject to change and will be based on many factors, including the following:

the results of our research and development and product testing;

manufacturing, marketing, and other costs associated with commercialization of our products; and

the costs involved in preparing, filing, prosecuting, maintaining and enforcing patents or defending ourselves against competing technological and market developments.

**We may experience an ownership change in connection with this offering (or in the future), which would result in a limitation of the use of our net operating losses.**

As of December 31, 2007, we had approximately \$54 million of net operating loss, or NOL, carryforwards. Our ability to utilize these NOL carryforwards, including any future NOL carryforwards that may arise, may be limited by Section 382 of the Internal Revenue Code of 1986, as amended, if we undergo an ownership change as a result of the sale of units in this offering or as a result of subsequent changes in the ownership of our outstanding common stock. A corporation generally undergoes an ownership change when the ownership of its stock, by value, changes by more than 50 percentage points over any three-year testing period. In the event of an ownership change, Section 382 imposes an annual limitation on the amount of post-ownership change taxable income a corporation may offset with pre-ownership change NOL carryforwards and certain recognized built-in losses.

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**SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus contains forward-looking statements that are forward-looking in nature. Examples of forward-looking statements include statements regarding our belief that the fuel cell industry will continue to develop, our future financial results, operating results, business strategies, projected costs, products under development, competitive positions, and our plans and objectives for future operations. Words such as may, will, should, would, expects, anticipates, intends, believes, estimates, predicts, potential, continue, or the negative of these terms or other comparable terminology, as well as statements in future tense, identify forward-looking statements. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including the Risk Factors discussed herein. These and many other factors could affect our future operating results and financial condition and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by us or on our behalf.

Forward-looking statements should not be read as a guarantee of future performance or results, and will not necessarily be accurate indications of the times at, or by which, that performance or those results will be achieved. Forward-looking statements are based on information available at the time they are made or our good faith belief as of that time with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause these differences include the following:

- our history of recurring net losses and the risk of continued net losses;
- our independent auditors raising substantial concern about our ability to continue as a going concern;
- the potential delisting of our common stock from The Nasdaq Global Market;
- sales revenue growth of our test and measurement instrumentation business may not be achieved;
- the dependence of our test and measurement instrumentation business on a small number of customers and potential loss of government funding;
- risks related to developing Mobion direct methanol fuel cells and whether we will ever successfully develop reliable and commercially viable Mobion fuel cell solutions;
- our need to raise additional financing;
- risks relating to the market price of Plug Power common stock;
- the risk that current U.S. regulations will not be changed to permit methanol to be carried onto airplanes;
- our portable power source products or our customers' products that utilize our portable power source products may not be accepted by the market;
- our inability to build and maintain relationships with our customers;
- our limited experience in manufacturing fuel cell systems on a commercial basis;

our dependence on others for our production requirements for our portable power source products;

our dependence on our manufacturing subcontractors to provide high levels of productivity and satisfactory delivery schedules for our portable power source products;

our dependence on third-party suppliers for most of the manufacturing equipment necessary to produce our portable power source products;

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our inability to obtain sufficient quantities of components and other materials, including platinum and ruthenium, necessary for the production of our portable power source products;

our dependence on OEMs integrating Mobion fuel cell systems into their devices;

our lack of long-term purchase commitments from our customers and the ability of our customers to cancel, reduce, or delay orders for our products;

risks related to protection and infringement of intellectual property;

our new technologies may not result in customer or market acceptance;

our ability to commercialize our proposed portable power source solutions and develop new product solutions on a timely basis;

our ability to develop and utilize new technologies that address the needs of our customers;

intense competition in the direct methanol fuel cell and instrumentation businesses;

change in policies by U.S. or foreign governments that hinder, disrupt, or economically disadvantage international trade;

the impact of future exchange rate fluctuations;

uncertainty of the U.S. economy;

the historical volatility of our stock price;

the cyclical nature of the electronics industry;

failure of our strategic alliances to achieve their objectives or perform as contemplated and the risk of cancellation or early termination of such alliance by either party;

product liability or defects;

risks related to the flammable nature of methanol as a fuel source;

the loss of services of one or more of our key employees or the inability to hire, train, and retain key personnel;

significant periodic and seasonal quarterly fluctuations in our results of operations; and

other factors discussed under the headings Risk Factors, Management's Discussion and Analysis of Financial Condition and Results of Operations, and Business.

Forward-looking statements speak only as of the date they are made. You should not put undue reliance on any forward-looking statements. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions, or changes in other factors affecting forward-looking information, except to the extent

required by applicable securities laws. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.



**Table of Contents****USE OF PROCEEDS**

We estimate that our net proceeds from the sale of \_\_\_\_\_ units in this offering will be approximately \$ \_\_\_\_\_ million, based on an assumed offering price of \$ \_\_\_\_\_ per unit, the last reported sale price of our common stock on The Nasdaq Global Market on March \_\_\_\_\_, 2008, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. A \$1.00 increase (decrease) in the assumed public offering price of \$ \_\_\_\_\_ per unit would increase (decrease) the net proceeds to us from this offering by approximately \$ \_\_\_\_\_ million, assuming the number of units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We currently intend to use the net proceeds from this offering as follows:

Commercialization of our portable power source products (1)	\$
Capital equipment (2)	
General corporate purposes, including working capital	
 Total	 \$

- (1) Expected to consist of activities to commercialize our portable power source products for portable handheld electronic devices (including further enhancements to our Mobion Chip) and activities to achieve manufacturing readiness (including design for manufacturability, design for assembly, design for testability, and design for serviceability).
- (2) Expected to consist of expenditures for equipment and tooling to support engineering design and commercialization of our Mobion portable power source products.

We believe the net proceeds of this offering will provide sufficient funds to commercialize our portable power source products. It is possible, however, that changing circumstances could require us to raise capital above the net proceeds of this offering to fund the commercialization of our portable power source business. We may raise this additional capital through one or more financings or by selling our test and measurement instrumentation business should we determine to do so.

The amounts and timing of our actual expenditures will depend upon numerous factors, including the amount of proceeds actually raised in this offering, cash flows from operations, and the growth of our business. We will, from time to time, evaluate these and other factors to determine if the allocation of our resources, including the proceeds of this offering, is being optimized and we must therefore retain broad discretion to allocate the net proceeds from this offering.

Pending use of the net proceeds as described above, we intend to invest the net proceeds of this offering in U.S. government and short-term investment grade securities.

**Table of Contents****PRICE RANGE OF OUR COMMON STOCK**

Our common stock is traded on The Nasdaq Global Market under the symbol MKTY. The following table sets forth the high and low sale prices of our common stock as reported by The Nasdaq Global Market for the periods indicated.

	<b>High</b>	<b>Low</b>
<b>2006</b>		
First Quarter	\$ 3.90	\$ 2.70
Second Quarter	5.00	2.00
Third Quarter	2.49	1.27
Fourth Quarter	2.96	1.55
<b>2007</b>		
First Quarter	1.93	1.32
Second Quarter	1.80	1.20
Third Quarter	1.41	0.90
Fourth Quarter	1.35	0.72
<b>2008</b>		
First Quarter (through March 20, 2008)	0.89	0.65

We estimate that there were approximately 530 holders of our common stock as of March 20, 2008, which does not include an indeterminate number of stockholders whose shares may be held by brokers in street name.

**DIVIDEND POLICY**

We have never declared or paid any dividends on our capital stock. We currently intend to retain any future earnings to fund the development and expansion of our business, and therefore do not anticipate paying cash dividends in the foreseeable future. Any future determination to pay dividends will be at the discretion of our Board of Directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in financing instruments, and other factors our Board of Directors deems relevant.

**Table of Contents****CAPITALIZATION**

The following table sets forth our capitalization as of December 31, 2007

on an actual basis, which reflects our actual capitalization as of December 31, 2007 on a historical basis, without giving effect to our proposed eight-to-one reverse stock split that has been submitted to our stockholders for approval at a meeting to be held during May 2008; and

on an as adjusted basis to give effect to our receipt of the estimated net proceeds from the sale of units at the assumed offering price of \$ per unit, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	<b>December 31, 2007</b>	
	<b>Actual</b>	<b>As Adjusted</b>
	<b>(in thousands, except share data)</b>	
Cash and cash equivalents	\$7,650	\$
Securities available for sale (2)	4,492	4,492
Stockholders' equity (3):		
Common stock, par value \$0.01 per share, 75,000,000 shares authorized, actual and as adjusted; 46,220,624 shares issued and outstanding, actual; shares issued and outstanding, as adjusted (4)	462	
Additional paid-in capital	131,661	
Accumulated deficit	(105,066)	(105,066)
Accumulated other comprehensive income:		
Unrealized gain on securities available for sale, net of tax	500	500
Common stock in treasury, at cost, 8,040,736 shares	(13,754)	(13,754)
Total stockholders' equity	\$13,803	\$

(1) A \$1.00 increase (decrease) in the assumed public offering price of \$ per unit which is the last reported sale price of our common stock on The Nasdaq Global Market on March 20, 2008 would increase (decrease) total stockholders' equity by \$ million, assuming the number of units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and after giving effect to our receipt of the estimated net proceeds.

(2) Represents shares of Plug Power held for sale by us, classified as current assets, and such amount reflects the fair value of these shares. Through the sale of Plug Power shares, we generated proceeds of \$6.2 million during 2006 and \$5.1 million during 2007 that we have used to fund the development and commercialization of our portable power source business.

(3)

The table does not include any adjustment in the number of shares of our common stock issued and outstanding as a result of the proposed eight-to-one reverse stock split of common stock that has been submitted to our stockholders for approval at a meeting to be held during May 2008 pursuant to which every eight shares of common stock will be combined into one share of common stock.

(4) Excludes the following as of December 31, 2007:

1,265,733 shares of common stock reserved for future issuance under our equity incentive plans. As of December 31, 2007, there were 6,213,566 options outstanding and 5,000 shares of restricted stock issued under our equity incentive plans;

3,027,778 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2007, with an exercise price of \$2.27 per share; and

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shares of common stock that will be issued upon exercise of warrants at an exercise price of \$ per share sold as part of the units in this offering.

Please read the capitalization table together 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.

**Table of Contents****DILUTION**

If you purchase units in this offering, and assuming no value is attributed to the warrants, your interest will be diluted immediately to the extent of the difference between the assumed public offering price of \$ \_\_\_\_\_ per unit and the as adjusted net tangible book value per share of our common stock immediately following this offering.

Our net tangible book value as of December 31, 2007 was \$12.6 million, or approximately \$0.33 per share. Net tangible book value per share represents our total tangible assets less total liabilities, divided by the number of shares of common stock outstanding as of December 31, 2007.

Net tangible book value dilution per unit to new investors represents the difference between the amount per unit paid by purchasers in this offering and the as adjusted net tangible book value per share of common stock immediately after completion of this offering, assuming that no value is attributed to the warrants. After giving effect to our sale of \_\_\_\_\_ units in this offering at an assumed public offering price of \$ \_\_\_\_\_ per unit, and after deducting underwriting discounts and commissions and estimated offering expenses, our as adjusted net tangible book value as of December 31, 2007 would have been \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per share to existing stockholders and an immediate dilution in net tangible book value of \$ \_\_\_\_\_ per unit to purchasers of units in this offering, as illustrated in the following table:

Assumed public offering price per unit		\$
Net tangible book value per share as of December 31, 2007	\$ 0.33	
Increase in net tangible book value per unit attributable to new investors	\$	
Adjusted net tangible book value per share as of December 31, 2007, after giving effect to this offering		\$
Dilution per unit to new investors		\$

A \$1.00 increase (decrease) in the assumed public offering price of \$ \_\_\_\_\_ per unit which is the last reported sale price of our common stock on The Nasdaq Global Market on March 20, 2008 would increase (decrease) (a) our as adjusted net tangible book value by approximately \$ \_\_\_\_\_ million, (b) our as adjusted net tangible book value per share by \$ \_\_\_\_\_, and (c) the dilution to new investors by \$ \_\_\_\_\_ per unit, assuming no value is attributed to the warrants and that the number of units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us and after giving effect to our receipt of the estimated net proceeds.

The above discussion and tables do not include the following:

1,265,733 shares of common stock reserved for future issuance under our equity incentive plans. As of December 31, 2007, there were 6,213,566 options outstanding and 5,000 shares of restricted stock issued under our equity incentive plans.

3,027,778 shares of common stock issuable upon exercise of outstanding warrants as of December 31, 2007, with an exercise price of \$2.27 per share.

shares of common stock that will be issued upon exercise of warrants at an exercise price of \$ per share sold as part of the units in this offering.

**Table of Contents****SELECTED CONSOLIDATED FINANCIAL DATA**

The following table sets forth our summary consolidated financial data for the fiscal years ended December 31, 2005, 2006 and 2007, which was derived from our audited consolidated financial statements included elsewhere in this prospectus. We derived the consolidated financial data for the years ended December 31, 2003 and 2004 from our audited consolidated financial statement that is not included in this prospectus. You should read the following summary consolidated financial data together with the information under Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements, including the related notes thereto.

	<b>Years Ended December 31,</b>				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Statement of Operations Data</b>					
<b>(in thousands except share and per share data):</b>					
Product revenue	\$5,547	\$7,530	\$6,012	\$7,667	\$9,028
Gross profit on product revenue	3,165	4,653	3,631	4,767	5,598
Funded research and development revenue	2,311	1,040	1,829	489	1,556
Research and product development expenses	8,348	12,960	9,671	12,921	11,765
Operating loss	(8,709)	(13,592)	(15,098)	(17,737)	(13,349)
Net loss	\$(559)	\$(4,191)	\$(15,094)	\$(13,667)	\$(9,575)
Net loss per share (basic and diluted)	\$(0.02)	\$(0.14)	\$(0.49)	\$(0.43)	\$(0.25)
Weighted average common shares outstanding (basic and diluted)	27,655,990	29,161,178	30,737,608	31,622,345	38,108,377
<b>Balance Sheet Data (in thousands):</b>					
Cash and cash equivalents	\$12,380	\$22,545	\$11,230	\$14,545	\$7,650
Securities available for sale (1)	44,031	17,678	18,947	10,075	4,492
Working capital	49,053	33,663	33,045	23,076	11,347
Current ratio	4.2:1	4.0:1	4.9:1	3.9:1	3.9:1
Total assets	65,838	66,830	41,267	33,811	18,716
Total current liabilities	16,761	8,826	8,222	7,071	3,866
Long-term obligations	24	1,149		3,664	904
Total stockholders' equity	\$48,266	\$55,584	\$32,916	\$22,871	\$13,803

(1) Represents shares of Plug Power held for sale by us, classified as current assets, except for 2004 when approximately \$16.5 million shares were classified as restricted shares, and such amount reflects the fair value



of these shares. Through the sale of Plug Power shares, we generated proceeds of \$6.2 million during 2006 and \$5.1 million during 2007 that we have used to fund the development and commercialization of our portable power source business.

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

*The following discussion of our financial condition and results of operations should be read in conjunction with our Consolidated Financial Statements and the related notes included elsewhere in this prospectus. This discussion contains forward-looking statements, which involve risk and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of certain factors including those discussed in Risk Factors and elsewhere in this prospectus.*

**Overview**

We are developing and commercializing off-the-grid rechargeable power sources for portable electronics. We have developed a patented, proprietary direct methanol fuel cell technology platform called Mobion, which generates electrical power using up to 100% methanol as fuel. Our proprietary fuel cell power solution consists of two primary components integrated in an easily manufactured device: the direct methanol fuel cell power engine, which we refer to as our Mobion Chip, and methanol replacement cartridges. Our current Mobion Chip weighs less than one ounce and is small enough to fit in the palm of one's hand. The methanol used by the technology is fully biodegradable. We believe we are the only micro fuel cell developer to have demonstrated power density of over 50 mW/cm<sup>2</sup> with high energy efficiencies of 1.4 Wh/cc of methanol for handheld consumer electronic applications. For these reasons, we believe our technology offers a compelling alternative to current lithium-ion and similar rechargeable battery systems currently used by original equipment manufacturers and branded partners, or OEMs, in many handheld electronic devices, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, PDAs, and GPS devices. We believe our platform will facilitate the development of numerous product advantages, including small size, environmental friendliness, and simplicity of design, all critical for commercialization in the consumer market, and can be implemented as three different product options: a compact external charging device, a snap-on or attached power accessory, or an embedded fuel cell power solution. We have strategic arrangements with Samsung Electronics and the Duracell division of the Gillette Company. Our goal is to become a leading provider of portable power for handheld electronic devices and we intend to commercialize Mobion products beginning in 2009.

Our Mobion technology eliminates the need for active water recirculation pumps or the inclusion of water as a fuel dilutant. The water required for the electrochemical process is transferred internally within the Mobion Chip from the site of water generation on the air-side of the cell. This internal flow of water takes place without the need for any pumps, complicated re-circulation loops or other micro-plumbing tools. Our Mobion technology is protected by a patent portfolio that includes over 90 U.S. patent applications covering five key technologies and manufacturing areas.

We also design, manufacture, and sell high-performance test and measurement instruments and systems serving three markets: general dimensional gauging, semiconductor, and aviation. These products consist of: electronic, computerized gauging instruments for position, displacement and vibration applications for the design, manufacturing and test markets; semiconductor products for wafer characterization; and engine balancing and vibration analysis systems for military and commercial aircraft.

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Our cash requirements depend on numerous factors, including completion of our portable power source products development activities, our ability to commercialize our portable power source products, market acceptance of our portable power source products, and other factors. We expect to pursue the expansion of our operations through internal growth and strategic partnerships. Several key indicators of our liquidity are summarized in the following table:

	<b>Years Ended December 31,</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>		
Cash and cash equivalents	\$11,230	\$14,545	\$7,650
Securities available for sale	18,947	10,075	4,492
Working capital	24,465	20,820	11,347
Net loss	(15,094)	(13,667)	(9,575)
Net cash used in operating activities	(12,572)	(12,706)	(11,683)
Purchase of property, plant and equipment	(1,004)	(1,574)	(414)

From inception through December 31, 2007, we have incurred an accumulated deficit of \$105.1 million and we expect to incur losses for the foreseeable future as we continue micro fuel cell product development and commercialization programs. We expect that losses will fluctuate from year to year and that such fluctuations may be substantial as a result of, among other factors, sales of securities available for sale as well as the operating results of our business.

**Results of Operations***Results of Operations for the Year Ended December 31, 2007 Compared to December 31, 2006.*

*Product Revenue.* Product revenue in our test and measurement instrumentation business increased by \$1.4 million, or 17.8%, to \$9.0 million for the fiscal year ended December 31, 2007 from \$7.7 million for the fiscal year ended December 31, 2006. This performance was primarily the result of a \$602,000 increase in activity by the U.S. Air Force, driven by the New PBS-4100 systems contract. Also contributing were increased purchases by our Japanese distributor (particularly OEM capacitance), as well as increased volume in semiconductor product shipments. Total product revenue for general dimensional gauging products increased \$298,000, or 7.2%, to \$4.5 million, while total product revenue for the segment's semiconductor products increased by \$364,000, or 71.2%, to \$875,000.

In our test and measurement instrumentation business, during 2007 the U.S. Air Force accounted for \$2.4 million, or 26.3%, of product revenue while during 2006, the U.S. Air Force accounted for \$1.8 million, or 23.1%, of product revenue. Additionally, during 2007, Koyo Precision, our Japanese distributor, represented \$2.5 million, or 27.7%, of product revenue while during 2006, Koyo Precision represented \$1.8 million, or 22.9%, of product revenue.

Information regarding government contracts included in product revenue is as follows:

Contract (1)	Expiration	Revenue For The		Revenue	Total Contract
		Year Ended	Year Ended	Contract to	Orders
		December 31,	December 31,	Date	Received to
		2006	2007	December 31,	Date
				2007	2007

**(dollars in thousands)**

\$2.3 million Air Force New PBS-4100 Systems	07/28/2010 (2)	\$	\$1,596	\$1,596	\$1,596
\$8.8 million Air Force Retrofit and Maintenance of PBS-4100 Systems	05/19/2008 (3)	\$1,417	\$738	\$7,365	\$7,365

(1) Contract values represent maximum potential values and may not be representative of actual results.

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- (2) Date represents expiration of contract, including all three potential option extensions.
- (3) Expiration date was extended during December 2007 from December 20, 2007 to May 19, 2008.

*Funded Research and Development Revenue.* Funded research and development revenue in our new energy business during 2007 increased \$1.1 million, or 218.2%, to \$1.6 million for the year ended December 31, 2007 from \$489,000 for the year ended December 31, 2006. The increase in revenue was primarily the result of billings under the DOE contract, which had its funding reinstated during May 2007 after it had been suspended during 2006. This DOE funding resumption contributed an additional \$613,000 to revenue during 2007. Revenue during 2007 also included \$418,000 from the SAFT contract, for which revenue recognition had been deferred until the delivery under the contract was accepted during the first quarter of 2007. Revenue recognized under the Samsung alliance agreement increased \$21,000 during 2007 over 2006.

Contract	Expiration (1)	For The Year Ended December 31, 2006		For The Year Ended December 31, 2007		Revenue Contract to Date December 31, 2007
		Revenue	Percent	Revenue	Percent	
		(dollars in thousands)				
\$3.0 million DOE (2)	09/30/08	\$ 62	12.7%	\$ 675	43.4%	\$ 1,846
\$1.0 million Samsung (3)	07/31/07	427	87.3	448	28.8	875
\$418,000 SAFT (4)	12/31/06			418	26.9	418
\$15,000 NCMS (5)	06/30/07			15	0.9	15
Total		\$ 489	100.0%	\$ 1,556	100.0%	\$ 3,154

- (1) Dates represent expiration of contract, not date of final billing.
- (2) The DOE contract is a cost share contract. DOE funding for this contract was suspended during January 2006 and reinstated during May 2007. During 2007, we received notifications from the DOE of funding releases totaling \$1.0 million and also received an extension of the termination date for the contract from July 31, 2007 to September 30, 2008. During February 2008, we received notification from the DOE of a funding release of \$500,000.
- (3) The Samsung contract is a research and prototype contract. This contract included one up-front payment of \$750,000 and two milestone payments of \$125,000 each for the delivery of prototypes. The contract was amended on October 22, 2007 as we agreed to issue a credit in the amount of the last invoice in recognition of our continuing collaboration with Samsung. Therefore, revenue under this contract totaled \$875,000.
- (4) The SAFT contract is a fixed price contract. This is a subcontract with SAFT under the U.S. Army CECOM contract. The purchase order received in connection with this subcontract was revised on November 14, 2006 eliminating one milestone. As a result, the contract value was reduced from \$470,000 to \$418,000 and the expiration date was extended from September 30, 2006 to December 31, 2006.
- (5)

This contract was a cost plus catalyst research contract with the National Center for Manufacturing Sciences, or NCMS.

*Cost of Product Revenue.* Cost of product revenue in our test and measurement instrumentation business increased by \$530,000, or 18.3%, to \$3.4 million during the year ended December 31, 2007 from \$2.9 million during the year ended December 31, 2006. As a percentage of product revenue, the annual cost of product revenue remained relatively consistent with 2006, and this increase was consistent with the higher revenue during 2007.

Gross profit as a percentage of product revenue decreased by 0.2% to 62.0% during the year ended December 31, 2007, remaining relatively consistent with 2006.

*Funded Research and Product Development Expenses.* Funded research and development expenses in our new energy business increased \$739,000, or 64.1%, to \$1.9 million for the year ended December 31, 2007 from \$1.2 million for the year ended December 31, 2006. While the active contracts were relatively consistent between periods, costs for the DOE contract increased

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\$1.3 million, reflecting its reinstatement during May 2007, while costs for the Samsung contract increased by \$22,000. These increases were partially offset by a decrease in costs for the SAFT contract of \$576,000, as that contract was completed during the first quarter of 2007.

*Unfunded Research and Product Development Expenses.* Unfunded research and product development expenses decreased \$1.9 million, or 16.1%, to \$9.9 million for the year ended December 31, 2007 from \$11.8 million for the year ended December 31, 2006. This decrease reflects a \$2.2 million decrease in development costs related to (a) the DOE contract that resumed during May 2007, which related increase is reflected in funded research and product development expenses, and (b) cost savings from the decision to suspend work on our high power program during March 2007. This decrease was partially offset by a \$317,000 increase in product development expenses in our test and measurement instrumentation business, reflecting increased staffing and external product development costs focused on the development of the division's new stand-alone measurement and data acquisition solution, stand-alone laser head, as well as other precision measurement solutions.

*Selling, General and Administrative Expenses.* Selling, general and administrative expenses decreased by \$1.3 million, or 13.2%, to \$8.7 million for the year ended December 31, 2007 from \$10.1 million for the year ended December 31, 2006. This decrease was primarily the result of (a) a \$387,000 decrease in non-cash stock-based compensation charges reflecting the difference between sign on and promotion grants during 2006 compared with primarily annual compensation grants during 2007 and the reversal of expense during 2007 related to certain cancelled executive stock-based performance grants where performance goals were not met, (b) a \$528,000 decrease in outside services, including audit, legal, and consulting fees, (c) a \$345,000 decrease in recruiting and relocation costs, (d) a \$178,000 increase in severance costs attributable to employees terminated as a result of our March 2007 restructuring, (e) a \$632,000 decrease in wages and benefits, which was also attributable to our March 2007 restructuring, (f) a \$227,000 decrease in other operating expenses, primarily insurance and laboratory operating fees, (g) a \$647,000 increase related to a decrease in allocations of expense from SG&A to funded and unfunded research and development costs for overhead and other costs allocable to research and development programs, and (h) a \$40,000 savings in other expenses, net.

*Operating Loss.* Operating loss for the year ended December 31, 2007 compared with the operating loss for the year ended December 31, 2006 decreased by \$4.4 million to \$13.3 million, a 24.7% decrease, as a result of the factors noted above.

*Gain on Sale of Securities Available for Sale.* The gain on sale of securities available for sale for the year ended December 31, 2007 was \$2.5 million compared with a gain of \$4.3 million for the year ended December 31, 2006. During 2007, we sold 1,452,770 shares of Plug Power common stock at a weighted average price of \$3.53 per share, with gross proceeds to us of \$5.1 million.

*Gain (loss) on Derivatives.* We recorded a gain on derivative accounting of \$3.0 million for the year ended December 31, 2007 and a gain of \$182,000 on derivative accounting for the year ended December 31, 2006. Both the 2007 and 2006 gains are the result of derivative treatment of the freestanding warrants issued to investors in conjunction with our December 2006 capital raise.

*Income Tax (Expense) Benefit.* Our income tax rate for the year ended December 31, 2007 was 33%, while the income tax rate for the year ended December 31, 2006 was 15%. These tax rates were primarily the result of losses generated by operations, changes in the valuation allowance, state true-ups upon tax return filings, permanent deductible differences for the derivative valuation, and disproportionate effects of reclassification of gains on Plug Power security sales included in operating loss.

The valuation allowance against our deferred tax assets at December 31, 2007 was \$22.3 million and at December 31, 2006 was \$18.9 million. We determined that it was more likely than not that the ultimate recognition of certain deferred tax assets would not be realized.



**Table of Contents***Results of Operations for the Year Ended December 31, 2006 Compared to December 31, 2005.*

*Product Revenue.* Product revenue in our test and measurement instrumentation business increased by \$1.7 million, or 27.5%, to \$7.7 million for the year ended December 31, 2006 from \$6.0 million for the year ended December 31, 2005. This performance was primarily the result of (a) an increase of \$1.5 million, or 55.0%, in dimensional gauging sales, particularly direct capacitance sales through our Japanese distributor, (b) increases in semiconductor sales of \$200,000, as 18 manual, one automatic, and one semi-automated metrology tool systems were sold during the year, compared to seven manual, one semi-automated, and four OEM systems during 2005, (c) commercial aviation equipment sales increases of \$539,000, and (d) lower revenue from the U.S. Air Force of \$611,000 as a result of fewer purchases of new equipment and reduced activity under the existing repair contract.

In our test and measurement instrumentation business, the U.S. Air Force accounted for \$1.8 million, or 23.1%, of product revenue during the year ended December 31, 2006 compared with \$2.4 million, or 39.7% of product revenue during the year ended December 31, 2005. During 2006, Koyo Precision, our Japanese distributor, represented \$1.8 million, or 22.9%, of product revenue.

Information regarding government contracts included in product revenue is as follows:

<b>Contract (1)</b>	<b>Expiration</b>	<b>Revenue Year Ended December 31,</b>		<b>Revenue Contract to</b>	<b>Total Contract Orders Received to</b>
		<b>2005</b>	<b>2006</b>	<b>Date</b>	<b>Date</b>
				<b>December 31, 2006</b>	<b>December 31, 2006</b>
<b>(dollars in thousands)</b>					
\$8.8 million Air Force Retrofit and Maintenance of PBS-4100 Systems	05/19/2008 (1)	\$ 1,552	\$ 1,417	\$6,627	\$ 6,637

(1) Expiration date was extended from December 20, 2007 to May 19, 2008.

*Funded Research and Development Revenue.* Funded research and development revenue in our new energy business decreased \$1.3 million, or 73.3%, to \$489,000 for the year ended December 31, 2006 from \$1.8 million for the year ended December 31, 2005. The decrease in revenue was primarily the result of the suspension of previously approved DOE funding for 2006 and the completion of other programs that were active in 2005, including programs with the New York State Energy Research and Development Authority, the Army Research Labs, the Marine Corps, the Cabot Superior Micro Powders subcontract with the National Institute of Standards and Technology, and Harris. This decrease was partially offset by \$427,000 of revenue recognized from the Samsung alliance agreement during 2006.

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Information regarding government and private company development contracts included in funded research and development revenue is as follows:

Contract	Expiration (1)	For The Year Ended December 31, 2005		For The Year Ended December 31, 2006		Revenue Contract to Date December 31, 2006
		Revenue	Percent	Revenue	Percent	
		(dollars in thousands)				
\$3.0 million DOE (2)	07/31/07	\$ 930	50.8%	\$ 62	12.7%	\$ 1,171
\$1.3 million NYSERDA (3)	06/30/06	329	18.0			1,135
\$1.0 million Samsung (4)	07/31/07			427	87.3	427
\$418,000 SAFT (5)	12/31/06					
\$250,000 ARL	09/30/05	250	13.7			250
\$210,000 NIST (6)	06/30/05	100	5.5			210
\$150,000 Harris (7)	06/25/04	150	8.2			150
\$70,000 Marine Corps	03/31/05	70	3.8			70
Total		\$ 1,829	100.0%	\$ 489	100.0%	\$ 3,413

(1) Dates represent expiration of contract, not date of final billing.

(2) DOE funding for this cost shared contract was suspended during January 2006.

(3) The total contract value for this cost shared contract is \$1.3 million consisting of four Phases: Phase I for \$500,000 was from March 12, 2002 through September 30, 2003; Phase II for \$200,000 was from October 28, 2003 through October 31, 2004; Phase III for \$348,000 was from August 23, 2004 through August 31, 2005; and Phase IV for \$202,000 which commenced on December 14, 2004 and expired on June 30, 2006. Phases I, II, and III have been completed, while Phase IV expired before it was completed.

(4) Represents a research and prototype contract that includes one up-front payment of \$750,000 and two milestone payments totaling \$250,000 for the delivery of acceptable prototypes.

(5) Represents a fixed price subcontract with SAFT under the U.S. Army CECOM contract. The purchase order received in connection with this subcontract was revised on November 14, 2006 eliminating one milestone. As a result, the contract value was reduced from \$470,000 to \$418,000 and the expiration date was extended from September 30 to December 31, 2006.

(6) Represents a fixed price subcontract with CSMP under NIST and includes the original contract for \$200,000 and a contract amendment for \$10,000.

(7) Represents a fixed price contract that includes the original contract for \$200,000, an amendment for \$50,000, and a 2005 amendment reducing the contract by \$100,000.

*Cost of Product Revenue.* Cost of product revenue in our test and measurement instrumentation business increased by \$519,000, or 21.8%, to \$2.9 million for the year ended December 31, 2006 from \$2.4 million for the year ended December 31, 2005. This increase is consistent with higher product revenue during 2006 compared with 2005.

Gross profit as a percentage of product revenue increased by 1.8% to 62.2% for the year ended December 31, 2006. The improvement in gross margin during 2006 was primarily the result of a five point rise in average margins on capacitance product sales resulting from higher sales volume and improved pricing strategies.

*Funded Research and Product Development Expenses.* New energy funded research and development expenses decreased by \$2.4 million, or 67.6%, to \$1.2 million for the year ended December 31, 2006 from \$3.6 million for the year ended December 31, 2005. The decreased costs

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were attributable to active contracts during 2005, which were no longer active during 2006. During 2006, we had active contracts with Samsung, DOE, and SAFT, while during 2005 we had active contracts with DOE, NYSERDA, SAFT, NIST, ARL, and the Marine Corps.

*Unfunded Research and Product Development Expenses.* Unfunded research and product development expenses increased by \$5.7 million, or 92.4%, to \$11.8 million for the year ended December 31, 2006 from \$6.1 million for the year ended December 31, 2005. This increase reflected a \$5.4 million increase in our new energy business related to increased internal costs for the development of micro fuel cell systems and costs in connection with developing prototypes and product intent prototypes, including a \$512,000 non-cash charge for share-based compensation resulting from the adoption of SFAS No. 123R, which requires that the fair value of share-based compensation be expensed. This increase also included a \$208,000 increase in product development expenses in our test and measurement instrumentation business for projects related to the development of a glass thickness gauge, improvements to the portable engine vibration and balancing system, and updated industrial balancing software.

*Selling, General and Administrative Expense.* Selling, general and administrative expenses decreased by \$815,000, or 7.5%, to \$10.1 million for the year ended December 31, 2006 from \$10.9 million for the year ended December 31, 2005. This decrease was primarily the result of (a) an \$892,000 increase in non-cash equity compensation charges resulting from the adoption of SFAS No. 123R, which required that the fair value of share-based compensation be expensed, (b) a \$1.1 million decrease in salaries and engineering management costs, partially a result of an increase in costs directly charged to research and product development and the elimination of the government systems group during the second quarter of 2005, (c) a \$640,000 decrease related to increases in liquidations to unfunded research and development costs, which was a result of having charged more time to internal development projects for low power and high power technology platform developments, the development of prototypes for Samsung, and the development of the Mobion 30M product, (d) a \$259,000 decrease in the Los Alamos National Laboratory license fees as a result of an amendment of the license agreement, which resulted in reduced minimum annual license payments, (e) a \$152,000 decrease in depreciation costs primarily related to the renewal of the lease on our main office, (f) a \$104,000 increase in commission costs at MTI Instruments, (g) a \$131,000 increase in incentive compensation primarily related to new executive employment agreements, (h) a \$261,000 increase in marketing costs as MTI Micro raised its emphasis on marketing and business development and MTI Instruments underwent a major rebranding campaign during 2006, and (i) a \$39,000 decrease in other expenses, net.

*Operating Loss.* Operating loss increased by \$2.6 million, or 17.5%, to \$17.7 million for the year ended December 31, 2006 compared with the year ended December 31, 2005 as a result of the factors noted above.

*Gain on Sale of Securities Available for Sale.* The gain on sale of securities available for sale for the year ended December 31, 2006 was \$4.3 million compared with \$10.1 million for the year ended December 31, 2005. During the year ended December 31, 2006, we sold 1,103,500 shares of Plug Power common stock at a weighted average price of \$5.66 per share, with gross proceeds to us of \$6.2 million.

On June 24, 2005, Fletcher International Ltd., or Fletcher, notified us of its election to exercise in full its right to purchase from us an amount of common stock of Plug Power. As a result of this election, Fletcher purchased 1,799,791 shares of Plug Power common stock from us at a price of \$0.7226 per share, with proceeds to us of \$1.3 million. In connection with this exercise, we recognized a loss on this embedded derivative immediately prior to exercise of \$7.2 million and a gain on the sale of Plug Power common shares of \$9.6 million.

*Gain (loss) on Derivatives.* We recorded a gain on derivative accounting of \$182,000 for the year ended December 31, 2006 and a loss of \$10.4 million on derivative accounting for the year ended December 31, 2005. The 2006 gain was the result of derivative treatment of the freestanding



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warrants issued in conjunction with our December 2006 capital raise, while the 2005 result related to an embedded derivative for the purchase of Plug Power common stock, which was issued as part of the 2004 private placement transaction. The warrant derivative was valued using the Black-Scholes Pricing model, as was the embedded derivative prior to its exercise on June 24, 2005. Upon exercise, the embedded derivative was valued at its intrinsic value.

*Income Tax (Expense) Benefit.* Our income tax expense rate for the year ended December 31, 2006 was 15%, while the income tax expense rate for the year ended December 31, 2005 was 11%. These tax rates were primarily the result of losses generated by operations, changes in the valuation allowance, and disproportionate effects of reclassification of gains on Plug Power security sales included in operating loss.

The valuation allowance against our deferred tax assets at December 31, 2006 was \$18.8 million and at December 31, 2005 was \$10.9 million. We determined that it was more likely than not that the ultimate recognition of certain deferred tax assets would not be realized.

**Quarterly Results of Operations**

The following table presents unaudited quarterly financial information for each of the 12 quarters ended December 31, 2007. We believe this information contains all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation. The quarterly operating results are not necessarily indicative of results for any future periods. Quarter-to-quarter comparisons should not be relied upon as indicators of future performance. Our operating results are subject to quarterly fluctuations as a result of a number of factors.

Mar. 31	2005			2006				2007		
	June 30	Sep. 30	Dec. 31	Mar. 31	June 30	Sep. 30	Dec. 31	Mar. 31	June 30	Sep. 30
(dollars in thousands, except per share data)										
\$1,403	\$1,285	\$1,428	\$1,896	\$1,513	\$1,700	\$1,693	\$2,761	\$1,701	\$2,275	\$2,275
801	768	865	1,197	974	974	1,043	1,776	963	1,348	1,348
324	380	792	333	45	93	173	178	615	353	353
2,660	2,913	2,093	2,005	2,560	3,252	3,557	3,552	3,622	2,872	2,872
(4,569)	(4,273)	(2,623)	(3,633)	(4,601)	(4,961)	(4,200)	(3,975)	(4,500)	(3,500)	(3,500)
\$(6,054)	\$(2,793)	\$(1,909)	\$(4,338)	\$(3,431)	\$(3,222)	\$(3,678)	\$(3,336)	\$(3,156)	\$(2,487)	\$(2,487)
\$(0.20)	\$(0.09)	\$(0.06)	\$(0.14)	\$(0.11)	\$(0.10)	\$(0.12)	\$(0.10)	\$(0.08)	\$(0.07)	\$(0.07)

**Liquidity and Capital Resources**

We have incurred significant losses as we continue to fund the development and commercialization of our portable power source business. We expect that losses will fluctuate from year to year and that such fluctuations may be substantial as a result of, among other factors, sales of securities available for sale, our operating results, the availability of equity financing, including warrants issued in connection with the December 2006 capital raise, and the ability to attract government funding resources to offset research and development costs. As of December 31, 2007, we had an accumulated deficit of \$105.1 million. During the year ended December 31, 2007, our results of operations resulted in a net loss of \$9.6 million and cash used in operating activities totaling \$11.7 million. This cash use in 2007 was funded primarily by cash and cash equivalents on hand as of December 31, 2006 of \$14.5 million and proceeds from the sales of securities available for sale of \$5.1 million. We expect to continue to incur losses as we seek to develop and commercialize

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our portable power source products and we expect to continue funding our operations from current cash and cash equivalents, the sales of securities available for sale, proceeds, if any, from equity financings, including warrants issued in connection with the December 2006 capital raise, and government funding. We expect to spend approximately \$11.7 million on research and development of Mobion technology and \$1.8 million in research and development on MTI Instruments products during 2008.

Additional financing during 2008 may not be available to us on acceptable terms, if at all. Cash used to support operations is expected to total approximately \$11.8 million and cash used for capital expenditures is expected to total approximately \$1.1 million. Capital expenditures will consist of purchases of manufacturing and laboratory equipment, software, computer equipment, and furniture. Proceeds from our sale of securities available for sale are subject to fluctuations in the market value of Plug Power. We may also seek to supplement our resources through additional equity offerings, sales of assets (including MTI Instruments), and additional government revenue could also provide more resources. We will depend on the proceeds of this offering to fund our long-term business plan.

As of December 31, 2007, we owned 1,137,166 shares of Plug Power common stock. Potential future sales of Plug Power securities will generate taxable income or loss, which is different from book income or loss, as a result of the tax bases in these assets being significantly different from their book bases. Book and tax bases as of December 31, 2007 are as follows:

<b>Security</b>	<b>Shares Held</b>	<b>Average Book Cost Basis</b>	<b>Average Tax Cost Basis</b>
Plug Power	1,137,166	\$ 1.78	\$ 0.96

Plug Power stock is currently traded on The Nasdaq Global Market and is therefore subject to stock market conditions. When acquired, these securities were unregistered. Our Plug Power securities are considered restricted securities as defined in the securities laws and may not be sold in the future without registration under the Securities Act, unless in compliance with an available exemption from registration. While our Plug Power shares remain restricted securities, these shares are now freely transferable in accordance with Rule 144(d) under the Securities Act, subject to the limitations associated with such rule.

Working capital was \$11.3 million at December 31, 2007, a \$9.5 million decrease from \$20.8 million at December 31, 2006. This decrease was primarily the result of the use of cash in operations offset by proceeds from sale of securities available for sale.

At December 31, 2007, our order backlog was \$445,000, compared with \$220,000 at December 31, 2006.

Our inventory turnover ratios and average accounts receivable days sales outstanding for the years ended December 31, 2006 and 2007 and their changes are as follows:

	<b>Years Ended December 31,</b>		
	<b>2006</b>	<b>2007</b>	<b>Change</b>
Inventory turnover	2.6	2.3	(0.3)
Average accounts receivable days sales outstanding	45	58	13



The decline in inventory turnover stemmed from a 13% higher year-end inventory balance needed to support new product initiatives as these products gain acceptance in their targeted markets, as well as maintenance of higher stock levels to support continued growth at strategic end-use customers.

The increase in average accounts receivable days sales outstanding in 2007 compared with 2006 was primarily attributable to our decision to grant our largest commercial customer 90-day payment terms.

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Cash flow used by operating activities was \$11.7 million during 2007 compared with \$12.7 million during 2006. This cash use decrease of \$1.0 million reflected a net decrease of \$3.5 million in cash expenditures to fund operations coupled with net balance sheet changes, which increased cash expenditures by \$2.5 million, reflecting the timing of cash receipts and payments, particularly recognition of deferred revenue and payment of certain accrued liabilities.

Capital expenditures were \$414,000 during 2007, a decrease of \$1.2 million from the prior year. Capital expenditures during 2007 included computer equipment, software, and manufacturing and laboratory equipment. Outstanding commitments for capital expenditures as of December 31, 2007 totaled \$35,000 and included expenditures for laboratory and computer equipment. We expect to finance these expenditures and other capital expenditures during 2008 with current cash and cash equivalents, the sale of securities available for sale, equity financing, and other sources, as appropriate and to the extent available.

During 2007, we sold 1,452,770 shares of Plug Power common stock with proceeds totaling \$5.1 million and gains totaling \$2.5 million. These proceeds reflect our previously announced strategy to raise additional capital through the sale of Plug Power stock to fund our micro fuel cell operations. We expect the net gains to be offset by our operating losses for purposes of computing taxable income. We estimate that as of December 31, 2007, our remaining net operating loss carry forwards were approximately \$54 million.

## **Off-Balance Sheet Arrangements**

Pursuant to a financing transaction between us and certain investors on December 15, 2006, we issued warrants to purchase up to an aggregate 3,027,778 shares of our common stock exercisable at any time until December 19, 2011 at an exercise price per share of \$2.27. The shares issuable upon exercise of these warrants would be issued under a shelf registration statement covering the resale of such shares. The terms of the warrant agreement permit a cash settlement with the holders of the warrants if we are acquired by, or merge with, a private company. Because of the possibility of such a settlement, we have classified this agreement as an asset/liability derivative in accordance with SFAS No. 133 and EITF 00-19.

## **Critical Accounting Policies and Significant Judgments and Estimates**

The following discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. Note 2 to the consolidated financial statements includes a summary of our most significant accounting policies. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, and expenses, and related disclosure of assets and liabilities. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventories, securities available for sale, income taxes, share-based compensation and derivatives. We base our estimates on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Periodically, we review our critical accounting estimates with the Audit Committee of our Board of Directors.

The significant accounting policies that we believe are most critical to aid in fully understanding and evaluating our financial statements include the following:

*Revenue Recognition.* We recognize revenue from development contracts based upon the relationship of actual costs to estimated costs to complete the contract. These types of contracts typically provide development services to achieve a specific scientific result relating to direct methanol fuel cell technology. Some of these contracts require us to

contribute to the development effort. The customers for these contracts are commercial customers and various state and federal

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government agencies. While government agencies are providing revenue, we do not expect the government to be a significant end user of the resulting products. Therefore, we do not reduce funded research and product development expense by the funding received. When it appears probable that estimated costs will exceed available funding on fixed price contracts and we are not successful in securing additional funding, we record the estimated additional expense before it is incurred.

We apply the guidance in SAB No. 104, *Revenue Recognition*, in the evaluation of commercially funded fuel cell research and prototype agreements to determine when to properly recognize income. Payments received in connection with commercial research and prototype agreements are deferred and recognized on a straight-line basis over the term of the agreement for service-related payments. For milestone and prototype delivery payments, if and when achieved, revenue is deferred and recognized on a straight-line basis over the remaining term of the agreement. When revenue qualifies for recognition it will be recorded as funded research and development revenue. The costs associated with research and prototype-producing activities are expensed as incurred. Expenses in an amount equal to revenue recognized are reclassified from unfunded research and product development to funded research and product development.

We also recognize revenue from product sales in accordance with SAB No. 104. We recognize product revenue when there is persuasive evidence of an arrangement, delivery of the product to the customer or distributor has occurred, at which time title generally is passed to the customer or distributor, and we have determined that collection of a fixed fee is probable, all of which occur upon shipment of the product. If the product requires installation to be performed by us, all revenue related to the product is deferred and recognized upon the completion of the installation.

*Inventory.* Inventory is valued at the lower of cost or the current estimated market value of the inventory. We periodically review inventory quantities on hand and record a provision for excess or obsolete inventory based primarily on our estimated forecast of product demand, as well as based on historical usage. Demand and usage for products and materials can fluctuate significantly. A significant decrease in demand for our products could result in a short-term increase in the cost of inventory purchases and an increase of excess inventory quantities on hand. Therefore, although we make every effort to assure the accuracy of our forecasts of future product demand, any significant unanticipated changes in demand could have a significant impact on the value of our inventory and our reported operating results.

*Share-Based Payments.* We grant options to purchase our common stock and award restricted stock to our employees and directors under our equity incentive plans. The benefits provided under these plans are share-based payments subject to the provisions of SFAS No. 123R, *Share-Based Payment*, and SEC Staff Accounting Bulletin 107, *Share-Based Payments*. Effective January 1, 2006, we use the fair value method to apply the provisions of FAS 123R with the modified prospective application, which provides for certain changes to the method for valuing share-based compensation. The valuation provisions of FAS 123R apply to new awards and to awards that are outstanding on the effective date and subsequently modified. Under the modified prospective application, prior periods are not revised for comparative purposes. Share-based compensation expense recognized under FAS 123R for the year ended December 31, 2007 was \$1.6 million. At December 31, 2007, total unrecognized estimated compensation expense related to non-vested awards granted prior to that date was \$1.6 million, which is expected to be recognized over a weighted average period of 1.31 years.

Upon adoption of FAS 123R, we began estimating the value of share-based awards on the date of grant using a Black-Scholes option-pricing model. Prior to the adoption of FAS 123R, the value of each share-based award was estimated on the date of grant using the Black-Scholes model for the pro forma information required to be disclosed under FAS 123. The determination of the fair value of share-based payment awards on the date of grant using an option-pricing model is affected



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by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables include our expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rate, and expected dividends.

If factors change and we employ different assumptions in the application of FAS 123R during future periods, the compensation expense that we record under FAS 123R may differ significantly from what we have recorded in the current period. Therefore, we believe it is important for investors to be aware of the high degree of subjectivity involved when using option-pricing models to estimate share-based compensation under FAS 123R. Option-pricing models were developed for use in estimating the value of traded options that have no vesting or hedging restrictions, are fully transferable and do not cause dilution. Because our share-based payments have characteristics significantly different from those of freely traded options, and because changes in the subjective input assumptions can materially affect our estimates of fair values, in our opinion, existing valuation models, including the Black-Scholes Option Pricing model, may not provide reliable measures of the fair values of our share-based compensation. Consequently, there is a risk that our estimates of the fair values of our share-based compensation awards on the grant dates may bear little resemblance to the intrinsic values realized upon the exercise, expiration, cancellation, or forfeiture of those share-based payments in the future. Certain share-based payments, such as employee stock options, may expire worthless or otherwise result in zero intrinsic value as compared to the fair values originally estimated on the grant date and expensed in our financial statements. Alternatively, value may be realized from these instruments that are significantly in excess of the fair values originally estimated on the grant date and expensed in our financial statements. There currently is neither a market-based mechanism nor other practical application to verify the reliability and accuracy of the estimates stemming from these valuation models, nor a way to compare and adjust the estimates to actual values. Although the fair value of employee share-based awards is determined in accordance with FAS 123R and SAB 107 using a qualified option-pricing model, that value may not be indicative of the fair value observed in a willing buyer/willing seller market transaction. Estimates of share-based compensation expenses are significant to our financial statements, but these expenses are based on the aforementioned option valuation model and will never result in the payment of cash by us.

The guidance in FAS 123R and SAB 107 is still relatively new, and best practices are not well established. The application of these principles may be subject to further interpretation and refinement over time. There are significant differences among valuation models, and there is a possibility that we will adopt different valuation models in the future. This may result in a lack of consistency in future periods and materially affect the fair value estimate of share-based payments. It may also result in a lack of comparability with other companies that use different models, methods, and assumptions.

Theoretical valuation models and market-based methods are evolving and may result in lower or higher fair value estimates for share-based compensation. The timing, readiness, adoption, general acceptance, reliability, and testing of these methods is uncertain. Sophisticated mathematical models may require voluminous historical information, modeling expertise, financial analyses, correlation analyses, integrated software and databases, consulting fees, customization, and testing for adequacy of internal controls.

For purposes of estimating the fair value of stock options granted during the year ended December 31, 2007 using the Black-Scholes model, we used the historical volatility of our stock for the expected volatility assumption input to the Black-Scholes model, consistent with the guidance in FAS 123R and SAB 107. The risk-free interest rate is based on the risk-free zero-coupon rate for a period consistent with the expected option term at the time of grant. We do not currently pay nor do we anticipate paying dividends, but we are required to assume a dividend yield as an input to the Black-Scholes model. As such, we use a zero dividend rate. The expected option term is estimated using both historical term measures and projected termination estimates.



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*Income Taxes.* As part of the process of preparing our consolidated financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves the estimation of our actual current tax exposure together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. Included in this assessment is the determination of net operating loss carry forwards. These differences result in a net deferred tax asset. We must assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent that we believe that recovery is not likely, we must establish a valuation allowance.

Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities, and any valuation allowance recorded against our net deferred tax assets. We have recorded a valuation allowance as a result of uncertainties in our ability to realize certain net deferred tax assets, primarily consisting of net operating losses being carried forward. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust the recorded valuation allowance, which could materially impact our financial position and results of operations. We have recorded a full valuation allowance against our net deferred tax assets of \$22.3 million as of December 31, 2007. In the event actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust our valuation allowance which could materially impact our financial position and results of operations.

During June 2006, the Financial Accounting Standards Board, or FASB, issued Interpretation No. 48, *Accounting for Uncertainty in Income Taxes, an Interpretation of FASB Statement No. 109* or FIN 48, which became effective for us beginning in fiscal 2007. FIN 48 addresses the determination of how tax benefits claimed or expected to be claimed on a tax return should be recorded in the financial statements. Under FIN 48, we must recognize the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. The impact of our reassessment of our tax positions in accordance with FIN 48 did not have a material impact on our results of operations, financial condition, or liquidity.

*Derivative Instruments.* We account for derivative instruments and embedded derivative instruments in accordance with SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended. The amended standard requires an entity to recognize all derivatives as either assets or liabilities in the statement of financial position and measure these instruments at fair value. Fair value is estimated using the Black-Scholes Pricing model. We also follow EITF Issue No. 00-19, *Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock*, which requires freestanding contracts that are settled in a company's own stock, including common stock warrants, to be designated as an equity instrument, asset or a liability. Under the provisions of EITF Issue No. 00-19, a contract designated as an asset or a liability must be carried at fair value, with any changes in fair value recorded in the results of operations. A contract designated as an equity instrument can be included in equity, with no fair value adjustments are required.

The asset/liability derivatives are valued on a quarterly basis using the Black-Scholes Pricing model. Significant assumptions used in the valuation included exercise dates, closing prices for our common stock, volatility of our common stock, and a proxy risk-free interest rate. Gains (losses) on derivatives are included in Gain (loss) on derivatives in our consolidated statement of operations.



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**BUSINESS**

We are developing and commercializing off-the-grid rechargeable power sources for portable electronics. We have developed a patented, proprietary direct methanol fuel cell technology platform called Mobion, which generates electrical power using up to 100% methanol as fuel. Our proprietary fuel cell power solution consists of two primary components integrated in an easily manufactured device: the direct methanol fuel cell power engine, which we refer to as our Mobion Chip, and methanol replacement cartridges. Our current Mobion Chip weighs less than one ounce and is small enough to fit in the palm of one's hand. The methanol used by the technology is fully biodegradable. We believe we are the only micro fuel cell developer to have demonstrated power density of over 50 mW/cm<sup>2</sup> with high energy efficiencies of 1.4 Wh/cc of methanol for handheld consumer electronic applications. For these reasons, we believe our technology offers a compelling alternative to current lithium-ion and similar rechargeable battery systems currently used by original equipment manufacturers and branded partners, or OEMs, in many handheld electronic devices, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, PDAs, and GPS devices. We believe our platform will facilitate the development of numerous product advantages, including small size, environmental friendliness, and simplicity of design, all critical for commercialization in the consumer market, and can be implemented as three different product options: a compact external charging device, a snap-on or attached power accessory, or an embedded fuel cell power solution. We have strategic arrangements with Samsung Electronics and the Duracell division of the Gillette Company. Our goal is to become a leading provider of portable power for handheld electronic devices and we intend to commercialize Mobion products beginning in 2009.

Our Mobion technology eliminates the need for active water recirculation pumps or the inclusion of water as a fuel dilutant. The water required for the electrochemical process is transferred internally within the Mobion Chip from the site of water generation on the air-side of the cell. This internal flow of water takes place without the need for any pumps, complicated re-circulation loops or other micro-plumbing tools. Our Mobion technology is protected by a patent portfolio that includes over 90 U.S. patent applications covering five key technologies and manufacturing areas.

We also design, manufacture, and sell high-performance test and measurement instruments and systems serving three markets: general dimensional gauging, semiconductor, and aviation. These products consist of: electronic, computerized gauging instruments for position, displacement and vibration applications for the design, manufacturing and test markets; semiconductor products for wafer characterization; and engine balancing and vibration analysis systems for military and commercial aircraft.

**The Portable Power Source Industry**

*Industry Background*

Consumers demand portable electronics that offer an enhanced experience through expanded memory, improved display technologies, constant connectivity, robust software, and a reduced form factor. In addition, technological advances in semiconductor manufacturing, LED displays, memory costs and availability, wireless technologies, and software applications have resulted in a dramatic increase in the number of portable electronic devices, their usage, and power requirements. As a result of these consumer demands and technological advances, there are a number of handheld electronic devices, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, PDAs, and GPS devices, that have been introduced into the market. Many of these devices provide consumers and mobile professionals with the ability to communicate any time, anywhere and have effectively enabled the creation of an always-on environment independent of the end user's location. This trend towards increased functionality in portable electronic devices has led to a power gap in which the disparity between



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a device's power supply, typically a rechargeable lithium-ion battery, and its power need are not being met. This power gap leads to a need for the end user to plug-in their devices to the electrical grid on a regular basis, which limits their ability to use these electronic devices where and when the need arises.

### *The Power Source Bottleneck*

Improvements in rechargeable battery technology have not kept pace with the evolution of consumer electronic device performance. Over the last ten years, device performance as measured by silicon processor speed has increased by a factor of 128 times, while the energy density of lithium-ion technology has only doubled. We believe that further gains in lithium-ion technology for portable electronics will be incremental at best, as any achievable benefits may be outweighed by the decreasing stability, availability, integrity, and relative safety of these higher energy output batteries. In addition to their performance shortfalls, lithium-ion battery technology poses an environmental risk as the various heavy metals incorporated in these batteries require special disposal to prevent contamination of waste disposal sites.

According to Frost and Sullivan, an independent research firm, the global battery market was approximately \$14.3 billion in 2006 and is projected to increase to roughly \$21.4 billion by 2012. The market for batteries can be divided into three segments: consumer, industrial, and military. Consumer battery sales represented approximately 81% of this market and are projected to represent an overwhelming majority of sales through at least 2012. The same study estimates that rechargeable batteries accounted for approximately \$5.4 billion of this market in 2006.

OEMs are actively seeking improved power sources to replace existing rechargeable lithium-ion batteries and to power additional improvements to their mobile electronic devices. The development of new products using technologies that already exist, such as radio frequency technologies and 4G wireless capabilities, but cannot be effectively commercialized on mobile devices, will result from the availability of portable, compact, economical, rechargeable/replaceable higher energy density power sources, including micro fuel cells.

### *Our Solution*

At the core of our solution is our proprietary Mobion Chip engine, a design architecture that embodies a reduction in the size, complexity, and cost of fuel cell construction, which results in a reliable, manufacturable, and affordable power solution that we believe provides improved energy density and portability over competing rechargeable battery technologies. Our proprietary fuel cell power solution consists of two primary components integrated in an easily manufactured device: the direct methanol fuel cell power engine, which we refer to as our Mobion Chip, and methanol replacement cartridges. Our Mobion Chip weighs less than one ounce and is small enough to fit in the palm of one's hand. For these reasons, we believe that our Mobion platform is ideally suited to provide a replacement for rechargeable lithium-ion batteries. Based upon our ability to provide a compact, efficient, clean, safe, and long-lasting power source for lower power applications, we intend to initially target power solutions for applications, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, PDAs, and GPS devices.

For handheld consumer electronic applications, we believe we are the only micro fuel cell developer to have demonstrated power density of over 50 mW/cm<sup>2</sup> with energy efficiencies of 1.4 Wh/cc of fuel, which is a direct result of our Mobion platform's ability to use 100% methanol—a widely available, environmentally friendly, inexpensive, and biodegradable fuel. These advantages result in higher energy density and reduced size, cost, and complexity of our power solution offering consumers portable on-demand power, independence from power outlets, and freedom from the need to constantly recharge their devices.



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### **Our Strategy**

Our goal is to become a leading provider of portable power for handheld electronic devices. Key elements of our strategy designed to achieve this objective include the following:

*Business Focus.* We are focusing our efforts on the development and commercialization of our portable power source products. We believe this business provides a higher potential, higher growth opportunity than our test and measurement instrumentation business. We will continue to evaluate our test and measurement instrumentation business, which contributes positive operating results and cash flows, but may consider its eventual sale or other disposition.

*Design for Mass Manufacturing.* Our portable power source products will be manufactured using standard processes, such as injection molding and automated test and assembly, which are broadly employed throughout the electronics manufacturing industry. In preparing Mobion for commercialization, our current Mobion Chip is injection molded and is being designed for mass manufacturing. In addition, we have continued integrating more functionality into our Mobion Chip while reducing its part count to one molded piece. Our current Mobion Chip is 9ccs in size, which is small enough to fit in the palm of a hand.

*Outsource Manufacturing.* We plan to outsource manufacturing to expand rapidly and diversify our production capacity. This strategy will allow us to maintain a variable cost model in which we do not incur most of our manufacturing costs until our proprietary fuel cell power solution has been shipped and billed to our customers. We intend to concentrate on our core competencies of research and development and product design. This approach should reduce our fixed capital expenditures and allow us to efficiently scale production.

*Utilize our Technology to Provide Compelling Products.* We plan to utilize our intellectual property portfolio and technological expertise to develop and offer portable power source products across multiple electronic device markets. We intend to employ our technological expertise to reduce the overall size and weight of our portable power source products while increasing their ease of manufacturing, power capacity, and power duration and decreasing their cost. We believe that these efforts will enable us to meet customer expectations and to achieve our goal of supplying on a timely and cost-effective basis the most environmentally friendly portable power source products to our target markets. We believe our products will offer advantages in terms of performance, functionality, size, weight, and ease of use. We plan to continue enhancing our customer's industrial design alternatives and device functionality through innovative product development based on our existing capabilities and technological advances.

*Capitalize on Growth Markets.* We intend to capitalize on the growth of the electronic device markets, including new products that may be brought about by the convergence of computing, communications, and entertainment devices. We believe our portable power source products will address the growing need for portability, connectivity, and functionality in the evolving electronic device markets. We plan to offer these power solutions to OEM customers to enable them to offer products that have advantages in terms of size, weight, power duration, and environmental friendliness. We plan to utilize our existing technologies, as well as aggressively pursue new technologies and evolving markets that demand enhanced power solutions.

*Develop Strong Customer Relationships.* We plan to develop strong and long-lasting customer relationships with leading electronic device OEMs and to provide them with power solutions for their products. We believe that our portable power source products will enable our OEM customers to deliver a more positive user experience and to differentiate their products from those of their competitors. We will attempt to enhance the competitive position of our customers by providing them with innovative, distinctive, and high-quality portable power supply products on a timely and cost-effective basis. We will work continually to improve our portable power source products, to reduce costs, and to speed the delivery of our products. We will endeavor to streamline our designs



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and delivery processes through ongoing design, engineering, and production improvement efforts. We will also devote considerable effort to support our customers after the purchase of our portable power source products.

*Pursue Strategic Relationships.* We intend to develop and expand strategic relationships to enhance our ability to offer value-added customer solutions, penetrate new markets, and strengthen the technological leadership of our portable power source products.

## **Products**

### *Portable Power Source Products*

We are developing three product categories of our Mobion technology: (i) external power charger products, (ii) snap-on or attached power source products, and (iii) embedded power source products. In addition, we are working with our strategic partners and suppliers to develop disposable methanol cartridges that will be used to fuel our portable power source products. Through our alliance with Duracell, we are developing fuel cartridges that will be designed and branded for mass market commercialization. Duracell has experience in the sale and distribution of portable power through its battery products, as well as in the development, distribution, and sale of liquid products with similar safety and packaging requirements as the 100% methanol cartridges.

*External Power Charger:* Our design for an external power charger is a standalone device that uses a standard and widely used universal serial bus, or USB, interface as a power output connector that can be used to recharge handheld mobile devices. Our current design for the device is roughly the size of two decks of playing cards (see photo below) and employs a 100% methanol fuel cartridge, which occupies the same volume as a pack of chewing gum. Our current prototype external power charger provides up to one month of power for the typical mobile phone. It can also be designed to enable a professional photographer to take over 5,000 pictures using a high end digital camera from a single fuel tank. Our device is designed to provide 2.5 watts of power from its USB interface and also offer fast charge, ultra-long run time and self-charging modes.

### **Mobion external power charger prototypes**

*Snap-on or Attached Power Source Products:* Similar to aftermarket battery attachments, our snap-on direct methanol fuel cell power solution is an attached power supply that is compatible with existing portable electronic devices and offers users extended run-time power. In this category, we envision a number of product applications, including attachments for digital cameras, portable media players, GPS devices, and other consumer and electronic products. Our initial design is a direct methanol fuel cell camera-grip (see photo below) that replaces comparable rechargeable lithium-ion battery-pack grips and is designed to provide twice as much energy as similar

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rechargeable lithium-ion battery-based products. Our Mobion direct methanol fuel cell camera grip allows photographers the benefits of extended usage plus the freedom to refill using a methanol cartridge rather than by plugging into a wall outlet.

**Sample Mobion attached power source camera-grip prototype**

*Embedded power source products:* Our goal is to produce direct methanol fuel cells that can be embedded into portable electronic devices in order to increase their run time and to provide fast charge capability by hot-swapping 100% methanol cartridges. We have developed an embedded fuel cell concept model (see photo below) designed for a smart phone and believe that this concept model highlights the anticipated future product direction for our portable power source products in the consumer market.

**Concept model of a smart phone with an embedded Mobion power source**

*Advantages of our Portable Power Source Products*

We believe that our portable power source products will offer the following advantages:

*Off-the-grid power source.* Our products provide users of consumer electronic devices with extended mobility by providing power without having to attach to a wall outlet to recharge their devices.

*Small size and low weight.* The dimensions of our products will enable our OEM customers to reduce the overall size and weight of their products.

*Power density.* Our products will have power density of over 50 mW/cm<sup>2</sup> and high energy efficiencies of 1.4 Wh/cc of methanol.

*Power duration.* Our products will offer longer run time than currently available portable charging systems.

*Ease of manufacturing.* Our products will be manufactured using traditional injection molding techniques that will easily transfer to mass-manufacturing production lines.

*Safety.* Our products will utilize methanol fuel, which does not require storage under pressure or at low temperatures.

*Environmentally friendly.* Our products will utilize fully biodegradable methanol fuel.



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### *Codes and Standards*

In 2004, we became the world's first company to obtain micro fuel cell safety compliance certifications for a fuel cell product from Underwriter's Laboratory and CSA International. In addition, we received United Nations packaging certification and our methanol cartridges were deemed compliant by the U.S. Department of Transportation for worldwide cargo shipment. Certification is required for every commercial product prior to its shipment. Based upon our previous experiences with these regulatory agencies, we do not anticipate delays associated with seeking Underwriter's Laboratory and CSA International product certifications for our commercial products, which are anticipated to begin shipping in 2009.

Also, we helped to develop a proposal adopted by the United Nations to provide methanol fuel cartridges a separate classification and we worked with other micro fuel cell companies, and the appropriate regulatory bodies, to generate the first draft of the international standards for methanol safety and use related to transport on commercial airplanes.

As a result of our industry coalition efforts, the International Civil Aviation Organization technical instructions and the International Air Transport Association Dangerous Goods Regulations now permit airline passengers and crew to carry on and use certain fuel cell power systems and fuel cell cartridges containing methanol. The U.S. Department of Transportation is currently reviewing the International Civil Aviation Organization and International Air Transport Association air transport regulations and issued a notice of proposed rulemaking on September 20, 2007 to adopt the International Civil Aviation Organization passenger allowance and harmonize the U.S. requirements with the international standard. The public comment period on these proposed rules closed on November 19, 2007. We expect the U.S. Department of Transportation to adopt its proposed rules during 2008.

### *Test and Measurement Instrumentation Products*

We are a global supplier of computerized gauging instruments, metrology systems for semiconductor wafers, and jet engine balancing systems.

*General Dimensional Gauging:* Our gauging instruments employ fiber optic, laser, and capacitance technologies to make precision measurements in product design, production, and quality related processes. Our gauging instruments include capacitance gauging systems offering ultra-high precision measurement, a fiber-optic based vibration sensor system with extremely high frequency response, a high-speed laser sensor system utilizing the latest complementary metal-oxide semiconductor/charge-coupled device technology, and a stand-alone data acquisition system that incorporates multiple sensor technologies. These products are targeted towards the data storage, semiconductor, and automotive industries.

*Semiconductor:* Our family of wafer metrology systems range from manually operated units to fully automated systems, which test key wafer characteristics critical to producing high-quality chips used in the semiconductor industry. These units are used as quality control tools delivering highly precise measurements for thickness variations, bow, warp, resistivity, and flatness. These systems can be used on substrates varying widely in size and materials. Our wafer metrology systems include an automated wafer characterization system, a semi-automated, full wafer surface scanning system, and a device that provides for manual, non-contact measurements.

*Jet Engine Balancing Systems:* Our portable and test cell balance systems automatically collect and record aircraft engine vibration data, identify vibration or balance issues in an engine, and calculate a solution to the problem. These units are used by major aircraft engine manufacturers, the U.S. Air Force, other military and commercial airlines and gas turbine manufacturers.



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**Technology**

A fuel cell is an electrochemical energy conversion device, which is similar to a battery, that produces electricity from a liquid or gaseous fuel, such as methanol, and an oxidant, such as oxygen. Fuel cells are different from batteries in that they consume a reactant, which must be replenished, while batteries store electrical energy chemically in a closed system. Generally, the reactants flow in and reaction products flow out of the fuel cell. While the electrodes within a battery react and change as a battery is charged or discharged, a fuel cell's electrodes are catalytic and relatively stable.

The direct methanol fuel cell relies upon the reaction of water with methanol at the catalytic anode layer to release protons and electrons, and form carbon dioxide. The electrons pass through a circuit and generate electricity that can be used to power external devices. The protons generated through this reaction pass through the proton exchange membrane to the cathode, where they combine to form water. The anode and cathode layers of a direct methanol fuel cell are usually made of platinum particles and platinum ruthenium particles embedded on either side of a proton exchange membrane.

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Methanol fuel cells need water at the anode and therefore pure methanol cannot be used without the provision of water via either active transport, such as the pumping of water generated at the cathode back to the anode layer (see Chart A), or a passive recirculation mechanism that incorporates pressurized internal ducts or piping. Without either an active or a passive recirculation mechanism, a direct methanol fuel cell would require the inclusion of water as a dilutant in the methanol fuel, which limits the energy content of the diluted fuel (see Chart B).

**Direct Methanol Fuel Cell with Active Water Transport (Chart A)**

**Methanol Fuel Cell With Water As A Fuel Dilutant (Chart B)**

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Our Mobion technology eliminates the need for active water recirculation pumps or the inclusion of water as a fuel dilutant. The water required for reaction at the anode is transferred internally within the Mobion Chip from the site of water generation on the air-side of the cell through a proprietary, passive design that eliminates the need for water movement by external pumps, complicated re-circulation loops or other micro-plumbing tools (see Chart C).

### **Our Mobion Technology with 100% Methanol and Passive Water Recirculation (Chart C)**

Our Mobion solution contains a passive water recirculation sub-system that allows for the consumption of 100% methanol, results in a reduced parts count design and offers the advantage of higher energy density than competing fuel cell technologies for portable electronic devices.

## **Strategic Agreements**

On May 16, 2006, we entered into an alliance with Samsung Electronics Co., Ltd., or Samsung, to develop next-generation fuel cell prototypes for Samsung's mobile phone business. We developed, and together with Samsung we jointly tested and evaluated, our Mobion technology for several Samsung mobile phone applications. We are continuing to work with Samsung on a non-exclusive collaboration under which we continue to refine our Mobion baseline product design. We will share development updates with Samsung and loan them prototypes for evaluation. Samsung may also request changes to product specifications until December 2008 and may purchase commercial samples as soon as they become available.

On September 19, 2003, we entered into a strategic alliance agreement with the Duracell division of The Gillette Company, or Duracell, under which we agreed to work with Duracell to develop and commercialize complementary methanol fuel cell products to power mass market, high-volume portable consumer devices. The agreement provides for a multi-year partnership for the design, development, and commercialization of a low power direct methanol fuel cell power system and a compatible fuel refill system. The arrangement provides for us to receive a percentage of net revenues related to Duracell's sale of fuel refills for methanol fuel cells. The agreement gives Duracell the ability to make equity investments in MTI Micro. Duracell has made an initial \$1.0 million investment in MTI Micro common stock and may make additional investments of up to \$4.0 million, subject to agreed upon milestones related to technical and marketing progress. Any further investment by Duracell in MTI Micro will effectively dilute our ownership interest in MTI Micro, although we do not believe that such dilution will be substantial.

On August 1, 2004, we entered into a \$6.1 million cost-shared development contract with the U.S. Department of Energy, or the DOE, for the development of manufacturing techniques and the optimization of our Mobion product solutions. Through February 2008, the DOE has authorized \$5.5 million of spending on a cost-shared basis.

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On December 13, 2007, we entered into an agreement with Trident Systems, Inc. to pursue opportunities to leverage our consumer market platform into low-power military markets. Teaming opportunities include demonstrations of unattended ground sensor prototypes powered by Mobion and evaluations and potential submissions of proposals for military programs.

## **Manufacturing**

We plan to outsource manufacturing of our portable power source products through third-party relationship contract manufacturers. We believe this strategy will provide us with a business model that allows us to concentrate on our core competencies of research and development and technological know-how and reduce our capital expenditures. In addition, this strategy will significantly reduce our working capital requirements for inventory because we will not incur most of our manufacturing costs until we have actually shipped our portable power source products to our customers and billed those customers for those products. To date, we have established an internal developmental pilot production line to test our design and engineering capabilities. Although we have developed an internal developmental pilot production line, we intend to rely upon third parties to forecast production requirements and have established the basic design, function, and performance of our in-house engineering capabilities to foster the successful commercialization of our products.

The commercialization of our Mobion power solution will depend upon our ability to reduce the costs of our portable power source products, as they are currently more expensive than existing rechargeable battery technologies. In addition, we continue to work on enhancing our Mobion power source, including our injection molded Mobion Chip, design to ensure its manufacturability (including engineering, verification and product testing), design for assembly, design for testability, and design for serviceability, all of which are critical to successful high-volume production.

We assemble and test our test and instrumentation measurement products at our facilities located in Albany, New York. We believe that our existing assembly and test capacity is sufficient to meet our current needs and short-term future requirements. We believe that most of the raw materials used in our test and measurement products are readily available from a variety of vendors.

## **Sales and Marketing**

We plan to sell our portable power source products for incorporation into the products of our OEM customers or to be sold as accessories through them. We plan to generate sales to OEM customers through direct sales employees as well as outside sales representatives and distributors. We have recently established sales representatives in South Korea and Japan.

We build awareness in our target markets through a series of targeted campaigns, which include our website, e-mails, conferences, tradeshows, and other standard marketing efforts. In addition, we monitor developments in the portable power industry through subscriptions with well known firms such as Frost and Sullivan, a wide array of publications, active public relations, updates with industry analysts and the investment community, and speaking engagements.

We market our test and measurement instrumentation products through a combination of direct sales personnel and domestic and international distributors.

## **Customers**

We expect that our customers for our portable power source products will include a number of the world's largest electronic device OEMs.

Sales of our test and measurement instrumentation products to Koyo, our Japanese distributor, and the U.S. Air Force accounted for 27.8% and 26.4%, respectively, of product revenue in 2007. In 2006, sales to the U.S. Air Force and Koyo accounted for 23.1% and 22.9%, respectively, of product revenue. No other customer accounted for more than 10% of our product revenue in either 2006 or 2007.

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### **Competition**

We expect that the primary competitive factor in our portable power source business will be market acceptance of our portable power source products as an alternative power source to conventional lithium-ion and other rechargeable batteries. Market acceptance of our portable power source products will depend on a wide variety of factors, including the compatibility of direct methanol fuel cell power sources with portable electronic devices and the market's assessment of the advantages offered by our products in terms of size, weight, power density and duration, safety, reliability, and environmental friendliness when measured against price disadvantages. We anticipate direct competition from large Asian-based companies and some of our potential OEM customers.

Competition in the sale of our measurement and instrumentation products is based on product quality, performance, price, and timely delivery. Our competitors for test and measurement instrumentation products include National Instruments, KLA-Tencor, Capacitec, Sigma Tech, Corning Tropel, Chadwick-Helmuth, ACES Systems, Micro-Epsilon, and Keyence.

### **Product Development**

Over the past two years, we have developed and built a number of engineering prototypes used to validate our technology and to generate discussions with potential customers about the inclusion of our technology in new products. During the same period, we have created three generations of external power charger prototypes, each of which has shown a dramatic size reduction over the previous generation. Our latest external power charger prototype achieved a 60% reduction in volume over our first generation prototype.

We have improved the capabilities of our Mobion Chip technology during the last two years, which we expect will continue to evolve as we integrate greater functionality into our designs. This continuous iterative integration process is intended to reduce the size, simplify the design and construction, and reduce assembly complexity of our technology. We continue to improve the product design of the Mobion Chip and believe that future product generations will deliver performance improvements in terms of energy density, size, weight, and power duration and should be able to power wireless electronic devices for longer periods of time than rechargeable lithium-ion batteries.

### **Intellectual Property and Proprietary Rights**

We rely on a combination of patent (both national and international), trade secret, trademark, and copyright protection to protect our intellectual property. Our strategy is to apply for patent protection for all significant design requirements. Additionally, we systematically analyze the existing intellectual property landscape for direct methanol fuel cells to determine where the greatest opportunities for developing intellectual property exist. We also enter into standard confidentiality agreements with our employees, consultants, vendors, partners and potential customers and seek to control access to and distribution of our proprietary information.

As of December 31, 2007, we had filed over 90 U.S. patent applications, 43 of which have been awarded. Of the awarded patents, 34 are assigned to us and 9 are assigned to Duracell as part of our strategic alliance agreement with them. We have filed 22 Patent Cooperation Treaty Applications and have filed for National Phase Patent Protection for 12 pieces of intellectual property in multiple countries, including Japan, the European Union, and South Korea. We have developed a portfolio of patent applications in areas including fuel cell systems, components, controls, manufacturing processes, and system packaging.

### **Research and Development**



Our research and development team is responsible for advanced research, product planning, design and development, and quality assurance. Through our supply chain, we are also working with subcontractors in developing specific components of our technologies.

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The primary objective of our research and development program is to advance the development of our direct methanol fuel cell technology to enhance the commercial value of our products and technology, as well as to develop next generation fuel cell products.

We have incurred research and development costs of approximately \$9.7 million, \$12.9 million and \$11.8 million for the years ended December 31, 2005, 2006, and 2007, respectively. We expect to continue to invest in research and development in the future.

**Employees**

As of December 31, 2007, we had 107 employees compared with 132 as of December 31, 2006. Of these employees, 46 were involved in our portable power source business (including 25 scientists and engineers, of whom 18 had advanced degrees) and 46 were involved in our test and measurement instrumentation business. Fifteen of our employees are involved in corporate functions.

**Properties**

We presently lease two premises, one located at 325 Washington Avenue Extension, Albany, New York and the other at 431 New Karner Road, Albany, New York. Both leases expire at the end of 2009. The 325 Washington Avenue Extension premise consists of approximately 20,700 useable square feet of space, and the 431 New Karner Road consists of approximately 23,500 useable square feet of space. Together, the premises are adequate for our current and foreseeable needs.

**Legal Proceedings**

We are not currently involved in any legal proceeding that we believe would have a material adverse effect on our business or financial condition.

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The following table sets forth information regarding our executive officers and directors.

<b>Name</b>	<b>Age</b>	<b>Position or Capacity</b>
Peng K. Lim	45	Chief Executive Officer and Director
Cynthia A. Scheuer	46	Vice President, Chief Financial Officer and Secretary
Robert J. Kot	57	Vice President and General Manager, MTI Instruments
James K. Prueitt	50	Vice President of Engineering and Operations, MTI Micro
Steven N. Fischer	64	Chairman and Director
Thomas J. Marusak	57	Director
E. Dennis O Connor	68	Director
William P. Phelan	51	Director
Dr. Walter L. Robb	79	Director

**Peng K. Lim** has served as our Chief Executive Officer since December 2006. Between May 2006 and December 2006, Mr. Lim served as the President and Chief Executive Officer of MTI Micro. From July 2005 to April 2006, Mr. Lim served on numerous boards of private and public companies. From 2001 to 2005, Mr. Lim served as the President and Chief Executive Officer of Tapwave, Inc., a handheld and entertainment platform company. Mr. Lim served as Vice President, Worldwide Product Development of Palm, Inc., a handheld and wireless computer company, from April 1999 until May 2001. Mr. Lim served as Vice President of Engineering of Fujitsu Personal Systems, a pen-based and wireless computer company and a wholly-owned subsidiary of Fujitsu Limited, from June 1997 until March 1999. From July 1996 to June 1997, Mr. Lim was an Engineering Platform Director for Texas Instruments, a semiconductor company. Mr. Lim holds a B.S. and an M.S. in Electrical Engineering from University of Windsor (Ontario, Canada) and a Master of Engineering Management from Northwestern University. Mr. Lim is an alumnus of the Stanford Executive Program for Growing Companies at Stanford University.

**Cynthia A. Scheuer** has served as our Vice President and Chief Financial Officer since November 1997 and as our Secretary since March 2005. From June 1983 to October 1997, Ms. Scheuer served as a Senior Business Assurance Manager at PricewaterhouseCoopers LLP where she was responsible for the planning and delivery of audit and financial consulting services to a diverse group of clients in manufacturing, high technology, retail, and government. Ms. Scheuer holds a B.A. in Accounting and Economics from Ohio Wesleyan University and is a Certified Public Accountant.

**Robert J. Kot** has served as a Vice President of MTI Instruments since March 2007 and has served as General Manager in that division since December 2005. Mr. Kot previously served as MTI Instruments Vice President of Marketing and Sales from August 2005 to December 2005. From June 2001 to July 2005, Mr. Kot served as Vice President of Sales for Sierra Monitor Corporation, a company with independent business units serving the industrial, building automation, and telecommunications industries. During 1998, Mr. Kot founded OnCuity, a software company that marketed advanced alarm management systems for the process controls, building, and security markets. Mr. Kot served as Chief Executive Officer of OnCuity from 1998 to 2001. Prior to that time, Mr. Kot served in various capacities with Honeywell, EMC Controls, Azonix, and several venture capital backed technology companies focused upon rapid growth within the process, measurement, and building automation markets.

**James K. Prueitt** has served as Vice President of Engineering and Operations of MTI Micro since November 2007 and served as MTI Micro's Senior Director of Engineering between April 2006 and November 2007. Mr. Prueitt manages research and development, purchasing, quality, operations and program management. Prior to joining our company, Mr. Prueitt spent 20 years at Polaroid

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Corporation where he served most recently as Divisional Vice President of Hardware and Software research and development. Mr. Prueitt also holds an M.B.A. from the University of West Florida and an M.S. in Mechanical Engineering from the University of Kentucky.

**Steven N. Fischer** has served as our Chairman since September 2004 and has served as a director since 2003. Mr. Fisher also served as our Chief Executive Officer from September 2004 until December 2006. Mr. Fischer previously served as Chief Executive Officer of New York-based professional services firm UHY Advisors NY, Inc., formerly Urbach Kahn and Werlin Advisors Inc., and UKW P.C., a certified public accounting firm, from 1985 to December 2001 and as Chairman through July 2004. Mr. Fischer joined Urbach Kahn and Werlin P.C. in 1971. Mr. Fischer holds a J.D. degree from New York University, a B.B.A. degree from the City College of New York, and is a Certified Public Accountant.

**Thomas J. Marusak** has served as a director since December 2004. Since 1986, Mr. Marusak has served as President of Comfortex Corporation, an internationally recognized manufacturer of window blinds and specialty shades. Mr. Marusak served with New York's Capital Region Center for Economic Growth as Chairman of the Technology Council from June 2001 to July 2004 and Chairman of the Board of Directors from July 2004 until December 2005. Mr. Marusak has served as a director for the New York State Energy and Development Authority since September 1999. Mr. Marusak also represented the interests of small- and medium- sized manufacturing businesses of New York as a delegate at the White House in 1995. He was previously a member of the Advisory Board of Directors for Key Bank of New York from 1996 through 2004, and served on the Advisory Boards of Dynabil Industries Inc. and Clough Harbour Associates Technology Services Company of Albany from 2000 through 2005. Mr. Marusak received a B.S. in Engineering from Pennsylvania State University, and an M.S. in Engineering from Stanford University.

**E. Dennis O Connor** has served as a director since 1993, and is a retired attorney specializing in intellectual property. From 1984 until his retirement in June 2000, Mr. O Connor served as the Director of New Products and Technology for Masco Corporation, a diversified manufacturer of building, home improvement, and other specialty products for the home and family. Mr. O Connor holds a J.D. degree from George Washington University and a B.S. in Mechanical Engineering from Notre Dame University.

**William P. Phelan** has served as a director since December 2004. Mr. Phelan is the co-founder and Chief Executive Officer of Bright Hub, Inc., a software company founded in 2006, which focuses on the development of online commerce for software. Since May 2004, Mr. Phelan has acted as Chairman and CEO of Chatham Capital Management, Inc. In May 1999, Mr. Phelan founded OneMade, Inc., an electronic commerce marketplace technology systems and tools provider. Mr. Phelan served as Chief Executive Officer of OneMade, Inc. from May 1999 to May 2004. OneMade, Inc. was sold to America Online in May 2003. Mr. Phelan also serves on the Board of Trustees, and Chairman of the Audit Committee, of the Paradigm mutual fund family. In addition, Mr. Phelan served as a member of the Board of Directors of Florists' Transworld Delivery, the largest floral services organization in the world, from January 1995 through December 1999. He has also held numerous executive positions at Fleet Equity Partners, Cowen & Company, and UHY Advisors Inc., formerly Urbach Kahn & Werlin, PC. Mr. Phelan has a B.A. in Accounting and Finance from Siena College, an M.S. in Taxation from City College of New York, and is a Certified Public Accountant.

**Dr. Walter L. Robb** has served as a director since 1997. Dr. Robb has served as President of Vantage Management, Inc., a management consulting company, since 1993. Prior to that time, Dr. Robb served in various executive positions with General Electric Company. Dr. Robb served as Senior Vice President for Corporate Research and Development with General Electric from 1986 until his retirement in December 1992, directing the General Electric Research and Development Center, one of the world's largest and most diversified industrial laboratories, while also serving on its



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Corporate Executive Council. Dr. Robb served on the Board of Directors of Plug Power Inc., from 1997 through October 2002, and currently serves on the board of directors of Celgene Corporation, a publicly held integrated biopharmaceutical company, and a number of privately held companies.

### **Classification of our Board of Directors**

Our certificate of incorporation provides for a Board of Directors consisting of three classes serving three-year staggered terms. Messrs. Fischer, Lim, and Robb serve as our Class I directors, with the term of office of the Class I directors (other than Mr. Fischer) expiring at the annual meeting of stockholders in fiscal 2010. At our last annual meeting of stockholders, Mr. Fischer stood for election for only a one-year term and his term of office expires at the annual meeting of stockholders in fiscal 2008. The Class II directors consist of Messrs. Marusak and O Connor, with the term of office of the Class II directors expiring at the annual meeting of stockholders in fiscal 2008. The Class III director is Mr. Phelan, with the term of office of the Class III director expiring at the annual meeting of stockholders in 2009. Officers serve at the pleasure of the Board of Directors.

### **Information Relating to Corporate Governance and the Board of Directors**

Our Board of Directors has determined, after considering all the relevant facts and circumstances, that Messrs. Marusak, O Connor and Phelan, and Dr. Robb are independent directors, as independence is defined by the listing standards of Nasdaq Stock Market and the SEC, because they have no relationship with us that would interfere with their exercise of independent judgment in carrying out their responsibilities as a director.

Our bylaws authorize our Board of Directors to appoint among its members one or more committees, each consisting of one or more directors. Our Board of Directors has established two standing committees: an Audit Committee and a Governance, Nominating and Compensation Committee, each consisting entirely of independent directors.

#### *The Audit Committee*

The primary purpose of the Audit Committee is to select the independent registered public accounting firm to conduct the independent audit of the financial statements of our company; review the annual financial statements, any significant accounting issues, and the scope of the audit with the independent registered public accounting firm; and discuss with such firm any other audit-related matters that may arise during the year. The Audit Committee currently consists of Messrs. Phelan and O Connor and Dr. Robb, each of whom is an independent director of our company under The Nasdaq Stock Market Inc. as well as under rules adopted by the SEC.

#### *The Governance, Nominating, and Compensation Committee*

The Governance, Nominating, and Compensation Committee reviews and acts on matters relating to compensation levels and benefit plans for our key executives; assists our Board of Directors in fulfilling its responsibility to nominate and approve qualified new members to our Board of Directors in accordance with our certificate of incorporation and bylaws; develops and recommends to our Board of Directors a set of corporate governance principles; and oversees the selection and compensation of committees of our Board of Directors. The Compensation Committee currently consists of Messrs Marusak and O Connor and Dr. Robb, with Mr. O Connor serving as Chairman.

### **Executive Compensation**

#### *Compensation Philosophy*

The primary objectives of our compensation policies are to attract, retain, motivate, develop, and reward our management team for executing our strategic business plan thereby enhancing



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stockholder value, while recognizing and rewarding individual and company performance. These compensation policies include (i) an overall management compensation program that is competitive with national and regional companies of similar size or within our industry; and (ii) long-term incentive compensation in the form of stock-based compensation that will encourage management to continue to focus on stockholder return. Our executive compensation program ties a substantial portion of each executive's overall compensation to key strategic, financial, and operational goals, including establishing and maintaining customer relationships, signing OEM agreements; meeting revenue targets and profit and expense targets; introducing new products; progressing products towards manufacturing; and improving operational efficiency.

We believe that potential equity ownership in our company is important to provide executive officers with incentives to build value for our stockholders. We believe that equity awards provide executives with a strong link to our short- and long-term performance, while creating an ownership culture to maintain the alignment of interests between our executives and our stockholders. When implemented responsibly, we also believe these equity incentives can function as a powerful executive retention tool.

Our Governance, Compensation, and Nominating Committee consists entirely of independent directors, administers our compensation plans and policies, including the establishment of policies that govern base salary as well as short- and long-term incentives for our executive management team.

*Summary of Cash and Other Compensation*

The following table sets forth the total compensation received for services rendered in all capacities to our company during the fiscal years ended December 31, 2006 and 2007 by our three named executive officers, namely our Chief Executive Officer and our other two most highly compensated executive officers during fiscal 2007.

**SUMMARY COMPENSATION TABLE**

Name and Principal Position	Year	Salary	Bonus (3)	Stock Awards (4)	Option Awards (5)	Non-Equity Incentive	All Other Compensation (7)	Total
						Plan (6)		
Peng K. Lim <i>Chief Executive Officer (1)</i>	2007	\$ 300,000	\$ 21,041	\$ 67,000	\$ 509,750	\$ 120,000	\$ 10,769	\$ 1,028,560
	2006	196,154	38,959		610,448	60,000	143,243	1,048,804
Cynthia A. Scheuer <i>Vice President, Chief Financial Officer and Secretary</i>	2007	210,000		(7,001)	92,485	10,500	8,400	314,384
	2006	207,500	20,000	10,447	116,310		8,300	362,557
James K. Prueitt <i>Vice President of Engineering and Operations, MTI Micro (2)</i>	2007	184,975			54,645		46,909	286,529

- (1) Mr. Lim commenced employment as the Chief Executive Officer of MTI Micro on May 8, 2006, becoming our Chief Executive Officer on December 1, 2006.
- (2) Mr. Prueitt did not become a named executive officer until 2007.
- (3) Mr. Lim received a \$60,000 guaranteed bonus in 2007 at the conclusion of his first year of employment. The bonus amount for 2006 reflects the proportionate amount of his bonus accrued through December 31, 2006 and the amount for 2007 reflects the remainder of the bonus accrued and then paid in 2007.
- (4) Valuations based upon the dollar amount of stock awards recognized for financial statement reporting purposes pursuant to FAS 123R. During 2007, Ms. Scheuer forfeited a 5,000 restricted

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stock grant that did not vest, which resulted in compensation expense recovery of \$10,493, and was awarded a 5,000 restricted stock grant that will vest upon successful completion of a financing objective by June 30, 2008, which resulted in compensation expense of \$3,492.

- (5) Valuations based upon the dollar amount of option grants recognized for financial statement reporting purposes pursuant to FAS 123R with respect to 2006 and 2007. The assumptions we use in calculating these amounts are discussed in Note 13 to our consolidated financial statements for the year ended December 31, 2007.
- (6) Mr. Lim received a \$60,000 bonus in 2007 based upon successful completion of performance objectives, and we have accrued, as of December 31, 2007, a \$120,000 bonus related to his successful completion of performance objectives established for 2007-2008. We have accrued for Ms. Scheuer, as of December 31, 2007, a \$10,500 bonus related to successful completion of certain of her 2007-2008 performance objectives.
- (7) The following is a recap of the major categories included in All Other Compensation :

	2007 All Other Compensation			Total
	401(k) Matching	Relocation	Other	All Other Compensation
Peng K. Lim	\$10,385	\$	\$384	\$10,769
Cynthia A. Scheuer	8,400			8,400
James K. Prueitt	6,240	40,669		46,909

*Base Salary and Cash Incentives of the Chief Executive Officer*

Mr. Lim joined our company during May 2006 as President and Chief Executive Officer of MTI Micro at an annual salary of \$300,000 and was promoted to our Chief Executive Officer during December 2006, receiving no base salary change. During our annual Chief Executive Officer compensation review during 2007, we engaged Radford to review the compensation package of our Chief Executive Officer based upon competitive market data. After consideration of the analysis and information provided by and the recommendations from Radford, we determined that no base salary adjustment was required for Mr. Lim during 2007.

Mr. Lim participates in an annual cash incentive compensation plan with a bonus targeted at 40% of base salary as prescribed in his current employment agreement.

During May 2007, Mr. Lim was awarded his first year bonus payouts: a cash bonus of \$60,000 in connection with his first year guaranteed bonus and a cash bonus of \$60,000 in connection with the completion of performance objectives for his first year of employment as established during 2006 by our Board of Directors.

In concert with our milestones, we included the following objectives in Mr. Lim's 2007-08 performance plan:

completion of low-power prototypes to Samsung;

introduction of the next generation of MTI Instruments precision instrumentation products;

addition of at least one OEM agreement for our low power platform;

at least a 15% increase in MTI Instruments annual revenue during fiscal year 2007 compared with fiscal year 2006; and

maintenance of key affiliate relationships, among other individual goals.

Although we have yet to certify that Mr. Lim has met these performance objectives for 2007, we accrued \$120,000 in our financial statements at December 31, 2007 expecting that the Governance, Compensation, and Nominating Committee will approve this amount for Mr. Lim related to fiscal

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year 2007 milestones. Any future bonus compensation to Mr. Lim will be contingent solely upon the determination of the Governance, Compensation, and Nominating Committee that set objectives for Mr. Lim have been satisfied.

### *Base Salary and Cash Incentives of Other Named Executive Officers*

We evaluated other named executive officer base salaries during 2007. We maintained current base salary levels for most of our named executive officers, but adjustments to the following executives' base salaries were made to recognize either high performance or an increase in responsibility.

On October 8, 2007, James Prueitt was promoted to Vice President of Engineering and Operations at MTI Micro. Mr. Prueitt had received a base salary increase from \$175,000 to \$188,300 during April 2007 when he was appointed the acting leader of engineering and operations. We believed that Mr. Prueitt's total compensation package required a greater emphasis on equity participation in congruence with compensation packages offered by other early stage technology companies. Thus, Mr. Prueitt's base salary was not changed at his promotion date and he received additional equity incentive awards.

The base salary of Cynthia Scheuer, Vice President, Chief Financial Officer and Secretary, has not increased since April 2006 and remains at \$210,000.

In addition to base salary compensation, we consider short-term cash incentives to be an important tool in motivating and rewarding near-term performance against established short-term goals. We do not utilize a specific formula, but executive management is eligible for cash awards contingent upon achievement of individual, financial, or company-wide performance criteria. The criteria are established to ensure that a reasonable portion of an executive's total annual compensation is performance based.

We believe that the higher an executive's level of responsibility, the greater the portion of that executive's total earnings potential should be tied to the achievement of critical technological, operational and financial goals. Our Chief Executive Officer generally is eligible for annual cash incentive awards of up to 40% of his base salary, with other named executive officer eligibility between 5% and 10% of base salary. We believe this strategy places the desired proportionate level of risk and reward on performance by the Chief Executive Officer and other named executive officers.

During June 2007, our Board of Directors initiated individual executive cash incentive programs for Ms. Scheuer. Ms. Scheuer became eligible for a bonus of up to 10% of her annual base salary based upon achievement of certain operating expense and administrative goals to be achieved by May 2008. In connection with his promotion to Vice President, Mr. Prueitt became eligible for a bonus of 5% of his annual salary based upon certain commercial prototype technical advances to be achieved by May 2008.

While performance targets are established at levels that are intended to be achievable, we believe that we have structured these incentives so that maximum bonus payouts would require a substantial level of both individual and company performance.

### *Long-Term Equity Incentive Compensation*

Equity awards typically take the form of stock option and restricted stock grants. Authority to make equity awards to executive officers rests with our Governance, Compensation and Nominating Committee. In determining the size of awards for new or current executives, we consider the competitive market, strategic plan performance, contribution to future initiatives, benchmarking of comparative equity ownership for executives in comparable positions at similar companies, individual option history, recommendations of our Chief Executive Officer and our Chairman.



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We generally base our criteria for performance-based equity awards on one or more of the following long-term measurements:

procurement and maintenance of OEM alliance/strategic agreements;

manufacturing readiness;

financing targets;

gross revenue and profit goals;

operating expense improvements; and

product launches, new product introductions or improvements to existing products or product-intent prototypes.

These performance measurements support various initiatives identified by our Board of Directors as critical to our future success, and are either expressed as absolute in terms of success or failure, or will be measured in more qualitative terms.

The timing of all equity awards for our Chief Executive Officer and our Chief Financial Officer in the past have generally coincided with either employment anniversary dates or the annual meeting dates. Other executive officer equity awards have occurred in conjunction with completion or assignment of objectives, promotions, commencement of employment, or coincide with our annual meeting date. We do not time option grants to our executives in coordination with the release of material non-public information, nor do we impose any equity ownership guidelines on our executives.

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The following table sets forth certain information regarding the options held and value of each such officer's unexercised options as of December 31, 2007.

**OUTSTANDING EQUITY AWARDS AT FISCAL YEAR END 2007**

Name	Number of Securities Underlying		Option Awards Equity Incentive Plan Awards:			Stock Awards Equity Incentive Plan Awards:	
	Exercisable	Unexercisable	Number of Securities Underlying Unexercised	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)
P. Lim	162,500			4.43	5/7/2013		
	121,875	203,125 (1)		4.43	5/7/2013		
			162,500	4.43	5/7/2013		
	70,000			1.34	6/17/2014		
		227,500 (6)		1.34	6/17/2014		
	52,500			1.34	6/17/2014		
C. Scheuer			100,000	1.34	6/17/2014		
	28,750			1.76	12/17/2008		
	20,000			2.88	12/14/2010		
	25,000			1.91	3/31/2013		
	5,000			6.17	6/19/2010		
	15,000			6.17	3/29/2010		
	60,000			6.17	6/22/2014		
	40,000			2.49	8/17/2015		
	5,000			2.80	7/16/2012		
	8,333			2.80	3/31/2013		
	20,416	14,584 (2)		4.05	5/17/2013		
	26,250			1.34	6/17/2014		
	48,750 (5)		1.34	6/17/2014			
J. Prueitt						5,000	3,750
	17,500	17,500 (3)		1.34	3/16/2014		
			50,000	1.23	10/7/2014		
		150,000 (6)		1.23	10/7/2014		
			15,000	4.38	4/18/2016		
	6,250	18,750 (4)		4.38	4/18/2016		



- (1) The options vest at a rate of 6.25% per quarter, becoming fully exercisable on May 8, 2010.
- (2) The options vest at a rate of 8.33% per quarter, becoming fully exercisable on February 18, 2009.
- (3) The options vested 50% immediately on the grant date, with the remaining options vesting at a rate of 25% annually, becoming fully exercisable on March 17, 2009.
- (4) The options vest at a rate of 25% annually, becoming fully exercisable on April 19, 2010.
- (5) The options vest at a rate of 6.25% per quarter, starting January 1, 2008, becoming fully exercisable on October 1, 2011.
- (6) The options vest at a rate of 25% at the first anniversary of the grants date and 6.25% on each quarterly anniversary thereafter, becoming fully exercisable on October 8, 2011 unless performance targets for accelerated vesting of this grant are achieved.

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*Equity Awards to Officers*

*Chief Executive Officer.* During June 2007, we awarded Mr. Lim the following:

50,000 shares of restricted stock that vested immediately;

options to purchase 70,000 shares of common stock that vested immediately;

options to purchase 52,500 shares of common stock that will vest upon achievement of all of our 2007 publicly disclosed milestones, as well as maintenance of existing relationships with our strategic alliance partners;

options to purchase 100,000 shares of common stock that will vest upon attainment of our financing goal during 2008, and if such goals are not achieved by June 30, 2008, the options will be cancelled; and

options to purchase 227,500 shares of common stock that vest will quarterly over a four-year period, with the first vesting event on January 1, 2008.

All stock options awarded to Mr. Lim during 2007 have a seven-year term.

*Other Named Executive Officers.* During October 2007, in recognition of his promotion to Vice President of Engineering and Operations, Mr. Prueitt was awarded the following performance-based stock options:

options to purchase 50,000 shares of common stock options that will vest upon attainment of a commercialization shipment volume goal to be achieved by March 31, 2010, and if the goals are not met, the options will be cancelled; and

options to purchase 150,000 shares of common stock that will vest 25% on the first anniversary of the grant date and 6.25% on each quarterly anniversary thereafter; this grant will accelerate vest upon the achievement of a specific unit shipment target.

During March 2007, as part of a non-executive retention initiative following suspension of our high power program, Mr. Prueitt was granted options to purchase 35,000 shares of common stock that vest as follows: 17,500 vested immediately; while 8,750 will vest during each of March 2008 and March 2009.

The awards to Mr. Prueitt reflect his performance and increasing responsibility through the year, as well as our expectations of future performance and retention needs for early stage organizations where significant equity awards take the place of cash compensation.

During June 2007, Ms. Scheuer was awarded the following:

options to purchase 15,000 shares of common stock that vested immediately;

options to purchase 11,250 shares of common stock that will vest upon achievement of all our 2007 publicly disclosed milestones, as well as maintenance of existing relationships with our strategic alliance partners; and

options to purchase 48,750 shares of common stock that will vest quarterly over a four-year period, with the first vesting event on January 1, 2008.

Concurrently, Ms. Scheuer was awarded 5,000 shares of restricted stock that will vest upon attainment of certain financing goals during 2008. If such goals are not achieved by June 30, 2008, the stock will be forfeited. On July 31, 2007, Ms. Scheuer forfeited a separate award of 5,000 shares of restricted stock, which would have vested upon achievement of certain financing goals by that date.

We believe the size of the awards to Ms. Scheuer is appropriate and necessary to retain and motivate her to meet these challenging but obtainable short and longer term objectives.

All 2007 option grants to Mr. Prueitt and Ms. Scheuer have a seven-year term.

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*Equity Incentive Plans*

As of December 31, 2007, we have three equity compensation plans: 1) 1996 Stock Incentive Plan; 2) 1999 Employee Stock Incentive Plan; and 3) 2006 Equity Incentive Plan.

The Governance, Compensation, and Nominating Committee administers all equity compensation plans, and has the authority to determine the terms and conditions of the awards granted under the 1996 Stock Incentive Plan and the 1999 Employee Stock Incentive Plan.

*1996 Stock Incentive Plan.* The 1996 Stock Incentive Plan, or 1996 Plan, was approved by our stockholders during December 1996. Under the 1996 Plan, our Board of Directors was authorized to award stock options, stock appreciation rights, restricted stock, and other stock-based incentives to our officers, employees and others. As of December 31, 2007, there were 1,329,617 options outstanding under the 1996 Plan, of which 1,243,554 were exercisable, with an additional 240,892 shares reserved for future grants.

*1999 Employee Stock Incentive Plan.* The 1999 Employee Stock Incentive Plan, or 1999 Plan, was approved by our stockholders during March 1999. Under the 1999 Plan, our Board of Directors is authorized to award stock options and restricted stock to our officers, employees and others. The 1999 Plan expires on March 18, 2009. As of December 31, 2007, options to purchase 3,633,449 shares of our common stock were outstanding under the 1999 Plan, of which 2,976,878 were exercisable with an additional 330,341 shares reserved for future grants.

Options issued under both the 1996 Plan and 1999 Plan terminate between seven and ten years after the date of grant. Stock option grants or restricted stock awards under these plans can be issued to vest immediately, vest over a certain period, vest based upon successful completion of a performance measure specified by our Governance, Compensation, and Nominating Committee, or a prescribed combination of performance and time vesting (i.e. a time vesting option accelerated by achievement of a performance objective or a performance vesting option that will vest at a certain date in the future).

The 1996 Plan and 1999 Plan provide that in the event of a change of control all unexercised and outstanding options and restricted stock shall become fully vested and exercisable as of the date of the change of control, provided the optionee is employed by us at the date of the change. This is commonly referred to as a single trigger acceleration of option vesting.

*2006 Equity Incentive Plan.* The 2006 Equity Incentive Plan, or 2006 Plan, was approved by our stockholders during May 2006. Up to 2,000,000 shares of our common stock may be issued under the 2006 Plan to our employees, officers, directors, consultants and advisors. As of December 31, 2007, 1,255,500 options to purchase our common stock were outstanding under the 2006 Plan, of which 408,416 were exercisable with an additional 694,500 shares reserved for future grants.

The 2006 Plan provides for the grant of incentive stock options intended to qualify under Section 422 of the Internal Revenue Code of 1986, nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units and other stock-based awards.

Our Governance, Compensation, and Nominating Committee selects the recipients of awards and determines (i) the number of shares of common stock covered by options and the dates upon which such options become exercisable, (ii) the exercise price of options (which may not be less than 100% of fair market value of the common stock), (iii) the duration of options (which may not exceed seven years), and (iv) the number of shares of common stock subject to any stock appreciation rights, restricted stock award, restricted stock unit award or other stock-based awards and the terms and conditions of such awards, including conditions for forfeiture, repurchase, issue price and repurchase price,

if any.

Upon a Substantial Corporate Change, as such term is defined in the 2006 Plan, the 2006 Plan and any unexercised or forfeitable awards will terminate unless either (i) an award agreement with a participant provides otherwise or (ii) provision is made in writing in connection with such

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transaction for the assumption or continuation of outstanding awards, or the substitution for such awards with awards covering the stock or securities of a successor employer entity, or a parent or subsidiary of such successor. If an award would otherwise terminate under the preceding sentence, we will either provide that optionees or holders of stock appreciation rights or other exercisable awards will have the right, at such time before the completion of the transaction causing such termination as we reasonably designate, to exercise any unexercised portions of the options or stock appreciation rights or other exercisable awards, including portions of such awards not already exercisable, or for any awards including the foregoing, cause us, or agree to allow the successor, to cancel each award after payment to the participant of an amount, if any, in cash, cash equivalents, or successor equity interests substantially equal to the fair market value of the consideration (as valued by the administrator) paid for our shares, under the transaction minus, for options and stock appreciation rights or other exercisable awards, the exercise price for the shares covered by such awards (and, for any awards, where we determine it is appropriate, any required tax withholdings), and with such allocation among cash, cash equivalents, and successor equity interests as we determine or approve.

### *Perquisites and Other Benefits*

Our executive officers are eligible to participate in similar benefit plans available to all our other employees including medical, dental, vision, group life, disability, accidental death and dismemberment, paid time off, and 401(k) plan benefits. In addition, we pay 100% of Mr. Lim's group term life insurance premiums, representing an additional cost in 2007 of \$384.

We also maintain a standard directors and officers liability insurance policy with coverage similar to the coverage typically provided by other small publicly held technology companies.

As prescribed in his employment agreement, Mr. Lim was reimbursed for his relocation, associated tax gross-ups and certain legal fees in connection with joining our company during 2006. These amounts totaled \$133,063 in relocation, \$16,637 in tax gross-ups and \$10,000 in legal fees.

We reimbursed Mr. Prueitt his relocation costs and associated tax gross-ups in connection with joining our company during 2006. These amounts totaled \$31,103 in relocation and \$8,463 in tax gross-ups.

### *Severance, Change in Control and Non-Compete Agreements*

Most of our executive officers are entitled to receive severance payments equal to a specified number of months of base salary and benefits in the event their employment is terminated without cause or in Mr. Lim's case, if he is terminated without cause or if he terminates his employment with us for good reason. Mr. Lim's stock options are also subject to acceleration or a continuation of vesting should we terminate his employment without cause or if he terminates his employment with us for good reason.

A change in control will accelerate the vesting of outstanding stock options issued under the 1996 and 1999 Stock Incentive Plans; however options outstanding under the 2006 Equity Plan will not automatically accelerate vesting unless provided in an employment agreement. See Employment Agreements.

We believe these severance and change in control arrangements are reasonable and mitigate some of the risk that exists for executives working in small technology companies by maintaining employee engagement and encouraging retention in an environment with substantial challenges and changes. This is especially true considering each executive officer has signed a Non-Competition and Non-Solicitation Agreement limiting future opportunities in the event the executive's employment is terminated for any reason. These agreements specify that the executive will not compete with our businesses for a period of one year following such termination.



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*Employment Agreements*

*Peng K. Lim.* We entered into an employment agreement Mr. Lim effective May 8, 2006, that provides he will serve as the President and Chief Executive Officer of MTI Micro for an initial term of two years at an annual salary of \$300,000. In December 2006, Mr. Lim was promoted to our Chief Executive Officer, receiving no salary change. Following his initial term, the agreement will be automatically renewed for successive one year terms, subject to our right, or his right, not to renew the agreement upon at least ninety (90) days written notice prior to the expiration of the initial two year term or any one year renewal term thereafter. Mr. Lim participates in an annual cash incentive compensation plan with a bonus targeted at 40% of base salary as prescribed in his current employment agreement. During May 2007, Mr. Lim was awarded his first year bonus payouts: a cash bonus of \$60,000 in connection with his first year guaranteed bonus and a cash bonus of \$60,000 in connection with the completion of performance objectives for his first year of employment as established during 2006 by our Board of Directors. In concert with our milestones, we included the following objectives in Mr. Lim's 2007-08 performance plan:

completion of low-power prototypes to Samsung;

introduction of the next generation of MTI Instruments precision instrumentation products;

addition of at least one OEM agreement for our low power platform;

at least a 15% increase in MTI Instruments annual revenue during fiscal year 2007 compared with fiscal year 2006; and

maintenance of key affiliate relationships, among other individual goals.

Although we have yet to certify that Mr. Lim has met these performance criteria for 2007, we accrued \$120,000 in our consolidated financial statements at December 31, 2007 expecting that the Governance, Compensation, and Nominating Committee will approve this amount for Mr. Lim related to fiscal year 2007 milestones. Any future bonus compensation to Mr. Lim will be contingent solely upon the determination of the Governance, Compensation, and Nominating Committee that set objectives for Mr. Lim have been satisfied.

In connection with our hiring of Mr. Lim, we also granted to Mr. Lim options to purchase 650,000 shares of common stock at an exercise price of \$4.43 that vest as follows: a) options to purchase 162,500 shares vested immediately; b) options to purchase 325,000 shares vest in equal quarterly amounts over a four-year period at the rate of 6.25% per quarter; and c) options to purchase 162,500 shares vest upon the earlier of the determination by our Board of Directors or a committee of the Board of Directors, that the performance milestones for the grant with respect to 2007 had been satisfied or December 31, 2008. All of such options will vest immediately upon a change of control as defined in the agreement.

The agreement also provides that if we terminate Mr. Lim's employment without cause or if Mr. Lim terminates his employment for good reason he will receive 1) his accrued salary, business expenses, and earned bonus through the date of termination; 2) 100% of his regular base salary and target bonus (in monthly installments) for 12 months, and certain other benefits for one year from the date of termination; 3) the first year premium for converting his group life insurance coverage to an individual policy; and 4) continued vesting of his outstanding options at the rate described in the each respective option agreement (including the full acceleration of the vesting of the performance-based options) for one year from the date of termination, with continued exercisability for all vested options for 90 days following the period ending one year after the date of termination.



If Mr. Lim's employment is terminated for cause, Mr. Lim will receive his accrued salary, business expenses, and earned bonus through the date of termination. If Mr. Lim's employment is terminated by reason of death or disability, in addition to these accrued entitlements, Mr. Lim will

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receive a pro-rata bonus, continuation of vesting of outstanding time-based options for one additional quarter, vesting of performance-based options as of the date of termination (if such date is after September 30, 2008), and all vested options will remain exercisable for one year.

For purposes of this agreement, *cause* means gross misconduct, gross negligence, theft, dishonesty, fraud, or gross dereliction of duties; or indictment on any felony charge or misdemeanor charge involving theft, moral turpitude; or a violation of the federal securities laws whether or not related to his conduct at work. *Good reason* means our failure to renew the agreement at substantially equivalent or greater salary and target bonus; a significant diminution of Mr. Lim's job title, responsibilities or reporting relationship; or relocation of the job to a location outside a 50 mile radius of MTI Micro's office location on the commencement date.

*Other Named Executive Officers.* We have employment agreements with our other named executive officers. Those employment agreements continue unless modified or terminated, with severance benefits where noted, provided employment terminations are without cause.

Our employment agreement with Ms. Scheuer provides her a current base annual salary of \$210,000. If we terminate Ms. Scheuer's employment without cause, she will continue to receive her base salary and benefits for a six-month period. During June 2007, our Board of Directors initiated an individual executive cash incentive program for Ms. Scheuer. Ms. Scheuer became eligible for a bonus of up to 10% of her annual base salary based upon achievement of certain operating expense and administrative goals to be achieved by May 2008.

Our employment agreement with Mr. Prueitt provides him a current base salary of \$188,300. Mr. Prueitt had received a base salary increase from \$175,000 to \$188,300 during April 2007 when he was appointed the acting leader of engineering and operations. In connection with his promotion to Vice President, Mr. Prueitt became eligible for a bonus of 5% of his annual salary based upon certain commercial prototype technical advances to be achieved by May 2008. During his first two years with us, a period ending on April 18, 2008, Mr. Prueitt will receive three months of base salary and benefits as a severance benefit. During this period, if Mr. Prueitt's employment is terminated within 90 days following a change in control of our company, he will receive his base salary and benefits for six months as a severance benefit.

*Potential Payments upon Termination*

The following table sets forth a breakdown of termination payments and the net realizable value of stock and stock options if the employment of any of our named executive officers had been terminated as of December 31, 2007. The information assumes a price of \$0.75 per share of our common stock as December 31, 2007. Severance payments are made either on a salary continuation basis paid over the severance period or on a lump sum basis payable upon a fixed date subsequent to termination of employment.

Name	Severance Term	Salary	Guaranteed Bonus	Health & Life	Intrinsic	Total
				Insurance	Value of Stock Options at Separation	
Peng K. Lim	One year salary and					

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Cynthia A. Scheuer	benefits	\$300,000	\$120,000	\$11,512	\$ \$ 431,512
	Six months salary and benefits	105,000		3,673	108,673
James K. Prueitt (1)	Three months salary and benefits	47,075		2,696	49,771

(1) Pursuant to Mr. Prueitt's employment agreement, beginning April 19, 2006, for the first two years of employment, we will provide three months of base salary and benefits as a severance

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benefit in the event his employment is terminated without cause. During this period, if Mr. Prueitt's employment is terminated within 90 days following a change in control of our company, he will receive his base salary and benefits for six months as a severance benefit.

**Directors Compensation**

On April 20, 2007, our Board of Directors adopted a new compensation plan for non-management directors that eliminated the quarterly cash retainer compensation of \$12,000 per year, after reducing it from \$16,000 per year, on March 13, 2007. Beginning in 2007, non-employee directors annually receive the following: 1) options to purchase 50,000 shares of our common stock, 2) the Chairman of the Audit Committee, the Chairman of the Governance, Compensation, and Nominating Committee and the Chairman of the Technical Committee of our MTI Micro subsidiary each receive additional options to purchase 7,500 shares of our common stock, and 3) members of the Audit Committee, the Governance, Compensation, and Nominating Committee and the Technical Committee of our MTI Micro subsidiary each receive additional options to purchase 5,000 shares of our common stock. Future compensation will be issued on an annual basis thereafter on the third Monday of each March. These options are priced based on the closing price of our common stock on The Nasdaq Global Market System on the date of grant, vest immediately and have a seven-year term. Each non-employee director is also reimbursed for reasonable travel and related expenses incurred on our behalf.

On March 12, 2008, the Board of Directors of the Company approved the deferral of the issuance of annual stock option compensation for the Company's non-management directors until a later date in 2008. Under the Company's current compensation plan for its non-management directors, annual option compensation was scheduled to be issued on March 17, 2008.

Mr. Fischer currently serves as Chairman of our Board of Directors. His current base salary is \$100,000 annually, and he participates in all benefit programs typically offered to all other employees. On April 20, 2007, Mr. Fischer was granted by the Governance, Compensation, and Nominating Committee options to purchase 100,000 shares of common stock that immediately vested and options to purchase 50,000 shares of common stock that will vest upon attainment of certain financing goals during 2008. If such goals are not achieved by June 30, 2008, the grant will be forfeited. On July 31, 2007, Mr. Fischer forfeited a grant of 100,000 stock options that would have vested upon achievement of certain financing goals by that date.

**DIRECTOR COMPENSATION FOR FISCAL YEAR 2007**

<b>Name</b>	<b>Fees Earned or Paid in Cash</b>	<b>Option Awards(1)</b>	<b>All Other Compensation</b>	<b>Total</b>
Steven N. Fischer (2)	\$ 100,000	\$9,403	\$ 4,000	\$ 113,403
Thomas J. Marusak (3)	7,000	51,558		58,558
E. Dennis O Connor (4)	7,000	53,706		60,706
William P. Phelan (5)	7,000	49,410		56,410
Dr. Walter Robb (6)	7,000	55,855		62,855

(1) Valuations are based upon the dollar amount of option grants recognized for financial statement purposes pursuant to FAS 123R with respect to 2007. The assumptions and methodologies were utilized in calculating these amounts are discussed in Note 13 to the financial statements for the year ended December 31, 2007.

- (2) As of December 31, 2007, Mr. Fischer had 447,833 options outstanding and exercisable. During 2007, Mr. Fischer was paid \$100,000 in cash and received \$4,000 in 401(k) matching contributions related to his executive position, forfeited 100,000 performance based stock options that did not

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vest and was granted 100,000 performance based stock options that will vest upon attainment of certain financing goals during 2008. If such goals are not achieved by June 30, 2008, the options will be forfeited.

- (3) As of December 31, 2007, Mr. Marusak had 129,167 options outstanding and exercisable.
- (4) As of December 31, 2007, Mr. O Connor had 330,083 options outstanding and exercisable.
- (5) As of December 31, 2007, Mr. Phelan had 145,000 options outstanding and exercisable.
- (6) As of December 31, 2007, Dr. Robb had 326,833 options outstanding and exercisable.

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**CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

**Review, Approval or Ratification of Transactions with Related Persons**

In early 2007, we formalized the process by which we review and approve transactions in which we or one or more related persons participate. Although we have always had procedures in place, we strengthened our current procedures by adopting a written policy requiring that all related person transactions, be reported to our Chief Financial Officer and approved or ratified by the Governance, Compensation and Nominating Committee of the Board of Directors. In completing our review of proposed related person transactions, the Governance, Compensation, and Nominating Committee considers the aggregate value of the transaction, whether the transaction was undertaken in the ordinary course of business, the nature of the relationships involved, and whether the transaction is on terms comparable to those that could be obtained in arm's length dealings with an unrelated third party.

We believe transactions among related parties are as fair to us as those obtainable from unaffiliated third parties. During our December 2006 capital raise, Sidney V. Gold, a stockholder in MTI Micro purchased 5,000 units consisting of 500,000 shares of our common stock and warrants exercisable for five years to purchase an additional 250,000 shares of our common stock at an exercise price of \$2.27 per share. The purchase price per unit was \$180.00.

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**DESCRIPTION OF SECURITIES**

The following is a description of the material provisions of our capital stock, as well as other material terms of our certificate of incorporation and bylaws as they will be in effect as of the consummation of the offering. The following description is intended to be a summary and does not describe all provisions of our certificate of incorporation or bylaws or New York law applicable to us. For a more thorough understanding of the terms of our securities, you should read the following together with our certificate of incorporation and bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part.

**General**

As of December 31, 2007, our total authorized capital stock consisted of 75,000,000 shares of common stock, par value \$0.01 per share. As of December 31, 2007, 38,179,888 shares of common stock were issued and outstanding. As of December 31, 2007, options to purchase 6,213,566 shares of common stock and warrants to purchase 3,027,778 shares of common stock were outstanding.

**Common Stock**

The holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available therefore at such time and in such amounts as our Board of Directors may from time to time determine subject to the prior rights of the holders of any preferred stock. The holders of our common stock have no preemptive or subscription rights to purchase any of our securities. Upon our liquidation, dissolution or winding up, the holders of common stock are entitled to receive, pro rata, our assets which are legally available for distribution, after payment of all debts and other liabilities and subject to the rights of any holders of preferred stock. Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of stockholders. There is no cumulative voting with respect to any shares of capital stock.

Our common stock is quoted on The Nasdaq Global Market under the symbol MKTY.

**Warrants**

Warrants for the issuance of 3,027,778 shares of our common stock are outstanding, all of which are exercisable at a price of \$2.27 per share. These warrants became exercisable on June 20, 2007 and are exercisable through December 19, 2011.

The descriptions of the warrants are only a summary and are qualified in their entirety by the provisions of the forms of the warrant, which are attached or referenced to the registration statement of which this prospectus forms a part.

**Unit Warrants**

In connection with this offering, we will issue warrants to purchase \_\_\_\_\_ shares of common stock. Each warrant entitles the holder to purchase at any time for a period of five years, a specified number of shares of common stock at an exercise price of \$ \_\_\_\_\_ per share. After the expiration of the exercise period, unit warrant holders will have no further rights to exercise such unit warrants.

The unit warrants may be exercised only for full shares of common stock, and may be exercised on a cashless basis. We will not issue fractional shares of common stock or cash in lieu of fractional shares of common stock. Unit



warrant holders do not have any voting or other rights as a stockholder of our company. The exercise price and the number of shares of common stock purchasable upon the exercise of each unit warrant are subject to adjustment upon the happening of certain events, such as stock dividends, distributions, and splits. No adjustment in the exercise price will be required unless cumulative adjustments require an adjustment of at least \$0.01. Notwithstanding the foregoing, in case of any consolidation, merger, or sale of all or substantially all of the assets of our company, the holder of each of the unit warrants will have only the right, upon the subsequent exercise thereof, to receive the kind and amount of shares and other securities and property, including cash, that the holder would have been entitled to receive by virtue of such transaction had the unit warrants been exercised immediately prior to such transaction.

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**Limitation of Liability and Indemnification of Officers and Directors**

Pursuant to the statutes of the State of New York, a director or officer of a corporation is entitled, under specified circumstances, to indemnification by our company against reasonable expenses, including attorney's fees, incurred by him/her in connection with the defense of a civil or criminal proceeding to which he/she has been made, or threatened to be made, a party by reason of the fact that he/she was such director or officer. In certain circumstances, indemnity is provided against judgments, fines, and amounts paid in settlement. In general, indemnification is available where the director or officer acted in good faith, for a purpose he/she reasonably believed to be in the best interests of the corporation. Specific court approval is required in some cases. The foregoing statement is subject to the detailed provisions of Sections 715, 717 and 721-725 of the New York Business Corporation Law.

Under provisions of our certificate of incorporation, we will indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending, or completed action, proceeding or suit (including one by or in the right of us to procure a judgment in its favor), whether civil or criminal, by reason of the fact that he, his testator or intestate is or was one of our directors or officers, or is or was serving any other corporation, partnership, joint venture, trust, employee benefit plan, or other enterprise in any capacity at our request, against judgments, fines, amounts paid in settlement, and expenses, including attorneys' fees, actually incurred as a result of or in connection with any such action, proceeding or suit, or any appeal therefrom, if such director or officer acted in good faith for a purpose which he reasonably believed to be in or not opposed to our best interests, and, in criminal actions or proceedings, in which he had no reasonable cause to believe that his conduct was unlawful. No indemnification will be made, however, to or on behalf of any director or officer if a judgment or other final adjudication adverse to the director or officer establishes that his/her acts were committed in bad faith or were the result of active and deliberate dishonesty and were material to the cause of action so adjudicated, or that he/she personally gained a financial profit or other advantage to which he/she was not legally entitled.

Our directors and officers are covered by insurance policies indemnifying against certain liabilities, including certain liabilities arising under the Securities Act that might be incurred by them in such capacities.

Our certificate of incorporation further provides that directors of our company will not be personally liable to us or our stockholders for any breach of duty in such capacity, however, such provision will not operation to eliminate or limit the liability of any director if a judgment or other final adjudication adverse to such director establishes that the director's acts or omissions were in bad faith or involved intentional misconduct or a knowing violation of law or that the director personally gained in fact a financial profit or other advantage to which the director was not legally entitled or that the director's acts violated certain provisions of the New York Business Corporation Law.

**Indemnification for Securities Act Liabilities**

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling our company pursuant to the foregoing provisions, we have been informed 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.

**Transfer Agent and Registrar**

The transfer agent and registrar for our common stock and warrants placed through this offering is American Stock Transfer & Trust Company, located at 59 Maiden Lane, Plaza Level, New York, NY 10038.

**Table of Contents****PRINCIPAL STOCKHOLDERS**

The following table sets forth information regarding the beneficial ownership of our common stock as of February 29, 2008 by each of our directors and named executive officers and all of our executive officers and directors as a group. We are not aware of any stockholders that beneficially own more than 5% of our common stock.

Name (1)	Shares	Percent	
	Beneficially Owned (2)	Before Offering	After Offering
Steven N. Fischer (3)	660,333	1.7%	
Robert J. Kot (4)	62,500	*	
Peng K. Lim (5)	532,505	1.4%	
Thomas J. Marusak (6)	136,167	*	
E. Dennis O Connor (7)	486,583	1.3%	
William P. Phelan (8)	145,000	*	
James K. Prueitt (9)	33,750	*	
Dr. Walter L. Robb (10)	776,833	2.0%	
Cynthia A. Scheuer (11)	298,462	*	
All present directors and officers as a group (9 persons) (12)	3,132,133	7.8%	

\* Less than 1%.

- (1) Unless otherwise indicated, each of the stockholders has sole voting and investment power with respect to the shares of common stock beneficially owned by the stockholder. The address of all listed stockholders is c/o Mechanical Technology, Incorporated, 431 New Karner Road, Albany, New York 12205.
- (2) The number of shares beneficially owned by each stockholder is determined under rules promulgated by the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and includes any shares as to which the individual or entity has the right to acquire beneficial ownership within 60 days after February 29, 2008, through the exercise of any warrant, stock option or other right. The inclusion in this schedule of such shares, however, does not constitute an admission that the named stockholder is a direct or indirect beneficial owner of such shares. The number of shares of common stock outstanding used in calculating the percentage for each listed person includes the shares of common stock underlying options held by such person, which are exercisable within 60 days of February 29, 2008, but excludes shares of common stock underlying options held by any other person. Percentage of beneficial ownership is based on 38,179,888 shares of common stock outstanding as of February 29, 2008.
- (3) Includes (a) 10,000 shares of common stock held by Mr. Fischer's spouse, over which Mr. Fischer disclaims beneficial ownership, and (b) 447,833 shares of common stock issuable upon exercise of stock options.
- (4) Includes 62,500 shares of common stock issuable upon exercise of stock options.

- (5) Includes 441,405 shares of common stock issuable upon exercise of stock options.
- (6) Includes 129,167 shares of common stock issuable upon exercise of stock options.
- (7) Includes 330,083 shares of common stock issuable upon exercise of stock options.
- (8) Includes 145,000 shares of common stock issuable upon exercise of stock options.
- (9) Includes 23,750 shares of common stock issuable upon exercise of stock options.
- (10) Includes 326,833 shares of common stock issuable upon exercise of stock options.
- (11) Includes 259,712 shares of common stock issuable upon exercise of stock options.
- (12) Includes 2,166,283 shares of common stock issuable upon exercise of stock options.

**Table of Contents****UNDERWRITING**

Merriman Curhan Ford & Co. and Ardour Capital Investments, LLC are acting as the representatives of the underwriters. We and the underwriters named below intend to enter into an underwriting agreement with respect to the units being offered by this prospectus. In connection with this offering and subject to certain conditions, each of the underwriters named below has severally agreed to purchase, and we have agreed to sell, the number of units set forth opposite the name of each underwriter.

<b>Underwriter</b>	<b>Number of Units</b>
Merriman Curhan Ford & Co	
Ardour Capital Investments, LLC	
Total	

The underwriting agreement is subject to a number of terms and conditions and provides that the underwriters must buy all of the units if they buy any of them (other than those units covered by the over-allotment option described below).

The underwriters have advised us that they do not intend to confirm sales of the units to any account over which they exercise discretionary authority in an aggregate amount in excess of 5% of the total securities offered by this prospectus.

We have granted to the underwriters an option, exercisable as provided in the underwriting agreement and expiring 30 days after the effective date of this offering, to purchase up to an additional \_\_\_\_\_ units at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option only to cover over-allotments made in connection with the sale of units offered by this prospectus, if any. To the extent that the underwriters exercise this option, each of the underwriters will become obligated, subject to certain conditions, to purchase approximately the same percentage of these additional units as the number of units to be purchased by it in the above table bears to the total number of units offered by this prospectus. We will be obligated, pursuant to the option, to sell these additional units to the underwriters to the extent the option is exercised. If any additional units are so purchased, the underwriters will offer the additional units on the same terms as those on which the \_\_\_\_\_ units are being offered.

The underwriting agreement provides that we will pay Merriman Curhan Ford & Co. a non-accountable expense allowance equal to \_\_\_\_\_ % of the total proceeds of this offering, or \$ \_\_\_\_\_ (\$ \_\_\_\_\_ if the underwriters exercise the overallotment option in full), of which \$ \_\_\_\_\_ has already been paid. In addition, we have agreed to reimburse the underwriters for up to \$ \_\_\_\_\_ of their legal fees incurred in connection with this offering if the offering is not completed.

The underwriters propose initially to offer the units to the public at the public offering price set forth on the cover page of this prospectus and to the dealers at that price less a concession not in excess of \$ \_\_\_\_\_ per unit. The underwriters may allow, and the dealers may reallow, a discount not in excess of \$ \_\_\_\_\_ per unit to other dealers. After the public offering, the public offering price, concession and discount may be changed.

Our common stock trades on The Nasdaq Global Market under the symbol MKTY. We have been notified by Nasdaq that our common stock could be delisted for failure to maintain a bid price of \$1.00 and that we have until July 7, 2008 to regain compliance with the listing standards of The Nasdaq Global Market. See Risk Factors.

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The underwriting discounts and commissions per unit are equal to the public offering price per unit less the amount paid by the underwriters to us per unit. The underwriting discounts and commissions are % of the public offering price. We have agreed to pay the underwriters the following discounts and commissions, assuming either no exercise or full exercise by the underwriters of the underwriters over-allotment option:

	Fees Per Unit	Total Fees (in thousands)	
		With Full Exercise of Over-Allotment Option	Without Exercise of Over-Allotment Option
Discounts and commissions paid by us	\$	\$	\$

We estimate that our share of the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately \$ .

Each of our directors and executive officers have agreed with the underwriters not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of shares of our common stock, for a period of at least 180 days after the date of the final prospectus relating to this public offering, without the prior written consent of Merriman Curhan Ford & Co. on behalf of the underwriters. This consent may be given at any time without public notice. In addition, if we issue an earnings release or material news or a material event relating to us occurs during the last 17 days of the 180-day lock-up period or if prior to the expiration of the 180-day lock-up period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day lock up period, the restrictions imposed by underwriters lock-up agreements will continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event, as applicable, unless Merriman Curhan Ford & Co. waives, in writing, such extension. The lock-up agreements do not apply to the exercise of options or warrants or the conversion of a security outstanding on the date of this prospectus and which is described in this prospectus, nor do they apply to transfers or dispositions of shares made (i) as a bona fide gift or gifts, provided that the donee or donees thereof agree to be bound by the restrictions set forth in the lock-up agreements, (ii) to any trust for the direct or indirect benefit of a signatory to a lock-up agreement or the immediate family of such signatory, provided that the trustee of the trust agrees to be bound by the restrictions set forth in the lock-up agreements, (iii) by will or intestate succession provided the transferee agrees to be bound by the restrictions set forth in the lock-up agreements, or (iv) to the underwriters pursuant to the underwriting agreement. There are no agreements between the underwriters and any of our stockholders or affiliates releasing them from these lock-up agreements prior to the expiration of the 180-day period. In addition, we have agreed with the underwriters not to make certain issuances or sales of our securities for a period of at least 180 days after the date of the final prospectus relating to this public offering, without the prior written consent of Merriman Curhan Ford & Co. on behalf of the underwriters.

The underwriting agreement provides that we will indemnify the underwriters against specified liabilities, including liabilities under the Securities Act. We have been advised that, in the opinion of the Securities and Exchange Commission, indemnification for liabilities under the Securities Act is against public policy as expressed in the

Securities Act and is therefore unenforceable.

In connection with the offering, Merriman Curhan Ford & Co., on behalf of the underwriters, may purchase and sell shares of our common stock in the open market. These transactions may include short sales, syndicate covering transactions and stabilizing transactions. Short sales involve syndicate sales of common stock in excess of the number of units to be



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purchased by the underwriters in the offering, which creates a syndicate short position. Covered short sales are sales of shares made in an amount up to the number of shares underlying the units represented by the underwriters over-allotment option. In determining the source of shares to close out the covered syndicate short position, the underwriters 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 units through the over-allotment option. Transactions to close out the covered syndicate short involve either purchases of the common stock in the open market after the distribution has been completed or the exercise of the over-allotment option. The underwriters may also make naked short sales of units in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares of common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may 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. Stabilizing transactions consist of bids for or purchases of shares in the open market while the offering is in progress.

The underwriters also may impose a penalty bid. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when Merriman Curhan Ford & Co. repurchases shares originally sold by that syndicate member in order to cover syndicate short positions or make stabilizing purchases.

Any of these activities may have the effect of preventing or retarding the decline in the market price of the common stock. They may also cause the price of the common stock to be higher than the price that would otherwise exist in the open market in the absence of these transactions. The underwriters may conduct these transactions on The Nasdaq Global Market or in the over-the-counter market, or otherwise. If the underwriters commence any of these transactions, they may discontinue them at any time.

A prospectus in electronic format may be made available on Internet sites or through other online services maintained by one or more of the underwriters or selling group members participating in this offering, or by their affiliates. In those cases, prospective investors may view offering terms online and, depending on the particular underwriter or selling group member, prospective investors may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of units for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations.

From time to time, Merriman Curhan Ford & Co., Ardour Capital Investments, LLC, and their affiliates may in the future provide investment banking, commercial banking, and financial advisory services to us, for which they may in the future receive, customary fees. We have also entered into a six-month exclusive agreement with Merriman Curhan Ford & Co., pursuant to which Merriman Curhan Ford & Co. will act as our financial advisor in connection with the potential sale or other disposition of certain of our assets. Other than the foregoing, Merriman Curhan Ford & Co. does not have any material relationship with us or any of our officers, directors or controlling persons, except with respect to their contractual relationship with us entered into in connection with this offering.

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**SHARES ELIGIBLE FOR FUTURE SALE**

Prior to this offering, there has been a limited public market for our common stock. We cannot predict the effect, if any, that sales of our common stock or the availability of our common stock for sale will have on the market price of our common stock prevailing from time to time. Sales of shares of our common stock in the public market, or the perception that those sales may occur, could cause the prevailing market price to decrease or to be lower than it might be in the absence of those sales or perceptions. These factors could also make it more difficult to raise funds through future offerings of common stock.

**Sale of Restricted Shares**

Upon the closing of this offering, we will have an aggregate of \_\_\_\_\_ shares of common stock outstanding. The shares of common stock as part of the units sold in this offering will be freely tradeable without restriction or further registration under the Securities Act. However, if shares are purchased by affiliates, as that term is defined in Rule 144 under the Securities Act, their sales of shares of common stock would be subject to volume limitations and other restrictions that are described below. In addition, \_\_\_\_\_ outstanding shares of common stock are freely tradeable without restriction or further registration under the Securities Act.

Our shares of common stock, outstanding upon closing of this offering or issued in the future on exercise of warrants to purchase additional shares of common stock, will be eligible for sale into the public market as follows:

**Rule 144**

In general, under Rule 144 as currently in effect, a person who is one of our affiliates or has purchased restricted securities and has beneficially owned those shares of common stock for at least six months, would be entitled to sell, within any three-month period, a number of shares that does not exceed the greater of:

1% of the total number of our shares of common stock then outstanding, which is expected to equal approximately \_\_\_\_\_ shares of common stock immediately after the closing of this offering; or

the average weekly trading volume of our shares of common stock on The Nasdaq Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 are also subject to other requirements regarding the manner of sale, notice filing and the availability of current public information about us.

A person who is not an affiliate of ours, has not been an affiliate of ours at any time during the 90 days preceding a sale and who has beneficially owned our shares of common stock for at least six months, including the holding period of any owner other than an affiliate, is entitled to sell those shares without regard to volume limitations, manner of sale provisions or information requirements under Rule 144. Therefore, unless subject to a lock-up agreement or otherwise restricted, these shares may be sold immediately upon the closing of this offering.

**Stock Options and Other Stock-Based Awards**

As of December 31, 2007, options to purchase 6,213,566 shares of common stock were issued and outstanding, of which options to purchase 4,628,348 shares of common stock were exercisable. Shares of common stock issued upon exercise of a stock option or other stock-based award and registered under a Form S-8 registration statement will,

subject to Rule 144 volume limitations applicable to our affiliates, be available for sale in the public market, immediately following the expiration of or release from the lock-up agreements.

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**Warrants**

In addition to the stock options described above, warrants for the issuance of 3,027,778 shares of our common stock are outstanding, all of which are exercisable at a price of \$2.27 per share. These warrants became exercisable on June 20, 2007 and are exercisable through December 19, 2011.

None of the shares issued upon exercise of these warrants will be eligible for resale until such time as they are registered under the Securities Act or an exemption from registration is available, including the exemption provided by Rule 144 described above.

**Lock-Up Agreements**

We and each of our directors and executive officers have agreed, with limited exceptions, that we and they will not, without the prior written consent of Merriman Curhan Ford & Co., during the period ending 180 days after the date of this prospectus, among other things, directly or indirectly, offer to sell, sell or otherwise dispose of any of our shares of common stock or file a registration statement with the SEC relating to the offering of any of our shares of common stock. However, in the event that either (1) during the last 17 days of the 180-day restricted period, we issue an earnings release or material news or a material event relating to us occurs or (2) prior to the expiration of the 180-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 180-day period, then the lock-up restrictions, subject to certain exceptions, will continue to apply until the expiration of the 18-day period beginning on the date of the earnings release or the occurrence of the material news or material event.

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**LEGAL MATTERS**

The validity of the shares of common stock offered hereby has been passed upon for us by our counsel, Orrick, Herrington & Sutcliffe LLP, New York, New York. Certain legal matters in connection with this offering will be passed upon for the underwriters by Greenberg Traurig, LLP, Phoenix, Arizona.

**EXPERTS**

The consolidated financial statements as of December 31, 2006 and December 31, 2007 and for each of the three years in the period ended December 31, 2007 included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to our ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

**WHERE YOU CAN FIND ADDITIONAL INFORMATION**

We file annual, quarterly, current and special reports, proxy statements and other information with the Securities and Exchange Commission, or SEC, under the Securities Exchange Act of 1934, as amended. You may read and copy this information at the following location of the SEC:

Public Reference Room  
100 F Street, NE  
Washington, D.C. 20549

You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330.

The SEC also maintains an Internet web site that contains reports, proxy and information statements and other information about issuers that file electronically with the SEC. The address of that site is [www.sec.gov](http://www.sec.gov).

We have filed a registration statement on Form S-1 with the SEC that covers the sale of the units offered by this prospectus. This prospectus is a part of the registration statement, but the prospectus does not include all of the information included in the registration statement. You should refer to the registration statement for additional information about us and the units being offered in this prospectus. Statements that we make in this prospectus relating to any documents filed as an exhibit to the registration statement may not be complete and you should review the referenced document itself for a complete understanding of its terms.

This prospectus contains market data and industry forecasts that were obtained from industry publications, third-party market research and publicly available information. These publications generally state that the information contained therein has been obtained from sources believed to be reliable, but the accuracy and completeness of such information is not guaranteed. While we believe that the information from these publications is reliable, we have not independently verified and make no representation as to the accuracy of such information.

**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES  
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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**Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Stockholders of  
Mechanical Technology, Incorporated:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and of cash flows present fairly, in all material respects, the financial position of Mechanical Technology, Incorporated and its subsidiaries at December 31, 2006 and 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2007 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has a net capital deficiency that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP

Buffalo, New York  
February 28, 2008

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES  
CONSOLIDATED BALANCE SHEETS**

**December 31, 2006 and 2007**

	<b>December 31, 2006                  2007 (dollars in thousands)</b>	
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$14,545	\$7,650
Securities available for sale	10,075	4,492
Accounts receivable	1,613	1,369
Inventories, net	1,216	1,373
Prepaid expenses and other current assets	442	329
Total current assets	27,891	15,213
Property, plant and equipment, net	2,926	2,159
Deferred income taxes	2,994	1,344
Total assets	\$33,811	\$18,716
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Accounts payable	\$651	\$273
Accrued liabilities	2,470	2,121
Deferred revenue	866	117
Income taxes payable	90	11
Deferred income taxes	2,994	1,344
Total Current Liabilities	7,071	3,866
<b>Long-term liabilities:</b>		
Uncertain tax position liability		208
Derivative liability	3,664	696
Total Long-Term-Liabilities	3,664	904
Total Liabilities	10,735	4,770
<b>Commitments and contingencies</b>		
Minority interests	205	143
<b>Stockholders equity:</b>		
Common stock, par value \$0.01 per share, authorized 75,000,000; 46,084,678 issued in 2006 and 46,220,624 issued in 2007	461	462



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Paid-in-capital	130,565	131,661
Accumulated deficit	(95,385)	(105,066)
Accumulated other comprehensive income:		
Unrealized gain on securities available for sale, net of tax	984	500
Common stock in treasury, at cost, 8,040,736 shares in 2006 and 2007	(13,754)	(13,754)
Total stockholders' equity	22,871	13,803
Total liabilities and stockholders' equity	\$33,811	\$18,716

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

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF OPERATIONS  
For the Years Ended December 31, 2005, 2006, and 2007**

	<b>Years Ended December 31,</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands, except per share)</b>		
Product revenue	\$6,012	\$7,667	\$9,028
Funded research and development revenue	1,829	489	1,556
Total revenue	7,841	8,156	10,584
Operating costs and expenses:			
Cost of product revenue	2,381	2,900	3,430
Research and product development expenses:			
Funded research and product development	3,555	1,152	1,891
Unfunded research and product development	6,116	11,769	9,874
Total research and product development expenses	9,671	12,921	11,765
Selling, general and administrative expenses	10,887	10,072	8,738
Operating loss	(15,098)	(17,737)	(13,349)
Gain (loss) on derivatives	(10,407)	182	2,967
Gain on sale of securities available for sale	10,125	4,289	2,549
Other income, net	431	286	224
Loss before income taxes and minority interests	(14,949)	(12,980)	(7,609)
Income tax (expense)	(1,587)	(1,895)	(2,548)
Minority interests in losses of consolidated subsidiary	1,442	1,208	582
Net loss	\$(15,094)	\$(13,667)	\$(9,575)
Loss per Share (Basic and Diluted):			
Loss per share	\$(0.49)	\$(0.43)	\$(0.25)

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

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY  
AND COMPREHENSIVE INCOME (LOSS)****For the Years Ended December 31, 2005, 2006, and 2007**

	Years Ended December 31,		
	2005	2006	2007
	(dollars in thousands)		
<b>Common stock</b>			
Balance, beginning	\$387	\$390	\$461
Issuance of shares private placement	1		
Issuance of shares capital		60	
Issuance of shares anti-dilution penalty		3	
Issuance of shares stock options	1	7	
Issuance of shares restricted stock	1	1	1
Balance, ending	\$390	\$461	\$462
<b>Paid-in capital</b>			
Balance, beginning	\$121,033	\$122,095	\$130,565
Private placement, net of expenses	(45)		
Capital raise and warrant issuance, net of expenses		6,250	
Issuance of shares stock options	325	1,181	59
Share-based compensation	1,083	2,406	1,558
MTI MicroFuel Cell investment	(301)	(1,284)	(521)
Elimination of unearned compensation due to change in accounting principle		(80)	
Issuance of shares anti-dilution penalty		(3)	
Balance, ending	\$122,095	\$130,565	\$131,661
<b>Accumulated deficit</b>			
Balance, beginning	\$(66,624)	\$(81,718)	\$(95,385)
Cumulative effect of adoption of FIN 48			(106)
Net loss	(15,094)	(13,667)	(9,575)
Balance, ending	\$(81,718)	\$(95,385)	\$(105,066)
<b>Accumulated other comprehensive income (loss):</b>			
Unrealized Gain (loss) on Securities Available for Sale, Net of Taxes			
Balance, beginning	\$14,542	\$5,983	\$984
Change in unrealized (loss) gain on securities available for sale (net of taxes of \$0 in 2005, 2006, and 2007)	(3,620)	(3,212)	68

Less reclassification adjustment for gains included in net income (net of taxes of \$3,293 in 2005, \$1,913 in 2006 and \$2,518 in 2007)	(4,939)	(1,787)	(552)
Balance, ending	\$5,983	\$984	\$500
<b>Restricted stock grants    unearned compensation</b>			
Balance, beginning		(80)	
Elimination of unearned compensation due to change in accounting principle		80	
Issuance of shares	(125)		
Grants amortization	45		
Balance, ending	\$(80)	\$	\$
<b>Treasury stock</b>			
Balance, beginning	\$(13,754)	\$(13,754)	\$(13,754)
Balance, ending	\$(13,754)	\$(13,754)	\$(13,754)
<b>Total stockholders    equity</b>	\$32,916	\$22,871	\$13,803
<b>Total comprehensive (loss):</b>			
Net loss	\$(15,094)	\$(13,667)	\$(9,575)
Other comprehensive (loss):			
Classification adjustment for gains included in net income, net of taxes	(4,939)	(1,787)	(552)
Change in unrealized (loss) gain on securities available for sale, net of taxes	(3,620)	(3,212)	68
Total comprehensive (loss)	\$(23,653)	\$(18,666)	\$(10,059)

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

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****CONSOLIDATED STATEMENTS OF CASH FLOWS  
For the Years Ended December 31, 2005, 2006, and 2007**

	<b>Years Ended December 31,</b>		
	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>		
<b>Operating activities</b>			
Net loss	\$(15,094)	\$(13,667)	\$(9,575)
Adjustments to reconcile net loss to net cash used by operating activities:			
(Gain) loss on derivatives	10,407	(182)	(2,967)
Gain on sale of securities available for sale	(10,125)	(4,289)	(2,549)
Depreciation and amortization	1,253	1,101	1,129
Minority interests in losses of consolidated subsidiary	(1,442)	(1,208)	(582)
Allowance for bad debts	(58)	(1)	
Loss on disposal of fixed assets	130	40	39
Deferred income taxes	1,617	1,890	2,518
Stock based compensation	1,003	2,406	1,558
Changes in operating assets and liabilities:			
Accounts receivable	832	(614)	244
Other receivables related parties		3	
Inventories	78	(158)	(157)
Prepaid expenses and other current assets	53	9	113
Accounts payable	362	277	(379)
Income taxes payable	25	25	23
Deferred revenue	(359)	746	(749)
Accrued liabilities related parties	2	(2)	
Accrued liabilities	(1,256)	918	(349)
Net cash used by operating activities	(12,572)	(12,706)	(11,683)
<b>Investing activities</b>			
Purchases of property, plant and equipment	(1,004)	(1,574)	(414)
Proceeds from sale of property, plant and equipment	10	2	12
Proceeds from sale of securities available for sale	1,969	6,249	5,130
Net cash provided by investing activities	975	4,677	4,728
<b>Financing activities</b>			
Gross proceeds from capital raise and warrants issued		10,900	
Costs of private placement	(45)		
Cost of capital raise		(744)	
Proceeds from stock option exercises	327	1,188	60

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Net cash provided by financing activities	282	11,344	60
(Decrease) increase in cash and cash equivalents	(11,315)	3,315	(6,895)
Cash and cash equivalents beginning of year	22,545	11,230	14,545
Cash and cash equivalents end of year	\$11,230	\$14,545	\$7,650

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

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**1. Nature of Operations**

**Description of Business**

Mechanical Technology, Incorporated, ( MTI or the Company ), a New York corporation, was incorporated in 1961. MTI operates in two segments, the New Energy segment which is conducted through MTI MicroFuel Cells Inc. ( MTI Micro ), a majority owned subsidiary, and the Test and Measurement Instrumentation segment, which is conducted through MTI Instruments, Inc. ( MTI Instruments ), a wholly owned subsidiary.

At its MTI Micro subsidiary, the Company's Mobion® cord-free power packs are being developed to replace current lithium ion and similar rechargeable battery systems in many handheld electronic devices for the military and consumer markets. Mobion® power packs are based on direct methanol fuel cell technology which has been recognized as enabling technology for advanced portable power sources by the scientific community and industry analysts. As the need for advancements in portable power increases, MTI Micro is developing Mobion® cord-free rechargeable power pack technology as a superior solution for powering the multi-billion dollar portable electronics market.

At its MTI Instruments subsidiary, the Company continues to be a worldwide supplier of precision non-contact physical measurement solutions, condition based monitoring systems, portable balancing equipment and semiconductor wafer inspection tools. MTI Instruments' products use a comprehensive array of technologies to solve complex real world applications in numerous industries including manufacturing, semiconductor, commercial/military aviation, automotive and data storage. The Company's products consist of electronic gauging instruments for position, displacement and vibration applications within the design, manufacturing/production, test and research markets; semiconductor products for wafer characterization of semi-insulating and semi-conducting wafers within the semiconductor industry; and engine balancing and vibration analysis systems for both military and commercial aircraft.

**Liquidity and Going Concern**

The Company has incurred significant losses as it continues to fund MTI Micro's direct methanol fuel cell product development and commercialization programs, and has an accumulated deficit of \$105,066 thousand and working capital of \$11,347 thousand at December 31, 2007. Because of these losses, limited current cash, cash equivalents and securities available for sale, negative cash flows and accumulated deficit, the report of the Company's independent registered public accounting firm for the year ended December 31, 2007 expressed substantial doubt about the Company's ability to continue as a going concern.

During 2007, the Company sold 1,452,770 shares of Plug Power Inc. ( Plug Power ) common stock with proceeds totaling \$5,130 thousand and gains totaling \$2,549 thousand. These proceeds reflect the Company's previously announced strategy to raise additional capital through the sale of Plug Power stock in order to fund MTI Micro operations.

Based on the Company's projected cash requirements for operations and capital expenditures for 2008 and its current cash, cash equivalents and marketable securities of \$12,142 thousand at December 31, 2007, management believes it

will have adequate resources to fund operations and capital expenditures for the next twelve months based on current cash and cash equivalents, current cash flow requirements, revenue and expense projections and the potential sale of securities available for sale at current market values.

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**1. Nature of Operations (Continued)**

However, the Company may need to do one or more of the following to raise additional resources, or reduce its cash requirements:

reduce its current expenditure run-rate;

sell additional shares of Plug Power;

obtain additional government or private funding of the Company's direct methanol fuel cell research, development, manufacturing readiness and commercialization;

sell operating divisions of the Company; or

secure additional equity financing.

There is no guarantee that such resources will be available to the Company on terms acceptable to it, or at all, or that such resources will be received in a timely manner, if at all, or that the Company will be able to reduce its expenditure run-rate without materially and adversely affecting its business.

**2. Accounting Policies**

**Principles of Consolidation**

The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries. All significant inter-company transactions are eliminated in consolidation.

Minority interest in subsidiaries consists of equity securities issued by a subsidiary of the Company. No gain or loss was recognized as a result of the issuance of these securities, and the Company owned a majority of the voting equity of the subsidiary both before and after the transactions. The Company reflects the impact of the equity securities issuances in its investment in subsidiary and additional paid-in-capital accounts for the dilution or anti-dilution of its ownership interest in the subsidiary.

**Use of Estimates**

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

**Fair Value of Financial Instruments**

The Company's financial instruments consist of cash and cash equivalents, marketable securities, accounts receivable, unbilled contract costs and fees, derivatives and accounts payable. The estimated fair values of these financial instruments approximate their carrying values at December 31, 2006 and 2007. The estimated fair values have been determined through information obtained from market sources, where available, or Black-Scholes Option Pricing model valuations.

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

**Accounting for Derivative Instruments**

The Company accounts for derivative instruments and embedded derivative instruments in accordance with Statement of Financial Accounting Standards ( SFAS ) No. 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended. The amended standard requires an entity to recognize all derivatives as either assets or liabilities in the statement of financial position and measure these instruments at fair value. Fair value is estimated using the Black-Scholes Option Pricing model. The Company also follows Emerging Issues Task Force ( EITF ) Issue No. 00-19, *Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock*, which requires freestanding contracts that are settled in a company's own stock, including common stock warrants, to be designated as an equity instrument, asset or a liability. Under the provisions of EITF Issue No. 00-19, a contract designated as an asset or a liability must be carried at fair value, with any changes in fair value recorded in the results of operations. A contract designated as an equity instrument can be included in equity, with no fair value adjustments are required.

The asset/liability derivatives are valued on a quarterly basis using the Black-Scholes Option Pricing model. Significant assumptions used in the valuation include exercise dates, closing market prices for the Company's common stock, volatility of the Company's common stock, and proxy risk-free interest rates. Gains (losses) on derivatives are included in Gain (loss) on derivatives in the Consolidated Statement of Operations.

**Accounts Receivable and Allowance for Doubtful Accounts**

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. An allowance for doubtful accounts, if necessary, represents the Company's best estimate of the amount of probable credit losses in its existing accounts receivable. The Company determines the allowance based on historical write-off experience and current exposures identified. The Company reviews its allowance for doubtful accounts monthly. Past due balances over 90 days and over a specified amount are reviewed individually for collectability. All other balances are reviewed on a pooled basis by type of receivable. Account balances are charged off against the allowance when the Company believes it is probable the receivable will not be recovered. The Company does not have any off-balance-sheet credit exposure related to its customers.

**Inventories**

Inventories are valued at the lower of cost (first-in, first-out) or market. The Company provides estimated inventory allowances for excess, slow moving and obsolete inventory as well as inventory whose carrying value is in excess of net realizable value.

**Property, Plant, and Equipment**

Property, plant and equipment are stated at cost and depreciated using primarily the straight-line method over their estimated useful lives:

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Leasehold improvements	Lesser of the life of the lease or the useful life of the improvement
Computers and related software	3 to 5 years
Machinery and equipment	3 to 10 years
Office furniture, equipment and fixtures	2 to 10 years

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

Significant additions or improvements extending assets' useful lives are capitalized; normal maintenance and repair costs are expensed as incurred. The costs of fully depreciated assets remaining in use are included in the respective asset and accumulated depreciation accounts. When items are sold or retired, related gains or losses are included in net (loss) income.

**Income Taxes**

The Company accounts for taxes in accordance with SFAS No. 109, *Accounting for Income Taxes* ( SFAS No. 109 ), which requires the use of the asset and liability method of accounting for income taxes. Under the asset and liability method, deferred income taxes are recognized for the tax consequences of temporary differences by applying enacted statutory tax rates applicable for future years to differences between financial statement and tax bases of existing assets and liabilities. Under SFAS No. 109, the effect of tax rate changes on deferred taxes is recognized in the income tax provision in the period that includes the enactment date. The provision for taxes is reduced by investment and other tax credits in the years such credits become available. A valuation allowance is recorded to reduce the carrying amounts of deferred tax assets unless it is more likely than not those assets will be realized.

Effective January 1, 2007, the Company adopted the provisions of FASB Interpretation (FIN) No. 48, *Accounting for Uncertainty in Income Taxes - an Interpretation of FASB Statement No. 109*. FIN 48 contains a two-step approach to recognizing and measuring uncertain tax positions (tax contingencies) accounted for in accordance with SFAS No. 109. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more than 50% likely of being realized upon ultimate settlement. The Company considers many factors when evaluating and estimating its tax positions and tax benefits, which may require periodic adjustments and which may not accurately forecast actual outcomes.

**Revenue Recognition**

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

**Product Revenue**

Product revenue is recognized when there is persuasive evidence of an arrangement, the collection of a fixed fee is probable or determinable, delivery of the product to the customer or distributor has occurred, at which time title generally is passed to the customer or distributor, all of which generally occur upon shipment of the product. If the product requires installation to be performed by the Company, all revenue related to the product is deferred and recognized upon the completion of the installation. If the product requires specific customer acceptance, revenue is deferred until customer acceptance occurs or the acceptance provisions lapse, unless the Company can objectively and

reliably demonstrate that the criteria specified in the acceptance provisions are satisfied.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2. Accounting Policies (Continued)**

MTI Instruments currently has distributor agreements in place for the international sale of general instrument and semiconductor products in certain global regions. Such agreements grant a distributor the right of first refusal to act as distributor for such products in the distributor's territory. In return, the distributor agrees to not market other products which are considered by MTI Instruments to be in direct competition with MTI Instruments' products. The distributor is allowed to purchase MTI Instruments' equipment at a price which is discounted off the published domestic/international list prices. Such list prices can be adjusted by MTI Instruments during the term of the distributor agreement, but MTI Instruments must provide advance notice at least 90 days before the price adjustment goes into effect. Generally, payment terms with the distributor are standard net 30 days; however, on occasion, extended payment terms have been granted. Title and risk of loss of the product passes to the distributor upon delivery to the independent carrier (standard free-on-board factory), and the distributor is responsible for any required training and/or service with the end-user. The sale (and subsequent payment) between MTI Instruments and the distributor is not contingent upon the successful resale of the product by the distributor. Distributor sales are covered by MTI Instruments' standard one-year warranty and there are no special return policies for distributors.

Some of MTI Instruments' direct sales, particularly sales of semi-automatic and fully-automated semiconductor metrology equipment, or rack-mounted vibration systems, involve on-site customer acceptance and/or installation. In those instances, revenue recognition does not take place at time of shipment. Instead, MTI Instruments recognizes the sale after the unit is installed and/or an on-site acceptance is given by the customer. Agreed-upon acceptance terms and conditions, if any, are negotiated at the time of purchase.

***Funded Research and Development Revenue***

The Company performs funded research and development for government agencies under both cost reimbursement and fixed-price contracts. Cost reimbursement contracts provide for the reimbursement of allowable costs. On fixed-price contracts, revenue is generally recognized on the percentage of completion method based upon the proportion of costs incurred to the total estimated costs for the contract. Revenue from reimbursement contracts is recognized as the services are performed. In each type of contract, the Company generally receives periodic progress payments or payments upon reaching interim milestones. When the current estimates of total contract revenue for commercial development contracts indicate a loss, a provision for the entire loss on the contract is recorded. Any losses incurred in performing funded research and development projects are recognized as research and development expense as incurred. When government agencies are providing funding they do not expect the government to be the only significant end user of the resulting products. These contracts do not require delivery of products that meet defined performance specifications, but are best efforts arrangements to achieve overall research and development objectives. Included in accounts receivable are billed and unbilled work-in-progress on contracts. Billings in excess of contract revenues earned are recorded as deferred revenue. While the Company's accounting for government contract costs is subject to audit by the sponsoring entity, in the opinion of management, no material adjustments are expected as a result of such audits. Adjustments are recognized in the period made.

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2. Accounting Policies (Continued)*****Commercial Research and Prototype Agreement Income***

The Company also applies the guidance in SAB No. 104 in the evaluation of commercially funded fuel cell research and prototype agreements in order to determine when to properly recognize income. Payments received in connection with commercial research and prototype agreements are deferred and recognized on a straight-line basis over the term of the agreement for service-related payments, and for milestone and prototype delivery payments, if and when achieved, revenue is deferred and recognized on a straight-line basis over the remaining term of the agreement. Under this policy, when revenue qualifies for recognition it will be recorded in the Consolidated Statements of Operations in the line Funded research and development revenue. The costs associated with research and prototype-producing activities are expensed as incurred. Expenses in an amount equal to revenues recognized are reclassified from

Unfunded research and product development to Funded research and product development in the Consolidated Statements of Operations.

Information regarding MTI Micro's government and commercial funded research and development contracts is as follows:

<b>Contract Name</b>	<b>Expiration (1)</b>
\$3,000 thousand DOE (2)	09/30/08
\$1,250 thousand NYSERDA (3)	06/30/06
\$1,000 thousand Samsung (4)	07/31/07
\$418 thousand SAFT (5)	12/31/06
\$250 thousand ARL	09/30/05
\$210 thousand NIST (6)	06/30/05
\$150 thousand Harris (7)	06/25/04
\$70 thousand Marine Corps	03/31/05
\$15 thousand NCMS (8)	06/30/07

(1) Dates represent expiration of contract, not date of final billing.

(2) The DOE contract is a cost share contract. DOE funding for this contract was suspended during January 2006 and reinstated during May 2007. During 2007, the Company received notifications from the DOE of funding releases totaling \$1.0 million and also received an extension of the termination date for the contract from July 31, 2007 to September 30, 2008.

(3) The total contract value for this cost shared contract is \$1.3 million consisting of four Phases: Phase I for \$500,000 was from March 12, 2002 through September 30, 2003; Phase II for \$200,000 was from October 28, 2003 through October 31, 2004; Phase III for \$348,000 was from August 23, 2004 through August 31, 2005; and Phase IV for \$202,000 which commenced on December 14, 2004 and expired on June 30, 2006. Phases I, II, and III have been completed, while Phase IV expired before it was completed.



- (4) The Samsung contract is a research and prototype contract. This contract included one up-front payment of \$750,000 and two milestone payments of \$125,000 each for the delivery of prototypes. The contract was amended on October 22, 2007 as MTI Micro agreed to issue a credit in the amount of the last invoice in recognition of the Company's continuing collaboration with Samsung. Therefore, revenue under this contract totaled \$875,000.
- (5) The SAFT contract is a fixed price contract. This is a subcontract with SAFT under the U.S. Army CECOM contract. The purchase order received in connection with this subcontract was revised

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2. Accounting Policies (Continued)**

on November 14, 2006 eliminating one milestone. As a result, the contract value was reduced from \$470,000 to \$418,000 and the expiration date was extended from September 30, 2006 to December 31, 2006.

- (6) Represents a fixed price subcontract with CSMP under NIST and includes the original contract for \$200,000 and a contract amendment for \$10,000.
- (7) Represents a fixed price contract that includes the original contract for \$200,000, an amendment for \$50,000, and a 2005 amendment reducing the contract by \$100,000.
- (8) This contract was a cost plus catalyst research contract with the National Center for Manufacturing Sciences ( NCMS ).

The Company's cost-shared contracts require that MTI Micro conduct research, deliver direct methanol fuel cell prototypes, and other deliverables pursuant to predefined work plans and schedules. For cost-shared contracts spanning multiple years, the following table summarizes as of December 31, 2007 the total expenditures incurred or expected to be incurred by MTI Micro along with the related funded research and development revenue received or expected to be received:

<b>Contract</b>	<b>Total Contract Value</b>	
	<b>Funded Expense</b>	<b>Funded Revenue</b>
	<b>(dollars in thousands)</b>	
DOE	\$6,144	\$3,000
NYSERDA	2,702	1,250

MTI Micro retains ownership of the intellectual property ( IP ) generated by MTI Micro under each of its federal government contract and under the contract with Samsung. Each federal government agency retains a government use license and march-in rights if MTI Micro fails to commercialize technology generated under the contract. In addition, under the New York State Energy Research and Development Authority ( NYSERDA ) contract, MTI Micro has the right to elect to retain any invention made under the NYSERDA contract within six months of invention. NYSERDA also retains rights to a government use license for New York State and its political subdivisions for any inventions made under the contract. Additionally, MTI Micro agreed to pay NYSERDA a royalty of 5.0% of the sales price of any product sold incorporating IP developed pursuant to the NYSERDA contract. If the product is manufactured by a New York State manufacturer, this royalty is reduced to 1.5%. Total royalties are subject to a cap equal to two times the total contract funds paid by NYSERDA to MTI Micro, and may potentially be reduced to reflect any New York State jobs created by MTI Micro.

**Cost of Product Revenue**

Cost of product revenue includes material, labor and overhead. Costs incurred in connection with funded research and development arrangements are included in funded research and product development expenses.

**Deferred Revenue**

Deferred revenue consists of payments received from customers in advance of services performed, completed installation or customer acceptance.

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

**Warranty**

The Company records a warranty reserve at the time product revenue is recorded based on a historical rate. The reserve is reviewed during the year and is adjusted, if appropriate, to reflect new product offerings or changes in experience. Actual warranty claims are tracked by product line.

**Accounting for Goodwill and Other Intangible Assets**

Intangible assets include patents and trade names. Goodwill and other intangible assets are accounted for in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*. Intangible assets with finite useful lives are amortized over those periods. Indefinite life intangible assets are tested for impairment annually, and will be tested for impairment between annual tests if an event occurs or circumstances change that would indicate that the carrying amount may be impaired. Definite life assets are tested for impairment whenever events or circumstances indicate that a carrying amount of an asset may not be recoverable. An impairment loss would be recognized when the carrying amount of an asset exceeds the estimated undiscounted cash flows used in determining the fair value of the asset. The amount of the impairment loss to be recorded is calculated by the excess of the assets carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis. Costs related to internally-developed intangible assets are expensed as incurred.

**Accounting for Impairment or Disposal of Long-Lived Assets**

The Company accounts for impairment or disposal of long-lived assets in accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*. This Statement addresses financial accounting and reporting for the impairment or disposal of long-lived assets and specifies how impairment will be measured and how impaired assets will be classified in the consolidated financial statements. On a quarterly basis, the Company analyzes the status of its long-lived assets at each subsidiary for potential impairment. As of December 31, 2007, the Company does not believe that any of its long-lived assets have suffered any type of impairment that would require an adjustment to that asset's recorded value.

**Cash and Cash Equivalents**

Cash and cash equivalents consist of cash and highly liquid short-term investments with original maturities of less than three months.

**Securities Available for Sale**

Management determines the appropriate classification of its investments in marketable securities at the time of purchase and reevaluates such determinations at each balance sheet date. Marketable securities for which the Company does not have the intent or ability to hold to maturity are classified as available for sale. Securities available for sale are carried at fair value, with the unrealized gains and losses, net of income taxes, reported as a separate component of stockholders' equity. The Company has had no investments that qualify as trading or held to maturity. Realized gains and losses are included in the caption "Gain (loss) on sale of securities available for sale" in the

Consolidated Statements of Operations. The cost of securities sold is based on the specific identification method.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2. Accounting Policies (Continued)****Net (Loss) Income per Common Share**

The Company reports net (loss) income per basic and diluted common share in accordance with SFAS No. 128, *Earnings Per Share*, which establishes standards for computing and presenting (loss) income per share. Basic earnings (loss) per common share are computed by dividing net (loss) income by the weighted average number of common shares outstanding during the reporting period. Diluted (loss) income per share reflects the potential dilution, if any, computed by dividing net (loss) income by the combination of dilutive common share equivalents, comprised of shares issuable under outstanding investment rights, warrants and the Company's share-based compensation plans, and the weighted average number of common shares outstanding during the reporting period. Dilutive common share equivalents include the dilutive effect of in-the-money stock options, which are calculated based on the average share price for each period using the treasury stock method. Under the treasury stock method, the exercise price of a stock option, the amount of compensation cost, if any, for future service that the Company has not yet recognized, and the amount of windfall tax benefits that would be recorded in additional paid-in capital, if any, when the stock option is exercised are assumed to be used to repurchase shares in the current period.

**Share-Based Payments**

The Company has three share-based employee compensation plans and MTI Micro has one share-based employee compensation plan, all of which are described more fully in Note 13, Stock Based Compensation.

In December 2004, the Financial Accounting Standards Board ( FASB ) revised SFAS No. 123 ( FAS 123R ), *Share-Based Payment*, which establishes accounting for share-based awards exchanged for employee services and requires companies to expense the estimated fair value of these awards over the requisite employee service period. The accounting provisions of FAS 123R were adopted by the Company as of January 1, 2006. In March 2005, the SEC issued SAB 107, *Share-Based Payment* ( SAB 107 ) to assist filers by simplifying some of the implementation challenges of FAS 123R. In particular, SAB 107 provides supplemental implementation guidance on FAS 123R, including guidance on valuation methods, classification of compensation expense, inventory capitalization of share-based compensation cost, income tax effects, disclosures in Management's Discussion and Analysis and several other issues. The Company applied the principles of SAB 107 in conjunction with its adoption of FAS 123R.

Under FAS 123R, share-based compensation cost is measured at the grant date, based on the estimated fair value of the award, and is recognized as expense over the employee's requisite service period. The Company has awards with performance conditions, but no awards with market conditions. The Company adopted the provisions of FAS 123R on January 1, 2006, the first day of the Company's fiscal year, using the modified prospective application, which provided for certain changes to the method for valuing share-based compensation. Under the modified prospective application, prior periods were not revised for comparative purposes. The valuation provisions of FAS 123R apply to new awards and to awards that are outstanding on the effective date and subsequently modified or cancelled. Estimated compensation expense for awards outstanding at the effective date will be recognized over the remaining service period using the compensation cost calculated for pro forma disclosure purposes under the original FASB Statement No. 123, *Accounting for Stock-Based Compensation* ( FAS 123 ).

In November 2005, the FASB issued Staff Position No. FAS 123(R)-3, *Transition Election Related to Accounting for Tax Effects of Share-Based Payment Awards*. The Company elected to adopt the

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

alternative transition method provided in this FASB Staff Position for calculating the tax effects of share-based compensation pursuant to FAS 123R. This method included a simplified method to establish the beginning balance of the additional paid-in capital pool related to the tax effects of employee share-based compensation, which is available to absorb tax deficiencies recognized subsequent to the adoption of FAS 123R.

Prior to the adoption of FAS 123R, the Company accounted for stock-based awards to employees and directors using the intrinsic value method in accordance with Accounting Principles Board ( APB ) Opinion No. 25, *Accounting for Stock Issued to Employees*, and related Interpretations as permitted under FAS 123. Under the intrinsic value method, stock-based compensation was typically only recognized by the Company due to modifications in option provisions, since the exercise price of the Company's and MTI Micro's common stock options granted to employees and directors generally equaled the fair market value of the underlying stock at the date of grant.

Stock-based compensation represents the cost related to stock-based awards granted to employees and directors. The Company measures stock-based compensation cost at grant date based on the estimated fair value of the award, and recognizes the cost as expense on a straight-line basis (net of estimated forfeitures) over the option's requisite service period. The Company estimates the fair value of stock-based awards using a Black Scholes valuation model. Stock-based compensation expense is recorded in Selling, general and administrative expenses and Unfunded research and product development expenses in the Consolidated Statements of Operations based on the employees' respective functions.

The Company records deferred tax assets for awards that potentially can result in deductions on the Company's income tax returns based on the amount of compensation cost recognized and the Company's statutory tax rate. Differences between the deferred tax assets recognized for financial reporting purposes and the actual tax deduction reported on the Company's income tax return are recorded in Additional Paid-In Capital (if the tax deduction exceeds the deferred tax asset) or in the Consolidated Statement of Operations (if the deferred tax asset exceeds the tax deduction and no historical pool of windfall tax benefits exists). Since the adoption of FAS 123R, no tax benefits have been recognized related to share-based compensation since the Company has incurred net operating losses and has established a full valuation allowance to offset all potential tax benefits associated with these deferred tax assets. The Company continues to record the fair market value of stock options and warrants granted to non-employees and non-directors in exchange for services in accordance with EITF Issue No. 96-18, *Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services*, in the Consolidated Statements of Operations.

**Advertising**

The costs of advertising are expensed as incurred. Advertising expense was approximately \$45, \$110, and \$102 thousand for the years ended December 31, 2005, 2006, and 2007, respectively.

**Concentration of Credit Risk**

Financial instruments that subject the Company to concentrations of credit risk principally consist of cash equivalents, marketable securities, trade accounts receivable and unbilled contract costs.





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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

The Company's trade accounts receivable and unbilled contract costs and fees are primarily from sales to commercial customers, the U.S. government and state agencies. The Company does not require collateral and has not historically experienced significant credit losses related to receivables or unbilled contract costs and fees from individual customers or groups of customers in any particular industry or geographic area.

The Company deposits its cash and invests in marketable securities primarily through commercial banks and investment companies. Credit exposure to any one entity is limited by Company policy.

**Research and Development Costs**

The Company expenses research and development costs as incurred.

**Comprehensive (Loss) Income**

Comprehensive (loss) income includes net (loss) income, as well as changes in stockholders' equity, other than those resulting from investments by stockholders (i.e., issuance or repurchase of common shares and dividends).

**Effect of Recent Accounting Pronouncements**

In December 2007, the FASB issued SFAS No. 141R, *Business Combinations* a replacement of FASB Statement No. 141 ( SFAS No. 141R ), which significantly changes the principles and requirements for how the acquirer of a business recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree. The statement also provides guidance for recognizing and measuring the goodwill acquired in the business combination and determines what information to disclose to enable users of the financial statements to evaluate the nature and financial effects of the business combination. SFAS No. 141R is effective prospectively, except for certain retrospective adjustments to deferred tax balances, for fiscal years beginning after December 15, 2008. This statement will be effective for the Company for fiscal year 2009. The Company has not yet determined the impact, if any, of this statement on its Consolidated Financial Statements.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements an amendments of ARB No. 51* ( SFAS No. 160 ). SFAS No. 160 requires that accounting and reporting for minority interests will be recharacterized as noncontrolling interests and classified as a component of equity. SFAS No. 160 also establishes reporting requirements that provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. SFAS No. 160 applies to all entities that prepare consolidated financial statements, except not-for-profit organizations, but will affect only those entities that have an outstanding noncontrolling interest in one or more subsidiaries or that deconsolidate a subsidiary. This statement is effective as of the beginning of an entity's first fiscal year beginning after December 15, 2008. This statement will be effective for the Company for its

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**2. Accounting Policies (Continued)**

fiscal year beginning January 1, 2009. Based upon the December 31, 2007 balance sheet, the impact of adopting SFAS No. 160 would be to reclassify from \$143 thousand minority interests in consolidated subsidiaries to stockholders' equity as a separate component of stockholders' equity.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities* ( SFAS No. 159 ). SFAS No. 159 provides companies with an option to report selected financial assets and financial liabilities at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings at each subsequent reporting date. SFAS No. 159 is effective beginning January 1, 2008. The adoption of the provisions of SFAS No. 159 is not expected to have a material effect on the Company's Consolidated Financial Statements.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* ( SFAS No. 157 ). SFAS No. 157 establishes a common definition for fair value to be applied to United States generally accepted accounting principles guidance requiring use of fair value, establishes a framework for measuring fair value, and expands disclosure about such fair value measurements. This Statement is effective for fiscal years beginning after November 15, 2007. This statement will be effective for the Company for its fiscal year beginning January 1, 2008. The adoption of the provisions of SFAS No. 157 is not expected to have a material effect on the Company's Consolidated Financial Statements.

In September 2006, the FASB issued SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans, an amendment of FASB Statements No. 87, 88, 106, and 132(R)* ( SFAS No. 158 ). Among other items, SFAS No. 158 requires recognition of the over-funded or under-funded status of an entity's defined benefit postretirement plan as an asset or liability in the financial statements, requires the measurement of defined benefit postretirement plan assets and obligations as of the end of the employer's fiscal year, and requires recognition of the funded status of defined benefit postretirement plans in other comprehensive income. This Statement is effective for fiscal years ending after December 15, 2006. Since the Company does not maintain any defined benefit or other postretirement plans, the adoption of this Statement for fiscal year 2007 did not have a material effect on the Company's Consolidated Financial Statements.

In March 2006, the FASB issued SFAS No. 156, *Accounting for Servicing of Financial Assets* — an amendment of FASB Statement No. 140 ( SFAS No. 156 ) that provides guidance on accounting for separately recognized servicing assets and servicing liabilities. In accordance with the provisions of SFAS No. 156, separately recognized servicing assets and servicing liabilities must be initially measured at fair value, if practicable. Subsequent to initial recognition, the Company may use either the amortization method or the fair value measurement method to account for servicing assets and servicing liabilities within the scope of this Statement. The adoption of this Statement by the Company in fiscal year 2007 did not have a material effect on the Company's Consolidated Financial Statements.

In February 2006, the FASB issued SFAS No. 155, *Accounting for Certain Hybrid Financial Instruments* — an amendment of FASB Statements No. 133 and 140 ( SFAS No. 155 ), to permit fair value remeasurement for any hybrid financial instrument that contains an embedded derivative that otherwise would require bifurcation in accordance with the provisions of SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. The adoption of this Statement by the Company in fiscal year 2007 did not have a material effect on the Company's Consolidated Financial

Statements.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****3. Accounts Receivable and Allowance for Doubtful Accounts**

Receivables consist of the following at December 31:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
U.S. and State Government:		
Amount billable	\$194	\$0
Amount billed	9	79
 Total U.S. and State Government	 203	 79
Commercial	1,410	1,290
 Total	 \$1,613	 \$1,369

As of December 31, 2006 and 2007, the Company concluded that a reserve for doubtful trade accounts receivable was not considered necessary.

**4. Issuance of Stock by Subsidiary**

MTI Micro was formed on March 26, 2001 and as of December 31, 2007, the Company owns approximately 96% of MTI Micro's outstanding common stock.

On December 31, 2005, as a result of an option exchange between the Company and MTI Micro, MTI Micro issued 105,701 shares of its common stock at a price of \$2.22 per share to the Company as compensation for minority stockholder benefit in connection with the transaction. Additionally, on December 31, 2005, MTI Micro issued 1,103,604 shares of its common stock at a price of \$2.22 per share to the Company in connection with the conversion of its \$2,450 thousand loan receivable to equity.

On December 31, 2006, MTI Micro issued 3,772,727 shares of its common stock at a price of \$1.10 per share to the Company in connection with the conversion of its \$4,150 thousand loan receivable to equity; on December 1, 2006, MTI Micro issued 739 shares of its common stock at a price of \$1.61 per share to the Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; on November 11, 2006, MTI Micro issued 1,960,506 shares of its common stock at a price of \$1.06 per share to the Company in connection with the transfer of \$2,070 thousand worth of Plug Power common stock to MTI Micro; on September 30, 2006, MTI Micro issued 2,574,627 shares of its common stock at a price of \$1.34 per share to the Company in connection with the conversion of its \$3,450 thousand loan receivable to equity; on September 1, 2006, MTI Micro issued 56,055 shares of its common stock at a price of \$3.10 per share to the Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; on May 27, 2006, MTI Micro issued 50,158 shares of its common stock at a price of \$2.32 to the

Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; between April 11 and April 18, 2006, MTI Micro issued 1,662,400 shares of its common stock at a price of \$2.50 per share to the Company in connection with the transfer of \$4,156 thousand worth of Plug Power common stock to MTI Micro; and on March 31, 2006, MTI Micro issued 1,400,000 shares of its common stock at a price of \$2.50 per share to the Company in connection with the conversion of its \$3,500 thousand loan receivable to equity.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****4. Issuance of Stock by Subsidiary (Continued)**

Between October 10 and October 25, 2007, MTI Micro issued 4,050,488 shares of its common stock at a price between \$0.37 and \$0.41 per share to the Company in connection with the transfer of \$2,808 thousand worth of Plug Power common stock to MTI Micro; on November 16, 2007, MTI Micro issued 1,630,339 shares of its common stock at a price of \$0.33 per share to the Company in connection with the transfer of \$1,113 thousand worth of Plug Power common stock to MTI Micro; on September 1, 2007, MTI Micro issued 35,625 shares of its common stock at a price of \$0.62 per share to the Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; on September 30, 2007, MTI Micro issued 2,740,715 shares of its common stock at a price of \$0.69 per share to the Company in connection with the conversion of its \$1,900 thousand loan receivable to equity; on June 1, 2007, MTI Micro issued 8,653 shares of its common stock at a price of \$0.94 per share to the Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; on June 30, 2007, MTI Micro issued 6,083,334 shares of its common stock at a price of \$0.60 per share to the Company in connection with the conversion of its \$3,650 thousand loan receivable to equity; on March 1, 2007, MTI Micro issued 682 shares of its common stock at a price of \$0.98 per share to the Company as compensation for the minority stockholder benefit in connection with the Company issuing Company options to MTI Micro employees; and on March 31, 2007, MTI Micro issued 4,243,721 shares of its common stock at a price of \$0.84 per share to the Company in connection with the conversion of its \$3,550 thousand loan receivable to equity.

The decrease in the Company's paid-in-capital of \$301, \$1,284, and \$521 thousand in 2005, 2006, and 2007, respectively, represents the changes in the Company's equity investment in MTI Micro, which resulted from the anti-dilutive impact of the Company's investments into and third-party stock transactions in MTI Micro stock.

**5. Inventories**

Inventories, net consist of the following at December 31:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Finished goods	\$279	\$467
Work in process	238	168
Raw materials, net	699	738
	<b>\$1,216</b>	<b>\$1,373</b>

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****6. Property, Plant and Equipment**

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

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Leasehold improvements	\$1,213	\$1,213
Computers and related software	2,186	2,241
Machinery and equipment	3,625	3,895
Office furniture and fixtures	303	303
	7,327	7,652
Less accumulated depreciation	4,401	5,493
	<b>\$2,926</b>	<b>\$2,159</b>

Depreciation expense was \$1,253, \$1,101, and \$1,129 thousand for 2005, 2006, and 2007, respectively. Repairs and maintenance expense was \$105, \$75, and \$82 thousand for 2005, 2006, and 2007, respectively.

**7. Securities Available for Sale**

Securities available for sale are classified as current assets and accumulated net unrealized gains (losses) are charged to other comprehensive income (loss).

The principal components of the Company's securities available for sale consist of the following at:

<b>Security</b>	<b>Book</b>	<b>Unrealized</b>	<b>Recorded</b>	<b>Quoted</b>	<b>Ownership</b>	<b>Shares</b>
	<b>Basis</b>	<b>Gain</b>	<b>Fair</b>	<b>Market</b>		
	<b>(dollars in thousands, except stock price and share data)</b>					
December 31, 2006						
Plug Power	\$4,602	\$5,473	\$10,075	\$3.89	2.99%	2,589,936
December 31, 2007						
Plug Power	\$2,021	\$2,471	\$4,492	\$3.95	1.29%	1,137,166



The book basis roll forward of Plug Power securities as of December 31 is as follows:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Securities available for sale, beginning of period	\$6,562	\$10,075
Sale of shares	(1,960)	(8,054)
Securities book basis	4,602	2,021
Unrealized gain on securities available for sale	5,473	2,471
Securities available for sale, end of period	\$10,075	\$4,492

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****7. Securities Available for Sale (Continued)**

Accumulated unrealized gains related to securities available for sale for each of the years ended December 31 are as follows:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Accumulated unrealized gains	\$5,473	\$2,471
Accumulated deferred tax expense on unrealized gains	(4,489)	(1,971)
Accumulated net unrealized gains	\$984	\$500

Realized gains related to Plug Power securities available for sale sold during each of the years ended December 31 are as follows:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands, except shares)</b>	
Shares sold	1,103,500	1,452,770
Proceeds	\$6,249	\$5,130
Total net gain on sales	\$4,289	\$2,549

The Company regularly reviews its securities available for sale to determine if any declines in value of those securities available for sale are other than temporary. The Company assesses whether declines in the value of its securities in publicly traded companies, measured by comparison of the current market price of the securities to the carrying value of the Company's securities, are considered to be other than temporary based on factors that include the length of time carrying value exceeds fair market value, the Company's assessment of the financial condition and the near term prospects of the companies and the Company's intent with respect to the securities.

**8. Income Taxes**

Income tax (expense) benefit for each of the years ended December 31 consists of the following:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>		
Operations before minority interest			
Federal	\$	\$	\$
State	54	(5)	(30)

Deferred	(1,641)	(1,890)	(2,518)
Total	\$(1,587)	\$(1,895)	\$(2,548)

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****8. Income Taxes (Continued)**

Income tax benefit (expense) allocated directly to stockholders' equity for each of the years ended December 31 is as follows:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>		
Change in unrealized (gain) loss on securities available for sale:			
Deferred tax benefit (expense)	\$1,448	\$1,285	\$(27)
Valuation allowance (expense)	(1,448)	(1,285)	27
Tax effect of reclassification adjustment for gains included in net income (loss)	3,293	1,913	2,518
Expenses for employee stock options recognized differently for financial reporting/tax purposes:			
Federal tax benefit	87		
Valuation allowance (expense)	(87)		
	<b>\$3,293</b>	<b>\$1,913</b>	<b>\$2,518</b>

The significant components of deferred income tax (expense) benefit from operations before minority interest for each of the years ended December 31 consists of the following:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>		
Deferred tax benefit (expense)	\$238	\$1,158	\$1,181
Net operating loss carry forward	5,673	3,983	3,069
Valuation allowance	(4,259)	(5,118)	(4,250)
Disproportionate tax effect of reclassification adjustment for gains included in net income (loss)	(3,293)	(1,913)	(2,518)
	<b>\$(1,641)</b>	<b>\$(1,890)</b>	<b>\$(2,518)</b>

The Company's effective income tax rate from operations before minority interest differed from the Federal statutory rate for each of the years ended December 31 is as follows:

<b>2005</b>	<b>2006</b>	<b>2007</b>
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Federal statutory tax rate	34 %	34 %	34 %
State taxes, net of federal tax effect	3	3	1
Change in valuation allowance	(29)	(37)	(56)
Disproportionate tax effect of reclassification adjustment for gains included in net income (loss)	(19)	(13)	(28)
Permanent tax difference on derivative valuation			16
Other, net		(2)	
Tax Rate	(11)%	(15)%	(33)%

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Table of Contents**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****8. Income Taxes (Continued)**

Pre-tax loss before minority interests was \$14,949, \$12,980, and \$7,609 thousand for 2005, 2006, and 2007, respectively. The deferred tax assets and liabilities as of December 31 consist of the following tax effects relating to temporary differences and carry forwards:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Current deferred tax (liabilities) assets:		
Inventory valuation	\$60	\$73
Inventory capitalization	14	13
Securities available for sale	(3,039)	(1,362)
Vacation pay	161	147
Warranty and other sale obligations	8	29
Other reserves and accruals	58	56
	(2,738)	(1,044)
Valuation allowance	(256)	(300)
Net current deferred tax liabilities	\$(2,994)	\$(1,344)
Noncurrent deferred tax assets (liabilities):		
Net operating loss	\$19,661	\$21,037
Property, plant and equipment	(239)	27
Stock options	1,379	1,800
Other	239	
Research and development tax credit	459	459
Alternative minimum tax credit	54	54
	21,553	23,377
Valuation allowance	(18,559)	(22,033)
Non-current net deferred tax assets	\$2,994	\$1,344

The valuation allowance at December 31, 2006 and 2007 was \$18,815 and \$22,333 thousand, respectively. The net change in the valuation allowance was \$7,892 thousand in 2006 and \$3,518 thousand in 2007. The valuation allowance at December 31, 2006 and 2007 reflects the estimate that it is more likely than not that the net deferred tax assets may not be realized. In addition to changes in valuation allowance of \$4,250 thousand reflected in continuing operations, the valuation allowance was increased by \$1,201 thousand reflected in stockholders' equity and decreased by \$1,933 thousand as a result of the adoption of FIN 48.

At December 31, 2007, the Company has unused Federal net operating loss carry forwards of approximately \$53,918 thousand. Of these carry forwards, \$1,325 thousand represents windfall tax benefits from stock option transactions, the tax effect of which are not included in the Company's net deferred tax assets. The Federal net operating loss carry forwards, if unused, will begin to expire in 2010. As of December 31, 2007, the Company has approximately \$459 thousand of research and development tax credit carry forwards, which begin to expire in 2018, and approximately \$54

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****8. Income Taxes (Continued)**

thousand of alternative minimum tax credit carry forwards, which have no expiration date. 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 Company adopted the provisions of FIN 48 on January 1, 2007, the first day of its 2007 fiscal year. As a result of the implementation of FIN 48, the Company recorded a \$106 thousand increase in the net liability for uncertain tax positions, which was recorded as an adjustment to the Company's opening balance of retained earnings on January 1, 2007. Additionally, the same tax position that triggered the Company's FIN 48 adoption charge caused the Company to reclassify \$80 thousand from current income taxes payable to non-current liabilities for uncertain tax positions.

A reconciliation of the beginning and ending amount of unrecognized tax benefits for 2007 is as follows:

	<b>(dollars in thousands)</b>
Balance as of January 1, 2007	\$2,024
Additions for tax positions related to the current year	
Additions for tax positions of prior years	20
Reductions for tax positions of prior years	
Settlements	
Balance as of December 31, 2007	\$2,044

In future periods, if \$1,836 thousand of these unrecognized benefits become supportable, the Company may not recognize a change in its effective rate as long as it remains in a full valuation allowance position, \$208 thousand of these unrecognized tax benefits would affect the Company's effective tax rate if recognized. Included in the balance of unrecognized tax benefits at January 1, 2007 is \$239 thousand related to tax positions for which it is reasonably possible that the total amounts could significantly change during the next twelve months. This amount represents unrecognized tax benefits comprising potential recognition for tax purposes of losses in a partnership in which the Company held a minority stake. In accordance with the Company's accounting policy, it recognizes interest and penalties related to uncertain tax positions as a component of tax expense. This policy did not change as a result of the adoption of FIN 48. As of January 1, 2007, accrued interest included in Uncertain Tax Position Liability totaled \$34 thousand. During the year ended December 31, 2007, the Company recognized \$15 thousand in potential interest expense on uncertain tax positions, and the Company's Consolidated Balance Sheet as of that date includes total interest of \$49 thousand associated with these positions.

The Company files income tax returns, including returns for its subsidiaries, with federal and state jurisdictions. The Company is no longer subject to IRS examination for its federal returns for any periods prior to 2003, although carryforward attributes that were generated prior to 2004 may still be adjusted upon examination by the IRS if they either have been or will be used in a future period. The Company has an ongoing tax examination by New York State for the years 2002 through 2004. The Company does not believe that the net outcome of this examination will have a



material impact on its financial statements.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****9. Accrued Liabilities**

Accrued liabilities consist of the following at December 31:

	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands)</b>	
Salaries, wages and related expenses	\$781	\$937
Acquisition and disposition costs	363	363
Legal and professional fees	311	230
Warranty and other sale obligations	19	72
Commissions	139	95
Other	857	424
	<b>\$2,470</b>	<b>\$2,121</b>

**10. Stockholders Equity****Common Shares**

Changes in common shares are as follows for the years ended December 31:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
Balance, beginning	38,650,949	38,965,937	46,084,678
Issuance of shares for stock option exercises	148,575	719,791	85,946
Issuance of shares for private placement shares	66,413		
Issuance of shares for restricted and unrestricted stock grants	100,000	76,080	55,000
Issuance of shares for capital raise		6,055,556	
Issuance of shares for anti-dilution penalty		267,314	
Forfeiture of restricted stock grants			(5,000)
Balance, ending	38,965,937	46,084,678	46,220,624

**Treasury Stock**

Changes in treasury stock are as follows for the years ended December 31:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
Balance, beginning	8,040,736	8,040,736	8,040,736
Balance, ending	8,040,736	8,040,736	8,040,736

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**10. Stockholders Equity (Continued)**

**Sale of Common Stock**

*Capital Raise:* On December 15, 2006, the Company entered into agreements with certain investors to sell 6,055,556 shares of common stock and warrants to purchase 3,027,778 shares of common stock for an aggregate purchase price of \$10,900 thousand. The common stock and warrants were sold in units, with each unit consisting of 100 shares of common stock and a warrant to purchase 50 shares of common stock, at an exercise price of \$2.27 per share. Each non-certificated unit was sold at a negotiated price of \$180.00. The shares of common stock and warrants are immediately separable and were issued separately (see Warrants Issued below). The common stock, the warrants and shares issuable upon exercise of the warrants are registered with the SEC on the Company's filed and effective registration statement.

In connection with the 2006 capital raise, in December 2006, the Company paid Rodman & Renshaw, LLC placement fees, recorded in equity against the proceeds of the capital raise, of \$570 thousand.

*Private Placement:* The Company entered into a financing transaction with Fletcher on January 29, 2004 and amended the terms of such transaction on May 4, 2004. Fletcher purchased 2,680,671 shares of the Company's common stock for \$18,000 thousand pursuant to such financing transaction 1,418,842 shares at \$7.048 per share and 1,261,829 shares at \$6.34 per share. In addition, Fletcher had the right to purchase an additional \$20,000 thousand of the Company's common stock, on one or more occasions, at a price of \$6.023 (adjusted from \$6.34) per share at any time prior to December 31, 2006. Fletcher had the right to receive Company shares without payment upon the occurrence of certain events, including but not limited to, failing to register for resale with the SEC shares purchased by Fletcher on the agreed upon time table, a restatement of the Company's financial statements, change of control of the Company and issuance of securities at a price below Fletcher's purchase price. The Company has filed registration statements covering all of the shares purchased by Fletcher.

The Company filed a registration statement on January 6, 2005 covering the resale of 1,261,829 shares of the Company's common stock purchased by Fletcher on December 22, 2004. The Company failed to meet its contractual obligation with Fletcher to have such registration statement declared effective by March 22, 2005 and therefore under the terms of the Fletcher agreement the Company was required to issue additional shares of common stock to Fletcher and the exercise price for the Fletcher additional investment rights has been reduced to \$6.023 per share. The Company was required to issue a number of shares of common stock that resulted in Fletcher having effectively made its December 2004 investment at a price per share that was lower than the actual price paid. The Company refers to this reduced exercise price as the deemed exercise price. More specifically, for each month during which the Company failed to satisfy the registration requirement, the deemed exercise price was reduced by \$0.317 per share. As a consequence, on April 20, 2005 the Company issued 66,413 shares of common stock to Fletcher without any additional payment required by Fletcher, representing a deemed exercise price for Fletcher's December 2004 investment of \$6.023 per share. In addition, since the Company was required to file a registration statement covering the resale of any such additional shares issued to Fletcher, the Company amended the registration statement initially filed in January 2005 to include the additional 66,413 shares of common stock. That registration statement, covering the resale of 1,328,242 shares of common stock, was declared effective by the SEC on April 21, 2005.

*Dilutive Issuances:* If, after December 31, 2004 and ending December 31, 2006, the Company issued any equity securities at a price below \$7.048 as it relates to the initial \$10,000 thousand investment and \$6.34 as it relates to any additional investments which have been made, the exercise

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****10. Stockholders Equity (Continued)**

price for the additional investment rights would have been adjusted to provide Fletcher weighted average anti-dilution protection and the Company would have had to issue to Fletcher a number of additional shares such that all prior investments would have been effectively made at such adjusted exercise price.

On December 7, 2006, Fletcher agreed to lower the dilutive issuance provision by 25% of the original calculation for the remainder of the provision's original term and in connection with the issuance of common stock in the Company's December 2006 capital raise, the Company issued Fletcher 267,314 of its common shares. Through a release dated January 5, 2007, between the Company and Fletcher, the Company is not required to register these shares with the SEC since these shares may be sold by Fletcher pursuant to Rule 144(k) under the Securities Act of 1933, as amended.

The Company does not presently have any outstanding agreements with Fletcher concerning additional investment rights or dilutive stock issuance.

**Warrants Issued**

On December 20, 2006, the Company issued warrants to investors to purchase 3,027,778 shares of the Company's common stock at an exercise price of \$2.27 per share. These warrants will be fair valued by the Company until expiration or exercise of the warrants. The warrants became exercisable on June 20, 2007 and expire on December 19, 2011.

**Reservation of Shares**

The Company has reserved common shares for future issuance as follows as of December 31, 2007:

Stock options outstanding	6,213,566
Stock options available for issuance	1,265,733
Warrants outstanding	3,027,778
Number of common shares reserved	10,507,077

**Completion of Option Exchange with MTI Micro Option Holders**

On December 30, 2005, the Company issued options to acquire 1,021,213 shares of MTI common stock, par value \$0.01 per share, to certain employees, officers and directors of MTI and MTI Micro who previously held MTI Micro options (the Optionees). The options have an exercise price per share of \$2.80 (the closing price of the Company's common stock on December 30, 2005). The Company issued the options pursuant to a November 28, 2005 stock option exchange offer. MTI Micro options outstanding for a purchase of a total of 2,392,947 shares of MTI Micro common stock, par value \$0.01 per share, were tendered by the Optionees and then cancelled by MTI Micro as a result of this exchange. Each option is exercisable for one share of MTI common stock. The exchange rate was one option for each two MTI Micro options, rounded down to the nearest whole option, or if an individual had an MTI

Micro option balance in excess of 150,000 options, then at a rate of one option for each four MTI Micro options in excess of 150,000 options. The exchange was accounted for in accordance with EITF 00-23 Issue 1, *Issues Related to the Accounting for Stock Compensation under APB Opinion No. 25 and FASB Interpretation No. 44* and no compensation expense was recorded.

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****11. Retirement Plan**

The Company maintains a voluntary savings and retirement plan under Internal Revenue Code Section 401(k) covering substantially all employees. Employees must complete six months of service and have attained the age of twenty-one prior to becoming eligible for participation in the plan. The Company plan allows eligible employees to contribute a percentage of their compensation on a pre-tax basis and the Company matches employee contributions dollar for dollar up to a discretionary amount, currently 4%, of the employee's salary, subject to annual tax deduction limitations. Company matching contributions vest at a rate of 25% annually for each year of service completed. Company matching contributions were \$272, \$269, and \$283 thousand for 2005, 2006, and 2007, respectively. The Company may also make additional discretionary contributions in amounts as determined by management and the Board of Directors. There were no additional discretionary contributions by the Company for the years 2005, 2006, or 2007.

**12. Earnings per Share**

The following table sets forth the reconciliation of the numerators and denominators of the basic and diluted per share computations for continuing operations for the years ended December 31:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
	<b>(dollars in thousands, except shares)</b>		
<u>Numerator:</u>			
Net loss	\$(15,094)	\$(13,667)	\$(9,575)
<u>Denominator:</u>			
Basic EPS:			
Common shares outstanding, beginning of period	30,610,213	30,925,201	38,043,942
Weighted average common shares issued during the period	127,395	700,267	72,887
Weighted average restricted shares forfeited during the period			(2,877)
Less Weighted average non-vested restricted stock		(3,123)	(5,575)
Denominator for basic earnings per common shares - Weighted average common shares	30,737,608	31,622,345	38,108,377
Diluted EPS:			
Common shares outstanding, beginning of period	30,610,213	30,925,201	38,043,942
Weighted average common shares issued during the period	127,395	700,267	72,887
Weighted average restricted shares forfeited during the period			(2,877)
Less Weighted average non-vested restricted stock due to anti-dilutive effect		(3,123)	(5,575)
Denominator for diluted earnings per common shares - Weighted average common shares	30,737,608	31,622,345	38,108,377



Not included in the computation of earnings per share-assuming dilution for the year ended December 31, 2005 were options to purchase 5,041,242 shares of the Company's common stock, additional investment rights to purchase approximately 3,320,604 shares of the Company's common stock, warrants to purchase 28,377 shares of the Company's common stock and options to purchase

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**

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

**12. Earnings per Share (Continued)**

78,461 shares of MTI Micro's common stock. These potentially dilutive items were excluded because the Company incurred a loss for this period and their inclusion would be anti-dilutive. The additional investment rights expired on December 31, 2006.

Not included in the computation of earnings per share-assuming dilution for the year ended December 31, 2006 were options to purchase 5,509,194 shares of the Company's common stock, 5,000 unvested restricted shares of the Company's common stock and options to purchase 33,668 shares of MTI Micro's common stock. These potentially dilutive items were excluded because the Company incurred a loss for this period and their inclusion would be anti-dilutive. The MTI options expire between January 4, 2007 and November 9, 2016, while the MTI Micro options expire between September 29, 2012 and September 18, 2015. The Company also has 3,027,778 warrants outstanding as of December 31, 2006; however, these were excluded in the computation earnings per share because they were not eligible to be exercised until June 20, 2007.

Not included in the computation of earnings per share-assuming dilution for the year ended December 31, 2007 were options to purchase 6,213,566 shares of the Company's common stock, warrants to purchase 3,027,778 shares of the Company's stock, 5,000 unvested restricted shares of the Company's common stock and options to purchase 22,668 shares of MTI Micro's common stock. These potentially dilutive items were excluded because the Company incurred a loss for this period and their inclusion would be anti-dilutive.

**13. Stock Based Compensation**

**MTI Option Plans**

Stock-based incentive awards are provided to employees and directors under the terms of the Company's 1996 Stock Incentive Plan ( 1996 Plan ), 1999 Employee Stock Incentive Plan ( 1999 Plan ) and 2006 Equity Incentive Plan ( 2006 Plan ), the (collectively, the Plans ). Awards under the Plans have generally included at-the-money options and restricted stock grants. MTI Micro also issued awards under the MTI MicroFuel Cells Inc. 2001 Employee, Director and Consultant Stock Option Plan ( 2001 MTI Micro Plan ). During 2005, MTI Micro ceased making grants under the 2001 MTI Micro Plan and determined that it would make no new awards under this plan in the future.

The 1996 Plan was approved by stockholders during December 1996. The 1996 Plan provided an initial aggregate number of 500,000 shares of common stock to be awarded or issued. The number of shares available to be awarded under the 1996 Plan and awards outstanding were adjusted for stock splits and rights offerings. The total number of shares which may be awarded under the 1996 Plan was 3,746,813 during 2005, 2006, and 2007. Under the 1996 Plan, the Board of Directors was authorized to issue stock options, stock appreciation rights, restricted stock, and other stock-based incentives to officers, employees and others.

The 1999 Plan was adopted by the Company's Board of Directors and approved by stockholders on March 18, 1999. The 1999 Plan provides that an initial aggregate number of 1,000,000 shares of common stock may be awarded or issued. The number of shares which may be awarded under the 1999 Plan and awards outstanding have been adjusted for stock splits, and during 2005, 2006, and 2007, the total number of shares which may be awarded under the 1999 Plan was 4,500,000 shares. Under the 1999 Plan, the Board of Directors is authorized to issue stock-based awards to

officers, employees and others.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****13. Stock Based Compensation (Continued)**

The 2006 Plan was adopted by the Company's Board of Directors on March 16, 2006 and approved by stockholders on May 18, 2006. The 2006 Plan provides that an initial aggregate number of 2,000,000 shares of common stock may be awarded or issued. The number of shares which may be awarded under the 2006 Plan and awards outstanding will be adjusted for stock splits and other similar events. Under the 2006 Plan, the Board of Directors is authorized to issue stock options, stock appreciation rights, restricted stock, and other stock-based incentives to officers, employees and others.

Stock-based compensation expense for the year ended December 31, 2007 was generated from stock options and restricted stock grants. Stock options are awards which allow holders to purchase shares of the Company's common stock at a fixed price. Stock options issued to employees generally vest 25% per year beginning one year after grant. Options issued to non-employee members of the MTI Board of Directors generally vest upon grant. Certain options granted may be fully or partially exercisable immediately, may vest on other than a four year schedule or vest upon attainment of specific performance criteria. Restricted stock awards generally vest one year after the date of grant; however, certain awards may vest immediately or vest upon attainment of specific performance criteria. Option exercise prices are generally equivalent to the closing market value price of the Company's common stock on the date of grant. Unexercised options generally terminate either seven or ten years after date of grant.

***Share-Based Compensation Information under FAS 123 and APB 25***

Prior to January 1, 2006, the Company had elected to follow APB Opinion No. 25, *Accounting for Stock Issued to Employees* ( *APB Opinion No. 25* ) and related Interpretations in accounting for employee stock-based compensation and to provide the disclosures required under FAS 123. APB Opinion No. 25 requires no recognition of compensation expense for most of the stock-based compensation arrangements provided by the Company, namely, broad-based employee option grants where the exercise price is equal to market value at the date of grant. However, APB Opinion No. 25 requires recognition of compensation expense for variable award plans over the vesting periods of such plans, based upon the then-current market values of the underlying stock. In contrast, FAS 123 requires recognition of compensation expense for grants of stock, stock options, and other equity instruments, over the vesting periods of such grants, based on the estimated grant-date fair values of those grants. Under the intrinsic-value-based method, compensation cost is the excess, if any, of the market value of the stock at grant over the amount an employee must pay to acquire the stock.

During 2005, the Company awarded 50,000 shares each of common stock and restricted common stock which vested over a one-year period. Presented below is a summary of compensation expense related to the intrinsic value of performance-based, time-based and unrestricted awards, which is included in the summary of the Company's compensation expense under all share-based awards, for the Plans which was recorded in the financial statement line Selling, general and administrative expenses for the year ended December 31:

	<b>2005</b> <b>(dollars in thousands)</b>	
Stock	\$	124

Restricted stock		45
Stock options		633
Total stock-based compensation expense	\$	802

Table of Contents**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****13. Stock Based Compensation (Continued)**

The 2005 stock-based compensation expense included \$438 thousand of stock-based compensation expense recorded as a result of accelerating the vesting and/or extending the time to exercise options after termination but not in excess of the original contractual life of the options. These changes were made in connection with employment, termination and change in status (employee to consultant) arrangements.

***Pro Forma Information under FAS 123 for Periods Prior to Fiscal 2006***

Prior to adopting the provisions of FAS 123R, the Company recorded estimated compensation expense for employee stock options based upon their intrinsic value on the date of grant pursuant to APB Opinion No. 25 and provided the required pro forma disclosures of FAS 123. Because the Company generally established the exercise price based on the fair market value of the Company's stock at the date of grant, the stock options generally had no intrinsic value upon grant, and therefore compensation expense was recorded primarily for grant modifications prior to adopting FAS 123R. Each accounting period, the Company reported the potential dilutive impact of stock options in its diluted earnings per common share using the treasury-stock method. Out-of-the-money stock options (i.e., the average stock price during the period was below the strike price of the stock option) were not included in diluted earnings per common share as their effect was anti-dilutive.

For purposes of pro forma disclosures under FAS 123 for the year ended December 31, 2005, the estimated fair value of the stock options was assumed to be amortized to expense over the stock options' vesting periods. The pro forma effects of recognizing estimated compensation expense under the fair value method on net (loss) and (loss) per common share for the year ended December 31 was as follows:

	<b>2005</b> <b>(dollars in thousands,</b> <b>except per share data)</b>
Net loss, as reported	\$(15,094)
Add: Total stock-based employee compensation expense already recorded in financial statements, net of related tax effects	1,003
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(2,963)
Pro forma net loss	\$(17,054)
Loss per Share:	
Basic and diluted as reported	\$(0.49)
Basic and diluted pro forma	\$(0.55)

**2005**

Fair value of each option granted	\$2.85
Number of options granted	1,467,880
Fair value of all options granted	\$4,187,301

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Table of Contents**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****13. Stock Based Compensation (Continued)**

The fair value of options granted, which is amortized to expense over the option vesting period in determining the pro forma impact, is estimated on the date of grant using the Black-Scholes Option Pricing model with the following weighted average assumptions for each of the year ended December 31:

	<b>2005</b>
Expected life of option	5 years
Risk-free interest rate	4.28%
Expected volatility of the Company's stock	77.3%
Expected dividend yield on the Company's stock	0%

The weighted average grant-date fair value of stock awarded and vested for each of the year ended December 31 is as follows:

	<b>2005</b>
Fair value of each share granted	\$2.49
Number of shares granted	50,000
Fair value of all shares granted	\$124,500

The weighted average grant-date fair value of restricted stock awarded for each of the year ended December 31 is as follows:

	<b>2005</b>
Fair value of each restricted share granted	\$2.49
Number of restricted shares granted	50,000
Fair value of all restricted shares granted	\$124,500

***Share-Based Compensation Information under FAS 123R***

As discussed in Note 2 Significant Accounting Policies, effective January 1, 2006, the Company adopted the fair value recognition provisions for stock-based awards granted to employees using the modified prospective application method provided by FAS 123R. Stock-based compensation cost is measured at grant date, based on the fair value of the award, and is recognized as expense over the employee requisite service period.

The Company estimates the fair value of stock options using a Black Scholes valuation model consistent with the provisions of FAS 123R and SAB 107. 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.

**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****13. Stock Based Compensation (Continued)**

The fair value of each stock option grant was estimated at the date of grant using a Black-Scholes Option Pricing model. The following table presents the weighted-average assumptions used for options granted:

	2006	2007
Option term (years) A	4.26	3.61
Volatility B	73.14%	72.76%
Risk-free interest rate range C	4.60 - 5.29%	3.23 - 5.04%
Dividend yield D	0%	0%
Weighted-average fair value per option granted	\$2.51	\$0.77

- A The option term is the number of years that the Company estimates, based upon historical experience and the full contractual term of the options outstanding, those options will be outstanding prior to exercise.
- B The expected stock price volatility as of the grant date is based on the historical volatility of the Company's common stock price over a period corresponding to the expected term of the option, adjusted for activity that is not expected to occur in the future.
- C The risk-free interest rate is the implied yield on U.S. Treasury zero coupon issues with a remaining term equal to the expected term used as the assumption in the model.
- D The dividend yield assumption is based on the Company's history and expectation of future dividend payouts, which may be subject to substantial change in the future.

Share-based compensation expense recognized in the Consolidated Statements of Operations is based on awards ultimately expected to vest, therefore, awards are reduced for estimated forfeitures. FAS 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

***Stock-Based Compensation Expense All Accounting Treatments***

Total share-based compensation expense, related to all of the Company's share-based awards, recognized for the years ended December 31, was comprised as follows:

	2005	2006	2007
	(dollars in thousands, except eps)		
Unfunded research and product development	\$	\$512	\$216
Selling, general and administrative-B	1,003	1,894	1,342

Share-based compensation expense before taxes	1,003	2,406	1,558
Related income tax benefits-A			
Share-based compensation expense, net of taxes	\$1,003	\$2,406	\$1,558
Impact on basic and diluted EPS		\$(0.08)	\$(0.04)

A Income tax effect is zero due to the Company maintaining a full valuation allowance.

B Compensation expense for the year ended December 31, 2005 was calculated under APB 25.

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**Table of Contents****MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****13. Stock Based Compensation (Continued)**

As of January 1, 2006, the adoption of FAS 123R resulted in the elimination of unearned compensation related to restricted stock (contra equity account) against additional paid-in capital totaling approximately \$80 thousand. Total unrecognized compensation costs related to non-vested awards as of December 31, 2007 is \$1,595 thousand and is expected to be recognized over a weighted-average vesting period of approximately 1.31 years.

Presented below is a summary of the Company's stock option plans' activity for the years ended December 31:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
Shares under option, beginning	3,752,063	5,041,242	5,509,194
Granted	1,467,880	1,564,750	1,853,750
Exercised	(148,575)	(719,791)	(85,946)
Canceled/Forfeited	(10,126)	(175,099)	(520,921)
Expired	(20,000)	(201,908)	(542,511)
Shares under option, ending	5,041,242	5,509,194	6,213,566
Options exercisable	4,197,029	4,053,286	4,628,348
Remaining shares available for granting of options	1,363,214	2,096,159	1,024,841

The weighted average exercise price is as follows for each of the years ended December 31:

	<b>2005</b>	<b>2006</b>	<b>2007</b>
Shares under option, beginning	\$ 4.06	\$ 3.76	\$ 4.04
Granted	\$ 2.85	\$ 4.04	\$ 1.37
Exercised	\$ 2.20	\$ 1.65	\$ 0.70
Canceled/Forfeited	\$ 4.26	\$ 4.29	\$ 3.55
Expired	\$ 6.17	\$	