2004 Annual Report

QUANTUM
TECHNOLOGIES

# Unlocking the Hydrogen Economy

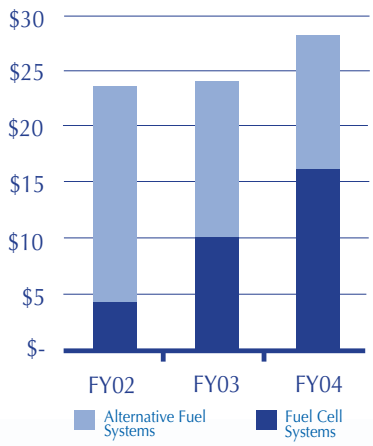
# Financial Highlights

*in thousands, except per share data*

| | Fiscal Year Ended April 30, | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Net revenues | $ 23,403 | $ 23,639 | $ 28,119 |
| Gross profit on product sales | (10,064) | (2,639) | 5,759 |
| Research and development | 33,474 | 15,062 | 15,657 |
| Operating loss | (42,898) | (18,336) | (9,333) |
| Net loss applicable to common stock | (43,378) | (18,197) | (8,934) |
| Basic and diluted loss per share | $ (3.07) | $ (1.00) | $ (0.33) |
| Number of shares used in the basic and diluted per share calculation | 14,142 | 18,153 | 27,257 |
| Cash and marketable securities | $ 177 | $ 11,539 | $ 68,556 |
| Total assets | 28,159 | 51,274 | 103,447 |
| Stockholders' equity | 10,271 | 42,950 | 97,451 |
| Cash used in operations | (34,526) | (13,133) | (4,796) |

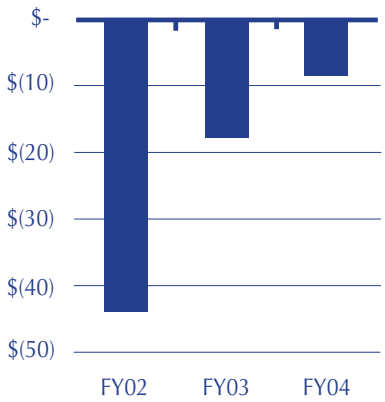
## Revenues

*in millions*



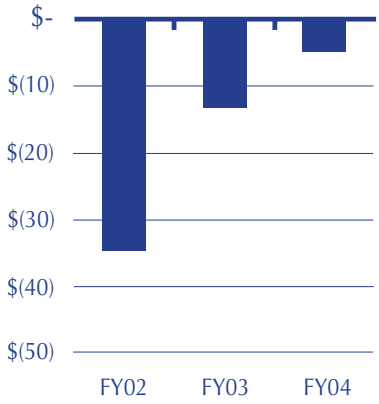

## Net Loss

*in millions*




## Cash Used in Operations

*in millions*




# Dear Stockholders,

Quantum continues to define and accelerate today's fast-moving hydrogen economy. We're at the center of fuel cell vehicle development through our state-of-the-art packaged fuel systems, working in concert with automotive manufacturers to revolutionize the transportation industry. Our technologies unlock the future of hydrogen. We provide innovative hydrogen storage solutions that lead the charge to enable fuel cell vehicle commercialization. Our customers' vision is clear and we are committed to being their partners at the forefront of a new and dynamic automotive age.

**Alan P. Niedzwiecki**
*President & Chief Executive Officer*

We attribute our success this year to broader adoption of our advanced technologies, our strong and growing customer base, and our commercialization experience as a Tier One OEM supplier of packaged fuel systems. Our role in this automotive transformation is positively impacting our financial performance. In fiscal 2004, we reached record revenues, achieved positive product margins, improved the bottom line 51%, reduced cash used in operations 63%, and strengthened the balance sheet.

We continue to see favorable trends contributing to our positive financial results: expanding customer programs, new fuel cell development contracts, and increasing product revenue streams. We expect these trends to continue as we strengthen our efforts to develop and deliver technology solutions to our growing customer base, reinforce our position as an industry leader, and deliver long-term value to our stockholders.

# The Year's Highlights

Fiscal 2004 was successfully marked by several milestones and achievements: the attainment of record level financial results; the advancement of technology; the expansion of our customer base and related programs; and the strides made toward commercialization.

## Financial Results

Our fiscal 2004 financial performance achieved record levels in many areas. We posted a 19% increase in our annual revenues, reaching a record $28.1 million. We reported record gross margins in both of our business segments. Our Fuel Cell Systems segment reported record revenues and reached profitability for the first time. On a consolidated basis, we reported our best bottom line performance ever and reduced cash used in operations to $4.8 million. We strengthened our balance sheet by raising in excess of $60 million in a follow-on equity offering and are now financially positioned to capitalize on the growing opportunities in the fuel cell market and hydrogen economy.

## Technology Advancements

We made major advancements to our hydrogen storage and pressure regulation technologies this past year. The integration of these technologies into our customers' fuel cell and hydrogen applications produced record revenues. We secured several development contracts in fiscal 2004 to advance our hydrogen systems technologies and our position as a leader in fuel system technology. This leadership position is crucial as OEMs, governments, and military branches pursue packaged fuel systems and technologies for transportation and industrial vehicles, stationary and portable power generation, and hydrogen refueling products for the infrastructure to support fuel cell vehicles—our target markets.

## Customer & Program Expansion

In fiscal 2004, we were able to secure several new key customers, including the military. We were awarded our first major contract by the U.S. Army to develop an all-terrain, high-performance fuel cell vehicle. This was followed by another military contract for a transportable hydrogen refueling system. The U.S. Army is currently evaluating fuel cell vehicle advantages: a reduced thermal signature, near-silent propulsion, and the potential to reduce fuel usage through increased fuel efficiency. In addition, fuel cell-powered vehicles can export electrical power silently for the increasing tactical electronic and communications equipment utilized on the battlefield. With fuel comprising up to 70% of the supplies transported by the Armed Services to support battlefield operations, these projects demonstrate a pathway to address fuel logistics.

We also initiated a program with the U.S. Department of Energy for the development and advancement of hydrogen storage systems for fuel cell vehicle commercialization. This award directly supports President Bush's Hydrogen Fuel Initiative by developing near-term storage solutions for hydrogen vehicles that are more efficient and cleaner than today's vehicles.

## Strides Toward Commercialization

We continued to strengthen our Tier One supplier capabilities by supplying our packaged fuel systems for alternative fueled vehicles. To date, we have shipped over 17,000 packaged systems including those for General Motors' premier line of natural gas vehicles.

We are leveraging our commercialization skills into other alternative fuel areas. We recently announced a contract award to develop and produce a fleet of hydrogen-powered internal combustion engine / hybrid electric vehicles for use in Southern California. We believe this vehicle platform provides the opportunity for fleets and municipalities to initiate the use of low emission hydrogen technologies in advance of fuel cell vehicle availability. Fleet operators and municipalities are expected to be early adopters of hydrogen-powered vehicles, demonstrating leadership in bringing the benefits of a cleaner fuel to the public sooner rather than later.

For fuel cell vehicles, we shipped a record number of packaged hydrogen fuel systems allowing our customers to put fuel cell vehicles into the hands of the public. We are more excited than ever by the progress that our OEM customers have made toward commercializing fuel cell vehicles and their continued commitment to this revolutionary technology.

# A Year of Solid Progress

**Reached Record Revenues**
*of $28 million, up 19% over last year.*

**Improved the Bottom Line**
*by 51% over last year.*

**Reduced Cash Used in Operations**
*by 63% compared to last year.*

**Reinforced Our Balance Sheet**
*by raising over $60 million in a follow-on offering.*

**Secured New Customers**
*with major new programs.*

**Strengthened Customer Relationships**
*with expanded development programs.*

**Advanced Our Technologies**
*closer to commercialization.*

**Broadened Our Commercialization Experience**
*as a tier one OEM supplier and system integrator.*

# A Look at 2005 and Beyond

We are keenly aware of the opportunities, as well as the challenges, ahead of us in moving toward a hydrogen economy. We are targeting advancements and refinements in our technologies. The cost of our packaged fuel systems is projected to decrease, as is the cost of fuel cell vehicles. The path will not be easy. We will confront challenges along the way: OEM timing, infrastructure development, technology adoption, governmental support, and consumer acceptance. These challenges keep us motivated.

The opportunities far exceed the challenges. We are infinitely excited and energized by the promise of the hydrogen economy. Our goal is to continue to be at the center of unlocking the hydrogen economy by advancing our technologies. We also remain committed to being a leader in fuel system integration, building on a decade of experience in developing and integrating packaged fuel systems.

We are well positioned to continue to deliver positive results. Our balance sheet is strong and our customer base is broad. We will stay focused on growing the revenue base, improving the bottom line, and maintaining financial discipline in our business operations. We have sound corporate governance and business practices in place to ensure integrity in our business and our performance. We are enthusiastic about the new and expanding programs awarded to Quantum over the past several months and look forward to advancing our technologies and expanding their application. We are excited about our future.

Our success is the culmination of the work of many people. Critical to our mission is our management team, of which we are very proud. They are all extremely committed to our vision and possess talents that are required to execute our business plan. Our results over the past few years are due to the contributions of this passionate team of professionals.

Of course, our management team owes their success to the continued hard work and dedication of our employees. From top to bottom, our employees are tightly connected to our customers and their needs. Our employees are setting the pace . . . leading an industry. We are all committed to maximizing long-term value for our stockholders.

On behalf of Quantum's Board of Directors and employees, I thank you for your continued support and confidence.

Best regards,

Alan P. Niedzwiecki
*President & Chief Executive Officer*

*Standing (left to right)*
**Alan Niedzwiecki,** *President & Chief Executive Officer*
**Bruce Falls,** *Director of Integration & Refueling Products*
**Neel Sirosh,** *Director of Advanced Technologies*
**Andy Abele,** *Executive Director of Strategic Development*
**Brad Timon,** *Corporate Controller*
**John Williams,** *Senior Manager of Business Development*

*Seated (left to right)*
**Jim Andrighetti,** *Director of Research and Development*
**Brian Olson,** *Chief Financial Officer*
**Cathy Johnston,** *Director of Communications & Corporate Secretary*
**Glenn Moffett,** *General Manager, Operations*
**Jim Schmitz,** *Director of Operations*

# FORM 10-K

**SECURITIES AND EXCHANGE COMMISSION**
**Washington, D.C. 20549**

# FORM 10-K

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

**For the fiscal year ended April 30, 2004**

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

**For the transition period from to**

**Commission File No.: 0-49629**

# QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

**(Exact name of Registrant as specified in its charter)**

| **Delaware** | **33-0933072** |
|---|---|
| **(State or other jurisdiction of incorporation or organization)** | **(IRS Employer Identification Number)** |

**17872 Cartwright Road, Irvine, CA 92614**
**(Address of principal executive offices, including zip code)**

**(949) 399-4500**
**(Registrant's telephone number, including area code)**

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

**None**

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

**Common Stock, $0.001 par value per share**

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

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

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

The aggregate market value of the Common Stock held by non-affiliates of the Registrant as of October 31, 2003 was approximately $244.9 million, based upon the closing sale price of the Registrant's Common Stock on such date, as reported on the Nasdaq National Market. Shares of Common Stock held by each executive officer and director and each person owning more than 5% of the outstanding Common Stock of the Registrant have been excluded in that such persons may be deemed to be affiliates of the Registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

Number of shares outstanding of each of the issuer's classes of common stock as of June 18, 2004: 30,694,339 shares of Common Stock, $.001 par value per share, and 999,969 shares of Series B Common Stock, $.001 par value per share.

**Documents Incorporated By Reference Into Part III:**

Portions of the definitive Proxy Statement for the Registrant's fiscal 2004 Annual Meeting of Stockholders to be filed pursuant to Regulation 14A within 120 days after the Registrant's fiscal year end of April 30, 2004 are incorporated by reference into Part III of this Report.

**QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.**

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## FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements include statements regarding our expectations, hopes, beliefs or intentions regarding the future, including but not limited to statements regarding our strategy, competition, expenses, expectations regarding future demand, development plans (including anticipated cost, timing and eventual acceptance of new technologies by the market), revenue and government research funding. Forward-looking statements involve certain risks and uncertainties, and actual results may differ materially from those discussed in any such statement. Factors that could cause actual results to differ materially from such forward-looking statements include the risks described in greater detail in "Risk Factors" and elsewhere in this report. All forward-looking statements in this document are made as of the date hereof, based on information available to us as of the date hereof, and we assume no obligation to update any forward-looking statement.

## PART I

### Item 1. Business.

#### Overview

We design, manufacture and supply packaged fuel systems to OEMs for use in alternative fuel vehicles and fuel cell applications. For automotive OEMs, we provide hydrogen systems for both internal combustion engine and fuel cell vehicles, and natural gas and propane fuel systems for internal combustion engine vehicles. In the area of hydrogen refueling infrastructure, we offer several hydrogen refueling systems focused on early infrastructure development.

Our advanced enabling products for fuel cell applications are used in transportation and industrial vehicles, for stationary and portable power generation, and in hydrogen refueling products for the infrastructure to support fuel cell vehicles. Our advanced fuel systems comprise the storage, monitoring, control and injection of gaseous fuels to improve efficiency, enhance power output, and reduce pollutant emissions from internal combustion engines and fuel cell systems.

We supply our advanced natural gas and propane fuel systems for alternative fuel vehicles to OEM customers for use by consumers and for commercial and government fleets. Since 1997, we have sold over 17,000 fuel systems for alternative fuel vehicles, primarily to General Motors Corporation and its affiliates ("General Motors" or "GM"), which in turn has sold substantially all of these vehicles to its customers. We also provide our gaseous fuel systems and hydrogen refueling products for fuel cell applications to major OEMs through funded research and development contracts and on a prototype basis. These fuel cell and hydrogen refueling products are not currently used on a commercial basis and will require additional product development over the next five years; however, we believe that a commercial market will begin to develop for these products over the next five years. We believe that these systems will reach production volumes only if OEMs produce fuel cell applications and hydrogen refueling products using our systems on a commercial basis.

A number of automotive, industrial and power generation manufacturers are developing alternative clean power systems using fuel cells or clean burning gaseous fuels in order to decrease fuel costs, lessen dependence on crude oil and reduce harmful emissions. Our products and services consist primarily of fuel storage, fuel delivery and electronic control systems, as well as system integration services for alternative fuel vehicles, fuel cell applications and hydrogen refueling products. We offer the following products and services to enable the development and commercialization of these systems:

- *fuel storage*—advanced composite, ultra-lightweight tanks that provide cost-effective storage of hydrogen or natural gas;

- *fuel delivery*—pressure regulators, fuel injectors, flow control valves, and other components designed to control the pressure, flow and metering of gaseous fuels;
- *electronic controls*—solid-state components and proprietary software that monitor and optimize fuel pressure and flow to meet manufacturers' fuel cell or engine requirements; and
- *systems integration*—services to integrate gaseous fuel storage, delivery and electronic control components to meet OEM requirements.

The current market for our packaged gaseous fuel systems for alternative fuel applications is the expanding world market for passenger and fleet vehicles powered by internal combustion engines using natural gas or propane. Based on the anticipated market size and growth rate for alternative fuel vehicles across the globe, we have focused our marketing efforts in Asia-Pacific, Europe and North America. We believe that the market for our fuel cell enabling technologies will develop over the next five years in conjunction with the expected commercialization of fuel cells. We plan to continue the development of our fuel cell enabling technologies to meet this market opportunity. We believe that the commercialization of stationary fuel cells for residential, emergency back-up, and uninterruptible power supply applications will precede the volume production of fuel cell vehicles. We plan to focus our fuel cell enabling technology marketing efforts on North America, Europe and Asia-Pacific.

We continually survey and evaluate the benefits of joint ventures, acquisitions and strategic alliances with our customers and other participants in the fuel cell and alternative fuel vehicle industry and in the hydrogen and renewable energy industry to strengthen our global business position. We have focused our strategic alliances on expanding our market opportunities and advancing the development of our technologies. We currently have strategic marketing alliances with General Motors, IMPCO and Sumitomo. We have a technology development alliance with General Motors focused on the development of enabling technologies for hydrogen fuel cell vehicles.

We were incorporated in Delaware in October 2000 as a wholly-owned subsidiary of IMPCO Technologies, Inc. IMPCO conducted our business through various departments, first as a division (the Automotive OEM Division) and most recently as a subsidiary (Quantum Fuel Systems Technologies Worldwide, Inc.). On July 23, 2002, IMPCO distributed to its stockholders, on a pro-rata basis, all of the shares of Quantum common stock owned by IMPCO. Each IMPCO stockholder received one share of Quantum common stock for each share of IMPCO common stock owned as of July 5, 2002, the record date for the distribution. Immediately prior to the distribution, IMPCO transferred to Quantum substantially all of the operations, assets and liabilities constituting IMPCO's automotive OEM business.

Immediately following the completion of our spin-off from IMPCO, our strategic alliance with General Motors became effective. As of June 18, 2004, General Motors has a 14.2% equity position in our company.

**Fuel Cell Industry**

The emerging fuel cell industry offers a technological option to address increasing worldwide energy costs, the long-term availability of petroleum reserves and environmental concerns. Fuel cells have emerged as a potential alternative to certain existing power sources because of their higher efficiency, reduced noise and lower emissions. Fuel cell industry participants are currently targeting the transportation, stationary power and portable power markets. We believe that our fuel cell enabling products of gaseous fuel storage, fuel delivery and electronic control systems along with our fuel system integration experience can be applied in all three of these markets.

A fuel cell is an electrochemical device that produces electricity by combining hydrogen with oxygen from the air. This electrochemical reaction occurs silently and without combustion with useable heat and water as the only by-products. The system can use as its base fuel either pure hydrogen or hydrogen derived from

hydrocarbon fuels such as methanol, natural gas or petroleum using a device called a reformer. A reformer breaks down hydrocarbon fuels using heat and a catalytic process. Regardless of the fuel used to provide hydrogen, the fuel cell system will require on-board hydrogen storage, fuel delivery and electronic controls. Furthermore, keys to optimizing the performance of a fuel cell are proper metering and delivery of hydrogen fuel and air to its fuel cell stacks and efficient storage of the fuel to maximize its total operation time.

Recently, the use of hydrogen as a fuel of the future has been gaining support within the U.S. government. In his 2003 State of the Union Address, President Bush discussed his goal to promote energy independence for the United States, while dramatically improving the environment. Further, the Energy Policy Act of 2003 establishes a comprehensive national policy that includes provisions intended to accelerate the implementation of hydrogen as an energy carrier. Specifically, this Act authorizes $2.1 billion over the next 5 years to support the President's Hydrogen Fuel Initiative to develop hydrogen vehicles and the necessary infrastructure to support their commercial implementation by 2020.

The U.S. Department of Energy has published the National Hydrogen Energy Roadmap that provides a plan for the coordinated, long-term, public and private efforts required for hydrogen energy development. Quantum's President and CEO, Alan Niedzwiecki, led the group responsible for the hydrogen storage section of the Roadmap. We believe that these actions by the U.S. government and the commitments made by businesses are positive indications of the momentum behind the development of a hydrogen economy. Frost and Sullivan, an international marketing consulting and training firm that monitors information technology, telecommunication, medical, consumer and industrial markets, anticipates that the overall fuel cell market will grow to $32 billion by 2010 of which the automotive, stationary and portable fuel cell markets would represent $14 billion, $10 billion, and $8 billion, respectively.

In addition to these federal programs, a number of states have established hydrogen initiatives over the last five years, with accelerated activity over the last year. The state of California was first to initiate the formation of public-private cooperative efforts to accelerate the demonstration and deployment of fuel cells and hydrogen, beginning with the California Fuel Cell Partnership in 1999 and the California Stationary Fuel Cell Collaborative in 2001. In 2004, California Governor Schwarzenegger signed an Executive Order officially launching California's Hydrogen Highway Network, which outlines a public-private partnership to ensure that, before 2010, California has a network of hydrogen refueling stations in place to support the commercial introduction of hydrogen powered vehicles. Other states that have recently established statewide initiatives to encourage the implementation of hydrogen and fuel cells include Colorado, Florida, Illinois, Michigan, New Mexico, New York and Ohio.

The collaborative activities to encourage the implementation and commercialization of hydrogen and fuel cell technologies are not limited to the United States. The efforts are international in magnitude. Significant cooperative commercialization efforts are occurring in Canada, China, Iceland, India, Japan and Europe, through the European Integrated Hydrogen Project.

Fuel cell and hydrogen-based products are being designed to provide clean, quiet, vibration-free electric power on demand for a variety of applications in the transportation and industrial vehicle, stationary power, portable power and related hydrogen refueling infrastructure markets. The commercialization of fuel cells in all of these markets will require cost reductions for the entire system, including the fuel cell stack, fuel system and assembly.

In the automotive market, each of DaimlerChrysler, Ford, General Motors, Honda, Hyundai, Nissan, and Toyota Motor Corporation ("Toyota") has announced its intention to introduce fuel cell vehicles sometime before 2006 with mass production of fuel cell vehicles anticipated by General Motors and Toyota to begin close to the end of the decade. Allied Business Intelligence ("ABI"), a technology research and consultancy firm that publishes intelligence on the automotive industry and energy markets, projects that the industry will produce 800,000 fuel cell vehicles per year by 2012.

ABI estimates that in the stationary power market, 403,000 megawatts of new electricity generating capacity is forecast to be needed by 2020 in the U.S. alone to meet growing demand and to replace retiring units from its current installed electricity generating base of 900,000 megawatts. The existing electricity transmission and distribution grid is already overburdened in a number of regions. By locating the power generation close to where the power is used, known as distributed generation, it is possible to bypass the overloaded transmission and distribution grid. ABI estimates that the cumulative electrical generating capacity of stationary fuel cells will grow worldwide from 75 megawatts in 2001 to approximately 16,000 megawatts by 2011.

We believe that additional markets will develop in other areas, including boats, forklifts, golf carts, recreational vehicles, auxiliary power units and military applications. The commercialization of fuel cells in all of these markets will require across-the-board cost reductions for the entire system, including the fuel cell stack, fuel system, balance-of-plant, and assembly. As cost reduction targets are achieved in volume production, we believe that the fuel subsystem will represent approximately 20% of the cost of a fuel cell system.

**Alternative Fuel Industry**

The development of the alternative fuel vehicle industry is being driven by three independent market factors—economics, energy independence and environmental concerns. Due to the abundance and economic advantages of gaseous fuels in worldwide markets, many countries and geographic regions are mandating the use of alternative fuels, which provide energy independence and environmentally suitable solutions. For instance, the European Commission has adopted an action plan to achieve by 2020 a 20% replacement of diesel and gasoline fuels with alternative fuels such as natural gas, propane and hydrogen in the road transport sector in the current European Union member states.

We believe that the markets for gaseous fuel vehicles will continue to develop, especially in countries where all three market factors are prevalent. Gaseous fuel systems currently being used in the market will need to be advanced in order to fully leverage the market factors driving the alternative fuel industry.

**Industry Challenges**

Rapid commercialization of fuel cell vehicles is dependent upon establishing cost-effective on-board fuel storage solutions, hydrogen storage and handling codes and standards, and a hydrogen refueling infrastructure. Safety is also a primary concern when dealing with highly compressed gases. The fuel storage systems must be able to withstand rigorous testing as individual components and as part of the fuel system on the vehicle. Safety concerns apply to the fuel system as a whole, including the tank, regulator and fuel lines, all of which need to comply with safety standards. Additionally, to ensure widespread commercialization, the fuel storage and delivery systems need to provide adequate range, need to be of acceptable size and shape, and need to perform similarly to conventionally fueled vehicles without unacceptably high cost. We believe interim steps will be taken to provide initial refueling infrastructure for demonstration fleets, government programs, commercial fleet operators, and initial consumer commercialization. This initial infrastructure could include mobile refueling units, compact stationary refueling units, and bulk transport trailers.

We believe that the markets for gaseous fuel vehicles and other applications will continue to mature and that end users will place more emphasis on technology advancement and economic advantage. Gaseous fuel systems currently being used in the market will need to be advanced in order to fully leverage the market factors driving the alternative fuel industry.

**Business Operations**

We develop and manufacture cost-effective and efficient fuel storage, fuel delivery and electronic control systems for OEM alternative fuel passenger and fleet vehicles. We also target the emerging fuel cell industry, which includes the transportation, industrial vehicle, and stationary and portable power generation markets, and the hydrogen-refueling infrastructure to be developed to support fuel cell vehicles. Our products and capabilities include the following:

- hydrogen and compressed natural gas fuel storage and safety testing;

- fuel control devices and technology for gaseous fuels for use in internal combustion engines and fuel cells;
- electronic control systems and validation;
- testing procedures to meet a variety of global regulations and emission control standards;
- research and development;
- application engineering and validation; and
- manufacturing and quality assurance.

***Products***

Our core products include gaseous fuel storage, fuel delivery, and electronic controls for use in OEM alternative fuel vehicles and fuel cell applications. Our advanced enabling products for fuel cell applications are used in transportation and industrial vehicles, for stationary and portable power generation, and in hydrogen refueling products for the infrastructure to support fuel cell vehicles. We continue to improve our products and develop new systems to meet increasingly stringent vehicle operational and durability requirements in automotive OEM fuel cell powered vehicles. We are also developing improved system technologies using fuel injectors, high- and low-pressure regulators, on-board diagnostics, high-performance fuel system control modules, fuel lock-offs and related components for application in the stationary and portable power generation fuel cell markets. We design and manufacture computerized controls, regulators and automatic shut-off equipment, and lightweight, high-pressure hydrogen and natural gas storage tanks using our TriShield™ technology.

We classify the stages of our product development in the following categories:

- research and development;
- prototype;
- pre-production prototype; and
- production ready.

There can be no assurance that any of our products under development will be completed within the anticipated time frame or for the currently expected development costs, or that they will receive market acceptance.

***Fuel Storage Products***

Our fuel storage products include cylindrical and conformable tanks. We provide lightweight, all-composite storage tank technologies for compressed hydrogen and natural gas. The lightweight nature of the tank, coupled with high hydrogen mass by volume, improves the range of hydrogen-powered fuel cell vehicles. Our conformable tank maximizes hydrogen storage in a given space, optimizing the volume of hydrogen stored on board. We expect that the remaining product development and application engineering costs for the fuel storage products currently under development will be approximately $20 million. We expect a portion of these expenses to be funded by customer-sponsored programs that are focused on cost reductions, storage efficiencies and weight. The following table describes the features and production stages of our storage products:

| Products | Features/Production Stage |
|---|---|
| TriShield™ All-Composite Storage Tanks | • Designed for safety, light weight and cost effectiveness<br>• Exceed current regulatory qualification requirements and also meet OEMs' more stringent requirements for use in natural gas and hydrogen fueled vehicles<br>• Provide 30% more fuel capacity than comparably-sized aluminum tanks, and lower cost than steel tanks<br>• The all-composite liner technology acts as a permeation barrier for stored fuel and reduces the possibility of hydrogen embrittlement often present with aluminum or steel liners in the presence of hydrogen<br>• Production ready for compressed natural gas and hydrogen |
| Conformable/Solid State Storage Tanks | • Designed for safety, light weight and storage efficiency<br>• Optimal packaging solution<br>• Prototype stage |

***Fuel Delivery Products***

Our fuel delivery products consist of both in-tank and external regulators, injectors and valves. We have designed our in-tank and external regulators for use with hydrogen for fuel cell applications. Our in-tank design provides greater safety by eliminating the need for high-pressure fuel lines outside of the fuel storage tank. The unit is also cost-effective because it incorporates the features of many independent components, thereby eliminating the need to install several separate components. We have designed our patented fuel injector for use with dry gases such as hydrogen, propane or natural gas. Our fuel injector is capable of handling the high flow rates needed in automotive OEM applications, while offering superior durability, longer life, less noise and lower cost as compared to other gaseous fuel injectors. This component also allows for very precise metering of fuel, which is critical to optimizing a fuel cell system. We expect that the remaining product development costs for the fuel delivery products currently under development will be less than $5 million. We expect a portion of these expenses to be funded by customer-sponsored programs that are focused on hydrogen delivery and application engineering. The following table describes the features of our fuel delivery products:

| Products | Features/Production Stage |
|---|---|
| In-Tank Regulators | • Reduce the pressure of the fuel stored in the tank at the tank outlet, eliminating the need for high-pressure fuel lines running throughout the system<br>• Increase safety<br>• Prototype stage; production ready for compressed natural gas and hydrogen in approximately 2004 |
| External Regulators | • Meet the needs of customers desiring traditional external regulators<br>• Prototype stage; production ready for compressed natural gas and hydrogen in approximately 2004 |
| Gaseous Fuel Disc Injectors | • Designed specifically for precise gaseous fuel metering to provide superior flow rate and increased durability over existing plunger technologies<br>• Generally translates into lower costs than competing technologies<br>• Pre-production prototype stage; production ready for compressed natural gas in approximately 2004 and for propane and hydrogen in approximately 2005 |
| Injector Pressure Regulators | • Provide precise control of fuel required for injection systems<br>• Production ready for compressed natural gas; production ready for hydrogen in approximately 2004 |
| Gas Mass Sensors/Mixture Control Valves | • Measure and control gaseous fuel and airflow, a critical step in the optimization of fuel systems for fuel cell applications<br>• Production for compressed natural gas commenced in 1997 |
| Fuel Shut-Off Products | • Mechanically or electronically shut off fuel flow to the system when fuel leakage occurs or when the system is turned off<br>• Production for compressed natural gas commenced in 1997 |

***Electronic Control Products***

Our electronic control products range from eight- to 32-bit architecture. These units precisely control the flow and pressure of gaseous fuels such as natural gas, hydrogen, and other gases such as air. We currently use these electronic controls, coupled with our proprietary software, to optimize fuel pressure and flow management for fuel cell and internal combustion engine applications. We believe, however, that there are numerous other potential applications for these controls. The development of electronic controls and software is generally driven by a specific application or program and is usually funded by customer-sponsored programs. The following table describes the features of our electronic controls and software products:

| Products | Features/Production Stage |
|---|---|
| Electronic Controls and Proprietary Software | • Manage flow of fuel and air in internal combustion engines and fuel cell applications to improve optimization of the overall system<br>• Provide closed-loop system control<br>• Proprietary designs, software and calibration tools to develop, calibrate and optimize fuel cell control systems<br>• Sensors, actuators and controllers specific to our customers' needs and specifications<br>• Production commenced for compressed natural gas in 1997 and for hydrogen in approximately 2005 |

***Services***

We provide services in the areas of design, development, validation, certification, manufacture and after-sales service support. We provide our customers with the following services to support their programs for transportation, stationary and portable power generation, and hydrogen refueling applications:

- *Systems Integration.* We integrate our gaseous fuel storage, fuel delivery, and electronic control components and systems into alternative fuel vehicles and fuel cell applications in the transportation, stationary power and portable power industries, as well as hydrogen refueling products. We also employ rapid prototyping techniques, which accelerate the iterative design process and result in a more accurate design.
- *Testing and Validation.* To increase the likelihood of high success rates at the system level, we perform component, subsystem and system testing and validation. These procedures must satisfy our own internal requirements, customer-specific requirements and industry standards. If no suitable procedures exist, we generate requirements for the customer.
- *Certification and Compliance.* Our regulatory and certification engineers implement the latest emissions and safety regulations to ensure the proper certification and ongoing compliance of our products and our business.
- *System Level Assembly.* We develop and manage the assembly process for integration of our systems into end products at our facilities or at our customers' facilities.
- *Training.* We develop comprehensive technical training for our customers that sell and service our products as well as for our customers that use our products.
- *Service and Warranty.* We have extensive capabilities in developing service procedures and programs for OEMs. We also provide technical support over the telephone or at customer sites to resolve technical issues.

**Business Strategy**

Our objective is to be the leading developer and supplier of packaged systems that store gaseous fuels and monitor and control the pressure and flow of those fuels for fuel cells, internal combustion engines and hydrogen refueling units. Our strategy for achieving this objective includes the following elements:

***Develop and Supply On-Board Hydrogen Fuel Storage and Control Systems for Fuel Cell Vehicle Applications***

We will continue to develop our fuel cell enabling technologies to assist fuel cell OEMs in expediting the commercialization of vehicle applications. We also plan to develop systems to assist the military in developing fuel cell technologies. We intend to apply our systems integration expertise in OEM alternative fuel vehicle applications in the emerging fuel cell vehicle market. Most of the major automotive OEMs have announced intentions to introduce fuel cell vehicles before 2006. We will focus our fuel cell enabling technology business development priorities in North America, Europe and Asia-Pacific.

***Provide Hydrogen-Refueling Units for Initial Infrastructure for Development Fleets, Fleet Operators, Military Applications and Consumer Commercialization***

We plan to leverage our hydrogen storage, metering and control technologies, and integration capabilities to capitalize on the need for mobile and stationary hydrogen refueling units. We believe there are significant opportunities to work with OEMs and energy and petroleum companies in providing the initial refueling products such as mobile refueling units, compact stationary refueling units, and hydrogen storage for bulk transport trailers. In fiscal 2004, we received two military contracts totaling approximately $1.7 million to provide for a hydrogen fuel cell hybrid powered light-duty all-terrain vehicle and a transportable hydrogen refueler. We plan to continue assisting the military in developing their fuel cell technologies.

***Provide Fuel Systems to the Stationary Fuel Cell Power Generation Market***

We plan to address demand for stationary fuel cell applications by continuing to work with fuel cell manufacturers to develop and supply packaged fuel systems for their stationary and portable power generation applications. We believe that the commercialization of stationary fuel cells for residential, emergency back-up, and uninterruptible power supply applications will precede the volume production of fuel cell vehicles. Several fuel cell manufacturers have announced intentions of introducing stationary fuel cell products by 2005.

***Focus Research and Development on Fuel Cell Enabling Technologies and Securing Outside Funding to Support These Programs***

We intend to focus our research and development efforts on advancing our fuel cell enabling technologies and systems to succeeding generations to further improve performance and reduce cost. We will actively seek to establish joint development programs and strategic alliances with the major fuel cell developers and industry leaders in these markets and secure outside funding to support these programs. For example, under our alliance with General Motors, we are co-developing technologies that are designed to accelerate the commercialization of fuel cell applications.

***Expand Our Participation in the Development of Hydrogen Storage and Handling Codes and Standards***

We plan to expand our participation in national and international organizations that can influence international standard setting for alternative fuel vehicles, fuel cell applications and related supporting infrastructure. We will focus our involvement in these organizations to promote standards that are performance-based and consistent with and inclusive of our technologies. Members of our management team have served on the boards of key fuel cell and alternative fuel vehicle industry organizations, including the California Hydrogen Business Council, CalStart/Weststart, the National Hydrogen Association, the Natural Gas Vehicle Coalition, the Society of Automotive Engineers and the U.S. Fuel Cell Council.

### *Increase Our Participation in the Alternative Fuel OEM Vehicle Markets*

We plan to leverage our technology and systems integration capabilities in the OEM alternative fuel vehicle markets to expand our customer base and enter new OEM markets. We believe that significant opportunities for growth exist in international markets. Based on the anticipated market size and projected growth rate for alternative fuel vehicles across the globe, we have prioritized our business development efforts in Asia-Pacific, Europe and North America.

## Sales and Distribution

We derive revenue from the sale of our products and systems for use in alternative fuel and fuel cell vehicles manufactured by General Motors, Toyota and other OEMs, alternative fuel and fuel cell development contracts with OEMs, and government contracts focused on fuel cell and alternative fuel research. We sell our jointly developed alternative fuel systems and components to General Motors. Through our strategic alliance with General Motors, we are a recommended provider to General Motors of hydrogen storage, hydrogen handling and associated electronic controls for fuel cell system applications. We rely on our sales force and strategic partners to sell our products and services, develop new customers and consummate joint application development programs with leading OEMs in the target alternative fuel vehicle, fuel cell and hydrogen refueling infrastructure markets.

## Manufacturing

Our manufacturing activities currently include assembly, system installation and tank manufacturing. We assemble the majority of our components at our facility in Irvine, California, but outsource the assembly of complex electronic components to select key suppliers for certain components of developed fuel systems. Our vendor and service provider supply base is highly diversified, with none of our suppliers representing more than 15% of our raw material purchases. Complete systems are installed on vehicles at the OEM manufacturing facility or at third-party equipping sites. The criteria for the establishment of a site are proximity to vehicle manufacturing and delivery points. Our operations are QS-9000 certified.

## Strategic Relationships

We continually survey and evaluate the benefit of joint ventures, acquisitions and strategic alliances with our customers and other participants in the alternative fuel vehicle industry and hydrogen and renewable energy industry to strengthen our global business position. We have focused our strategic alliances on either our marketing strategy or on our development strategy. Our marketing strategy seeks to expand the distribution channels for our advanced fuel system technologies. Our development strategy is to advance the state of technology and the application thereof. We currently have strategic relationships with IMPCO, General Motors and Sumitomo Corporation.

### *IMPCO*

In July 2002, we entered into a Strategic Alliance Agreement with IMPCO pursuant to which we will work with IMPCO in identifying and conducting research and development programs of mutual interest. As part of such research and development activities, we may develop, solely or jointly with IMPCO, technology that is owned solely by us or jointly with IMPCO. The other purpose of this relationship is to provide IMPCO access to our advanced technologies and products, including the natural gas storage tanks, fuel injectors, in-tank regulators and other products, for use in automotive, bus and truck and industrial aftermarket applications and in the bus and truck and industrial OEM markets. We believe that this alliance with IMPCO will expedite the commercialization and integration of our advanced gaseous storage and handling systems into broader global alternative fuel markets, including automotive aftermarket, material handling, internal combustion engine-based stationary and portable power generation, and general industrial markets.

***General Motors***

Our strategic alliance with General Motors became effective upon our spin-off from IMPCO. We believe that the strategic alliance with General Motors will advance and commercialize, on a global basis, the integration of our gaseous storage and handling systems into fuel cell systems used in the transportation markets. Under the alliance, we and General Motors are co-developing technologies that are designed to accelerate the commercialization of fuel cell applications. Additionally, General Motors endorses us as a recommended provider of hydrogen storage, hydrogen handling and associated electronic controls. This strategic alliance expands upon the relationship that has been in place between General Motors and Quantum (as IMPCO's Automotive OEM Division) since 1993, through which we provide packaged natural gas and propane fuel systems for General Motors' alternative fuel vehicle products.

In connection with our strategic alliance, we issued stock to General Motors, representing 19.9% of our total outstanding equity following our January 2003 public offering, for consideration of a nominal cash contribution and access to certain of General Motors' proprietary information. Under the alliance, we have committed to spend $4.0 million annually for specific research and development projects directed by General Motors to speed the commercialization of our fuel cell related products. While this commitment was waived by General Motors for calendar years 2002 and 2003, there is no assurance that this commitment will be waived in the future. For 2004, we expect to spend an amount yet to be determined for research projects directed by General Motors. Each party retains the ownership of its existing technology and jointly owns technology that is jointly created under the alliance. We are free to use jointly created technologies in certain aspects of our business but are required to share with General Motors revenue from fuel cell system-related products that are sold to General Motors or third parties.

***Sumitomo Corporation***

In April 2003 and June 2004, we signed agreements with Sumitomo Corporation whereby Sumitomo will market our products for use in the global alternative fuel and fuel cell markets and will have exclusive sales and distribution rights to market our products in Japan. In addition, the agreements also form the basis, subject to definitive terms, for Sumitomo to make a future strategic investment in Quantum, including a joint business venture.

**Customers and Development Programs**

A substantial portion of our revenue relates to product sales to and development fees from GM and Toyota. During fiscal year 2004, revenues from GM and Toyota comprised 46.1% and 44.0% of our total revenue, respectively.

Since the beginning of 2001, we have had prototype development projects or programs with the following entities:

Adam Opel AG
AeroVironment
Ballard Power Systems
Catalytic Solutions, Inc.
Energy Conversion Devices
Ford Motor Company
Garrett-Engine Boosting Systems, Inc.
General Motors (Fuel Cell Activities)
General Motors Corporation
General Motors of Canada, Limited
Hydrogenics Corporation
Hyundai America Technical Center
Hyundai Motor Company
Integrated Concepts & Research Corporation
ISE Research
Lotus Engineering, Inc.
Pinnacle West Capital Corporation
Proton Energy Systems, Inc.
South Coast Air Quality Management District
Sumitomo Corporation
Suzuki Motor Corporation
Toyota Motor Corporation
U.S. Army - National Automotive Center
U.S. Department of Energy
Yamaha Motor Company

We intend to establish similar relationships with other leading industry OEMs by using our systems integration capabilities and our leading technology position in fuel storage, fuel delivery and electronic controls.

**Research and Development**

We conduct research and development in the following areas, with corresponding technical capabilities:

- *Fuel Storage.* Composite pressure vessel design and analysis, carbon and epoxy filament winding and hydraulic, pneumatic, burst and fatigue testing. Evaluation and development test capabilities for advanced hydrogen storage, including hydride, alanates, carbon adsorption and other emerging pressure and solid state storage.
- *Electronic Control Systems.* Specialization in hardware design and selection, engine modeling, calibration and software design for engine and emission controls.
- *Mechanical Design and Development.* Specialization in pneumatics, kinematics, hydraulic components and systems and advanced materials, structural, flow and thermal analysis.
- *Advanced Emissions Testing.* Testing facility that utilizes California Air Resources Board ("CARB") and U.S. Environmental Protection Agency ("EPA") approved advanced technology to test Super Ultra Low Emission Vehicles. EPA/CARB certification testing, vehicle development testing including catalyst efficiency, diagnostics calibration, engine durability testing and engine mapping.
- *Advanced Products.* Injectors, fuel management, fuel storage and fuel supplies for fuel cell power systems, mass flow sensors for natural gas measurement and "smart" sensors using 8-bit microcontrollers.
- *Component and Subsystem Test Facilities.* Extended vibrations, shock loads and accelerations, extreme temperature exposure from -85° F to 392° F and thermal shock, cyclic corrosion, extended salt, fog, humidity and dryness cycling, severe acid and alkali corrosion, flow simulations and pneumatic leak checks.

We believe these capabilities are a critical component of our ability to maintain our technology leadership position in alternative fuel and fuel cell applications. Company-sponsored research and development expense for the fiscal years ended April 30, 2002, 2003 and 2004 was approximately $27.1 million, $10.9 million and $10.9 million, respectively.

**Competition**

In the alternative fuel industry, our key competitors in North America for gaseous fuel delivery products in the automotive OEM market include Alternative Fuel Systems, Baytech Corporation, Clean Air Partners, FEV, GFI Control Systems, Inc. and Westport Innovations Inc. In international markets, we compete with aftermarket component and kit manufacturers such as Aisan, Landi, Lovato, OMVL, Tartanni, Teleflex Inc. and Vialle. In the future, we may also face competition from traditional automotive component suppliers, such as Bosch, Delphi, Siemens and Visteon, and from motor vehicle OEMs that develop fuel systems internally.

In the fuel cell industry, our area of expertise is in hydrogen fuel storage, fuel delivery, electronic controls, and system integration. We do not manufacture fuel cells or fuel reformers.

We believe that our competitive advantage over current and potential future competitors is our technology leadership derived from many years of experience with alternative fuels. Our current competitors typically focus on individual components. We offer complete packaged fuel systems based on our own advanced technologies, including gaseous fuel storage, fuel metering and electronic controls.

A critical element for fuel cell vehicles and OEM alternative fuel vehicles is fuel storage. Our major competitors for high-pressure gaseous storage cylinders include Dynetek Industries Ltd., Lincoln Composites and Structural Composites Inc. Liquid hydrogen, metal hydrides and on-board liquid fuel reformation may also provide alternatives to high-pressure storage. Companies pursuing these competing technologies include Linde AG and Energy Conversion Devices.

Many of these potential competitors have been in business longer than us and have substantially greater financial, marketing and development resources than we have. We expect that we will face increased competition in the future as new competitors enter the market and advanced technologies become available. In addition, consolidation in our industry may also affect our ability to compete. Consolidation may strengthen our competitors' financial, technical and marketing resources and may provide greater access to customers. Consequently, these competitors may be able to develop greater resources for the development, promotion and sale of their products. We cannot assure you that we will be able to compete successfully with our existing or new competitors or that the competitive pressures will not materially and adversely affect our business, financial condition or results of operations.

**Product Certification**

We must obtain emission compliance certification from the EPA to introduce vehicles or engines into commerce in the United States, and from the CARB to introduce vehicles or engines into commerce in California. Certification requires that each vehicle or engine meet specific component, subsystem and vehicle-level durability, emission, evaporative and idle tests.

We strive to meet stringent industry standards set by various regulatory bodies and industry practices, including the U.S. Department of Transportation and Federal Motor Vehicle Safety Standards, the National Fire Protection Association, TUV, European Integrated Hydrogen Project, Kouatsugasu Hoan Kyokai, Underwriters Laboratories and American Gas Association. Approvals enhance the acceptability of our products in the domestic marketplace. Many foreign countries also accept these agency approvals as satisfying the "approval for sale" requirements in their markets.

**Backlog**

As of April 30, 2004, backlog for our products was approximately $3.2 million. We measure backlog for our products from the time orders become irrevocable, which generally occurs 60 days prior to the date of delivery.

**Employees**

As of June 7, 2004, we had 138 full-time employees. We consider our relations with our employees to be good. None of our employees is represented by a collective bargaining agreement.

**Intellectual Property**

We rely primarily on patent and trade secret laws to protect our intellectual property rights. In connection with the spin-off, IMPCO assigned to us its interest in seven domestic patents and three domestic patent applications, including any interest IMPCO had in foreign patents and applications relating to those patents. Of the seven domestic patents, we have allowed three to expire, and the remaining patents will expire between June 2006 and September 2019. Of the three domestic patent applications, we have been awarded patents on two applications, and are diligently prosecuting the remaining application. In March 2002, we filed a reissue application in an attempt to broaden the scope of our in-tank regulator patent. We recently abandoned the reissue application notwithstanding an unfavorable patent office opinion with respect to the pending claims in the reissue application, including the claims of the original patent. Our abandonment of the reissue application could result in a successful challenge to the validity of the existing patent; however, we are developing replacement technologies that we believe may have intellectual property and commercial viability potential.

We do not know whether any patents will be issued from our patent applications or whether the scopes of our issued patents are sufficiently broad to protect our technologies or processes. Our patents may not provide us a competitive advantage. Competitors may successfully challenge the validity and/or scope of our patents and

trademarks. We also rely on a combination of trademark, trade secret and other intellectual property laws and various contract rights to protect our proprietary rights. However, we do not believe our intellectual property rights provide significant protection from competition. We believe that patent, copyright, trademark and trade secret protection are less significant and that our growth and future success will be more dependent on factors such as the knowledge and experience of our personnel, new product introductions and continued emphasis on research and development. We believe that establishing and maintaining strong strategic relationships with valued customers and OEMs are the most significant factors protecting us from new competitors.

In connection with our strategic alliance with General Motors, each party retains the ownership of its existing technology and jointly owns technology that is jointly created under the alliance. We are free to use jointly created technologies in certain aspects of our business but are required to share with General Motors revenue from fuel cell system-related products that are sold to General Motors or third parties.

In October 2002, we entered into a patent cross license agreement with GFI Control Systems, Inc. in connection with the parties' mutual agreement to dismiss claims against each other for patent infringement. Pursuant to the agreement, we granted GFI a royalty-free, nonexclusive license to sell products utilizing in-tank regulators covered by our in-tank regulator patent, and GFI granted us a royalty-free, nonexclusive license to sell products utilizing in-tank solenoid valves covered by its in-tank solenoid valve patent, in each case so long as the in-tank regulators and solenoid valves are used together. In the event that the patent covering our in-tank regulator is invalidated, we will be required to pay a five percent royalty to GFI for our use of technology covered by GFI's patent, so long as its patent is not invalidated. The competitive advantage that we believe can be achieved through the intellectual property related to our in-tank regulators may not be fully realized to the extent that GFI uses our in-tank regulator patent to compete with us.

**Available Information**

We make our annual reports on Form 10-K, our quarterly reports on Form 10-Q, our current reports on Form 8-K and all amendments to these reports available free of charge on our corporate website as soon as reasonably practicable after such reports are filed with, or furnished to, the SEC. Our corporate website is located at www.qtww.com. None of the information contained on our website is intended to be part of this report or incorporated by reference herein.

**Executive Officers**

The executive officers of the Company as of April 30, 2004 and their respective ages and positions are as follows:

| Name | Age | Position |
|---|---|---|
| Alan P. Niedzwiecki . . . . . | 47 | President; Chief Executive Officer; Director |
| W. Brian Olson . . . . . | 40 | Chief Financial Officer; Treasurer |
| Glenn D. Moffett . . . . . | 56 | General Manger of Operations |
| Bradley J. Timon . . . . . | 41 | Corporate Controller |
| Cathryn T. Johnston . . . . . | 38 | Director of Communications and Corporate Support; Corporate Secretary |

The following is a biographical summary of the experience of the executive officers:

*Alan P. Niedzwiecki* has served as President and as one of our directors since February 2002 and was appointed as Chief Executive Officer in August 2002. Mr. Niedzwiecki served as Chief Operating Officer from November 2001 until he was appointed as Chief Executive Officer in August 2002. From October 1999 to November 2001, Mr. Niedzwiecki served as Executive Director of Sales and Marketing. From February 1990 to October 1999, Mr. Niedzwiecki was President of NGV Corporation, an engineering and marketing/ commercialization consulting company. Mr. Niedzwiecki has more than 25 years of experience in the alternative fuels industry in product and technology development and commercialization relating to mobile, stationary power generation and refueling infrastructure solutions. Mr. Niedzwiecki is a graduate of Southern Alberta Institute of Technology.

*W. Brian Olson* has served as Chief Financial Officer and Treasurer since August 2002. From July 1999 to August 2002, Mr. Olson served as Treasurer, Vice President and Chief Financial Officer of IMPCO. He originally joined IMPCO in October 1994 and held various financial positions with IMPCO, including serving as Corporate Controller. Between November 1996 and April 1997, Mr. Olson served as manager of financial planning at Autobytel. Prior to joining IMPCO, Mr. Olson was with the public accounting firm of Ernst & Young LLP and its Kenneth Leventhal Group. Mr. Olson holds a B.S. degree in business and operations management from Western Illinois University and an M.B.A. degree in finance and economic policy from the University of Southern California. Mr. Olson is a Certified Financial Manager and a Certified Management Accountant.

*Glenn D. Moffett* has served as our General Manager of Operations since September 2003. Mr. Moffett served as our Corporate Counsel and as an Administrative Manager from January 2001 until he was appointed as General Manager of Operations in September 2003. From May 2000 to January 2001, Mr. Moffett was a consultant for Results-Based Leadership, a firm that builds strategic leadership and capabilities within organizations. One of his clients was Quantum. From October 1992 to May 2000, Mr. Moffett was the owner/ founder of a technology firm that produced interactive media. From November 1967 to October 1992, Mr. Moffett held the following positions with Rand McNally & Company, a $245 million manufacturing company with 2,500 employees: Personnel Manager, Industrial Relations Manager, Corporate Manager of Personnel and Industrial Relations, Vice President and General Manager, and Vice President of Human Resources and Administration. He has over 35 years of manufacturing, operational and administrative experience. Mr. Moffet holds a B.G.S. in Psychology and Business from the University of Kentucky, Lexington, and a J.D. from Indiana University, Indianapolis.

*Bradley J. Timon* has served as Corporate Controller since April 2004. Prior to joining the Company, Mr. Timon worked as a financial consultant. From June 1998 to October 2001, Mr. Timon was with CORE, INC. serving as the Corporate Controller through the period of January 2001 and then as Acting Chief Financial Officer until the corporate operations were closed pursuant to a merger. Between September 1995 and May 1998, Mr. Timon served as a Controller for James Hardie Industries. Before entering private industry, Mr. Timon was with the public accounting firm KPMG from 1989 to 1995. Mr. Timon has a B.A. in accounting from California State University, Fullerton and is a Certified Public Accountant.

*Cathryn T. Johnston* has served as Director of Communications and Corporate Support since September 2002 and became Corporate Secretary in November 2000. From June 2000 to September 2002, Ms. Johnston served as Director of Business Operations. From 1994 to June 2000, Ms. Johnston held various positions with IMPCO, including Manager of Business Administration, Manager of Program and Contracts Administration, and Program Administrator for OEM programs. Prior to joining IMPCO in 1994, Ms. Johnston held several business administration positions in a variety of industries, including the residential building industry and the non-profit sector. Ms. Johnston received a B.A. in Developmental Psychology from the University of California, Santa Barbara and an M.B.A. from the University of California, Irvine.

**Item 2. Properties.**

Our corporate headquarters are located in Irvine, California. Our facility in Irvine is dedicated to the research and development and production of systems and technologies that enable the use of gaseous fuels in internal combustion engines and fuel cells. This facility conducts research and development of advanced fuel storage, systems for light- and medium-duty OEM alternative fuel vehicles and for fuel cell applications in the transportation, stationary power generation, and portable power generation markets.

We conduct vehicle development and integration at our facilities located in Lake Forest, California. We opened this facility during fiscal year 2000. Our Advanced Vehicle Concept Center in Lake Forest, California is focused on systems integration, validation and certification for concept, prototype and production vehicles. The center additionally conducts research and development of advanced fuel delivery and electronic control systems for light- and medium-duty OEM alternative fuel vehicles and for fuel cell applications, including transportation,

stationary power generation, and portable power generation. Our Sterling Heights, Michigan facility assists our OEM customers in the Detroit area (including U.S. Army – National Automotive Center), acting as a liaison between us and our customers, performing the following primary functions: vehicle commercialization and specialty vehicle assembly management.

We currently lease manufacturing, research and development and general office facilities in the locations set forth below:

| Location | Principal Uses | Square Footage |
|---|---|---|
| Irvine, California | Corporate offices, manufacturing, research and development and testing | 88,000 |
| Lake Forest, California | Design, development and testing | 65,000 |
| Sterling Heights, Michigan | Customer relations, sales and specialty vehicle assembly management | 16,000 |

We believe our facilities are presently adequate for our current core product manufacturing operations and OEM development programs and production. We anticipate that we will require additional space as we expand our operations in the fuel cell and alternative fuel industries. We believe that we will be able to obtain suitable space as needed on commercially reasonable terms.

**Item 3. Legal Proceedings.**

We are not currently a party to any material legal proceeding. We may from time to time become involved in litigation relating to claims arising in the ordinary course of business. These claims, even if not meritorious, could result in the expenditure of significant financial and managerial resources.

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

No matters were submitted to a vote of security holders during the fourth quarter of the fiscal year ended April 30, 2004.

## PART II

### Item 5. Market for Company's Common Equity and Related Stockholder Matters.

Our common stock has been traded on the Nasdaq National Market under the symbol "QTWW" since July 23, 2002. Our Series B common stock is not publicly traded. Prior to our spin-off from IMPCO, from July 11, 2002 though July 22, 2002, our common stock traded on a "when-issued" basis on the Nasdaq National Market. The table below sets forth, for the periods indicated, the high and low daily sales prices for our common stock as reported on the Nasdaq National Market:

| | High | Low |
|---|---|---|
| **Fiscal Year Ended April 30, 2003** | | |
| Quarter ended July 31, 2002 (commencing July 11, 2002) | $ 6.05 | $3.20 |
| Quarter ended October 31, 2002 | 5.95 | 0.90 |
| Quarter ended January 31, 2003 | 3.90 | 1.95 |
| Quarter ended April 30, 2003 | 3.19 | 1.92 |
| **Fiscal Year Ended April 30, 2004** | | |
| Quarter ended July 31, 2003 | 3.26 | 1.93 |
| Quarter ended October 31, 2003 | 9.95 | 2.90 |
| Quarter ended January 31, 2004 | 10.58 | 5.95 |
| Quarter ended April 30, 2004 | 10.48 | 5.86 |

On June 18, 2004, the last reported sale price for our common stock as reported by the Nasdaq National Market was $5.35 per share. On June 18, 2004, there were approximately 521 holders of record of our common stock and one holder of record of our Series B common stock.

#### Dividend Policy

We have not paid any dividends in the past, and we do not anticipate paying any dividends on our common stock in the foreseeable future because we expect to retain our future earnings for use in the operation and expansion of our business. Our payment and amount of dividends, however, will be subject to the discretion of our board of directors and will depend, among other things, upon our results of operations, financial condition, cash requirements, future prospects and other factors which may be considered relevant by our board of directors.

#### Use of Proceeds of Securities Offering

On January 16, 2003, the Securities and Exchange Commission declared effective our Registration Statement on Form S-1 (No. 333-101668). The Registration Statement covered the sale of 4,025,000 shares of our common stock (including an option to purchase 525,000 shares to cover over-allotments) at an offering price of $2.25 per share, for an aggregate of $9,056,250. The managing underwriter was Adams, Harkness & Hill, Inc. After deducting the underwriting discounts and commissions and offering expenses totaling approximately $1.0 million in the aggregate, we received net proceeds of approximately $8.0 million in connection with the offering. Through the date of the filing of this report, approximately $2.6 million of the net proceeds from the offering have been used for working capital purposes. Pending use of the remaining proceeds from the offering, we have invested the funds in investment grade, interest-bearing marketable securities.

There were no securities offerings during the fourth quarter of the fiscal year ended April 30, 2004.

**Item 6. Selected Financial Data.**

The following table summarizes certain historical financial information at the dates and for the periods indicated prepared in accordance with accounting principles generally accepted in the United States. The statement of operations data for the years ended April 30, 2002, 2003 and 2004 and the balance sheet data as of April 30, 2003 and 2004 have been derived from our audited financial statements included elsewhere in this annual report. The statement of operations data for the years ended April 30, 2000 and 2001 and the balance sheet data as of April 30, 2000, 2001 and 2002 have been derived from audited financial statements not included in this annual report. Certain reclassifications have been made to amounts for fiscal years 2000 through 2003 to conform to the fiscal 2004 presentation. The selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and notes thereto, which are included elsewhere in this annual report.

| | Year Ended April 30 | | | | |
|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004 |
| | (in thousands, except per share amounts) | | | | |
| **Statement of Operations Data:** | | | | | |
| Revenue: | | | | | |
| Net product sales | $ 13,057 | $ 15,447 | $ 15,517 | $ 15,833 | $ 18,624 |
| Contract revenue | 9,284 | 7,911 | 7,886 | 7,806 | 9,495 |
| Total revenue | 22,341 | 23,358 | 23,403 | 23,639 | 28,119 |
| Cost and expenses: | | | | | |
| Cost of product sales | 15,081 | 19,452 | 25,581 | 18,471 | 12,865 |
| Research and development | 12,956 | 26,687 | 33,474 | 15,062 | 15,657 |
| Selling, general and administrative | 4,939 | 7,459 | 7,246 | 8,442 | 8,930 |
| Operating loss | (10,635) | (30,240) | (42,898) | (18,336) | (9,333) |
| Interest income (expense), net | — | (4) | (479) | 6 | 411 |
| Other income | — | — | — | 134 | 27 |
| Provision for income taxes | — | — | (1) | (1) | (39) |
| Net loss | $(10,635) | $(30,244) | $(43,378) | $(18,197) | $ (8,934) |
| Basic and diluted loss per share | — | — | $ (3.07) | $ (1.00) | $ (0.33) |
| Weighted average number of shares outstanding – basic and diluted (1) | — | — | 14,142 | 18,153 | 27,257 |

| | April 30 | | | | |
|---|---|---|---|---|---|
| | 2000 | 2001 | 2002 | 2003 | 2004 |
| | (in thousands) | | | | |
| **Balance Sheet Data:** | | | | | |
| Cash and cash equivalents | $ 2 | $ 4 | $ 177 | $ 11,539 | $ 15,729 |
| Marketable securities held-to-maturity | — | — | — | — | 52,828 |
| Working capital | 14,364 | 11,338 | (3,375) | 15,500 | 57,689 |
| Total assets | 23,399 | 32,815 | 28,159 | 51,274 | 103,447 |
| Long-term obligations, less current portion | — | 183 | 127 | — | — |
| Total equity | 19,357 | 23,992 | 10,271 | 42,950 | 97,451 |

(1) See Note 12 of the notes to the financial statements included elsewhere in this annual report for an explanation of the method used to determine the number of shares used to compute the net loss per share.

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

*You should read the following Management's Discussion and Analysis of Financial Condition and Results of Operations together with the financial statements and related notes included elsewhere in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those described under "Risk Factors" and elsewhere in this annual report.*

**Overview**

We design, manufacture and supply packaged fuel systems to OEMs for use in alternative fuel vehicles and fuel cell applications. Our fuel systems enable cars, trucks and buses powered by internal combustion engines to operate on hydrogen, natural gas or propane. Our advanced enabling products for fuel cell systems are used in transportation and industrial vehicles, stationary and portable power generation, and hydrogen refueling products for the infrastructure to support fuel cell vehicles. Our advanced fuel systems comprise the storage, monitoring, control and injection of gaseous fuels to improve efficiency, enhance power output and reduce pollutant emissions from internal combustion engines and fuel cell systems.

We supply our advanced gaseous fuel systems for alternative fuel vehicles to OEM customers for use by consumers and for commercial and government fleets. Since 1997, we have sold approximately 17,000 fuel systems for alternative fuel vehicles, primarily to General Motors, which in turn has sold substantially all of those vehicles to its customers. We also provide our gaseous fuel systems and hydrogen refueling products for fuel cell applications to major OEMs through funded research and development contracts and on a prototype basis. These fuel cell and hydrogen refueling products are not currently used on a commercial basis and will require additional product development over the next five years; however, we believe that a commercial market will begin to develop for these products in the next two years. We believe that these systems will reach production volumes only if OEMs produce fuel cell applications and hydrogen refueling products using our systems on a commercial basis. Our revenues and cash flows are dependent on the advancement of OEM fuel cell technologies and our OEM customers' internal plans, spending levels and timing for pre-production development programs and commercial production. Our business depends on the industry-wide growth of the fuel cell and alternative fuel markets, which in turn is dependent on regulations, laws, hydrogen availability and refueling, technology advancements and consumer adoption of alternative fuel and fuel cell technologies on a commercial scale. In evaluating financial condition and operating results, we assess these industry-wide factors and the potential impact on our business.

A significant portion of our business is generally related to alternative fuel automotive sales, which vary directly with the production schedules of our OEM customers. The market for alternative fuel vehicles is sensitive to general economic conditions, government agency and commercial fleet spending and consumer preferences. The rate at which our customers sell alternative fuel vehicles depends on their marketing strategy, as well as company specific inventory and incentive programs. Any significant reduction or increase in alternative fuel production by our OEM customers may have a material effect on our business. Our industry is also dependent upon a limited number of third party suppliers of materials and components for our products. Any quality or supply issue of these components can negatively impact our business. Recently, a supplier notified us that one of its components that we use in our hydrogen fuel regulation system has been discontinued due to a concern about compatibility of this component with hydrogen. We are in the process of evaluating other materials and suppliers for this component and are unsure on the timing of integrating a replacement part into our hydrogen fuel regulation system. To the extent we are unable to source an alternative material for a replacement part in a timely manner, we may experience delays in shipping our hydrogen fuel regulation systems or complete packaged fuel systems. Additionally, any shortage of materials could negatively impact our business. In the past few months, we have experienced early signs of pressure on the availability of high-strength fiber from our primary supplier, and we are looking for alternative suppliers to fulfill our needs in the event of any potential shortages.

In managing our business, our management utilizes several non-financial factors to analyze our performance. We assess the extent to which current programs are progressing in terms of timing and deliverables and the success to which our systems are interfacing with our customers' fuel cell applications. We also assess the degree to which we secure additional programs or new programs from our current or new OEM customers and the level of government funding we receive for hydrogen-based systems and storage solutions.

We classify our business operations into four reporting segments: the Fuel Cell Systems division, Alternative Fuels division, Advanced Research & Product Development and Corporate Expenses. The Fuel Cell Systems division generates revenue through the sale of compressed hydrogen storage, fuel delivery and electronic control systems to OEMs and the installation of our products into OEM fuel cell vehicles and hydrogen refueling systems. The Fuel Cell Systems division also generates contract revenue by providing engineering design and support to OEMs so that their fuel storage, fuel delivery and electronic control systems integrate and operate with certain of their fuel cell applications. The Alternative Fuels division generates revenue through the sale of compressed natural gas ("CNG") and propane ("LPG") fuel storage, fuel delivery and electronic control systems to OEMs, primarily General Motors, and the installation of our products into OEM vehicles. The Alternative Fuels division also generates contract revenue by providing engineering design and support to OEMs so that our fuel storage, fuel delivery and electronic control systems integrate and operate with certain of their alternative fuel vehicles. The chief operating decision maker allocates resources and tracks performance by each of the four reporting segments.

For the fiscal years ended April 30, 2002, 2003 and 2004, revenue related to sales of our products to and contracts with General Motors and its affiliates represented 79.9%, 58.9% and 46.1%, respectively, of our total revenue for these periods. For the fiscal years ended April 30, 2002, 2003 and 2004, revenue related to sales of our products to and contracts with Toyota represented 5.5%, 24.2% and 44.0% of our total revenue for these periods, respectively.

We recognize revenue for product sales when goods are shipped in accordance with our shipping terms and collectability is reasonably assured. Contract revenue is recognized based on the percentage of completion method. Corporate Expenses represents a sub-category of selling, general and administrative expense. Corporate Expenses consist of general and administrative expense incurred at the corporate level.

We expense all research and development when incurred. Research and development expense includes both customer-funded research and development and company-sponsored research and development. For segment reporting purposes, research and development expense is allocated to the Alternative Fuels and Fuel Cell Systems segments when the expense can be identified with those segments. Advanced Research & Product Development is a sub-category of research and development expense and represents company-sponsored research and development that is not allocated to the Alternative Fuels or Fuel Cell Systems reporting segments. Customer-funded research and development consists primarily of expenses associated with contract revenue. These expenses include application development costs we funded under customer contracts. We will continue to require significant research and development expenditures over the next several years in order to commercialize our products for fuel cell applications.

***General Motors Relationship***

Our strategic alliance with General Motors became effective upon our spin-off from IMPCO. We believe that our strategic alliance with General Motors will advance and commercialize, on a global basis, the integration of our gaseous storage and handling systems into fuel cell systems used in the transportation markets. Under the alliance, Quantum and General Motors will co-develop technologies that are designed to accelerate the commercialization of fuel cell applications. Additionally, General Motors will endorse Quantum as a recommended provider of hydrogen storage, hydrogen handling and associated electronic controls. This strategic alliance expands the relationship that has been in place between General Motors and Quantum (as IMPCO's Automotive OEM Division) since 1993, through which we provide packaged natural gas and propane fuel systems for General Motors' alternative fuel vehicle products.

In connection with our strategic alliance, immediately following our spin-off from IMPCO, we issued to General Motors an aggregate of 3,513,439 shares of our Series A common stock, representing 19.9% of our total outstanding equity following such issuance, for consideration of a nominal cash contribution and access to certain of General Motors' proprietary information. Under the alliance, we have committed to spend $4.0 million annually for specific research and development projects directed by General Motors to speed the commercialization of our fuel cell related products. While this commitment was waived by General Motors for calendar years 2002 and 2003, we cannot assure you that this commitment will be waived in the future. For 2004, we expect to spend an amount yet to be determined for research projects directed by General Motors. Each party will retain the ownership of its existing technology and will jointly own technology that is jointly created under the alliance. We will be free to use jointly created technologies in certain aspects of our business but will be required to share revenue with General Motors on fuel cell system-related products that are sold to General Motors or third parties.

Pursuant to the terms of our Amended and Restated Certificate of Incorporation, upon the completion of our January 2003 public offering, all of the outstanding 3,513,439 shares of Series A common stock held by General Motors converted on a one-for-one basis into Quantum common stock. We also issued an additional 999,969 shares of our non-voting Series B common stock to General Motors pursuant to General Motors' anti-dilution rights. As a result of the conversion of the Series A common stock, General Motors no longer has anti-dilution rights.

We recorded the value of the shares issued to General Motors as an intangible asset at fair market value on the date of their respective issuance. We are amortizing this intangible asset over the ten-year term of the strategic alliance with General Motors, subject to periodic evaluation for impairment.

***Separation from IMPCO***

We were incorporated under the laws of the State of Delaware on October 13, 2000, as a wholly-owned subsidiary of IMPCO. IMPCO conducted our business through various departments, first as a division (the Automotive OEM Division) and most recently as a subsidiary (Quantum Fuel Systems Technologies Worldwide, Inc.). On July 23, 2002, IMPCO completed the distribution and spin-off of our company by distributing to IMPCO stockholders one share of Quantum common stock for every share of IMPCO common stock held on the record date, which was July 5, 2002. Prior to the distribution, we entered into several agreements with IMPCO with respect to, among other things, intellectual property, interim services and a number of ongoing commercial relationships. The interim services agreement provided for specified charges generally intended to allow the providing company to fully recover the allocated direct costs of providing the services, plus all out-of-pocket costs and expenses, but without any profit. The pricing terms for goods and services covered by the commercial agreements reflected negotiated prices.

Our historical financial statements include allocations of certain of IMPCO corporate headquarters' assets, liabilities and expenses relating to our business operations that were transferred from IMPCO in connection with the spin-off. General corporate overhead has been allocated either based on the ratio of our headcount to IMPCO's total headcount, on our revenue as a percentage of IMPCO's total revenue, or specifically identified costs. General corporate overhead primarily includes salary and expenses for executive management, finance, legal, human resources, and investor relations departments and amounted to approximately $3,209,000, $0 and $0 in 2002, 2003 and 2004, respectively. As a result of the spin-off, we now perform these functions using our own resources or purchased services.

Our financial statements, which are discussed below, reflect the historical financial position, results of operations and cash flows of the business transferred to us from IMPCO as part of the distribution. The financial information included herein, however, may not necessarily reflect our financial position, results of operations and cash flows in the future or what our financial position, results of operations and cash flows would have been had we been a stand-alone company during the periods prior to fiscal year 2003.

***Income Taxes***

Income taxes were calculated as if we filed separate tax returns through the date of the spin-off. However, IMPCO was managing its tax position for the benefit of its entire portfolio of businesses, and its tax strategies are not necessarily reflective of the tax strategies that we would have followed as a stand-alone company.

***Combination with Global Thermoelectric***

On April 8, 2003, we entered into a Combination Agreement with Global Thermoelectric Inc. ("Global") to combine Global with our company in a share-for-share exchange pursuant to a Plan of Arrangement submitted to the Court of Queen's Bench of Alberta, Canada for approval. On July 14, 2003, Global announced that it had received a competing proposal from FuelCell Energy, Inc. ("FuelCell"). On July 31, 2003, upon reviewing the terms of the competing proposal and after full consideration of the possible alternative terms that could have been offered by us, our board of directors concluded that it was not in the best interest of Quantum or its stockholders to propose any adjustments or improvements to the terms and conditions of the transaction contemplated by the Combination Agreement between us and Global. On August 4, 2003, we announced that Global had terminated the Combination Agreement with us as a result of the proposed combination between Global and FuelCell. As a result of the termination of the Combination Agreement, we received a US $2,000,000 break-up fee from Global on August 4, 2003. This fee was netted against the accumulated transaction costs of approximately $2,127,000, which resulted in a $127,000 charge to earnings during the three months ended July 31, 2003.

**Critical Accounting Policies and Estimates**

The discussion and analysis of our financial condition and results of operations are based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States and are included elsewhere in this report. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses, and related disclosure of contingent assets and liabilities. We evaluate our estimates, including those related to bad debts, inventories, our intangible asset, warranty and recall obligations, long-term service contracts, and contingencies and litigation, on an ongoing basis. We base our estimates on historical experience and on various other assumptions 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.

Management considers an accounting estimate to be critical if:

- it requires assumptions to be made that were uncertain at the time the estimate was made; and
- changes in the estimate or different estimates that could have been selected could have a material impact on our results of operations or financial condition.

Our management has discussed the development and selection of these critical accounting policies and estimates with the audit committee of our board of directors, and the audit committee has reviewed the disclosure presented below relating to them. We believe the critical accounting policies described below affect the more significant judgments and estimates used in the preparation of our financial statements:

- We recognize revenue and profit as work progresses on long-term, fixed price contracts for product application development using the percentage-of-completion method, which relies on estimates of total expected contract revenue and costs. We follow this method because we can make reasonably dependable estimates of the revenue and costs applicable to various stages of a contract. Recognized revenue and profit are subject to revisions as the contract progresses to completion. Our estimates of contract costs are based on expectations of engineering development time and materials and other

support costs. These estimates can change based on unforeseen technology and integration issues, but known risk factors and contract challenges are generally allowed for in the initial scope and cost estimate of the program. Historically, our final contract costs have approximated the initial estimates and any unforeseen changes in the estimates have not resulted in a material impact to financial results. Revisions in profit estimates are charged to income in the period in which the facts that give rise to the revision become known.

- We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.
- We write down our inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future demand and market conditions. As part of our estimate, we rely upon future planned design configurations and projected alternative usage of certain components estimated by engineering. We also consider estimated demand for service and warranty parts based on historical information. If actual usage rates or market conditions are less favorable than those projected by management, inventory write-downs may be required.
- We conduct a major portion of our business with a limited number of customers. For the past year and for the foreseeable future, General Motors Corporation (and subsidiaries of General Motors) and Toyota Motor Corporation have represented, and are expected to continue to represent, a significant portion of our sales and outstanding accounts receivable. Credit is extended based upon an evaluation of each customer's financial condition, with terms consistent with those present throughout the industry. Typically, we do not require collateral from customers. We have recorded an allowance for uncollectible accounts receivable based on past experience and certain circumstances surrounding the composition of total accounts receivable. To the extent we increase this allowance in a period, we must include an expense in the statement of operations. If commercial conditions differ from management's estimates, an additional write-off may be required.
- As part of the process of preparing our 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 the net operating loss carryforward that has resulted from our cumulative net operating loss since spin-off. 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. To the extent we establish a valuation allowance or increase this allowance in a period, we must include an expense within the tax provision in the statement of operations. 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 due to uncertainties related to our ability to utilize the net deferred tax assets, primarily consisting of net operating losses and credits which may be carried forward, before they expire. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust the recorded valuation allowance, which could materially impact our financial position and results of operations. At April 30, 2004, our net deferred tax assets have been offset in full by a valuation allowance.
- We evaluate our long-lived assets, particularly our intangible asset relating to the strategic alliance with General Motors, in accordance with Statement of Financial Accounting Standards ("SFAS") No. 144, "Accounting for Impairment or Disposal of Long-Lived Assets." We review our long-lived assets, which includes property, plant and equipment and identifiable finite-lived intangible assets, for

impairment on an annual basis or whenever events or changes in circumstances indicate that the carrying value of such assets may not be recoverable. Factors we consider important which could trigger an impairment review include, but are not limited to, the following: significant underperformance relative to expected historical or projected future operating results; significant changes in the manner of our use of the acquired assets or the strategy for our overall business; significant negative industry or economic trends; and a significant decline in our stock price for a sustained period. An impairment would be recognized based on the difference between the fair value of the asset and its carrying value. Future events could cause us to conclude that impairment indicators exist and that long-lived assets may be impaired. Any resulting impairment loss could have a material adverse impact on our financial condition and results of operations.

**Results of Operations**

***Years Ended April 30, 2003 and 2004***

Net revenue and operating income (loss) for our business segments for the years ended April 30, 2003 and 2004 were as follows:

| | Revenue | | Operating Income (Loss) | |
|---|---|---|---|---|
| | Year Ended April 30 | | Year Ended April 30 | |
| | 2003 | 2004 | 2003 | 2004 |
| | (in thousands) | | | |
| Fuel Cell Systems | $ 9,867 | $16,193 | $ (1,874) | $ 2,541 |
| Alternative Fuels | 13,772 | 11,926 | (8,173) | (3,395) |
| Advanced Research & Product Development | — | — | (2,831) | (3,197) |
| Corporate Expenses(1) | — | — | (5,458) | (5,282) |
| Total | $23,639 | $28,119 | $(18,336) | $(9,333) |

(1) Represents corporate expenses not allocated to any of the reporting segments.

Net revenue increased $4.5 million, or 19.1%, from $23.6 million in fiscal year 2003 to $28.1 million in fiscal year 2004. Operating losses decreased by $9.0 million, or 49.2%, from $18.3 million in fiscal year 2003 to $9.3 million in fiscal year 2004. The decrease in loss was attributable to a $2.5 million operating profit as compared to a $1.9 million operating loss in the prior year for the Fuel Cell Systems segment, a $4.8 million decrease in the operating loss of the Alternative Fuels segment, and a $0.2 million decrease in the operating loss of the Corporate Expense segment, partially offset by a $0.4 million increase in the operating loss of the Advance Research & Product Development segment.

*Fuel Cell Systems.* Product sales increased $4.5 million, or 95.7%, from $4.7 million in fiscal year 2003 to $9.2 million in fiscal year 2004. Product sales consisted of sales associated with Toyota Motor Corporation's fuel cell SUV platform and bus platform equipped with our hydrogen fuel metering and fuel storage systems. The higher sales level in fiscal 2004 was mainly due to an increase in fuel storage systems delivered to Toyota Motor Corporation for their fuel cell vehicle programs.

Cost of product sales increased $0.6 million, or 18.8%, from $3.2 million in fiscal year 2003 to $3.8 million in fiscal year 2004. Although costs increased as a result of higher volume, this increase was offset by efficiencies achieved in per unit costs due to fewer production changeovers and reduced material scrap.

Gross profits on product sales increased $3.9 million, or 260.0%, from $1.5 million in fiscal year 2003 to $5.4 million in fiscal year 2004, due to a 25.4% decrease in cost of product sales as a percentage of sales.

Contract revenue for the Fuel Cell Systems segment increased $1.8 million, or 34.6%, from $5.2 million in fiscal year 2003 to $7.0 million in fiscal year 2004. Contract revenue is derived primarily from system

development and application engineering of our products under funded OEM contracts, and other funded contract work with the military and other government agencies. The increase in fiscal 2004 was primarily due to an increase in the development of fuel delivery systems on behalf of our automotive OEM customers and military contracts. We anticipate these development programs will continue to increase in fiscal 2005 based on expanded and new automotive OEM programs and an increase in military programs.

Research and development expense associated with cost of contract revenue included in the Fuel Cell Systems segment increased $1.0 million, or 34.5%, from $2.9 million in fiscal year 2003 to $3.9 million in fiscal year 2004. The increase was primarily due to development efforts to support customer-funded contracts.

Internally funded research and development expense for the Fuel Cell Systems segment increased by $0.1 million, or 1.8%, from $5.5 million in fiscal year 2003 to $5.6 million in fiscal year 2004. Internally funded research and development expense for the Fuel Cell Systems segment includes the amortization of our intangible asset recorded in July 2002. The increase in amortization during fiscal 2004 to $1.7 million as compared to only $1.2 million for fiscal 2003 was the primary reason for the overall increase in internally funded research and development, which offset cost reductions as a result of a continued shift of research and development programs being funded under customer specific programs.

Operating income for the Fuel Cell Systems segment increased $4.4 million from a $1.9 million operating loss in fiscal year 2003 to a $2.5 million operating income in fiscal year 2004. The increase in income was attributable to a $3.9 million increase in gross profit on product sales and a $1.8 million increase in contract revenue, partially offset by a $1.1 million increase in research and development expenses and a $0.3 million increase in sales and marketing expenses.

*Alternative Fuels*. Product sales decreased $1.8 million, or 16.1%, from $11.2 million in fiscal year 2003 to $9.4 million in fiscal year 2004. Product sales consist of sales associated with General Motors' mid-size automobiles, pick-up trucks, and vans equipped with our bi-fuel and compressed natural gas fuel systems and General Motors' medium duty trucks equipped with dedicated liquid propane gas kits. The decrease in product sales for fiscal year 2004 was due to lower sales of General Motors' midsize automobiles, medium duty trucks and vans, partially offset by higher sales of pickup trucks. The medium duty truck platform was discontinued during the third quarter of fiscal 2003 and the midsize automobile was negatively impacted by lower demand, particularly from government fleets. We expect that product revenues in this segment will continue to decline in fiscal 2005 due to General Motors' planned discontinuance of the midsize vehicle.

Cost of product sales decreased $6.3 million, or 41.2%, from $15.3 million in fiscal year 2003 to $9.0 million in fiscal year 2004. The decrease in cost of product sales was primarily due to a $2.8 million decrease in material costs related to the lower sales volume, and a $3.2 million decrease in direct labor and other indirect production costs, including warranty reserve, inventory obsolescence, and freight charges. A provision for inventory obsolescence is made for each model year based on inventory levels necessary to provide for future warranty and service parts, as well as for parts that cannot be transferred to the next model year program. During fiscal year 2003, we determined that excess inventory remained on the close out of certain model year platforms and, therefore, we recorded an additional provision of $1.0 million. During fiscal 2004, we recorded only $0.2 million in additional inventory reserves.

Gross profits on product sales increased $4.5 million, or 109.8%, from a negative $4.1 million in fiscal year 2003 to $0.4 million in fiscal year 2004, due to a 40.9% decrease in cost of product sales as a percentage of sales.

Contract revenue related to alternative fuels application development programs decreased $0.1 million, or 3.8%, from $2.6 million in fiscal year 2003 to $2.5 million in fiscal year 2004. Contract revenue is used primarily for system development and application engineering of our products under funded General Motors and other OEM contracts, and other funded contract work with state and federal agencies. Although overall contract revenue declined slightly in fiscal 2004, revenue under emissions testing contracts increased 158% over fiscal

2003 levels to $1.0 million. We expect an overall increase in contract revenues in this segment for fiscal year 2005 due in part to engineering, design and development of advanced fuel injection and storage systems for a fleet of vehicles for California's South Coast Air Quality Management District and a higher level of emissions testing contracts.

Research and development expense associated with cost of contract revenue included in the Alternative Fuels segment decreased $0.4 million, or 30.8%, from $1.3 million in fiscal year 2003 to $0.9 million in fiscal year 2004. The decrease is primarily due to the lower contract revenue and our realization of engineering efficiencies.

Internally funded research and development expense for the Alternative Fuels segment decreased by $0.3 million, or 12.0%, from $2.5 million in fiscal year 2003 to $2.2 million in fiscal year 2004.

Operating loss for the Alternative Fuels segment decreased by $4.8 million, or 58.5%, from $8.2 million in fiscal year 2003 to $3.4 million in fiscal year 2004. The decrease in loss was attributable to a $0.7 million decrease in research and development expenses, a $4.5 million increase in gross profit on product sales, which was offset by a $0.1 million decrease in contract revenue and a $0.4 million increase in sales and administrative expenses.

*Advanced Research & Product Development.* Advanced research and product development expense increased by $0.4 million, or 14.3%, from $2.8 million in fiscal year 2003 to $3.2 million in fiscal year 2004. The increase primarily relates to additional design efforts to advance hydrogen fuel storage and natural gas injector product capabilities and to advance vehicle design.

*Corporate Expenses*. Corporate expenses decreased by $0.2 million, or 3.6%, from $5.5 million in fiscal year 2003 to $5.3 million in fiscal year 2004. Corporate expenses as a percentage of total revenues decreased to 18.8% in fiscal 2004 as compared to 23.1% in fiscal 2003. We expect this ratio to be consistent with fiscal 2004 or slightly improve during fiscal 2005.

*Interest Expense (Income), Net* In fiscal year 2004, we recorded $456,000 in interest income as compared to $120,000 in fiscal 2003. The higher level of interest income earned is due to the investment of the proceeds of our public equity offering completed in October 2003. Interest expense decreased in fiscal 2004 to $45,000 as compared to $114,000 in fiscal 2003 as a result of reductions in capital lease obligations.

*Provision for Income Taxes.* Income tax expense remained minor due to our net losses during the period. Fiscal year 2004 expense was a result of foreign income taxes on Korean activities and minimum state income taxes incurred. A full valuation allowance has been established for our net deferred tax assets due to our lack of earnings history. We expect that income tax expense for fiscal year 2005 will be the same as fiscal year 2004 as we expect to continue to incur operating losses during fiscal year 2005. The tax credits and net operating losses incurred through the date of the distribution remained with IMPCO.

***Years Ended April 30, 2002 and 2003***

Net revenue and operating loss for our business segments for the years ended April 30, 2002 and 2003 were as follows:

| | Revenue | | Operating Loss | |
|---|---|---|---|---|
| | Year Ended April 30 | | Year Ended April 30 | |
| | 2002 | 2003 | 2002 | 2003 |
| | | (in thousands) | | |
| Fuel Cell Systems | $ 4,389 | $ 9,867 | $(13,352) | $ (1,874) |
| Alternative Fuels | 19,014 | 13,772 | (18,759) | (8,173) |
| Advanced Research & Product Development | — | — | (9,213) | (2,831) |
| Corporate Expenses(1) | — | — | (1,574) | (5,458) |
| Total | $23,403 | $23,639 | $(42,898) | $(18,336) |

(1) Represents corporate expenses not allocated to any of the reporting segments.

Net revenue increased $0.2 million, or 0.9%, from $23.4 million in fiscal year 2002 to $23.6 million in fiscal year 2003. Operating losses decreased by $24.6 million, or 57.3%, from $42.9 million in fiscal year 2002 to $18.3 million in fiscal year 2003. The decrease in loss was attributable to a $11.5 million decrease in operating loss for the Fuel Cell Systems segment, a $10.6 million decrease in the operating loss of the Alternative Fuels segment, and a $6.4 million decrease in the operating loss of the Advanced Research & Product Development segment, partially offset by a $3.9 million increase in the operating loss of the Corporate Expenses segment.

*Fuel Cell Systems.* Revenue increased by $5.5 million, or 125.0%, from $4.4 million in fiscal year 2002 to $9.9 million in fiscal year 2003. Product sales were $4.7 million in fiscal year 2003. There were no product sales in this segment during fiscal year 2002. Product sales consisted of sales associated with Toyota Motor Corporation's fuel cell SUV platform equipped with our hydrogen fuel metering and fuel storage systems. For fiscal year 2003, these product sales contributed $1.5 million in gross profit.

Contract revenue for the Fuel Cell Systems segment increased $0.8 million, or 18.2%, from $4.4 million in fiscal year 2002 to $5.2 million in fiscal year 2003. The increase was due to our participation in new fuel cell system developmental programs for automotive OEM programs and hydrogen refueling systems. Contract revenue was derived primarily from system development and application engineering of our products under funded OEM contracts, and other funded contract work with state and federal agencies.

Research and development expense associated with cost of contract revenue included in the Fuel Cell Systems segment increased $0.2 million, or 7.4%, from $2.7 million in fiscal year 2002 to $2.9 million in fiscal year 2003. The increase was primarily due to development efforts to support customer-funded contracts.

Internally funded research and development expense for the Fuel Cell Systems segment decreased by $9.6 million, or 63.6%, from $15.1 million in fiscal year 2002 to $5.5 million in fiscal year 2003. The decrease in internally funded research and development primarily relates to a decrease in fuel storage, fuel delivery systems, and vehicle integration for fuel cell-related programs primarily due to cost cutting measures, and less significantly, to an increase in research and development funded under customer programs and a decrease in direct and indirect support costs. Internally funded research and development expense for the Fuel Cell Systems segment includes the amortization of our intangible asset. The amortization expense in fiscal year 2003 was approximately $1.2 million.

Operating loss for the Fuel Cell Systems segment decreased by $11.5 million, or 85.8%, from $13.4 million in fiscal year 2002 to $1.9 million in fiscal year 2003. The decrease in loss was attributable to a $9.4 million decrease in research and development expenses, a $1.5 million increase in gross profit on product sales, and a $0.8 million increase in contract revenue.

*Alternative Fuels.* Product sales decreased $4.3 million, or 27.7%, from $15.5 million in fiscal year 2002 to $11.2 million in fiscal year 2003. Product sales consist of sales associated with General Motors' mid-size automobiles, pickup trucks, and vans equipped with our bi-fuel and CNG fuel systems and General Motors' medium duty trucks equipped with dedicated liquid propane gas kits. The decrease in product sales for fiscal year 2003 was due to lower sales of General Motors' midsize automobiles, medium duty trucks and vans, partially offset by higher sales of pickup trucks. The medium duty truck alternative fuel platform was discontinued for model year 2002 and the midsize automobile was negatively impacted by lower demand, particularly from government fleets.

Cost of product sales decreased $10.3 million, or 40.2%, from $25.6 million in fiscal year 2002 to $15.3 million in fiscal year 2003. The decrease in cost of product sales was due to a $2.5 million decrease in manufacturing overhead mainly due to cost reductions, a $3.9 million decrease in material costs related to the lower sales volume, and a $3.9 million decrease in direct labor and other indirect production costs, including warranty reserve, inventory obsolescence, and freight charges. A provision for inventory obsolescence is made for each model year based on inventory levels necessary to provide for future warranty and service parts, as well

as for parts that cannot be transferred to the next model year program. During fiscal year 2003, we completed four model year 2002 platforms and determined at the time of completion that excess inventory remained and, therefore, recorded an additional provision of $1.0 million.

Gross profits on product sales increased $6.0 million, or 59.4%, from a negative $10.1 million in fiscal year 2002 to a negative $4.1 million in fiscal year 2003, due to a 32.5% decrease in cost of product sales as a percentage of sales. Although our sales of alternative fuel vehicles in fiscal year 2003 generated material gross margin, these sales still generated negative gross profits due to lower than anticipated General Motors production quantities not fully covering overhead costs.

Contract revenue related to alternative fuels application development programs decreased $0.9 million, or 25.7%, from $3.5 million in fiscal year 2002 to $2.6 million in fiscal year 2003. The decrease was due to a decline in the number and scope of General Motors' alternative fuel developmental programs and due to the fact that many of these contracts are model year rollover programs which require less engineering time. Contract revenue was derived primarily from system development and application engineering of our products under funded General Motors and other OEM contracts, and other funded contract work with state and federal agencies.

Research and development expense associated with cost of contract revenue included in the Alternative Fuels segment decreased $2.3 million, or 66.7%, from $3.6 million in fiscal year 2002 to $1.3 million in fiscal year 2003. The decrease was primarily due to the lower contract revenue, engineering efficiencies due to the model year rollover of the contracts and cost cutting measures instituted in the second and third quarters of fiscal year 2002.

Operating loss for the Alternative Fuels segment decreased by $10.6 million, or 56.4%, from $18.8 million in fiscal year 2002 to $8.2 million in fiscal year 2003. The decrease in loss was attributable to a $2.7 million decrease in research and development expenses, a $6.0 million decrease in negative gross profit on product sales, and a $3.0 million decrease in general and administrative expenses, which was partially offset by a $0.9 million decrease in contract revenue and a $0.2 million increase in sales and marketing expenses.

*Advanced Research & Product Development.* Advanced research and product development expense decreased by $6.4 million, or 69.6%, from $9.2 million in fiscal year 2002 to $2.8 million in fiscal year 2003. The decrease in research and development primarily relates to a decrease in advanced engineering for component development work and support costs for vehicle integration activities primarily due to cost cutting measures instituted in the third and fourth quarters of fiscal year 2002.

*Corporate Expenses.* Corporate expenses increased by $3.9 million, or 243.8%, from $1.6 million in fiscal year 2002 to $5.5 million in fiscal year 2003. The fiscal year 2002 expenses represent the corporate portion of the cost allocation from IMPCO for the fiscal year. The increase for fiscal year 2003 is due to additional corporate expenses necessary to support our business as a stand-alone company. In fiscal year 2002, we had expended more direct and indirect resources supporting research and development activities than on the traditional general and administrative support activities needed for a stand-alone company. In fiscal year 2003, we realigned these resources to support these more traditional general and administrative activities.

*Interest Expense.* Interest expense decreased $0.4 million for fiscal year 2003 compared to fiscal year 2002. The decrease was due to a recapitalization of our company as a result of the spin-off from IMPCO.

*Interest Income.* Interest income increased $0.1 million for fiscal year 2003 compared to fiscal year 2002. The increase was due to higher cash equivalent balances since the spin-off from IMPCO.

*Provision for Income Taxes*. Income tax expense remained flat due to our net losses during the period. A valuation allowance has been established for deferred tax assets due to our lack of earnings history. The tax credits and net operating losses incurred through the date of the distribution remained with IMPCO.

**Liquidity and Capital Resources**

Prior to our spin-off from IMPCO, we used cash generated from IMPCO's operations, bank financings and investments from IMPCO to fund capital expenditures and research and development, as well as to invest in and operate our existing operations and new businesses. Prior to the distribution, IMPCO made an additional capital investment of $15.0 million in cash, plus an assumption of our debt facility of $8.6 million. As of April 30, 2004, we had no material indebtedness or commitments for capital expenditures.

In January 2003, we completed a public equity offering of an aggregate of 4,025,000 shares of our common stock at a price of $2.25 per share, which yielded net proceeds of $8.0 million after underwriting discounts, commissions and offering expenses. In October 2003, we completed a public equity offering of an aggregate of 8,050,000 shares of our common stock at a price of $8.00 per share, which yielded net proceeds of approximately $60.1 million after underwriting discounts, commissions and offering expenses.

We believe that our working capital will be adequate to meet our liquidity needs for at least the next twelve months. We may require additional sources of financing to develop facilities for commercialization and mass production of our products and systems and to take advantage of strategic opportunities. These additional sources of financing may include bank borrowings or public or private offerings of equity or debt securities. We cannot assure you that such additional sources of financing will be available on acceptable terms, if at all.

Cash flows from operating activities improved by $8.3 million during fiscal 2004. Net cash used in operating activities was $4.8 million in fiscal year 2004 as compared to $13.1 million for fiscal year 2003. The improvement primarily resulted from a lower net operating loss for fiscal year 2004 of $8.9 million as compared to the net operating loss of $18.2 million for fiscal year 2003. Net cash used in operating activities was $4.1 million less than our net operating loss for fiscal 2004 primarily due to the non-cash effects of depreciation and amortization expense of $5.2 million as offset by reductions in accounts payable and accrued liabilities.

Net cash used in investing activities in fiscal year 2004 was $54.3 million, an increase of $53.4 million from fiscal year 2003. The increase was mainly a result of $52.8 million invested in marketable securities classified as held-to-maturity at April 30, 2004 and an increase in capital expenditures of $0.4 million as compared to fiscal year 2003.

Net cash provided by financing activities in fiscal year 2004 was $63.3 million as compared to $25.4 million for fiscal year 2003. During the second quarter of fiscal year 2004, we completed a public equity offering of an aggregate of 8,050,000 shares of our common stock at a price of $8.00 per share, which yielded net proceeds of approximately $60.1 million after underwriting discounts and commissions and offering expenses. Proceeds from stock option exercises were $3.4 million during fiscal year 2004 as compared to none in fiscal 2003. During fiscal year 2003, we benefited from certain one-time financing activities, such as $2.7 million of net advances from IMPCO and a $15.0 million cash infusion from IMPCO as part of the spin-off.

The ratio of current assets to current liabilities was 10.6:1 at April 30, 2004 and 2.9:1 at April 30, 2003. Total working capital increased by $42.2 million from $15.5 million at the end of fiscal year 2003 to $57.7 million at the end of fiscal year 2004.

**Contractual Obligations**

The following table contains supplemental information regarding total contractual obligations as of April 30, 2004 (see Note 11 of the Notes to Financial Statements).

| | Payments due by Period | | | | |
|---|---|---|---|---|---|
| **Contractual Obligations** | **Total** | **Less Than One Year** | **1-3 Years** | **3-5 Years** | **More Than 5 Years** |
| Operating Lease Obligations | $5,877,042 | $1,380,313 | $2,372,319 | $1,928,716 | $195,694 |
| Employment Agreements | 987,413 | 764,435 | 222,978 | — | — |
| Total | $6,864,455 | $2,144,748 | $2,595,297 | $1,928,716 | $195,694 |

*Research and Development Funding Commitment.* Pursuant to the Corporate Alliance Agreement with General Motors, we committed to spend $4.0 million annually for specific research and development projects directed by General Motors to speed the commercialization of our fuel cell related products. While this commitment was waived by GM for calendar years 2002 and 2003, we expect in calendar 2004 to spend an amount yet to be determined for research projects directed by General Motors. We expect to be able to meet our commitments under the alliance for at least the next twelve months. There is no assurance that this commitment will be waived in any of the remaining years under the alliance.

**Quantitative and Qualitative Disclosures About Market Risk**

We are exposed to market risk from changes in interest rates due to our financing, investing and cash management activities. Specifically, our cash and cash equivalents and marketable securities are subject to fluctuations in interest rates. Based on our cash and marketable securities balance at April 30, 2004, a 1% decrease in interest rates would result in reduced annual interest income of approximately $680,000.

To date, we have not used any derivative financial instruments for the purpose of reducing our exposure to adverse fluctuations in interest rates. We are not a party to leveraged derivatives nor do we hold or issue financial investments for speculative purposes.

**Recent Accounting Pronouncements**

In August of 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 143, "Accounting for Asset Retirement Obligations." SFAS 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated retirement costs. We do not believe the effect of adopting SFAS 143, which is effective for fiscal years beginning after June 15, 2002, will have a significant effect on our financial position or results of operations.

In June 2002, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 146, "Accounting for Exit or Disposal Activities." SFAS 146 addresses significant issues regarding the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for under Emerging Issues Task Force Issue No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)." The scope of SFAS 146 also includes costs related to terminating a contract that is not a capital lease and termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract. SFAS 146 will be effective for exit or disposal activities that are initiated after December 31, 2002 but early application is encouraged. We have not initiated any exit or disposal activities during fiscal years 2003 and 2004.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN 45"), effective for reporting periods ending after December 15, 2002. FIN 45 requires a guarantor to recognize, at the inception of a guarantee, a liability for the fair value of all of the obligations it has undertaken in issuing the guarantee. We have evaluated the potential impact of FIN 45 as of April 30, 2004, and have concluded that there was no impact on our financial statements.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51," ("FIN 46"). FIN 46 introduces a new consolidation model, the variable interests model, which determines control (and consolidation) based on potential variability in gains and losses of the entity being evaluated for consolidation. The requirements for FIN 46, including its disclosures, apply immediately.

FIN 46 provides guidance for determining whether an entity qualifies as a variable interest entity ("VIE") by considering, among other considerations, whether the entity lacks sufficient equity or its equity holders lack adequate decision-making ability. If the entity does not qualify as a VIE, then the consolidation criteria is based on previously established accounting standards. Qualifying VIEs are covered by FIN 46 and are individually evaluated for consolidation based on their variable interests. FIN 46 requires consideration and estimates of a significant number of possible future outcomes of the VIE as well as the probability of each outcome occurring. Based on the allocation of possible outcomes, a calculation is performed to determine which party, if any, has a majority of potential negative outcomes (expected losses) or a majority of the potential positive outcomes (expected residual returns), with an emphasis on negative outcomes. That party, if any, is the primary beneficiary and is required to consolidate the VIE. We have evaluated the potential impact of FIN 46 as of April 30, 2004 and have concluded that there was no impact on our financial statements.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities," which amends and clarifies financial accounting and reporting derivative instruments, including certain derivative instruments embedded in other contracts and for hedging activities under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. This statement is effective for contracts entered into or modified and for hedging relationships designated after June 30, 2003. The adoption of this statement did not have a significant effect on our financial position or results of operations.

In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity," effective for financial instruments entered into or modified after May 31, 2003. The adoption of SFAS No. 150 did not have a significant effect on our financial position or results of operations.

## RISK FACTORS

This annual report, including the preceding Management's Discussion and Analysis of Financial Condition and Results of Operations, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. We face a number of risks and uncertainties which could cause actual results or events to differ materially from those contained in any forward-looking statement. Factors that could cause or contribute to such differences include, but are not limited to, the following:

***Our business depends on the growth of the fuel cell market and the hydrogen economy.***

Our future success depends on the continued expansion of the fuel cell market and hydrogen economy, which have not yet gained broad acceptance. In the United States and certain of our other target markets, hydrogen currently cannot be readily obtained by consumers for motor vehicle use. We cannot assure you that the markets for fuel cell vehicles will gain broad acceptance or, if they do, that they will result in increased sales of our advanced fuel system products. We cannot assure you that a broad-based hydrogen infrastructure will develop, which is necessary for continued expansion of the fuel cell vehicle market. In addition, we have designed many of our products for alternative fuel vehicles powered by both fuel cells and internal combustion engines, but not currently for other alternative power sources, such as electricity or alternate forms of existing fuels.

***Our revenue depends to a great extent on our relationship with General Motors and General Motors' commitment to the commercialization of the fuel cell and alternative fuel automotive OEM markets.***

Our strategic alliance with General Motors became effective upon our spin-off from IMPCO. Our business and results of operations would be materially adversely affected if General Motors were to terminate its relationship with us. Our ability to sell our products to the fuel cell and automotive OEM markets depends to a significant extent upon General Motors' and its partners' worldwide sales and distribution network and service capabilities. Any change in strategy by General Motors with respect to fuel cells or alternative fuels could harm our business by reducing or eliminating a substantial portion of our sales, whether as a result of market, economic or competitive pressures, including any decision by General Motors:

- to alter its commitment to our fuel storage, fuel delivery and electronic control technology in favor of other competing technologies;
- to exit the automotive OEM alternative fuel or fuel cell markets;
- to develop fuel cells or alternative fuel systems targeted at different application markets than ours; or
- to focus on different energy product solutions.

In addition, pursuant to our agreement with General Motors, we are required to spend $4.0 million annually on joint research and development projects directed by General Motors over a ten-year term commencing July 2002. While this commitment was waived by General Motors for calendar years 2002 and 2003, there is no assurance that this commitment will be waived in the future. For 2004, we expect to spend an amount yet to be determined for research projects directed by General Motors. This annual commitment could be financially burdensome or may impact our ability to achieve profitability in the future. Where intellectual property is developed pursuant to this alliance, we have committed to provide certain exclusive or non-exclusive licenses in favor of General Motors and in some cases, the intellectual property is jointly owned. As a result of such licenses, we may be limited or precluded, as the case may be, in the exploitation of such intellectual property rights.

***Our revenue is highly concentrated among a small number of customers.***

A large percentage of our revenue is typically derived from a small number of customers, and we expect this trend to continue. In particular, during the fiscal year ended April 30, 2004, revenue related to sales of our

products to and contracts with General Motors and its affiliates represented approximately 46% of our total revenue for this period. Similarly, during the fiscal year ended April 30, 2004, revenue related to sales of our products to Toyota Motor Corporation and its affiliates represented approximately 44% of our total revenue for this period. Furthermore, our arrangements generally are non-exclusive, have no volume commitments and are often done on a purchase-order basis. We cannot be certain that customers that have accounted for significant revenue in past periods will continue to purchase our products and generate revenue. Accordingly, our revenue and results of operations may vary from period to period. We are also subject to credit risk associated with the concentration of our accounts receivable from our customers. If one or more of our significant customers were to cease doing business with us, significantly reduce or delay its purchases from us, or fail to pay us on a timely basis, our business, financial condition and results of operations could be materially adversely affected.

***We have a history of operating losses and negative cash flow and anticipate that we will continue to incur operating losses for the foreseeable future.***

We have a history of operating losses and negative cash flow. If we fail to achieve and to maintain profitability in the future, investors could lose confidence in the value of our common stock, which could cause it to decline. We have spent significant funds to date to develop and to refine our technologies and services. If we are unable to execute our strategy to become profitable, the price of our common stock could be negatively affected. As a result of these factors, to achieve profitability we will need, among other matters, to increase our customer base and realize economies of scale. We cannot assure you that we will be able to increase our revenue or operating efficiencies or otherwise achieve and maintain profitability. Because we expect to continue to invest in research and development, this investment could outpace revenue growth, which would hinder our ability to achieve and maintain profitability. If we are unable to achieve and maintain profitability, our stock price could be materially adversely affected.

***We may never be able to introduce commercially viable fuel cell products and systems.***

We do not know whether or when we will successfully introduce commercially viable fuel storage, fuel delivery or electronic control products for the fuel cell market. We have produced and are currently demonstrating a number of test and evaluation systems and are continuing efforts to decrease the costs of these systems, and improve their overall functionality and efficiency. However, we must complete substantial additional research and development on these systems before we can introduce commercially viable fuel cell products and systems. Even if we are able to do so, these efforts will still depend upon the success of other companies in producing related and necessary products for use in conjunction with commercially viable fuel cells.

***A mass market for fuel cell products and systems may never develop or may take longer to develop than anticipated.***

Fuel cell systems represent emerging technologies, and we do not know whether consumers will adopt these technologies on a large scale or whether OEMs will incorporate these technologies into their products. In particular, if a mass market fails to develop or develops more slowly than anticipated for fuel cell powered transportation and power generation applications, we may be unable to recover the expenditures incurred to develop our fuel systems for fuel cell applications and may be unable to achieve or maintain profitability, any of which could negatively impact our business. Many factors that are beyond our control may have a negative effect on the development of a mass market for fuel cells and our fuel systems for fuel cell applications. These factors include the following:

- the cost competitiveness and physical size of fuel cell systems and “balance of plant” components;
- the availability, future costs and safety of hydrogen, natural gas or other potential fuel cell fuels;
- consumer reluctance to adopt fuel cell or alternative fuel products;

- government funding and support for the development of fuel cell vehicles and hydrogen fuel infrastructure;
- OEM reluctance to replace current technology;
- consumer perceptions of fuel cell systems;
- regulatory requirements; and
- the emergence of newer, breakthrough technologies and products within the fuel cell industry.

***Users of gaseous alternative fueled or fuel cell powered vehicles may not be able to obtain fuel conveniently and affordably, which may adversely affect the demand for our products.***

Vehicles and equipment powered by gaseous alternative fuels run primarily on natural gas or propane. Fuel cells run on hydrogen or fuels containing hydrogen. The construction of a distribution system to deliver natural gas, propane or hydrogen, or a suitable fuel containing hydrogen, will require significant investment by third parties. We are relying on third parties, most of which are committed to the existing gasoline infrastructure, to build this infrastructure. If these parties build a fuel distribution infrastructure, the fuel delivered through it, both due to the cost of the delivery system and the cost of the fuel itself, may have a higher price than users are willing to pay. In addition, an adequate fuel distribution infrastructure may not be adopted. If users cannot obtain fuel conveniently or affordably, a mass market for vehicles and equipment powered by gaseous alternative fuels or hygrogen is unlikely to develop.

Our ability to attract customers and sell products successfully in the alternative fuel industry also depends, in part, on the existence of a price disparity between liquid fuels, such as petroleum and gasoline, and gaseous fuels, such as propane and natural gas. This price disparity may not continue. Should this disparity narrow or disappear, it could adversely affect the demand for our products.

***Our ability to design and manufacture fuel systems for fuel cell applications that can be integrated into the products of OEMs will be critical to our business.***

We currently offer packaged alternative fuel systems, which include tanks, brackets, electronics, software and other components required to allow these products to operate in fuel cells or other alternative fuel applications. Customers for these systems require that these products meet strict OEM standards that vary by jurisdiction. Compliance with these requirements has resulted in increased development, manufacturing, warranty and administrative costs. A significant increase in these costs could adversely affect our business, results of operations and financial condition. If we fail to meet OEM specifications on a timely basis, existing or future relationships with OEMs may be harmed, which would have a material adverse effect on our business, results of operations and financial condition.

To be commercially viable, our fuel cell products and systems must be integrated into products manufactured by OEMs. We can offer no assurance that OEMs will manufacture appropriate products or, if they do manufacture such products, that they will choose to use our fuel cell products and systems. Any integration, design, manufacturing or marketing problems encountered by OEMs could adversely affect the market for our fuel cell products and systems and our business, results of operations and financial condition.

***We depend on relationships with strategic partners, and the terms and enforceability of many of these relationships are not certain.***

We have entered into relationships with strategic partners for design, product development and distribution of our existing products, and products under development, some of which may not have been documented by a definitive agreement. Where definitive agreements govern the relationships between us and our partners, the terms and conditions of many of these agreements allow for termination by the partners. Termination of any of

these agreements could adversely affect our ability to design, develop and distribute these products to the marketplace. In many cases, these strategic relationships are governed by a memorandum of understanding or a letter of intent. We cannot assure you that we will be able to successfully negotiate and execute definitive agreements with any of these partners, and failure to do so may effectively terminate the relevant relationship.

***We currently face and will continue to face significant competition.***

Our products face and will continue to face significant competition. New developments in technology may negatively affect the development or sale of some or all of our products or make our products uncompetitive or obsolete. Other companies, many of which have substantially greater resources, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, certain of our products and technologies. As the fuel cell has the potential to replace existing power sources, competition for fuel cell products will come from current power technologies, from improvements to current power technologies and from new alternative power technologies. Increases in the market for alternative fueled vehicles may cause OEMs to find it advantageous to develop and produce their own fuel management equipment rather than to purchase the equipment from us. In addition, greater acceptance of alternative fuel engines or fuel cells may result in new competitors. Additionally, there are competitors working on developing other fuel cell technologies in our targeted markets. A large number of corporations, national laboratories and universities in the United States, Canada, Europe and Japan possess fuel cell technology and/or are actively engaged in the development and manufacture of fuel cells. Each of these competitors has the potential to capture market share in various markets, which would have a material adverse effect on our position in the industry and our business, results of operations and financial condition. Many of our competitors have financial resources, customer bases, businesses or other resources which give them significant competitive advantages.

***We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our future growth and success.***

Our failure to protect our existing intellectual property rights may result in the loss of exclusivity or the right to use our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement or misappropriation, and/or be enjoined from using such intellectual property.

We have not conducted formal evaluations to confirm that our technology and products do not or will not infringe upon the intellectual property rights of third parties. As a result, we cannot be certain that our technology and products do not or will not infringe upon the intellectual property rights of third parties. If such infringement were to occur, our development, manufacturing, sales and distribution of such technology or products may be disrupted.

We rely on patent, trade secret, trademark and copyright law to protect our intellectual property. Our patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope and enforceability of a particular patent. Accordingly, we cannot assure you that any of the patents filed by us or other patents that third parties license to us will not be invalidated (especially in light of the potentially adverse implications of our abandoned reissue application and agreement with Dynetek Industries Ltd. in which we agreed not to assert claims with respect to our in-tank regulator patent), circumvented, challenged, rendered unenforceable, or licensed to others or any of our pending or future patent applications will be issued with the breadth of claim coverage sought by us, if issued at all.

Effective patent, trademark, copyright and trade secret protection may be unavailable, limited or not applied for in certain foreign countries. For instance, it may be difficult for us to enforce certain of our intellectual property rights against third parties who may have inappropriately acquired interests in our intellectual property rights by filing unauthorized trademark applications in foreign countries to register our marks because of their familiarity with our business in the United States.

Some of our proprietary intellectual property is not protected by any patent or patent application and despite our precautions, it may be possible for third parties to obtain and use such intellectual property without authorization. We generally seek to protect such proprietary intellectual property in part by confidentiality agreements and, if applicable, inventors' rights agreements with strategic partners and employees, although such agreements have not been put in place in every instance and we cannot guarantee that such agreements adequately protect our trade secrets and other intellectual property or proprietary rights. In addition, we cannot assure you that these agreements will not be breached, that we will have adequate remedies for any breach or that such persons or institutions will not assert rights to intellectual property arising out of these relationships. Furthermore, the steps we have taken and may take in the future may not prevent misappropriation of our solutions or technologies, particularly in respect of officers and employees who are no longer employed by us or in foreign countries where laws or law enforcement practices may not protect our proprietary rights as fully as in the United States.

***Our failure to obtain or maintain the right to use certain intellectual property may negatively affect the business of the company.***

Our future success and competitive position depends in part upon our ability to obtain or maintain certain proprietary intellectual property used in our principal products. This may be achieved, in part, by prosecuting claims against others who we believe are infringing our rights and by defending claims of intellectual property infringement by our competitors. While we are not currently engaged in any material intellectual property litigation, in the future we may commence lawsuits against others if we believe they have infringed our rights or we may become subject to lawsuits in which it is alleged that we have infringed the intellectual property rights of others. For example, to the extent that we have previously incorporated third party technology and/or know-how into certain products for which we do not have sufficient license rights, we could incur substantial litigation costs, be forced to pay substantial damages or royalties, or even be forced to cease sales in the event any owner of such technology or know-how were to challenge our subsequent sale of such products (and any progeny thereof). In addition, to the extent that we discover or have discovered third-party patents that may be applicable to products or processes in development, we may need to take steps to avoid claims of possible infringement, including obtaining non-infringement or invalidity opinions and, when necessary, re-designing or re-engineering products. However, we cannot assure you that these precautions will allow us to successfully avoid infringement claims. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not such litigation is resolved in our favor. In the event of an adverse outcome in any such litigation, we may, among other things, be required to:

- pay substantial damages;
- cease the development, manufacture, use, sale or importation of products that infringe upon other patented intellectual property;
- expend significant resources to develop or acquire non-infringing intellectual property;
- discontinue processes incorporating infringing technology; or
- obtain licenses to the infringing intellectual property.

We cannot assure you that we would be successful in such development or acquisition or that such licenses would be available upon reasonable terms, if at all. Any such development, acquisition or license could require the expenditure of substantial time and other resources and could have a material adverse effect on our business, results of operations and financial condition.

***We have limited experience manufacturing fuel systems for fuel cell applications on a commercial basis.***

To date, we have limited experience manufacturing fuel systems for fuel cell applications on a commercial basis. In order to produce fuel systems at affordable prices, we will have to make fuel systems through high

volume automated processes. We do not know whether we will be able to develop efficient, automated, low-cost manufacturing capability and processes that will enable us to meet the quality, price, engineering, design and production standards, or production volumes required to successfully mass market our fuel systems for fuel cell applications. Even if we are successful in developing our high volume manufacturing capability and processes, we do not know whether we will do so in time to meet our product commercialization schedules or to satisfy the requirements of customers. Our failure to develop such manufacturing processes and capabilities could have a material adverse effect on our business, results of operations and financial condition.

***We are dependent on third party suppliers for the supply of materials and components for our products.***

A supplier's failure to supply materials or components in a timely manner, or to supply materials and components that meet our quality, quantity or cost requirements, or our inability to obtain substitute sources for these materials and components in a timely manner or on terms acceptable to us, could harm our ability to manufacture fuel systems for fuel cell applications. In particular, components that we integrate in our hydrogen fuel regulation systems need to be compatible with hydrogen. To the extent materials need to be tested and replaced to ensure compatibility, we may experience delays in shipping our hydrogen fuel regulation systems or complete packaged fuel systems. Recently, a supplier notified us that one of its components that we use in our hydrogen fuel regulation system has been discontinued due to a concern about compatibility of this component with hydrogen. Additionally, a delay in the delivery of high-strength fiber from our current supplier or a change to another supplier would result in a delay of the production of our products, which could negatively impact our business, results of operations and financial condition.

***We may be required to indemnify IMPCO for taxes arising in connection with our spin-off from IMPCO, and the tax characteristics of the spin-off may interfere with our ability to engage in desirable strategic transactions and to issue equity securities.***

Unless Section 355(e) of the Internal Revenue Code applies to our spin-off from IMPCO, the spin-off will be tax-free to IMPCO under Section 355 of the Internal Revenue Code. Although IMPCO received an opinion of counsel to the effect that the spin-off will qualify under Section 355, the opinion is subject to certain representations made by us. While we are not aware of any facts or circumstances that would cause any of those representations to be untrue, if, as a result, the spin-off is taxable to IMPCO, we must indemnify IMPCO for any resulting taxes, penalties and interest. No assurance can be given that we will not be liable to IMPCO if the spin-off fails to qualify under Section 355 of the Internal Revenue Code.

Even if the spin-off qualifies under Section 355 of the Internal Revenue Code, it will be taxable to IMPCO if Section 355(e) of the Internal Revenue Code applies to the spin-off. Section 355(e) will apply if 50% or more of IMPCO stock or our stock, by vote or value, is acquired by one or more persons, other than IMPCO's historic stockholders who received our common stock in the spin-off, acting pursuant to a plan or series of related transactions that includes the spin-off. Any shares of our stock acquired directly or indirectly within two years before or after the spin-off generally are presumed to be part of such a plan. To prevent applicability of Section 355(e), except with respect to our initial public offering or issuance of Series A or Series B common stock to General Motors, we have agreed that, until three years after the spin-off, we would not take any of the following actions unless prior to taking such action we have obtained a written opinion of a law firm or a ruling from the Internal Revenue Service to the effect that such action will not cause the spin-off to be taxable to IMPCO:

- merge or consolidate with another corporation;
- liquidate or partially liquidate;
- sell or transfer all or substantially all of our assets;
- redeem or repurchase our stock (except in certain limited circumstances); or
- take any other action which could reasonably be expected to cause Section 355(e) to apply to the spin-off.

To satisfy this requirement, we expect to receive an opinion of counsel to the effect that this offering will not cause the spin-off to be taxable to IMPCO. However, the opinion is subject to certain representations made by us. Furthermore, regardless of whether we obtain an opinion or ruling described above, we must indemnify IMPCO if Section 355(e) of the Internal Revenue Code applies to the spin-off because of any action or omission by us. In the event that we were liable to IMPCO, the payment would have a substantial and material adverse effect on our business, financial position and results of operations. This obligation may also discourage, delay or prevent a merger, change of control, or other strategic or capital raising transaction involving our outstanding equity or issuance of equity securities. If we cannot engage in equity financing transactions because of these constraints, we may not be able to fund our working capital, capital expenditure and research and development requirements, as well as make other investments.

Many of our competitors are not subject to similar restrictions and may issue their stock to complete acquisitions, expand their product offerings and speed the development of new technology. Therefore, these competitors may have a competitive advantage over us. In addition, substantial uncertainty exists as to the scope of Section 355(e) of the Internal Revenue Code, and we and our stockholders have undertaken, contemplate undertaking or may otherwise undertake in the future transactions which may cause Section 355(e) to apply to the spin-off. Accordingly, we cannot assure you that we will not be liable to IMPCO for taxes, penalties and interest if Section 355(e) of the Internal Revenue Code applies to the spin-off.

***We may need to raise additional capital in the future to achieve commercialization of our products and technologies and to develop facilities for mass production of these products.***

Our future cash requirements will depend on numerous factors, including completion of our product development activities, our ability to commercialize our fuel systems for fuel cell applications and market acceptance of our products. We expect to devote substantial capital resources to continue development programs and develop a manufacturing infrastructure for our products. We anticipate that we may need to raise additional funds to achieve commercialization of our products and to develop facilities for mass production of those products. We do not know whether we will be able to secure additional funding on terms acceptable to us, if at all. If additional funds are raised through the issuance of equity securities or additional acquisitions of entities with cash reserves, the percentage ownership of our then current stockholders will be reduced. In addition, pursuant to restrictions in our agreement with General Motors, we will generally need General Motors' consent prior to issuing our capital stock in a private placement, and we can provide no assurances that such consent can be obtained. If adequate funds are not available to satisfy long-term capital requirements, we may be required to limit operations in a manner inconsistent with our development and commercialization plans, which could adversely affect operations in future periods.

***We may not meet our product development and commercialization milestones.***

We have product development programs that are in the pre-commercial stage. The success of each product development program is highly dependent on the correct interpretation by us of commercial market requirements, and translating those requirements into applicable product specifications and appropriate development milestones. If we have misinterpreted market requirements or the requirements of the market change, this could result in the development of a product that does not meet the cost and performance requirements for a successful commercial product. In addition, if we do not meet the required development milestones, our commercialization schedules could be delayed which could result in potential purchasers of these products declining to purchase additional systems or choosing to purchase alternative technologies. Delayed commercialization schedules may also impact our cash flow, which could require increased funding.

***Our business could suffer if we fail to attract and maintain key personnel.***

Our future depends, in part, on our ability to attract and retain key personnel. In addition, our research and development efforts depend on hiring and retaining qualified engineers. Competition for highly skilled engineers

is extremely intense, and we may experience difficulty in identifying and hiring qualified engineers in many areas of our business. Our future also depends on the continued contributions of our executive officers and other key management and technical personnel, each of whom would be difficult to replace. We do not maintain a key person life insurance policy on our chief executive officer, our chief financial officer or any other officer. The loss of the services of one or more of our senior executive officers or key personnel or the inability to continue to attract qualified personnel could delay product development cycles or otherwise materially harm our business, results of operations and financial condition.

***We may be affected by skilled labor shortages and labor disputes.***

We require experienced engineers, technicians and machinists to conduct our business. No assurance can be given that the supply of these skilled persons will always be adequate to meet our requirements or that we will be able to attract an adequate number of skilled persons.

Labor disputes could occur at OEM facilities, which may affect our business. As we become more dependent on vehicle conversion programs with OEMs, we will become increasingly dependent on OEM production and the associated labor forces at OEM sites. Labor unions represent most of the labor forces at OEM facilities. Labor disputes could occur at OEM facilities, which could adversely impact our direct OEM product sales.

***We may be subject to warranty claims and our provision for warranty costs may not be sufficient.***

We may be subject to increased warranty claims due to longer warranty periods. In response to consumer demand, vehicle manufacturers have been providing, and may continue to provide, increasingly longer warranty periods for their products. As a consequence, these manufacturers require their suppliers, such as us, to provide correspondingly longer product warranties. As a result, we could incur substantially greater warranty claims in the future.

***Our insurance may not be sufficient.***

We carry insurance that we consider adequate in regard to the nature of the covered risks and the costs of coverage. We are not fully insured against all possible risks, nor are all such risks insurable.

***Our business may be subject to product liability claims or product recalls, which could be expensive and could result in a diversion of management's attention.***

The automotive industry experiences significant product liability claims. As a supplier of products and systems to automotive OEMs, we face an inherent business risk of exposure to product liability claims in the event that our products, or the equipment into which our products are incorporated, malfunction and result in personal injury or death. We may be named in product liability claims even if there is no evidence that our systems or components caused the accidents. Product liability claims could result in significant losses as a result of expenses incurred in defending claims or the award of damages. The sale of systems and components for the transportation industry entails a high risk of these claims. In addition, we may be required to participate in recalls involving these systems if any of our systems prove to be defective, or we may voluntarily initiate a recall or make payments related to such claims as a result of various industry or business practices or the need to maintain good customer relationships. Our other products may also be subject to product liability claims or recalls. We cannot assure you that our product liability insurance will be sufficient to cover all product liability claims, that such claims will not exceed our insurance coverage limits or that such insurance will continue to be available on commercially reasonable terms, if at all. Any product liability claim brought against us could have a material adverse effect on our reputation and business.

***Our business may become subject to future product certification regulations, which may impair our ability to market our products.***

We must obtain product certification from governmental agencies, such as the U.S. Environmental Protection Agency and the California Air Resources Board, to sell certain of our products in the United States. A

significant portion of our future sales will depend upon sales of fuel management products that are certified to meet existing and future air quality and energy standards. We cannot assure you that our products will continue to meet these standards. The failure to comply with these certification requirements could result in the recall of our products, civil penalties or criminal penalties.

We anticipate that regulatory bodies will establish certification procedures and impose regulations on fuel cell enabling technologies, which may impair our ability to distribute, install and service these systems. Any new government regulation that affects our advanced fuel technologies, whether at the foreign, federal, state or local level, including any regulations relating to installation and servicing of these systems, may increase our costs and the price of our systems. As a result, these regulations may have a negative impact on our business, results of operations and financial condition.

***New technologies could render our existing products obsolete.***

New developments in technology may negatively affect the development or sale of some or all of our products or make our products obsolete. There are a range of other technologies that could compete with fuel cell or alternative fuel technologies on which our automotive OEM business is currently focused, including electric and hybrid vehicles, and methanol-based fuel cell vehicles that require fuel reformation. Our success depends upon our ability to design, develop and market new or modified fuel cell products and systems, as well as fuel storage, fuel delivery and electronic control products for fuel cells and internal combustion engines. Our inability to enhance existing products in a timely manner or to develop and introduce new products that incorporate new technologies, conform to increasingly stringent emission standards and performance requirements, and achieve market acceptance in a timely manner could negatively impact our competitive position. New product development or modification is costly, involves significant research, development, time and expense and may not necessarily result in the successful commercialization of any new products.

***Changes in environmental policies could hurt the market for our products.***

The market for alternative fuel and fuel cell vehicles and equipment, and the demand for our products are driven, to a significant degree, by local, state and federal regulations that relate to air quality, greenhouse gases and pollutants and require the purchase of motor vehicles and equipment operating on alternative fuels or fuel cells. Similarly, foreign governmental regulations also affect our international business. These laws and regulations may change, which could result in transportation or equipment manufacturers abandoning or delaying their interest in alternative fueled and fuel cell powered vehicles or equipment. In addition, a failure by authorities to enforce current domestic and foreign laws or to adopt additional environmental laws could limit the demand for our products.

Although many governments have identified as a significant priority the development of alternative energy sources, and fuel cells in particular, we cannot assure you that governments will not change their priorities or that any change they make would not materially affect our revenue or the development of our products.

***The development of uniform codes and standards for hydrogen fuel cell vehicles and related hydrogen refueling infrastructure may not develop in a timely fashion.***

Uniform codes and standards do not currently exist for fuel cell systems, fuel cell components or for the use of hydrogen as a vehicle fuel. Establishment of appropriate codes and standards is a critical element to allow fuel cell system developers, fuel cell component developers, and hydrogen storage and handling companies to develop products that will be accepted in the marketplace.

All fuels, including hydrogen, pose significant safety hazards and hydrogen vehicles have not yet been widely used under “real-world” driving conditions. The establishment of appropriate codes and standards is required to ensure that certain characteristics of hydrogen are addressed and that hydrogen fuels are handled in a safe manner, thereby ensuring that the fuel is safe to use by the car-driving public.

The development of fuel cell and hydrogen fuel applicable standards is being undertaken by numerous organizations, including the American National Standards Institute, the American Society of Mechanical Engineers, the European Integrated Hydrogen Project, the International Code Council, the International Standards Organization, the National Fire Protection Association, the National Hydrogen Association, the Society of Automotive Engineers, the Canadian Standards Association, the American National Standards Institute and the International Electrotechnical Commission. Given the number of organizations pursuing hydrogen and fuel cell codes and standards, it is not clear whether universally accepted codes and standards will result and, if so, when.

Although many organizations have identified as a significant priority the development of codes and standards, we cannot assure you that any resulting codes and standards would not materially affect our revenue or the commercialization of our products.

***The market price and trading volume of our common stock may be volatile.***

Prior to July 2002, there was no trading market for our common stock. Since our common stock began trading in July 2002, the market price and trading volume for our common stock has been volatile. The market price of our common stock could continue to fluctuate significantly for many reasons, including in response to the risk factors listed in this annual report or for reasons unrelated to our specific performance. In recent years, the stock market has experienced extreme price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies for reasons unrelated to their operating performance and may adversely affect the market price and trading volume of our common stock. Prices for our common stock may also be influenced by the depth and liquidity of the market for our common stock, investor perceptions about us and our businesses, our future financial results, the absence of cash dividends on our common stock and general economic and market conditions. In the past, securities class action litigation has often been instituted against companies following periods of volatility in their stock price. This type of litigation could result in substantial costs and could divert our management's attention and resources.

***Future sales of our common stock may depress our stock price.***

The market price of our common stock could decline as a result of sales by our existing stockholders of a large number of shares of our common stock in the market after this offering or the perception that such sales could occur. These sales also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

***Provisions of Delaware law and of our charter and bylaws may make a takeover or change in control more difficult.***

Provisions in our charter and bylaws and of Delaware corporate law may make it difficult and expensive for a third party to pursue a tender offer, change in control or takeover attempt that our management and board of directors may oppose. Public stockholders that might desire to participate in one of these transactions may not have an opportunity to do so. Our charter and bylaws contain the following types of provisions:

- establishing a staggered board of directors, which makes it difficult for stockholders to change the composition of the board of directors in any one year;
- reserving to the board of directors the exclusive right to change the number of directors and fill vacancies on the board of directors, which could make it more difficult for a third party to obtain control of the board of directors;
- authorizing the issuance of preferred stock which can be created and issued by the board of directors without prior stockholder approval, commonly referred to as "blank check" preferred stock, with rights senior to those of our common stock, which could make it more difficult or expensive for a third party to obtain voting control;

- establishing advance notice requirements for director nominations or other proposals at stockholder meetings;
- prohibiting stockholder action by written consent, which could delay a third party from pursuing an acquisition; and
- requiring the affirmative vote of holders of at least two-thirds of the outstanding voting stock to amend certain provisions in our charter or bylaws, and requiring the affirmative vote of 80% of the outstanding voting stock to amend certain other provisions of our charter or bylaws, which could make it more difficult for a third party to remove the provisions we have included to prevent or delay a change of control.

These anti-takeover provisions could substantially impede the ability of public stockholders to benefit from a change in control or to change our management and our board of directors.

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

Information relating to Quantitative and Qualitative Disclosures About Market Risk appear under the heading "Quantitative and Qualitative Disclosures About Market Risk" which is included in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operation.

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

The information required by this item is contained in the financial statements listed in Item 15(a) of this annual report under the caption "Financial Statements" and appear beginning on page F-1 of this annual report.

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

None.

**Item 9A. Controls and Procedures**

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective in timely alerting them to material information required to be included in this report.

There has been no change in our internal control over financial reporting that occurred during our most recent fiscal quarter that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

## PART III

### Item 10. Directors and Executive Officers

Information regarding the Company's board of directors, audit committee, audit committee financial expert and code of ethics is set forth under the caption "Election of Directors," in the Company's definitive Proxy Statement to be filed in connection with its fiscal 2004 Annual Meeting of Stockholders and such information is incorporated herein by reference. Information regarding Section 16(a) beneficial ownership compliance is set forth under the caption "Executive Compensation - Compliance with Section 16(a) of the Securities and Exchange Act" in the Company's definitive Proxy Statement to be filed in connection with its fiscal 2004 Annual Meeting of Stockholders and such information is incorporated by reference. A list of executive officers of the Company is included in Part I of this annual report.

### Item 11. Executive Compensation

The information required by this item is set forth under the caption "Executive Compensation and Other Information" and "Election of Directors - Compensation of Directors" in the Company's definitive Proxy Statement to be filed in connection with its fiscal 2004 Annual Meeting of Stockholders and such information is incorporated herein by reference.

### Item 12. Security Ownership of Certain Beneficial Owners and Management

The information required by this item is set forth under the caption "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in the Company's definitive Proxy Statement to be filed in connection with its fiscal 2004 Annual Meeting of Stockholders and such information is incorporated herein by reference.

### Item 13. Certain Relationships and Related Transactions

The information required by this item is set forth under the captions "Certain Relationships and Related Transactions" and "Compensation Committee Interlocks and Insider Participation" in the Company's definitive Proxy Statement to be filed in connection with its fiscal 2004 Annual Meeting of Stockholders and such information is incorporated herein by reference.

### Item 14. Principal Accountant Fees and Services

The information required by this item is set forth under the caption "Ratification and Approval of the Appointment of Independent Accountants" in the Company's definitive Proxy Statement to be filed in connection with the Company's fiscal 2004 Annual Meeting of Stockholders and such information is incorporated herein by reference.

## PART IV

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

(a) The following documents are filed as part of this report:

(1) Financial Statements. See Financial Statements beginning on page F-1.

(2) Financial Statement Schedules. See Schedule II, Valuation and Qualifying Accounts which follow the Financial Statements.

All other schedules are omitted because the information is not applicable or is not material, or because the information is included in the financial statements or the notes thereto.

(3) Exhibits.

| Exhibit Number | Description |
|---|---|
| 2.1 | Contribution and Distribution Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant (filed as Exhibit 10.1 hereto)(1) |
| 2.2 | Combination Agreement between Global Thermoelectric, Inc. and the Registrant, dated April 8, 2003(2) |
| 2.3 | First Amendment to Combination Agreement between Global Thermoelectric, Inc. and the Registrant, dated June 27, 2003 (8) |
| 3.1 | Amended and Restated Certificate of Incorporation of the Registrant(1) |
| 3.2 | Amended and Restated By-laws of the Registrant(1) |
| 4.1 | Specimen Common Stock Certificate (previously filed as Exhibit 4.1 to the Registrant's Registration on Form 10 (File No. 0-49629) and incorporated herein by reference) |
| 10.1 | Contribution and Distribution Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant(1) |
| 10.2 | Tax Allocation and Indemnification Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant(1) |
| 10.3 | Transition Services Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant(1) |
| 10.4 | Employee Benefit Matters Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant(1) |
| 10.5 | Strategic Alliance Agreement, dated as of July 23, 2002, between IMPCO Technologies, Inc. and the Registrant(1) |
| 10.6 | Quantum Fuel Systems Technologies Worldwide, Inc. 2002 Stock Incentive Plan (filed as Exhibit 10.1 to the Registrant's Registration Statement on Form S-8 (No. 333-96923) on July 23, 2002, and incorporated herein by reference)* |
| 10.7† | Corporate Alliance Agreement dated June 12, 2001 between the Registrant and General Motors Corporation(3) |
| 10.8 | Master Technical Development Agreement dated June 12, 2001 between the Registrant and General Motors Corporation(3) |
| 10.9 | Stock Transfer Agreement dated June 12, 2001 between the Registrant and General Motors Corporation(3) |

| Exhibit Number | Description |
|---|---|
| 10.10 | Registration Rights Agreement dated June 12, 2001 between the Registrant and General Motors Corporation(3) |
| 10.11 | Lease between Klein Investments, Family Limited Partnership, as Lessor, and IMPCO Technologies, Inc. as Lessee, dated August 18, 1997(4) |
| 10.12 | Lease dated as of March 31, 2000 by and between IMPCO Technologies, Inc. and Braden Court Associates(5) |
| 10.13 | Memorandum of Understanding and Teaming Agreement, dated May 22, 2000 between IMPCO Technologies, Inc. and ATK Thiokol Propulsion (previously filed as Exhibit 10.14 to the Registrant's Registration on Form 10 (File No. 0-49629) and incorporated herein by reference) |
| 10.14 | Amendment Nos. 1, 2 and 3 to Memorandum of Understanding and Teaming Agreement among the Registrant, IMPCO Technologies, Inc. and ATK Thiokol Propulsion(1) |
| 10.15 | First Amendment to Corporate Alliance Agreement, dated as of July 19, 2002, between the Registrant and General Motors Corporation(1) |
| 10.16 | First Amendment to Stock Transfer Agreement, dated as of July 19, 2002, between the Registrant and General Motors Corporation(1) |
| 10.17 | Amendment to Lease Agreement, dated October 18, 2000, among, the Registrant, IMPCO Technologies, Inc. and Braden Court Associates(1) |
| 10.18 | Amendment to Lease Agreement, dated October 31, 2000, among the Registrant, IMPCO Technologies, Inc., and Klein Investments Family Limited Partnership(1) |
| 10.19 | Employment Agreement, dated August 1, 2002, between the Registrant and Alan P. Niedzwiecki(6)* |
| 10.20 | Employment Agreement, dated September 1, 2002, between the Registrant and William B. Olson(6)* |
| 10.21 | Form of Indemnification Agreement between the Registrant and each of its directors and executive officers(7) |
| 10.22 | Employment Agreement, dated March 3, 2003, between the Registrant and Raymond W. Corbin(8)* |
| 10.23 | Addendum A to Employment Agreement, dated as of February 10, 2003, between the Registrant and Alan P. Niedzwiecki(8)* |
| 10.24 | Addendum A to Employment Agreement, dated as of February 10, 2003, between the Registrant and W. Brian Olson(8)* |
| 10.25 | Addendum B to Employment Agreement, dated as of February 10, 2003, between the Registrant and W. Brian Olson(8)* |
| 10.26 | Share Put and Dividend Guarantee Agreement, dated as of June 27, 2003, between the Registrant and Enbridge Inc.(8) |
| 10.27 | Assumption Agreement, dated June 27, 2003, between the Registrant and Enbridge Inc.(8) |
| 10.28 | Addendum B to Employment Agreement, dated as of November 2, 2003, between the Registrant and Alan P. Niedzwiecki* |
| 10.29 | Addendum C to Employment Agreement, dated as of March 15, 2004, between the Registrant and W. Brian Olson* |
| 10.30 | Lease between Klein Investments, Family Limited Partnership, as Lessor, and the Registrant, as Lessee, dated March 5, 2004 |

| Exhibit Number | Description |
|---|---|
| 10.31 | Memorandum of Understanding, dated June 2, 2004, between the Registrant and Sumitomo Corporation. |
| 21.1 | Subsidiaries of the Registrant |
| 23.1 | Consent of Independent Registered Public Accounting Firm |
| 31.1 | Certification of the Chief Executive Officer of the Company of the Registrant pursuant to Exchange Act Rule 13a-14(a) |
| 31.2 | Certification of the Chief Financial Officer of the Company of the Registrant pursuant to Exchange Act Rule 13a-14(a) |
| 32.1 | Certification of the Chief Executive Officer of the Company furnished pursuant to Exchange Act Rule 13a-14(b) and 18 U.S.C. 1350 |
| 32.2 | Certification of the Chief Financial Officer of the Company furnished pursuant to Exchange Act Rule 13a-14(b) and 18 U.S.C. 1350 |

† Certain information in this exhibit has been omitted and filed separately with the SEC. Confidential treatment has been granted with respect to the omitted portions.

* The referenced exhibit is a compensatory contract, plan or arrangement.

(1) Incorporated by reference to the annual report on Form 10-K of the Registrant for the fiscal year ended April 30, 2002.

(2) Incorporated by reference to the current report on Form 8-K of the Registrant filed on April 9, 2003.

(3) Incorporated by reference to Amendment No. 1 to the registration statement on Form S-3 (No. 333-63726) of IMPCO Technologies, Inc., filed with the Commission on July 9, 2001.

(4) Incorporated by reference to the annual report on Form 10-K of IMPCO Technologies, Inc. for the fiscal year ended April 30, 1998.

(5) Incorporated by reference to the annual report on Form 10-K of IMPCO Technologies, Inc. for the fiscal year ended April 30, 2000.

(6) Incorporated by reference to the quarterly report on Form 10-Q of the Registrant for the quarter ended July 31, 2002.

(7) Incorporated by reference to the registration statement on Form S-1 (No. 333-101668) of the Registrant, filed on December 5, 2002.

(8) Incorporated by reference to the annual report on Form 10-K of the Registrant for the fiscal year ended April 30, 2003.

*(b) Reports Filed on Form 8-K*

Although we did not file any reports on Form 8-K during the fourth quarter of fiscal 2004, we furnished to the SEC a report on Form 8-K on March 9, 2004 (pursuant to Item 12 of Form 8-K) disclosing an earnings announcement of our financial results for the quarter ended January 31, 2004.

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## INDEX TO FINANCIAL STATEMENTS

## REPORT OF ERNST & YOUNG LLP, INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders
Quantum Fuel Systems Technologies Worldwide, Inc.

We have audited the accompanying balance sheets of Quantum Fuel Systems Technologies Worldwide, Inc. as of April 30, 2003 and 2004, and the related statements of operations, changes in invested and stockholders' equity, and cash flows for each of the three years in the period ended April 30, 2004. Our audits also included the financial statement schedule listed in the index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Quantum Fuel Systems Technologies Worldwide, Inc. at April 30, 2003 and 2004, and the results of its operations and its cash flows for each of the three years in the period ended April 30, 2004, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ ERNST & YOUNG LLP

Los Angeles, California
June 10, 2004

**QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.**

**BALANCE SHEETS**

| | April 30 | |
|---|---|---|
| | **2003** | **2004** |
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 11,538,873 | $ 15,728,901 |
| Marketable securities held-to-maturity | — | 35,595,269 |
| Accounts receivable, less allowance for doubtful accounts of $40,000 for 2003 and $147,000 for 2004 | 5,894,696 | 5,896,504 |
| Inventories | 6,025,902 | 5,744,769 |
| Other current assets | 364,385 | 719,229 |
| Total current assets | 23,823,856 | 63,684,672 |
| Equipment and leasehold improvements, net | 10,884,032 | 8,780,096 |
| Marketable securities held-to-maturity | — | 17,232,298 |
| Intangible asset | 15,319,480 | 13,659,705 |
| Other assets | 1,246,984 | 90,173 |
| Total assets | $ 51,274,352 | $103,446,944 |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | |
| Current liabilities: | | |
| Accounts payable | $ 4,036,960 | $ 2,836,025 |
| Deferred revenue | 322,071 | 736,518 |
| Accrued liabilities | 3,826,258 | 2,422,924 |
| Current maturities of capital leases | 138,794 | — |
| Total current liabilities | 8,324,083 | 5,995,467 |
| Commitments and contingencies | | |
| Stockholders' equity: | | |
| Preferred stock, $.001 par value, 20,000,000 shares authorized; none issued and outstanding for each period | — | — |
| Series A common stock, $.001 par value; 12,000,000 shares authorized; none issued and outstanding for each period | — | — |
| Series B common stock, $.001 par value; 6,000,000 shares authorized; 999,969 issued and outstanding for each period | 1,000 | 1,000 |
| Common stock, $.001 par value; 42,000,000 shares authorized; 21,680,475 issued and outstanding for 2003 and 30,673,089 issued and outstanding for 2004 | 21,680 | 30,673 |
| Additional paid-in-capital | 56,437,797 | 119,864,432 |
| Accumulated deficit | (13,510,208) | (22,444,628) |
| Total stockholders' equity | 42,950,269 | 97,451,477 |
| Total liabilities and stockholders' equity | $ 51,274,352 | $103,446,944 |

See accompanying notes.

## QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

## STATEMENTS OF OPERATIONS

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Revenue: | | | |
| Net product sales | $ 15,517,198 | $ 15,832,919 | $18,624,021 |
| Contract revenue | 7,886,097 | 7,806,486 | 9,495,428 |
| Total revenue | 23,403,295 | 23,639,405 | 28,119,449 |
| Costs and expenses: | | | |
| Cost of product sales | 25,581,284 | 18,471,425 | 12,864,702 |
| Research and development | 33,474,077 | 15,061,887 | 15,657,320 |
| Selling, general and administrative | 7,246,027 | 8,442,137 | 8,930,874 |
| Total costs and expenses | 66,301,388 | 41,975,449 | 37,452,896 |
| Operating loss | (42,898,093) | (18,336,044) | (9,333,447) |
| Interest income (expense), net | (478,887) | 6,212 | 410,960 |
| Other income | — | 133,171 | 27,412 |
| Provision for income taxes | (800) | (800) | (39,345) |
| Net loss applicable to common stock | $(43,377,780) | $(18,197,461) | $ (8,934,420) |
| Net loss per share: | | | |
| Basic | $ (3.07) | $ (1.00) | $ (0.33) |
| Diluted | $ (3.07) | $ (1.00) | $ (0.33) |
| Number of shares used in per share calculation: | | | |
| Basic | 14,142,036 | 18,153,059 | 27,257,230 |
| Diluted | 14,142,036 | 18,153,059 | 27,257,230 |

See accompanying notes.

## QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

## STATEMENTS OF CHANGES IN INVESTED EQUITY AND STOCKHOLDERS' EQUITY

| | Invested Equity | Series A Common Stock | | Series B Common Stock | | Common Stock | | Additional Paid-In-Capital Relating to Common Stock | Accumulated Deficit | Total Invested and Stockholders' Equity |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Shares | Amount | Shares | Amount | Shares | Amount | | | |
| Balance at April 30, 2001 | $ 23,991,607 | — | $ — | — | $ — | — | $ — | $ — | $ — | $23,991,607 |
| Net Transfers from IMPCO | 29,656,620 | — | — | — | — | — | — | — | — | 29,656,620 |
| Issuance of common stock to IMPCO | — | — | — | — | — | 1,000 | 1 | 99 | — | 100 |
| Net loss | (43,377,780) | — | — | — | — | — | — | — | — | (43,377,780) |
| Balance at April 30, 2002 | $ 10,270,447 | — | $ — | — | $ — | 1,000 | $ 1 | $ 99 | $ — | $10,270,547 |
| Net transfers from IMPCO prior to distribution | 2,625,970 | — | — | — | — | — | — | — | — | 2,625,970 |
| Net loss prior to distribution | (4,687,253) | — | — | — | — | — | — | — | — | (4,687,253) |
| Cash contribution from IMPCO upon distribution | 15,000,000 | — | — | — | — | — | — | — | — | 15,000,000 |
| Assumption of line of credit by IMPCO | 8,625,000 | — | — | — | — | — | — | — | — | 8,625,000 |
| Conversion of Invested Equity to Stockholders' Equity upon distribution | (31,834,164) | — | — | — | — | 14,141,036 | 14,141 | 31,820,023 | — | — |
| Issuance of Series A common stock | — | 3,513,439 | 3,513 | — | — | — | — | 14,225,915 | — | 14,229,428 |
| Issuance of warrants | — | — | — | — | — | — | — | 163,875 | — | 163,875 |
| Issuance of common stock | — | — | — | — | — | 4,025,000 | 4,025 | 7,978,955 | — | 7,982,980 |
| Conversion of Series A common stock | — | (3,513,439) | (3,513) | — | — | 3,513,439 | 3,513 | — | — | — |
| Issuance of Series B common stock | — | — | — | 999,969 | 1,000 | — | — | 2,248,930 | — | 2,249,930 |
| Net loss subsequent to distribution | — | — | — | — | — | — | — | — | (13,510,208) | (13,510,208) |
| Balance at April 30, 2003 | $ — | — | $ — | 999,969 | $1,000 | 21,680,475 | $21,680 | $ 56,437,797 | $(13,510,208) | $42,950,269 |
| Issuance of common stock | — | — | — | — | — | 8,050,000 | 8,050 | 60,127,888 | — | 60,135,938 |
| Stock option exercises | — | — | — | — | — | 874,664 | 875 | 3,409,114 | — | 3,409,989 |
| Non-cash stock compensation charge | — | — | — | — | — | — | — | 16,714 | — | 16,714 |
| Warrant issuances and exercises | — | — | — | — | — | 67,950 | 68 | (68) | — | — |
| Additional costs related to equity offerings | — | — | — | — | — | — | — | (127,013) | — | (127,013) |
| Net loss | — | — | — | — | — | — | — | — | (8,934,420) | (8,934,420) |
| Balance at April 30, 2004 | $ — | — | $ — | 999,969 | $1,000 | 30,673,089 | $30,673 | $119,864,432 | $(22,444,628) | $97,451,477 |

See accompanying notes.

## QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.

## STATEMENTS OF CASH FLOWS

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| **Cash flows from operating activities:** | | | |
| Net loss | $(43,377,780) | $(18,197,461) | $ (8,934,420) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | | |
| Depreciation and amortization | 2,903,035 | 4,766,112 | 5,213,193 |
| Non-cash restructuring charge | 277,760 | — | — |
| Non-cash stock compensation charge | — | 163,875 | 16,714 |
| Costs arising from termination of combination with Global Thermoelectric | — | — | 126,819 |
| (Gain) loss on disposal of equipment and leasehold improvements | — | (133,718) | 17,497 |
| Changes in operating assets and liabilities: | | | |
| Accounts receivable | 5,196,869 | (1,400,368) | (1,808) |
| Inventories | (500,618) | 3,600,714 | 281,133 |
| Other assets | 850,656 | (1,169,656) | (354,844) |
| Accounts payable | 88,199 | (2,724,333) | (1,200,935) |
| Other liabilities | 35,973 | 1,961,933 | 41,105 |
| Net cash used in operating activities | (34,525,906) | (13,132,902) | (4,795,546) |
| **Cash flows from investing activities:** | | | |
| Proceeds from sale of equipment and leasehold improvements | 77,785 | 146,300 | 450 |
| Purchases of equipment and leasehold improvements | (3,471,134) | (1,083,496) | (1,467,429) |
| Purchases of marketable securities | — | — | (54,611,970) |
| Maturities of marketable securities | — | — | 1,784,403 |
| Net cash used in investing activities | (3,393,349) | (937,196) | (54,294,546) |
| **Cash flows from financing activities:** | | | |
| Payments on capital lease obligations | (189,352) | (177,393) | (138,794) |
| Borrowing under line of credit | 8,625,000 | — | — |
| Net advances from IMPCO prior to distribution | 29,656,721 | 2,625,970 | — |
| Proceeds from issuance of common stock, net | — | 7,982,980 | 60,135,938 |
| Proceeds from exercises of stock options and warrants | — | — | 3,409,989 |
| Contributions from IMPCO upon distribution | — | 15,000,000 | — |
| Additional costs related to equity offering | — | — | (127,013) |
| Net cash provided by financing activities | 38,092,369 | 25,431,557 | 63,280,120 |
| Net increase in cash and cash equivalents | 173,114 | 11,361,459 | 4,190,028 |
| Cash and cash equivalents at beginning of year | 4,300 | 177,414 | 11,538,873 |
| Cash and cash equivalents at end of year | $ 177,414 | $ 11,538,873 | $ 15,728,901 |
| **Supplemental schedule of non-cash activity:** | | | |
| Assets acquired under capital leases | $ 227,415 | $ — | $ — |
| Issuance of Series A and Series B common stock recorded as intangible asset | — | 16,479,358 | — |
| Assumption of line of credit by IMPCO | — | 8,625,000 | — |
| Conversion of owner's net investment to stockholders' equity | — | 31,834,164 | — |
| Issuance of warrants | — | 163,875 | 16,714 |
| **Supplemental disclosure information:** | | | |
| Cash paid for during the year for: | | | |
| Interest | $ 488,442 | $ 114,178 | $ 44,593 |
| Income taxes | 800 | 800 | 39,345 |

See accompanying notes.

**QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.**

**NOTES TO FINANCIAL STATEMENTS**

**April 30, 2004**

## 1. Background and Basis of Presentation

*Background*

On July 23, 2002, IMPCO Technologies, Inc. (IMPCO) completed the distribution and spin-off of Quantum Fuel Systems Technologies Worldwide, Inc. (the Company) to its stockholders. The Company designs, manufactures and supplies packaged fuel systems to OEMs for use in alternative fuel vehicles and fuel cell applications. For automotive OEMs, the Company provides hydrogen systems for both internal combustion engine and fuel cell vehicles, and natural gas and propane fuel systems for internal combustion engine vehicles. In the area of hydrogen refueling infrastructure, the Company offers several hydrogen refueling systems focused on early infrastructure development.

On October 13, 2000, the Company was incorporated in Delaware as a wholly-owned subsidiary of IMPCO. On the date of the distribution and spin-off, IMPCO distributed the stock of the Company to stockholders of IMPCO (the Distribution) based on a distribution ratio of one share of the Company's common stock for every share of IMPCO common stock outstanding on the record date. The Company's authorized capital stock consists of 20,000,000 shares of preferred stock, par value $0.001 per share, no shares issued and outstanding and 60,000,000 shares of common stock, par value $0.001 per share, 31,673,058 shares issued and outstanding. Of the 60,000,000 authorized shares of common stock, 12,000,000 are designated as Series A common stock and 6,000,000 are designated as Series B common stock.

On July 23, 2002 the date of the Distribution and spin-off, IMPCO distributed the stock of the Company to stockholders of IMPCO based on a distribution ratio of one share of the Company's common stock for every share of IMPCO common stock outstanding on the record date. In addition, IMPCO contributed $15 million in cash to the Company and assumed the Company's debt facility of $8.6 million on the date of distribution. Furthermore, as discussed in Note 8 and Note 13, immediately following the spin-off the Company issued 3,513,439 shares of its Series A common stock to General Motors Corporation ("General Motors" or "GM") in connection with a strategic alliance between the Company and General Motors. The Company's accumulated deficit of $22,444,628 represents its operating results from the Distribution date to April 30, 2004.

*Basis of Presentation*

The financial statements include the Company, as well as certain assets, liabilities, and related operations that were transferred to the Company (the Contribution) from IMPCO. The financial statements include the historical operations transferred to the Company by IMPCO (the Company's Businesses). The Contribution was completed prior to the Distribution and resulted in a recapitalization of the Company.

The financial statements prior to the Distribution date have been derived from the financial statements and accounting records of IMPCO using the historical results of operations and historical basis of the assets and liabilities of the Company's Businesses. Management believes the assumptions underlying the financial statements are reasonable. However, the financial statements included herein may not necessarily reflect the Company's results of operations, financial position and cash flows in the future or what its results of operations, financial position and cash flows would have been had the Company been a stand-alone company during those periods.

The financial statements prior to the Distribution date include allocations of certain IMPCO corporate headquarters' assets, liabilities, and expenses relating to the Company's Businesses that were transferred to the Company from IMPCO. General corporate overhead was allocated either based on the ratio of the Company's

headcount to IMPCO's total headcount, on the Company's revenue as a percentage of IMPCO's total revenue, or specifically identified costs for the Company. General corporate overhead primarily includes salary and expenses for the executive management, finance, legal, human resources, information services and investor relations departments. Following the spin-off, the Company is performing these functions using its own resources or purchased services.

The financial statements prior to the Distribution date also include an allocation from IMPCO to fund a portion of the costs of research conducted by the Company. This allocation was based on management's determination of which corporate projects were related to the specific intellectual property that was transferred to the Company as part of the Contribution. Beginning in fiscal year 2002, the Company satisfied its research requirements using its own resources or through purchased services.

IMPCO used a centralized approach to cash management and the financing of its operations. Cash deposits from the Company's Businesses were transferred to IMPCO on a regular basis and were netted against the owner's net investment account. As a result, none of IMPCO's cash or debt at the corporate level was allocated to the Company in the financial statements prior to the distribution date. Changes in invested equity represents any funding required from IMPCO for working capital, acquisition or capital expenditure requirements after giving effect to the Company's transfers to or from IMPCO of its cash flows from operations. Until May 2001, the Company had been funded by IMPCO with no debt obligations being transferred to the Company except for capital leases.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. This basis of accounting contemplates the recovery of the Company's assets and the satisfaction of its liabilities in the normal course of conducting business. Prior to the Distribution date, the Company used cash generated from IMPCO's operations, bank financings and investments to fund capital expenditures and research and development, as well as to invest in and operate existing operations and new businesses. Prior to the Distribution, IMPCO made an additional capital investment of $23.6 million into the Company, which consisted of the assumption of the $8.6 million outstanding under the debt facility plus a cash infusion of $15 million.

In January 2003, the Company completed a public equity offering of an aggregate of 4,025,000 shares of its common stock at a price of $2.25 per share, which yielded net proceeds of $8.0 million after underwriting discounts and commissions and offering expenses. In October 2003, the Company completed a public equity offering of an aggregate of 8,050,000 shares of common stock at a price of $8.00 per share, which yielded net proceeds of approximately $60.1 million after underwriting discounts and commissions and offering expenses. The Company believes that working capital will be adequate to meet liquidity needs for at least the next twelve months. The Company may require additional sources of financing to develop facilities for commercialization and mass production of products and systems. These additional sources of financing may include bank borrowings or public or private offerings of equity or debt securities. The Company cannot assure you that such additional sources of financing will be available on acceptable terms, if at all.

*Interest Expense*

The Company's financial statements include interest expense totaling $488,442, $114,178 and $44,593 in 2002, 2003 and 2004, respectively. Until 2001, the Company was funded entirely through investments from IMPCO, who for a significant portion of that period funded the Company from its operations or equity proceeds. It was management's intention of both companies that these advances were interest-free and would never be repaid. These advances were forgiven as part of the Distribution. The interest expense reflected in the statement of operations is due to the Company's capital lease obligations and, for the fiscal years ending April 30, 2003 and 2004, debt specifically entered into by the Company.

Below is the detailed schedule of IMPCO's Invested Equity to the date of the Distribution (in thousands).

| | Year Ended April 30 2002 | Period from May 1 to July 23, 2002 |
|---|---|---|
| Balance at beginning of period | $ 23,992 | $ 10,270 |
| Allocation of costs from IMPCO | 3,209 | — |
| Net intercompany purchases | 127 | 1 |
| Cash transfers from IMPCO | 26,320 | 26,250 |
| Net loss | (43,378) | (4,687) |
| Conversion of invested equity to stockholders' equity(1) | — | (31,834) |
| Balance at end of period | $ 10,270 | $ — |
| Average balance | $ 16,664 | $ 21,053 |

(1) Invested Equity was converted to stockholders' equity as part of the Distribution on July 23, 2002.

*Income Taxes*

The Company's income taxes were calculated on a separate tax return basis for the period prior to the spin-off. However, IMPCO was managing its tax position for the benefit of its entire portfolio of businesses, and its tax strategies are not necessarily reflective of the tax strategies that the Company would have followed as a stand-alone entity prior to the spin-off.

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

*Reclassification*

Certain reclassifications have been made to fiscal year 2002 and 2003 amounts to conform to the fiscal year 2004 presentation.

**2. Summary of Significant Accounting Policies**

*Use of Estimates in the Preparation of Financial Statements*

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. These estimates include assessing the collectability of accounts receivable, the use and recoverability of inventory, the realization of deferred tax assets, useful lives for depreciation periods of tangible assets, provisions for warranty claims, among others. The markets for the Company's products are characterized by competition, technological development and new product introduction, all of which could impact the future realizability of the Company's assets. Actual results could differ from those estimates.

*Revenue Recognition*

Revenue is recognized on product sales when goods are shipped in accordance with the Company's shipping terms and collectability is reasonably assured. The Company includes the costs of shipping and handling, when incurred, in cost of goods sold.

Contract revenue for customer funded research and development is principally recognized by the percentage of completion method. Amounts expected to be realized on contracts are based on the Company's estimates of total contract value and costs at completion. These estimates are reviewed and revised periodically throughout the lives of the contracts. Percentage of completion is determined based on costs incurred as a percentage of total estimated costs at completion. Billings under these types of contracts frequently differ from the periods that revenue is earned. Certain contracts are billable under a reimbursement basis while others have specific billing schedules or billing parameters that are unrelated to the earnings process. Consequently, the Company had earned revenue that had not been billed and was not billable to certain customers as of April 30, 2003 and 2004, which is included in accounts receivable. Billings made in advance of the earnings process for other customers is reported as deferred revenue.

*Research and Development Costs*

Research and development costs are charged to expense as incurred. Prior to the Distribution, this line item includes an allocation from IMPCO for the costs of research conducted by IMPCO (see Note 1). Equipment used in research and development with alternative future uses is capitalized and only the current period depreciation is charged to research and development.

*Cash and Cash Equivalents*

All highly liquid investments with original maturities of three months or less when purchased are considered to be cash equivalents.

*Marketable Securities*

The Company accounts for its investments in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities." SFAS No. 115 requires that all applicable investments be classified as trading securities, available-for-sale securities or held-to-maturity securities. Marketable securities are classified as held-to–maturity when the Company has the positive intent and

ability to hold the securities to maturity. Management has determined that all of its investments are being held-to-maturity. Held-to-maturity securities are stated at amortized cost. The amortized cost of securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization is included in interest income.

*Financial Instruments and Concentration of Credit Risk*

The estimated fair values of cash equivalents, accounts receivable, accounts payable, and accrued expenses approximate their carrying value because of the short-term maturity of these instruments. The fair values of marketable securities held-to-maturity, as summarized in Note 4, are based primarily on quoted prices for those or similar instruments.

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist principally of marketable securities and trade receivables. The Company conducts a major portion of its business with a limited number of customers. For the past three years and for the foreseeable future, General Motors (including subsidiaries of General Motors) and Toyota Motor Corporation ("Toyota") represent a significant portion of the Company's sales and outstanding accounts receivable. Credit is extended based upon an evaluation of each customer's financial condition, with terms consistent with those present throughout the industry. Typically, the Company does not require collateral from customers.

The Company may use derivative financial instruments for the purpose of reducing its exposure to adverse fluctuations in interest and foreign exchange rates. While these hedging instruments could be subject to fluctuations in value, such fluctuations are generally offset by the value of the underlying exposures being hedged. The Company has not had any derivative financial instruments for any of the periods reported. The Company is not a party to leveraged derivatives and does not hold or issue financial instruments for speculative purposes.

*Inventories*

Inventories are valued at the lower of cost or market. Cost is determined by the first-in, first-out (FIFO) method while market is determined by replacement cost for raw materials and parts and net realizable value for work-in-process and finished goods. The Company's business is subject to the risk of technological and design changes. The Company provides for obsolete or slow-moving inventory based on management's analysis of inventory levels and future sales forecasts at the end of each accounting period.

*Equipment and Leasehold Improvements*

Equipment and leasehold improvements are stated at historical cost. Depreciation of equipment is determined using a straight-line method over the assets' estimated useful lives ranging from three to seven years. Amortization of leasehold improvements and equipment financed under borrowing facilities is provided using the straight-line method over the shorter of the assets' estimated useful lives or the lease terms.

Major renewals and improvements are capitalized and minor replacements, maintenance and repairs are charged to current operations as incurred. Upon retirement or disposal of assets, the cost and related accumulated depreciation are removed from the balance sheets and any gain or loss is reflected in the statements of operations.

*Intangible Asset*

The issuance of shares related to the Company's strategic alliance with General Motors has been recorded at the estimated fair market value on the date of the Distribution, in accordance with SFAS No. 123, "Accounting

for Stock Based Compensation," and Emerging Issues Task Force ("EITF") 96-18, "Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services." The intangible asset was recorded in accordance with the consensus reached by the EITF during their November 2001 meeting with respect to EITF 00-18, "Accounting Recognition for Certain Transactions involving Equity Instruments Granted to Other than Employees." The intangible asset is carried at cost less accumulated amortization. The Company is amortizing the intangible asset, subject to periodic evaluations for impairment, over the ten-year term of the Corporate Alliance Agreement with General Motors (see Note 3).

*Warranty Costs*

Estimated future warranty obligations related to certain products are provided by charges to operations on a per unit sold accrual rate in the period in which the related revenue is recognized. Estimates are based, in part, on historical experience.

*Impairment of Long-Lived Assets*

In accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-lived Assets," impairment losses are recorded on long-lived assets used in operations when an indicator of impairment (significant decrease in market value of an asset, significant change in extent or manner in which the asset is used or significant physical change to the asset) is present and the undiscounted cash flows estimated to be generated by those assets are less than the assets' carrying amount. The Company has not experienced any significant changes in the business climate or in the use of assets that would require the Company to write-down the value of the assets recorded in the balance sheet.

*Income Taxes*

Prior to the date of Distribution, the Company's operations have been included in IMPCO's consolidated income tax returns. Income tax expense in the Company's financial statements has been calculated on a separate tax return basis.

The asset and liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax bases of assets and liabilities. Deferred tax assets and liabilities are determined based on the differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. In accordance with SFAS 109, the Company has established a full valuation allowance for its deferred tax assets due to a lack of history of earnings.

*Stock-Based Compensation*

In October 1995, the Financial Accounting Standards Board ("FASB") issued SFAS No. 123 "Accounting for Stock Based Compensation," which established accounting and reporting standards for stock based compensation plans effective after fiscal year 1996. SFAS No. 123 encourages entities to adopt the fair value based method of accounting; however, it also allows an entity to continue to measure compensation cost using the intrinsic value based method prescribed by Accounting Principles Board Opinion ("APB") No. 25. Such entities who elect to remain on the "intrinsic value based" method must make certain pro forma disclosures as if the new fair value method had been applied. At this time, the Company has not adopted the recognition provision of SFAS No. 123, but has provided pro forma disclosures (see Note 13) as required by SFAS No. 123 and SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure."

In December 2002, the FASB issued SFAS No. 148, "Accounting For Stock Based Compensation—Transition and Disclosure." SFAS No. 148 amended SFAS No. 123 "Accounting For Stock-Based Compensation", to provide new guidance concerning the transition when a company changes from the intrinsic-value method to the fair-value method of accounting for employee stock-based compensation cost. As amended by SFAS No. 148, SFAS No. 123 also requires additional disclosure regarding such cost in annual financial statements and in condensed interim financial statements.

SFAS No. 123, as amended by SFAS No. 148, requires pro forma information regarding net income and net income per share to be disclosed for new options granted after fiscal year 1996. The fair value of these options was determined at the date of grant using the Black-Scholes option-pricing model with the following weighted-average assumptions:

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Expected dividend yield | 0% | 0% | 0% |
| Calculated volatility | 0.801 | 1.245 | 1.005 |
| Risk-free interest rate | 5% | 3% | 3% |
| Expected life of the option in years | 10.00 | 7.10 | 7.16 |

The estimated fair value of the options is amortized to expense over the options' vesting period for pro forma disclosures. The net income per share "pro forma" for the effects of SFAS No. 123, as amended by SFAS No. 148, is not indicative of the effects on reported net income/loss for future years. The Company's "reported" and "pro forma" information at April 30 is as follows:

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Net loss, as reported | $(43,377,780) | $(18,197,461) | $ (8,934,420) |
| Deduct: Total stock-based employee compensation expense determined under the fair value based method for all awards, net of related tax effects | (126,000) | (1,343,000) | (2,079,000) |
| Pro forma net loss | $(43,503,780) | $(19,540,461) | $(11,013,420) |
| Net loss per share, as reported - basic and diluted | $ (3.07) | $ (1.00) | $ (0.33) |
| Net loss per share, as adjusted - basic and diluted | $ (3.08) | $ (1.08) | $ (0.40) |
| Number of shares used in the calculation of pro forma per share | 14,142,036 | 18,153,059 | 27,257,230 |

The FASB has also issued Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation." The Interpretation addresses implementation practice issues in accounting for compensation costs under existing rules prescribed by APB No. 25. The rules are applied prospectively to all new awards, modifications to outstanding awards and changes in grantee status after July 1, 2000, with certain exceptions. The Company considers the impact of these rules when adopting new stock option plans and when granting any options.

*Comprehensive Loss*

Comprehensive loss would include, in addition to net loss, unrealized gains and losses excluded from the statements of operations and would be recorded directly into a separate section of invested equity on the balance

sheet. These unrealized gains and losses are referred to as other comprehensive loss items. The Company had no items of other comprehensive loss, and hence there is no difference between the reported net loss and the comprehensive loss during the years ended April 30, 2002, 2003 and 2004.

*Recently Issued Accounting Pronouncements*

In August of 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations." SFAS No. 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated retirement costs. SFAS No. 143 became effective for fiscal years beginning after June 15, 2002. The adoption of this statement did not have a significant effect on the Company's financial position or results of operations.

In June 2002, the FASB issued SFAS No. 146, "Accounting for Exit or Disposal Activities." SFAS No. 146 addresses significant issues regarding the recognition, measurement, and reporting of costs that are associated with exit and disposal activities, including restructuring activities that are currently accounted for under EITF No. 94-3, "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (Including Certain Costs Incurred in a Restructuring)." The scope of SFAS No. 146 also includes costs related to terminating a contract that is not a capital lease and termination benefits that employees who are involuntarily terminated receive under the terms of a one-time benefit arrangement that is not an ongoing benefit arrangement or an individual deferred-compensation contract. SFAS No. 146 is effective for exit or disposal activities that are initiated after December 31, 2002. The Company has not initiated any exit or disposal activities during fiscal years 2003 and 2004.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN 45"), effective for reporting periods ending after December 15, 2002. FIN 45 requires a guarantor to recognize, at the inception of a guarantee, a liability for the fair value of all of the obligations it has undertaken in issuing the guarantee. The Company evaluated the potential impact of FIN 45 as of April 30, 2004, and has concluded that there was no impact on our financial statements.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51," ("FIN 46"). FIN 46 introduces a new consolidation model, the variable interests model, which determines control (and consolidation) based on potential variability in gains and losses of the entity being evaluated for consolidation. The requirements for FIN 46, including its disclosures, apply immediately.

FIN 46 provides guidance for determining whether an entity qualifies as a variable interest entity ("VIE") by considering, among other considerations, whether the entity lacks sufficient equity or its equity holders lack adequate decision-making ability. If the entity does not qualify as a VIE, then the consolidation criteria is based on previously established accounting standards. Qualifying VIEs are covered by FIN 46 and are individually evaluated for consolidation based on their variable interests. FIN 46 requires consideration and estimates of a significant number of possible future outcomes of the VIE as well as the probability of each outcome occurring. Based on the allocation of possible outcomes, a calculation is performed to determine which party, if any, has a majority of potential negative outcomes (expected losses) or a majority of the potential positive outcomes (expected residual returns), with an emphasis on negative outcomes. That party, if any, is the primary beneficiary and is required to consolidate the VIE. The Company has evaluated the potential impact of FIN 46 as of April 30, 2004 and has concluded that there was no impact on the Company's financial statements.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging Activities," which amends and clarifies financial accounting and reporting derivative instruments,

including certain derivative instruments embedded in other contracts and for hedging activities under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. This statement is effective for contracts entered into or modified and for hedging relationships designated after June 30, 2003. The adoption of this statement did not have a significant effect on the Company's financial position or results of operations.

In May 2003, the FASB issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity," effective for financial instruments entered into or modified after May 31, 2003. The adoption of SFAS No. 150 did not have a significant effect on the Company's financial position or results of operations.

**3. Related Party Transactions**

***Agreements with IMPCO***

For the years 2002, 2003 and 2004, respectively, the Company had $29,316, $93,862 and $63,123 of revenue for products and services sold to IMPCO. For the years 2002, 2003 and 2004, respectively, the Company had $156,041, $482,347 and $374,059 of products and services purchased from IMPCO. In connection with the Contribution and Distribution, the Company and IMPCO executed the Contribution and Distribution Agreement (the Contribution and Distribution Agreement), and certain related agreements that are summarized below. This summary is qualified in all respects by the terms of the Contribution and Distribution Agreement and such related agreements. On June 24, 2002, IMPCO amended its credit facility with Bank of America NT&SA in which IMPCO released the Company as a borrower under the line of credit.

Prior to the Distribution, each of the Company's executive officers served as an officer or employee of IMPCO and/or its other subsidiaries. In acting on the Company's behalf, these officers considered not only the short-term and long-term impact of operating decisions on its business, but also the impact of such decisions on the business of IMPCO. One of the Company's directors remains employed by IMPCO and continues to serve as IMPCO's Senior Vice President and Secretary.

*Contribution and Distribution Agreement*

The Company entered into a Contribution and Distribution Agreement with IMPCO that provides for, among other things, certain corporate transactions required to effect the Distribution and other arrangements among the Company and IMPCO subsequent to the Distribution. The agreement provided that IMPCO would transfer to the Company the assets constituting IMPCO's automotive OEM business. The agreement provides for, among other things, assumptions of liabilities and cross-indemnities designed to place financial responsibility on each of the Company and IMPCO for the liabilities of their respective business.

Under the agreement, if the Company or IMPCO act or fail to act in a manner which causes the Distribution to fail to qualify under Section 355 of the Internal Revenue Code or causes Section 355(e) of the Internal Revenue Code to apply to the Distribution, the Company or IMPCO will indemnify the other for any tax liability arising from such failure or application.

The Company and IMPCO have agreed to a non-competition arrangement under the Contribution and Distribution Agreement whereby each party will be restricted from engaging in competitive activities with the other party for a period of three years. Each party will refrain from directly competing with the retained businesses of the other party in such other party's designated market (including such party's OEM market) and/or aftermarket and from engaging in business with specified competitors of the other party. Additionally, IMPCO will refrain from engaging in business with the Company's OEM customers specified in the agreement for a three-year period, which ends July 22, 2005.

Under the Contribution and Distribution Agreement, IMPCO has retained rights to use, on a royalty-free basis, the existing technology for the Company's TriShield tanks, and to manufacture tanks using such technology, in certain markets, which include the automotive aftermarket, bus and truck aftermarket, the industrial aftermarket for vehicles with internal combustion engines, and the bus and truck and industrial OEM markets for vehicles with internal combustion engines. Subject to the non-competition restrictions discussed above, the Company will be free to commercialize its TriShield tanks in other markets, including the worldwide OEM market for Class 1 through 5 vehicles which are powered by fuel cell applications on an exclusive basis, the OEM market in the United States and Canada for Class 1 through 5 vehicles with internal combustion engines (other than diesel vehicles) on an exclusive basis and in all other countries on a non-exclusive basis, the worldwide OEM market in the United States and Canada for Class 6 vehicles on a non-exclusive basis, the worldwide market for components, systems and subsystems for fuel cell applications on an exclusive basis, the worldwide industrial OEM market for vehicles powered by fuel cell applications on an exclusive basis, and the worldwide industrial aftermarket for vehicles powered by fuel cell applications on an exclusive basis. Each party has a right to use the modifications and improvements made by the other party to such TriShield technology, if any, on a royalty-bearing basis at reasonable commercial rates in the designated market for such party. These rights will last for a minimum period of five years from the date of the Distribution, which ends July 22, 2007.

The agreement also provides for a full release and discharge of all liabilities existing or arising from all acts and events occurring or failing to occur or alleged to have occurred or to have failed to occur and all conditions existing or alleged to have existed on or before the date of the agreement, between or among the Company or any of its subsidiaries or affiliates, on the one hand, and IMPCO or any of its subsidiaries or affiliates other than the Company, on the other hand, except as expressly set forth in the agreement. The agreement also provides that, except as otherwise set forth therein or in any related agreement, all costs or expenses incurred in connection with the Distribution and not paid prior to the Distribution will be charged to and paid by the Company. Each party will pay its own expenses after the Distribution.

*Employee Benefit Matters Agreement*

The Company entered into an Employee Benefit Matters Agreement with IMPCO pursuant to which the Company agreed to create independent retirement and other employee benefit plans that are substantially similar to IMPCO's existing retirement and other employee benefit plans. Under the agreement and effective immediately after the Distribution, IMPCO transferred the assets and liabilities of its existing 401(k) retirement and other benefit plans related to the Company's employees to the comparable Company benefit plans. Generally, following the Distribution, IMPCO ceased to have any continuing liability or obligation to the Company's current employees and their beneficiaries under any of IMPCO's benefit plans, programs or practices.

Pursuant to the Employee Benefit Matters Agreement, all IMPCO stock options that were outstanding on the record date and that had not been exercised prior to the Distribution date were converted into two stock options: (i) an option to purchase the number of previously-unexercised IMPCO stock options as of the record date, and (ii) an option to purchase a number of shares of Quantum's common stock equal to the number of previously-unexercised IMPCO stock options times a fraction, the numerator of which is the total number of shares of Quantum's common stock distributed to IMPCO stockholders in the Distribution and the denominator of which is the total number of IMPCO shares outstanding on the record date for the Distribution.

*Tax Allocation and Indemnification Agreement*

The Company and IMPCO entered into a Tax Allocation and Indemnification Agreement, which allocates tax liabilities between the Company and IMPCO and addresses certain other tax matters such as responsibility for

filing tax returns and the conduct of audits and other tax proceedings for taxable periods before and after the Distribution date. IMPCO will be responsible for and will indemnify the Company against all tax liabilities relating to the assets and entities that constitute IMPCO and its subsidiaries, and the Company will be responsible for and will indemnify IMPCO against all tax liabilities relating to the assets and entities that constitute the Company's business. In addition, the Company generally will indemnify IMPCO for all tax liabilities arising if the contribution is not tax-free, other than tax liabilities arising in connection with the Company's assumption of certain IMPCO liabilities.

*Transition Services Agreement*

The Company entered into a Transition Services Agreement with IMPCO pursuant to which IMPCO provided the Company with various administrative services. Those services included employee benefits administration, affirmative action and immigration administration, and payroll processing. The Company paid fees to IMPCO for services provided in amounts based on IMPCO's loaded costs incurred in providing such services. This agreement expired on January 23, 2003; however, IMPCO continues to share certain investor relations services with the Company. Since the Company's spin-off from IMPCO, an officer of IMPCO and a member of the Company's board of directors, has provided these investor relations services to the Company, for which the Company has made payments to IMPCO of $213,569 in fiscal 2003 and $132,658 in fiscal 2004 for salary, overhead and related expenses. As of April 30, 2004, $201,009 was payable to IMPCO for investor relations services.

*Strategic Alliance Agreement*

The Company entered into a Strategic Alliance Agreement with IMPCO pursuant to which it will work with IMPCO in identifying and conducting research and development programs of mutual interest. As part of such research and development activities, the Company may develop, solely or jointly with IMPCO, technology that is owned solely by the Company or jointly with IMPCO. The other purpose of this relationship is to provide IMPCO access to the Company's advanced technologies, including the CNG storage tanks, fuel injectors, in-tank regulators and other products for use in automotive, bus and truck and industrial aftermarket applications and in the bus and truck and industrial OEM markets.

***Agreements with General Motors***

The Company has entered into a strategic alliance with General Motors regarding the development of fuel systems for fuel cell applications. Under the terms of the strategic alliance, General Motors acquired shares of stock representing 19.9% of the Company's issued and outstanding capital stock following the Distribution. The Company entered into the agreements described below with General Motors in connection with the alliance. The following description is a summary of the terms of the referenced agreements.

*Corporate Alliance Agreement*

The Corporate Alliance Agreement between the Company and General Motors serves to formalize the two companies' agreement to work together to advance and commercialize, on a global basis, fuel cell systems and the market for fuel cells to be used in transportation, mobile, stationary and portable applications. The Corporate Alliance Agreement became effective upon the Distribution and has a term of ten years, which ends on July 22, 2012. The agreement provides that:

- General Motors is obligated to actively support, endorse and recommend the Company to its customer base;
- General Motors will assist and provide guidance with respect to the Company's directed research and development of fuel cell applications;

- the Company will appoint one individual nominated by General Motors to the board of directors prior to or promptly after the Distribution, and thereafter during the term of the agreement the Company will continue to nominate one individual designated by General Motors to the proposed slate of directors to be presented to the stockholders as necessary for General Motors to retain one seat on the board of directors;
- General Motors will be entitled to appoint an "ex-officio" board member with non-voting capacity during the term of the agreement;
- the Company committed to spend $4.0 million annually for specific research and development projects directed by General Motors to speed the commercialization of the Company's fuel cell related products (waived for calendar years 2002 and 2003); and
- beginning three years after the effective date of the agreement, the Company will pay General Motors a percentage of gross revenue derived from sales of applications developed under the strategic alliance.

The Company retains the ownership of its existing technology and it and General Motors will jointly own technology that is jointly created under the alliance. The Company is free to use jointly created technologies in certain aspects of its business but will be required to share revenue with General Motors on fuel cell system-related products that are sold to General Motors or third parties. Under the agreement, General Motors has a right of first refusal in the event that the Company proposes to sell, or otherwise transfer its fuel cell-related intellectual property contemplated under the Corporate Alliance Agreement. In the event that the Company decides to discontinue operations or is deemed insolvent, General Motors has the right to purchase the intellectual property contemplated under the Corporate Alliance Agreement at a price to be determined by an independent appraisal firm approved by both the Company and General Motors.

*Stock Transfer Agreement*

The Company entered into a Stock Transfer Agreement pursuant to which it agreed to issue to General Motors shares of Series A common stock representing 19.9% of the Company's total issued and outstanding capital stock after the Distribution. The Company issued the Series A common stock immediately following the Distribution. The Series A common stock automatically converted into common stock upon the closing of the Company's public offering of common stock in January 2003.

The Company also agreed that, subject to limited exceptions, it would not issue any stock in a private placement transaction without the prior written consent of General Motors.

*Registration Rights Agreement*

The Company entered into a Registration Rights Agreement with General Motors pursuant to which General Motors may demand that the Company file a registration statement under the Securities Act, covering some or all of the common stock General Motors would receive upon conversion of its Series A common stock. General Motors may make this demand any time after the earlier of three years following the Distribution or six months after the effective date of the Company's first registration statement for a public offering of its securities to the general public, which was January 16, 2003. The Company is not required to effect more than two demand registrations nor is the Company required to effect a registration if the requested registration would have an aggregate offering price to the public of less than $20 million. In an underwritten offering, the managing underwriter of any such offering has the right to limit the number of registrable securities to be included in the registration statement.

General Motors also has "piggyback" registration rights. If the Company proposes to register any of its equity securities under the Securities Act, other than pursuant to the demand registration rights described above or certain excluded registrations, General Motors may require the Company to include all or a portion of its registrable securities in the registration and in any related underwriting. Further, if the Company is eligible to effect a registration on Form S-3, General Motors may demand that the Company file a registration statement on Form S-3 covering all or a portion of General Motors' registrable securities, provided that the registration has an aggregate offering price of at least $10 million. The Company will not be required to effect more than two such registrations in any twelve month period. In general, the Company will bear all fees, costs and expenses of such registrations, other than underwriting discounts and commissions. The Company also agreed to take such reasonable actions as are necessary to make Rule 144 available to General Motors for the resale of its registrable securities without registration under the Securities Act.

*Master Technical Development Agreement*

Under the terms of the Master Technical Development Agreement with General Motors, the Company has agreed to work with General Motors to facilitate the integration, interface, and optimization of General Motors' fuel cell systems with Quantum's gaseous fuel storage and handling modules. To that end, the agreement provides for the establishment of joint Quantum/General Motors technical teams to implement statements of work with respect to the development of fuel cell applications. In addition, the agreement provides that both the Company and General Motors will license their fuel cell-related technologies to each other for the purpose of developing, manufacturing and selling the fuel cell applications developed under the strategic alliance.

**4. Marketable Securities**

At April 30, 2004, the Company's marketable securities held-to-maturity were classified as follows:

| | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| **Short-Term** | | | | |
| Certificate of deposit | $ 1,402,696 | $ — | $ — | $ 1,402,696 |
| Commercial paper | 1,598,472 | — | — | 1,598,472 |
| Asset backed securities | 1,762,490 | — | 1,449 | 1,761,041 |
| Corporate bonds | 10,248,906 | 72 | 19,372 | 10,229,606 |
| U.S. government securities | 20,582,705 | 1,161 | 14,874 | 20,568,992 |
| | 35,595,269 | 1,233 | 35,695 | 35,560,807 |
| **Long-Term** | | | | |
| Asset backed securities | 1,543,479 | — | 14,016 | 1,529,463 |
| Corporate bonds | 11,028,193 | 629 | 49,959 | 10,978,863 |
| U.S. government securities | 4,660,626 | 411 | 17,128 | 4,643,909 |
| | 17,232,298 | 1,040 | 81,103 | 17,152,235 |
| Total marketable securities | $52,827,567 | $2,273 | $116,798 | $52,713,042 |

At April 30, 2004, marketable securities held-to-maturity classified as long-term have maturity dates ranging from May 2005 to September 2007.

## 5. Accounts Receivable

Accounts receivable consist of the following:

| | April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Customer accounts billed | $5,513,593 | $3,120,131 |
| Customer accounts unbilled | 421,103 | 2,923,373 |
| Allowance for doubtful accounts | (40,000) | (147,000) |
| Net accounts receivable | $5,894,696 | $5,896,504 |

## 6. Inventories

Inventories consist of the following:

| | April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Inventories: | | |
| Materials and parts | $ 4,812,341 | $5,198,673 |
| Work-in-process | 29,896 | 58,945 |
| Finished goods | 2,961,685 | 1,424,719 |
| | 7,803,922 | 6,682,337 |
| Less provision for obsolescence | (1,778,020) | (937,568) |
| Net inventories | $ 6,025,902 | $5,744,769 |

## 7. Equipment and Leasehold Improvements

Equipment and leasehold improvements consist of the following:

| | April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Equipment and leasehold improvements: | | |
| Dies, molds and patterns | $ 2,917,795 | $ 2,975,192 |
| Machinery and equipment | 8,525,905 | 8,970,785 |
| Office furnishings and equipment | 7,558,287 | 7,867,990 |
| Automobiles and trucks | 101,144 | 136,386 |
| Leasehold improvements | 2,521,888 | 2,547,012 |
| Capitalized machinery and equipment | 623,358 | 623,358 |
| Construction in progress | 276,048 | 841,282 |
| | 22,524,425 | 23,962,005 |
| Less accumulated depreciation and amortization | (11,640,393) | (15,181,909) |
| Net equipment and leasehold improvements | $ 10,884,032 | $ 8,780,096 |

**8. Intangible Asset**

In connection with the Company's strategic alliance with General Motors, the Company issued 3,513,439 shares of its Series A common stock to General Motors on July 24, 2002. This issuance has been recorded at the estimated fair market value on the date of the Distribution of approximately $14.2 million, in accordance with SFAS No. 123, "Accounting for Stock Based Compensation," and EITF 96-18, "Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services." The intangible asset was recorded in accordance with the consensus reached by the EITF during their November 2001 meeting with respect to EITF 00-18, "Accounting Recognition for Certain Transactions involving Equity Instruments Granted to Other than Employees."

Pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation, upon the completion of the Company's January 2003 public equity offering, all of the 3,513,439 shares of the Company's outstanding Series A common stock held by General Motors converted automatically into shares of the Company's common stock on a one-for-one basis, and the Company issued to General Motors an aggregate of 999,969 shares of its non-voting Series B common stock. The issuance of the Series B common stock has been recorded as additional consideration related to the strategic alliance between the companies at the estimated fair market value on the date of the public offering of approximately $2.2 million. As a result, the intangible asset recorded in connection with the Company's issuance of Series B common stock to General Motors was increased by $2.2 million.

The Company has adopted the provisions of SFAS No. 142, "Goodwill and Other Intangible Assets," effective May 1, 2002. SFAS No. 142 requires that intangible assets other than goodwill be amortized over their useful lives. Accordingly, the Company is amortizing the intangible asset, subject to periodic evaluations for impairment, over the ten-year term of the Corporate Alliance Agreement with General Motors.

On May 1, 2002, the Company adopted SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets and for Long-lived Assets to be Disposed Of." Accordingly, the intangible asset will be reviewed on an annual basis for impairment or on a more frequent basis if events or circumstances change that might indicate that impairment exists. In accordance with the requirements of SFAS No. 144, the Company believes that no event or circumstance currently exists that would indicate impairment of this asset.

The amortization expense during the fiscal year 2004 was approximately $1.7 million. The expected amortization expense for the next five fiscal years and thereafter is as follows:

| | Amortization Expense |
|---|---|
| 2005 | $ 1,659,778 |
| 2006 | 1,659,778 |
| 2007 | 1,659,778 |
| 2008 | 1,659,778 |
| 2009 | 1,659,778 |
| Thereafter | 5,360,815 |
| | $13,659,705 |

## 9. Other Assets

Other assets consist of the following:

| | April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Other assets: | | |
| Global acquisition costs | $1,156,811 | $ — |
| Leased facility security deposits | 90,173 | 90,173 |
| Net other assets | $1,246,984 | $90,173 |

On April 8, 2003, the Company entered into a Combination Agreement with Global Thermoelectric Inc. ("Global") to combine Global with the Company in a share-for-share exchange pursuant to a Plan of Arrangement submitted to the Court of Queen's Bench of Alberta, Canada for approval. On July 14, 2003, Global announced that it had received a competing proposal from FuelCell Energy, Inc. ("FuelCell"). On July 31, 2003, upon reviewing the terms of the competing proposal and after full consideration of the possible alternative terms that could have been offered by the Company, the Company's board of directors concluded that it was not in the best interest of the Company or its stockholders to propose any adjustments or improvements to the terms and conditions of the transaction contemplated by the Combination Agreement. On August 4, 2003, the Company announced that Global had terminated the Combination Agreement with the Company as a result of the proposed combination between Global and FuelCell. As a result of the termination of the Combination Agreement, the Company received a US $2,000,000 break-up fee from Global on August 4, 2003. This fee was netted against the accumulated transaction costs of approximately $2,127,000, which resulted in a $127,000 charge to earnings during fiscal 2004.

## 10. Income Taxes

Income taxes in the Company's financial statements have been calculated on a separate tax return basis. The following table presents the principal reasons for the difference between the effective tax rate and the federal statutory income tax rate:

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Income tax benefit at U.S. statutory rates | (34.0)% | (34.0)% | (34.0)% |
| State and local income taxes, net of federal benefit | (5.9)% | (6.0)% | (6.0)% |
| Net operating losses and research and development credits retained by IMPCO | 35.0% | 10.3% | 0.0% |
| Amortization of intangible asset | 0.0% | 2.5% | 7.5% |
| Other | 4.0% | 2.0% | 3.3% |
| Valuation allowance | 0.9% | 25.2% | 29.6% |
| | 0.0% | 0.0% | 0.4% |

The following table presents the provision for income taxes on a separate tax return basis:

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| Current: | | | |
| Federal | $ — | $ — | $ — |
| State and local | — | — | 7,000 |
| Foreign | — | — | 32,000 |
| | — | — | 39,000 |
| Deferred: | | | |
| Federal | 359,000 | 4,100,000 | 2,683,000 |
| State and local | 63,000 | 724,000 | (48,000) |
| | 422,000 | 4,824,000 | 2,635,000 |
| Less: Change in valuation allowance | (422,000) | (4,824,000) | (2,635,000) |
| Subtotal | — | — | — |
| Income tax provision | $ — | $ — | $ 39,000 |

The components of deferred tax assets and liabilities are as follows:

| | Year Ended April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Deferred income tax assets: | | |
| Accrued compensation | $ 170,000 | $ 186,000 |
| Accrued warranty | 448,000 | 379,000 |
| Inventory | 779,000 | 410,000 |
| Allowance for doubtful accounts | 16,000 | 59,000 |
| Net operating loss carryforwards | 5,384,000 | 8,178,000 |
| | 6,797,000 | 9,212,000 |
| Less: Valuation allowance | (5,920,000) | (8,555,000) |
| Total deferred income tax assets | 877,000 | 657,000 |
| Deferred income tax liabilities: | | |
| Equipment and leasehold improvements | (877,000) | (657,000) |
| Total deferred tax liabilities | (877,000) | (657,000) |
| Net deferred tax (liabilities) assets | $ — | $ — |

At April 30, 2004, the Company has net operating loss carryforwards of approximately $21.7 million available to offset future federal taxable income. Approximately $13.9 million expires in 2024 and approximately $7.8 million expires in 2025. The net operating loss carryforwards include approximately $0.7 million of deductions related to stock option exercises. The Company has established a full valuation allowance for deferred tax assets due to the lack of earnings history. Tax credits and net operating losses generated prior to the spin-off are retained by IMPCO.

**11. Commitments and Contingencies**

*Leases*

The Company has certain non-cancelable operating leases for facilities and equipment. Future minimum lease commitments under non-cancelable operating leases at April 30, 2004 are as follows:

| | Lease Obligation |
|---|---|
| 2005 | $1,380,313 |
| 2006 | 1,182,158 |
| 2007 | 1,190,161 |
| 2008 | 1,216,666 |
| 2009 | 712,050 |
| Thereafter | 195,694 |
| Total minimum lease payments | $5,877,042 |

Total rental expense under the operating leases for fiscal years ended April 30, 2002, 2003 and 2004 was approximately $2.4 million, $1.4 million and $1.5 million, respectively. These leases are non-cancelable and certain leases have renewal options and escalation clauses.

*Royalties*

The Company has entered into contracts under which it is required to pay royalties for products sold using certain technologies covered by these contracts. No royalty expense was incurred under these contracts for any of the periods reported in the financial statements.

*Contingencies*

The Company is currently subject to certain legal proceedings and claims arising in the ordinary course of business. Management does not believe that the outcome of any of these matters will have a materially adverse effect on the Company's financial statements.

*Investment and Tax Savings Plan*

Prior to the spin-off from IMPCO, the Company participated in IMPCO's Investment and Tax Savings Plan. Following the spin-off, the Company offers the Quantum Investment and Tax Savings Plan, which is similar to the plan offered by IMPCO. Quantum's Investment and Tax Savings Plan (the Plan) is a defined contribution plan, which is qualified under Internal Revenue Service Code Section 401(k). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974. All employees who are at least age twenty-one or older are eligible to participate in the Plan on the first day of employment with the Company. Employees of the Company who elect to participate in the Plan may contribute into the Plan not less than 1% nor more than 15% of compensation. The Company's matching contributions are discretionary and match elective salary deferrals up to 3% of compensation. Contributions attributable to the Company approximated $333,000, $210,000 and $223,000 for fiscal years ended 2002, 2003 and 2004, respectively.

*Employment Agreements*

The Company entered into employment agreements during fiscal 2003 with its Chief Executive Officer and Chief Financial Officer for a term of three consecutive twelve month periods, which provide for an annual base salary and severance obligations in the amount equivalent to the annual base salary. The Company's obligation under the amended terms of these agreements over the next twelve-month period is approximately $764,000. The Company's obligation beyond the next twelve-month period is approximately $223,000.

*General Motors Directed Research & Development Expenses*

Pursuant to the Corporate Alliance Agreement with General Motors, the Company has committed to spend $4.0 million annually for specific research and development projects directed by General Motors to speed the commercialization of the Company's fuel cell related products. While this commitment was waived by General Motors for calendar years 2002 and 2003, there is no assurance that this commitment will be waived in the future. For 2004, the Company expects to spend an amount yet to be determined for research projects directed by General Motors.

**12. Earnings Per Share**

The Company computes net loss per share in accordance with SFAS No. 128, "Earnings Per Share," and SEC Staff Accounting Bulletin ("SAB") No. 98. Under the provisions of SFAS No. 128, basic net loss per share is computed by dividing the net loss for the period by the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing the net loss for the period by the weighted average number of common and common equivalent shares outstanding during the period.

Under the provisions of SAB No. 98, common shares issued for nominal consideration, if any, would be included in the per share calculations as if they were outstanding for all periods presented. The Company initially issued 1,000 shares to IMPCO for nominal consideration. Prior to the spin-off, the Company declared a stock split to increase the number of shares outstanding to 14,142,036 shares of common stock in order to match the number of shares outstanding of IMPCO's common stock. In July 2002, IMPCO's Board of Directors declared a 1-for-1 stock dividend whereby every shareholder of IMPCO Common Stock received a corresponding share of the Company's common stock. On July 24, 2002, the Company issued 3,513,439 shares of Series A common stock to General Motors. The Company considers common equivalent shares from the exercise of stock options and warrants in the instance where the shares are dilutive to net income of the Company by application of the treasury stock method. The effects of stock options and warrants were anti-dilutive for all periods presented.

The following table sets forth the computation of basic and diluted earnings per share:

| | Year Ended April 30 | |
|---|---|---|
| | 2003 | 2004 |
| Numerator: | | |
| Net loss | $(18,197,461) | $ (8,934,420) |
| Numerator for basic earnings per share—loss to common stockholders | $(18,197,461) | $ (8,934,420) |
| Numerator for diluted earnings per share—loss to common stockholders | $(18,197,461) | $ (8,934,420) |
| Denominator for basic earnings per share—weighted-average shares | 18,153,059 | 27,257,230 |
| Denominator for diluted earnings per share—adjusted weighted-average shares | 18,153,059 | 27,257,230 |
| Basic loss per share | $ (1.00) | $ (0.33) |
| Diluted loss per share | $ (1.00) | $ (0.33) |

For fiscal years ended April 30, 2003 and 2004 options to purchase approximately 2,403,000 and 2,704,000 shares, respectively, of common stock were excluded in the computation of diluted net income per share, as the effect would be anti-dilutive. For the fiscal year ended April 30, 2004, 249,000 stock warrants were also excluded in the computation of diluted net income per share, as the effect would be anti-dilutive.

**13. Stockholders' Equity**

*Authorized Capital Stock*

The Company has authority to issue a total of 80,000,000 shares of all classes of stock, of which 20,000,000 may be shares of preferred stock and 60,000,000 may be shares of common stock. Of those shares of common stock, 12,000,000 are designated as Series A common stock and 6,000,000 are designated as Series B common stock. On February 11, 2002, the Company issued 1,000 shares of common stock to IMPCO for $100.

*Quantum Common Stock*

Holders of the Company's common stock are entitled to one vote for each share on all matters voted on by stockholders. Holders of common stock do not have cumulative voting rights in the election of directors.

Holders of the Company's common stock do not have subscription, redemption or conversion privileges. Subject to the preferences or other rights of any preferred stock that may be issued from time to time, holders of the Company's common stock will be entitled to participate ratably in dividends the Company's common stock as declared by the board of directors. Holders of common stock will be entitled to share ratably in all assets available for distribution to stockholders in the event of liquidation or dissolution of the Company, subject to distribution of the preferential amount, if any, to be distributed to holders of preferred stock. No holder of any capital stock of the Company authorized at the distribution date will have any preemptive right to subscribe for or purchase any securities of any class or kind of the Company.

*Series A Common Stock*

As part of the strategic alliance with General Motors, the Company agreed to issue to General Motors, and General Motors agreed to acquire, that number of shares of the Company's Series A common stock, $0.001 par value per share, which, when combined with all shares of capital stock of the Company then issued and outstanding, would equal 19.9% of the issued and outstanding shares of the capital stock of the Company. Immediately following the Distribution, the Company issued 3,513,439 shares of its Series A common stock to General Motors. Upon the closing of the Company's initial public offering in January 2003, the outstanding shares of Series A common stock automatically converted into an equal number of shares of common stock. Holders of the Company's Series A common stock had the same voting rights as holders of the Company's common stock.

The Series A common stock included certain anti-dilution rights, by which in the event the Company effected any other issuance of additional shares of common stock (including any shares issued in an initial public offering of the Company's securities, but excluding shares or options issued pursuant to a board-approved stock option or equity incentive plan), the holders of Series A common stock would receive shares of non-voting Series B common stock in an amount that will cause the issued and outstanding Series A and Series B common stock, taken together, to equal 19.9% of the issued and outstanding shares of all series of the Company's common stock (excluding shares issued pursuant to a board-approved stock option or equity incentive plan). As a result of the conversion of the Series A common stock in connection with the Company's initial public offering, General Motors no longer has anti-dilution rights.

*Series B Common Stock*

Shares of the Company's Series B common stock are not entitled to vote on any matters voted on by stockholders except as otherwise specifically required by law. In the event the Company issues additional shares of common stock as a dividend or other distribution on the Company's outstanding common stock, or a

subdivision or combination of the Company's common stock into a smaller or greater number of shares, the number of shares of Series B common stock will be adjusted to that number of shares of Series B common stock that is equal to the percentage of all outstanding shares of all series of the Company's common stock (excluding shares issued pursuant to a board-approved stock option or equity incentive plan) that the holders of Series B common stock held prior to such event. Upon the transfer of any of the outstanding shares of Series B common stock to any person or entity that is not controlled by or under common control with General Motors, the transferred shares of Series B common stock will convert into an equal number of shares of the Company's common stock. Subject to the preferences or other rights of any preferred stock that may be issued from time to time, holders of the Company's Series B common stock will be entitled to participate ratably in dividends on the Company's common stock as declared by the Company's board of directors. Holders of the Company's Series B common stock will be entitled to share ratably in all assets available for distribution to stockholders in the event of liquidation or dissolution of the Company, subject to distribution of the preferential amount, if any, to be distributed to holders of preferred stock.

*Preferred Stock*

The Company's charter authorizes the board of directors, without any vote or action by the holders of the Company's common stock, to issue up to 20,000,000 shares of preferred stock from time to time in one or more series. The Company's board of directors are authorized to determine the number of shares and designation of any series of preferred stock and the dividend rights, dividend rate, conversion rights and terms, voting rights (full or limited, if any), redemption rights and terms, liquidation preferences and sinking fund terms of any series of preferred stock. Issuances of preferred stock would be subject to the applicable rules of the Nasdaq National Market or other organizations on whose systems the Company's stock may then be quoted or listed. Depending upon the terms of preferred stock established by the Company's board of directors, any or all series of preferred stock could have preference over the Company's common stock with respect to dividends and other distributions and upon liquidation of the Company. Issuance of any such shares with voting powers, or issuance of additional shares of the Company's common stock, would dilute the voting power of the Company's outstanding common stock. The Company has no present plans to issue any preferred stock.

*Warrants*

In connection with the spin-off from IMPCO, the Company issued warrants to purchase an aggregate of 300,000 shares of the Company's common stock to holders of outstanding IMPCO warrants as of the distribution date, July 23, 2002. The Company issued these warrants at an exercise price of $5.83 with a term expiring in January 2006. During fiscal year 2004, warrants to purchase an aggregate of 51,000 shares of common stock were exercised on a cashless basis, which resulted in the issuance of 18,536 shares of common stock.

The Company issued a warrant to purchase 100,000 shares of the Company's common stock to a consulting firm on August 27, 2002 for services related to investor relations. This warrant was issued at an exercise price of $5.10 with a four-year term. The Company valued the warrant at fair value (in accordance with SFAS No. 123, "Accounting for Stock Based Compensation") based on a Black-Scholes fair value calculation. The warrant was valued at date of grant and was re-measured at fair value at each subsequent reporting period, and changes in value were recorded over the performance period. The Company has recorded an expense of $16,714 during fiscal year 2004 in connection with the issuance of this warrant. During the third quarter of fiscal year 2004, the warrant was exercised in full on a cashless or "net issue" basis, resulting in the issuance of an aggregate of 49,414 shares of common stock.

*Stock Options*

The Company has adopted a stock incentive plan with a maximum number of shares available for grant of options to purchase up to 3,500,000 shares of the Company's common stock. In connection with the spin-off

from IMPCO, each IMPCO option holder received one option to purchase Quantum stock for every IMPCO option held at the record date. The exercise price of both the IMPCO and Quantum stock options was adjusted based on the relative market values of the common stock of both companies on the first trading day following the spin-off. All vesting schedules remain the same and the option holders will not be required to exercise their options concurrently. Accordingly, the adoption of the Company's stock option plan did not give rise to a compensation charge. As of the Distribution date, 1,315,468 options were granted out of the Company's 2002 Stock Incentive Plan to IMPCO stock option holders.

IMPCO had stock option plans that provided for the issuance of options to key employees and directors of the Company at the fair market value at the time of grant. Options under the plans generally vested in four or five years and are generally exercisable while the individual is an employee or a director, or ordinarily within one month following termination of employment. In no event may options be exercised more than ten years after date of grant. The exercise price of the IMPCO options granted equaled the market price of the IMPCO stock on the grant date. Below is a summary of activity of the IMPCO options prior to the Distribution.

| | Number of Shares | Weighted Average Exercise Price |
|---|---|---|
| Options outstanding at April 30, 2001 | 1,594,765 | $4.23 |
| Options granted | 232,000 | 4.84 |
| Options exercised | (328,459) | 3.52 |
| Options forfeited | (120,826) | 5.18 |
| Options outstanding at April 30, 2002 | 1,377,480 | $4.35 |
| Shares exercisable at April 30, 2002 | 666,623 | $3.77 |

Below is a summary of activity of the Quantum options since the Distribution.

| | Number of Shares | Weighted Average Exercise Price |
|---|---|---|
| Options outstanding upon Distribution at July 23, 2002 | 1,315,468 | $4.31 |
| Options granted | 1,210,500 | 3.60 |
| Options exercised | — | — |
| Options forfeited | (123,099) | 3.95 |
| Options outstanding at April 30, 2003 | 2,402,869 | $3.97 |
| Options granted | 1,511,500 | 4.79 |
| Options exercised | (874,664) | 3.90 |
| Options forfeited | (335,680) | 3.97 |
| Options outstanding at April 30, 2004 | 2,704,025 | $4.45 |
| Shares exercisable at April 30, 2003 | 839,362 | $3.93 |
| Shares exercisable at April 30, 2004 | 291,368 | $4.43 |

The following table sets forth summarized information with respect to stock options outstanding and exercisable at April 30, 2004:

| | Outstanding | | | Exercisable | |
|---|---|---|---|---|---|
| Exercise Price Range | Number of Shares | Average Life | Average Price | Number of Shares | Average Price |
| $1.96 to $2.95 | 24,683 | 6.2 | $2.44 | 9,683 | $2.75 |
| $2.95 to $3.93 | 1,609,675 | 8.5 | 3.38 | 126,300 | 3.54 |
| $3.93 to $4.91 | 300,980 | 7.1 | 4.78 | 104,360 | 4.74 |
| $4.91 to $5.89 | 41,692 | 6.6 | 5.62 | 28,584 | 5.62 |
| $5.89 to $6.87 | 679,295 | 9.7 | 6.60 | 16,321 | 6.29 |
| $6.87 to $7.86 | 30,000 | 9.8 | 7.41 | — | — |
| $7.86 to $8.84 | 7,500 | 9.5 | 8.68 | — | — |
| $8.84 to $9.82 | 10,200 | 6.3 | 9.82 | 6,120 | 9.82 |
| | 2,704,025 | | | 291,368 | |

At April 30, 2004, there were 571,725 options available for grant.

The Company has elected to account for its employee stock options using the intrinsic method under APB No. 25, "Accounting for Stock Issued to Employees" and related interpretations in accounting for employee stock options. No compensation expense is recorded under APB No. 25 because the exercise price of the Company's employee common stock options equals the market price of the underlying common stock on the grant date.

### 14. Business Segment and Geographic Information

*Business Segments*

The Company classifies its business operations into four reporting segments: the Fuel Cell Systems division, Alternative Fuels division, Advanced Research & Product Development and Corporate Expenses. The Fuel Cell Systems division generates revenues through the sale of fuel cell-related fuel storage, fuel delivery and electronic control systems to OEMs, and the installation of its products into OEM vehicles. The Fuel Cell Systems division also generates contract revenue by providing engineering design and support to the OEMs so that its fuel storage, fuel delivery and electronic control systems integrate and operate with their fuel cell applications. The Alternative Fuels division generates revenues through the sale of compressed natural gas (CNG) and propane (LPG) fuel storage, fuel delivery and electronic control systems to OEMs, primarily General Motors, and the installation of its products into OEM vehicles. The Alternative Fuels division also generates contract revenue by providing engineering design and support to the OEMs so that its fuel storage, fuel delivery and electronic control systems integrate and operate with certain of their alternative fuel vehicles. The chief operating decision maker allocates resources and tracks performance by the four reporting segments.

All research and development is expensed as incurred. Research and development expense includes both customer-funded research and development and Company-sponsored research and development. For segment reporting purposes, research and development expense is allocated to the Fuel Cell Systems and Alternative Fuels segments when the expense can be identified with those segments. Advanced Research & Product Development is a sub-category of research and development expense and represents Company-sponsored research and development that is not allocated to the Fuel Cell Systems or Alternative Fuels reporting segments. Customer-funded research and development consists primarily of expenses associated with contract revenue. These expenses include applications development costs in the Company funded under customer contracts.

The accounting policies of the reportable segments are the same as those described in Note 2, "Summary of Significant Accounting Policies."

*Geographic Information*

All of the Company's long-lived assets are based either in its offices in Sterling Heights, Michigan, Irvine, California, or Lake Forest, California. The Company's revenue to customers is as follows (in thousands):

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| **Revenue to Customers** | | | |
| United States | $20,870 | $20,465 | $13,652 |
| Japan | 1,572 | 1,754 | 12,261 |
| Germany | 536 | 1,416 | 2,095 |
| Korea | 425 | 4 | 111 |
| Total | $23,403 | $23,639 | $28,119 |

*Financial Information by Business Segment*

Financial information by business segment for continuing operations follows (in thousands):

| | Year Ended April 30 | | |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| **Revenue** | | | |
| Fuel Cell Systems | $ 4,389 | $ 9,867 | $16,193 |
| Alternative Fuels | 19,014 | 13,772 | 11,926 |
| Advanced Research & Product Development | — | — | — |
| Corporate Expenses | — | — | — |
| Total | $ 23,403 | $ 23,639 | $28,119 |
| **Operating Income (Loss)** | | | |
| Fuel Cell Systems | $(13,352) | $ (1,874) | $ 2,541 |
| Alternative Fuels | (18,759) | (8,173) | (3,395) |
| Advanced Research & Product Development | (9,213) | (2,831) | (3,197) |
| Corporate Expenses | (1,574) | (5,458) | (5,282) |
| Total | $(42,898) | $(18,336) | $ (9,333) |
| **Capital Expenditures** | | | |
| Fuel Cell Systems | $ 905 | $ 75 | $ 78 |
| Alternative Fuels | 648 | 455 | 852 |
| Advanced Research & Product Development | 246 | 194 | 344 |
| Corporate Expenses | 1,672 | 359 | 193 |
| Total | $ 3,471 | $ 1,083 | $ 1,467 |
| **Depreciation and Amortization** | | | |
| Fuel Cell Systems | $ 402 | $ 1,725 | $ 2,122 |
| Alternative Fuels | 844 | 965 | 1,254 |
| Advanced Research & Product Development | 349 | 445 | 441 |
| Corporate Expenses | 1,308 | 1,631 | 1,396 |
| Total | $ 2,903 | $ 4,766 | $ 5,213 |

| | April 30 | |
|---|---|---|
| | 2003 | 2004 |
| **Identifiable Assets** | | |
| Fuel Cell Systems | $21,347 | $ 20,706 |
| Alternative Fuels | 12,617 | 9,905 |
| Advanced Research & Product Development | 1,129 | 1,046 |
| Corporate Expenses | 3,030 | 2,424 |
| Total identifiable assets | 38,123 | 34,081 |
| Assets not specifically identifiable | 13,151 | 69,366 |
| Total assets | $51,274 | $103,447 |

**15. Revenue**

The Company has been engineering, testing and validating CNG systems for certain 1997-2004 model year car and truck platforms in compliance with General Motors' specifications.

Revenues for development efforts are principally recognized by the percentage of completion method and principally related to contracts with General Motors. During fiscal years 2002, 2003 and 2004, GM and affiliated companies' revenue comprised 79.9%, 58.9% and 46.1% of the Company's total revenue, respectively. As of April 30, 2003 and 2004, General Motors and affiliated companies' accounts receivable comprised 45.7% and 35.2% of the Company's total outstanding accounts receivable, respectively. During fiscal years 2003 and 2004, Toyota's revenue comprised 24.2% and 44.0% of the Company's total revenue, respectively. As of April 30, 2003 and 2004, Toyota's accounts receivable comprised 42.4% and 42.1% of the Company's total outstanding accounts receivable, respectively.

**16. Purchases**

During fiscal years 2002, 2003 and 2004, respectively, purchases from one vendor constituted approximately 10%, 8% and 8% of net purchases. In fiscal year 2002, 2003 and 2004, 10 suppliers accounted for approximately 46%, 35% and 39% of net purchases, respectively.

**17. Restructuring Charges**

In December 2001, the Company adopted a plan to close its Guaymas, Mexico manufacturing operations, close one of its Sterling Heights, Michigan offices and terminate the employees supporting these facilities. Accordingly, the Company recorded a charge of approximately $1,162,000 during fiscal year 2002 for headcount reduction, lease and contract exit costs and other asset writedowns. In connection with these actions, the Company initiated involuntary separation plans that included headcount reductions of approximately 62 employees at a cost of $180,000 for severance and related costs. Additional costs of $982,000 were recorded to include losses on asset writedowns, office leases, net of anticipated sublease income over the lease term and contract exit costs. In April 2003, the Company revised its estimate of the total costs of the plan as all activities related to the restructuring plan had been completed.

The major components of the restructuring charges are as follows (in thousands):

| | Employee termination and severance costs | Lease exit costs | Contract exit costs | Asset writedowns | Total |
|---|---|---|---|---|---|
| 2002 charges | $(180) | $(394) | $(114) | $(474) | $(1,162) |
| 2002 activity | 180 | 116 | 114 | 474 | 884 |
| April 30, 2002 balance | — | (278) | — | — | (278) |
| 2003 activity | — | 278 | — | — | 278 |
| April 30, 2003 and 2004 balance | $ — | $ — | $ — | $ — | $ — |

## 18. Warranties

The Company offers a warranty for all of its alternative fuel products. The specific terms and conditions of those warranties varies depending on the platform and model year. For most products the Company provides a limited warranty, including parts and labor, extending 3 years or 36,000 miles, whichever is achieved first. The Company estimates the costs that may be incurred under its warranty and records a liability in the amount of such costs at the time product revenue is recognized. Factors that affect the Company's warranty liability include the number of installed units, historical and anticipated rates of warranty claims, and cost per claim. The Company periodically assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary.

Changes in the Company's product warranty liability are as follows (in thousands):

| | Balance at Beginning of Year | Warranties Issued | Settlements Made | Changes in Liability for Pre-Existing Warranties | Balance at End of Year |
|---|---|---|---|---|---|
| April 30, 2002 | $ 415 | $759 | $(664) | $ 716 | $1,226 |
| April 30, 2003 | 1,226 | 89 | (194) | — | 1,121 |
| April 30, 2004 | 1,121 | 134 | (134) | (172) | 949 |

**19. Quarterly Results of Operations (unaudited)**

A summary of the unaudited quarterly results of operations follows (in thousands, except per share amounts):

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|
| **Fiscal Year 2003** | | | | |
| Product sales | $ 2,823 | $ 3,807 | $ 3,639 | $ 5,564 |
| Contract revenue | 1,795 | 1,795 | 2,362 | 1,854 |
| Total revenue | 4,618 | 5,602 | 6,001 | 7,418 |
| Cost of product sales | 3,641 | 5,131 | 3,981 | 5,718 |
| Gross loss on product sales | (818) | (1,324) | (342) | (154) |
| Research and development expense | 3,423 | 3,951 | 4,242 | 3,446 |
| Net loss | (5,055) | (5,251) | (4,037) | (3,854) |
| Net loss per share—basic and diluted | (0.35) | (0.30) | (0.22) | (0.17) |

| | First Quarter | Second Quarter | Third Quarter | Fourth Quarter |
|---|---|---|---|---|
| **Fiscal Year 2004** | | | | |
| Product sales | $ 6,550 | $ 5,349 | $ 2,753 | $ 3,972 |
| Contract revenue | 1,328 | 1,376 | 1,669 | 5,122 |
| Total revenue | 7,878 | 6,725 | 4,422 | 9,094 |
| Cost of product sales | 4,373 | 3,176 | 1,633 | 3,683 |
| Gross profit on product sales | 2,177 | 2,173 | 1,120 | 289 |
| Research and development expense | 3,108 | 3,437 | 3,911 | 5,201 |
| Net loss | (1,768) | (2,037) | (3,095) | (2,034) |
| Net loss per share—basic and diluted | (0.08) | (0.09) | (0.10) | (0.06) |

Certain reclassifications have been made to the quarterly results previously reported to be consistent with the Company's classifications as of April 30, 2004.

## SCHEDULE II

## VALUATION AND QUALIFYING ACCOUNTS

| | Balance at Beginning of Year | Additions Charged/ (Credited) to Cost and Expenses | Write-offs and Other Adjustments | Balance at End of Year |
|---|---|---|---|---|
| Allowance for doubtful accounts for the year ended: | | | | |
| April 30, 2002 | $ (40,000) | $ (8,172) | $ 8,172 | $ (40,000) |
| April 30, 2003 | (40,000) | (12,136) | 12,136 | (40,000) |
| April 30, 2004 | (40,000) | (107,000) | — | (147,000) |
| Provision for obsolescence reserve for the year ended: | | | | |
| April 30, 2002 | $(1,056,909) | $(2,089,380) | $ 615,348 | $(2,530,941) |
| April 30, 2003 | (2,530,941) | (1,679,190) | 2,432,111 | (1,778,020) |
| April 30, 2004 | (1,778,020) | (238,320) | 1,078,772 | (937,568) |
| Warranty reserve for the year ended: | | | | |
| April 30, 2002 | $ (414,993) | $(1,475,052) | $ 664,147 | $(1,225,898) |
| April 30, 2003 | (1,225,898) | (89,255) | 194,399 | (1,120,754) |
| April 30, 2004 | (1,120,754) | (133,302) | 305,534 | (948,522) |

## SIGNATURES

**Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Irvine, State of California, on June 25, 2004.**

QUANTUM FUEL SYSTEMS TECHNOLOGIES
WORLDWIDE, INC.

By: /s/ ALAN P. NIEDZWIECKI

**Alan P. Niedzwiecki**
**President and Chief Executive Officer**

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Alan P. Niedzwiecki and W. Brian Olson, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this annual report on Form 10-K, and to file the same, with exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

| Signature | Title | Date |
|---|---|---|
| /s/ ALAN P. NIEDZWIECKI<br>**Alan P. Niedzwiecki** | President and Chief Executive Officer (Principal Executive Officer) | June 25, 2004 |
| /s/ W. BRIAN OLSON<br>**W. Brian Olson** | Chief Financial Officer (Principal Financial and Officer) | June 25, 2004 |
| /s/ BRADLEY J. TIMON<br>**Bradley J. Timon** | Controller (Principal Accounting Officer) | June 25, 2004 |
| /s/ DALE S. RASMUSSEN<br>**Dale S. Rasmussen** | Chairman of the Board of Directors | June 25, 2004 |
| /s/ BRIAN A. RUNKEL<br>**Brian A. Runkel** | Director | June 25, 2004 |
| /s/ SCOTT SAMUELSEN<br>**Scott Samuelsen** | Director | June 25, 2004 |
| /s/ THOMAS J. TYSON<br>**Thomas J. Tyson** | Director | June 25, 2004 |

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# Corporate Information

**ANNUAL STOCKHOLDERS' MEETING**

The annual meeting of stockholders for Quantum Fuel Systems Technologies Worldwide, Inc., will be held on September 23, 2004, at 1:30 p.m. local time, at the Hyatt Hotel located at 17900 Jamboree Boulevard, Irvine, California.

**OFFICERS**

**Alan P. Niedzwiecki**
*President & Chief Executive Officer*

**W. Brian Olson**
*Chief Financial Officer & Treasurer*

**Glenn D. Moffett**
*General Manager, Operations*

**Bradley J. Timon**
*Corporate Controller*

**Cathryn T. Johnston**
*Corporate Secretary &*
*Director of Communications*

**Corporate Counsel**
*Morrison & Foerster LLP*

**Independent Auditors**
*Ernst & Young LLP*

**Transfer Agent and Registrar**
*Mellon Investor Services LLP*
*85 Challenger Road*
*Ridgefield Park, NJ 07660*
*800.522.6645*

**DIRECTORS**

**Dale L. Rasmussen, Chairman**
*Senior Vice President & Secretary of*
*IMPCO Technologies, Inc.*

**Alan P. Niedzwiecki**
*President & Chief Executive Officer of*
*Quantum Fuel Systems*
*Technologies Worldwide, Inc.*

**Brian A. Runkel**
*Environmental Consultant & Director of the California*
*Environmental Business Council*

**G. Scott Samuelsen**
*Director for the National Fuel Cell Research Center &*
*Professor at the*
*University of California Irvine*

**Thomas J. Tyson**
*Retired Chief Executive Officer of*
*General Electric's Energy & Environmental*
*Research Corporation*

**Corporate Headquarters**
*17872 Cartwright Road*
*Irvine, CA 92614*
*949.399.4500*

**Nasdaq: QTWW**

**QTWW.COM**

This annual report contains forward-looking statements regarding the Company's current expectations within the meaning of Section 27A of the Securities Act of 1933, as amended, and section 21E of the Securities and Exchange Act of 1934, as amended. Forward-looking statements involve certain risks and uncertainties discussed in our Form 10-K and other documents filed with the SEC, and actual results may differ materially from those discussed in any such statement. Our fiscal 2004 annual report is provided for investors. It is not intended for use in connection with any sale or purchase of or any solicitation to buy or sell securities.



QUANTUM FUEL SYSTEMS TECHNOLOGIES WORLDWIDE, INC.
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