

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

## Introduction

Management's discussion and analysis (MD&A) provides our viewpoint on our Company, performance and strategy. "We," "us," "our," "Company" and "Electrovaya" include Electrovaya Inc. and its wholly-owned or controlled subsidiaries, as the context requires.

Our Board of Directors, on the recommendation of its Audit Committee, approved the content of this MD&A on February 13, 2013 and it is, therefore, dated as at that date. This MD&A includes the operating and financial results for the quarters ending December 31, 2012 and 2011, and should be read in conjunction with our Consolidated Financial Statements. It includes comments that we believe are relevant to an assessment of and understanding of the Company's consolidated results of operations and financial condition. The financial information herein is presented in thousands of US dollars unless otherwise noted, in accordance with International Financial Reporting Standards (IFRS). Additional information about the Company, including Electrovaya's current annual information form, can be found on the SEDAR website for Canadian regulatory filings at [www.sedar.com](http://www.sedar.com).

## Forward-looking statements

*This document contains forward-looking statements that involve a number of risks and uncertainties, including statements that relate to, among other things, the Company's objectives, goals, strategies, intentions, plans, beliefs, expectations and estimates, and can generally be identified by the use of words such as "may", "will", "could", "should", "would", "likely", "expect", "intend", "estimate", "anticipate", "believe", "plan", "objective" and "continue" (or the negative thereof) and words and expressions of similar import, and include statements concerning possible or assumed future results set out under "Our Strategy", "Marketing and Sales" and "Research and Development". Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, such statements involve risks and uncertainties, and undue reliance should not be placed on such statements. Certain material factors or assumptions are applied in making forward-looking statements, and actual results may differ materially from those expressed or implied in such statements. Important factors that could cause actual results to differ materially from expectations include but are not limited to: general business and economic conditions (including but not limited to currency rates and creditworthiness of customers); Company liquidity and capital resources, including the availability of additional capital resources to fund its activities; level of competition; changes in laws and regulations; legal and regulatory proceedings; the ability to adapt products and services to the changing market; the ability to attract and retain key executives; and the ability to execute strategic plans. Additional information about material factors that could cause actual results to differ materially from expectations and about material factors or assumptions applied in making forward-*

*looking statements may be found in this document under “Risk and Uncertainties”, as well as in other public disclosure documents filed with Canadian securities regulatory authorities. The Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements contained or incorporated by reference in this document, whether as a result of new information, future events or otherwise, except as required by law.*

## **Our Company**

We were incorporated in 1996 and listed on the Toronto Stock Exchange under the ticker symbol “EFL” in November 2000. Since 1996, much of our funding has come from government grants and product development of advanced battery systems. In addition, we have generated revenue from the sale of our rechargeable battery line of PowerPad® series of batteries as well as from sales of our Scribbler Tablet PC®, each of which targets the healthcare industry. In early 2002, we re-focused our research, development and commercial efforts on the design, development and production of advanced battery systems for the Plug in Hybrid Electric Vehicle (PHEV) and Electric Vehicle (EV) markets. Since 2010, we have also begun to focus on the stationary and data storage energy markets.

We design, develop and manufacture advanced battery and battery systems for the transportation, electric grid stationary storage and mobile computing end-markets. Our proprietary *Lithium Ion SuperPolymer*® technology, our expertise in the design and development of large-format prismatic (flat) battery systems, coupled with our emission-free manufacturing process provide our existing and potential customers with significant benefits.

Our main businesses include:

1. Stationary storage for energy grid systems, telecommunications and new green-energy solutions such as solar and wind.
2. Electric vehicles, whereby we are developing power-system designs for clean transportation applications.
3. Mobile computing, consisting of our proprietary Lithium Ion SuperPolymer® rechargeable batteries.
4. Other specialty applications, including aerospace and defence, which require complex power solutions, including competencies in building systems for third parties.

We continue to spend heavily on research and development, with approximately 32% of revenue being reinvested in research and development activities during the quarter ending

December 31, 2012. Our team of mechanical, electrical, battery and system engineers enables us to offer clients a complete solution for their requirements. The Company develops, manufactures and markets portable power technology products.

### **Core Capabilities**

We believe that the transportation market, including PHEV and EVs, as well as the stationary storage end markets can benefit significantly from our proprietary technology and expertise in large-format advanced battery and battery systems experience.

Our 156,000 square foot battery and battery systems manufacturing facility in Mississauga, Ontario offers production of electrodes which eliminates the standard use of toxic NMP solvents, a modular and scalable manufacturing process, as well as lower overall capital and operating costs since we do not require solvent container and recovery equipment that is common to the industry. Electrovaya Company, a wholly owned subsidiary of Electrovaya Inc. has been located at the Saratoga Technology + Energy Park (“STEP”), located in Malta, New York, since April, 2008. It leases approximately 7,500 square feet of office and manufacturing space to assemble battery power systems for electric vehicles and pursue other alternative energy opportunities in the United States. The Company is also seeking to establish facilities in other parts of the United States, as opportunities arise.

We also have an office in Norway.

Electrovaya also has a team of mechanical, electronic, battery and system engineers able to give clients a “complete solution” for their energy and power requirements.

We believe that our battery and battery systems contain a unique combination of important characteristics that enable us to offer battery solutions that are competitive with the most advanced currently available lithium-ion and non-lithium ion battery technologies. Our proprietary Lithium Ion SuperPolymer® technology is based on a novel electrode making process that is fundamentally different from standard lithium-ion polymer batteries. This allows superior energy density which translates into the ability to make the pack smaller and lighter. In addition, our proprietary SuperPolymer® technology is complemented by innovative battery designs, battery control systems and packaging solutions that enhance the performance and scalability of batteries and battery manufacturing processes.

## **Our Strategy**

Our goal is to utilize our proprietary *Lithium Ion SuperPolymer*® battery technology, and battery system expertise to develop and commercialize mass-production levels of battery systems for our targeted end markets.

To achieve these strategic objectives, we intend to pursue the following:

- Establish global strategic relationships in order to broaden the market potential of our products and services;
- Develop and commercialize leading-edge technology for zero-emission vehicles and partnering with key large organizations to bring them to market;
- Invest in research and development initiatives related to new technologies that reduce the costs of our products, but enhance the operating performance, of our current and future products;
- Further automate our non-toxic electrode production processes and increase quality by using best practices manufacturing approaches and through continuous improvement initiatives;
- Continue to license our technology in other markets where battery manufacturing costs are more favorable, or where it is essential that we are close to key markets.

## **Marketing and Sales**

### **1) Industries**

Advances in our battery technology have important implications in a number of areas, including our non-NMP clean production process and high energy density, which we believe are key drivers in industries such as transportation, electric grid stationary storage and mobile computing and communications.

#### ***Transportation Industry***

In 2009, President Obama announced the goal of one million electric vehicles on the road by 2015. To achieve this, the U.S. Department of Energy was allowed \$25 billion in loans for infrastructure development and deployment of electric vehicles under the Advanced Technology Vehicle Manufacturing Loan Program (ATVMLP). As of June 2012, over \$8.3 billion in loans have been granted under the ATVMLP. The program has the authority for up to \$16 billion in additional direct loans.

In addition, the Corporate Average Fuel Economy (CAFE) standard, the sales weighted average fuel economy of a manufacturer's fleet of passenger cars or light trucks sold in the U.S., was increased to 35.5 miles per gallon by 2016. In August 28, 2012, the Obama Administration finalized standards that will increase fuel economy to the equivalent of

54.5 mpg for cars and light-duty trucks by Model Year 2025. When combined with previous standards set by this Administration, this move will nearly double the fuel efficiency of those vehicles compared to new vehicles currently on our roads. In total, the Administration's national program to improve fuel economy and reduce greenhouse gas emissions will save consumers more than \$1.7 trillion at the gas pump and reduce U.S. oil consumption by 12 billion barrels.

In addition, to encourage the purchase of electric vehicles, tax credits have been made available to buyers of electric cars in the United States, the European Union, Japan, Israel and Canada. Automakers have responded to the new regulation and greater demand for more fuel efficient vehicles by ramping up production plans for hybrid, plug in hybrid and electric vehicles. In January, 2013, - Pike Research forecast that the overall market for Li-ion batteries in light duty transportation will grow from \$1.6 billion in 2012 to almost \$22 billion in 2020.

According to Roland Berger, Strategy Consultants, the worldwide market for Li-ion batteries for electric vehicles is extremely dynamic. In light of recently presented or announced vehicle models with electric, hybrid or plug-in-hybrid drives (xEV), Roland Berger expects the global LiB market to reach more than USD 9 billion by 2015, despite scaled-back forecasts for previously announced models.

Frost and Sullivan, a third party market research firm, estimates that by 2020, 7.0% of all vehicles shipped worldwide will be electric. According to A.T. Kearney, the global lithium-ion battery market for automotive applications in Hybrid Electric Vehicles (HEVs), PHEVs and EVs is estimated to grow to approximately \$21.8 billion by 2015 and \$74.1 billion by 2020.

While electric vehicles are currently more expensive than traditional gasoline powered vehicles, it is anticipated that production costs will decline as demand increases for electric vehicles, enabling battery companies to purchase materials in bulk and manufacture in large quantities. As electric vehicles become more economically feasible, we anticipate further cost efficiencies and increased adoption of Lithium Ion batteries across the transportation industry. In addition to pursuing opportunities for the light duty vehicle market, battery companies are in discussions with or working with manufacturers to develop clean alternatives for scooters, golf carts, mowing equipment, motorcycles, off-duty vehicles and heavy-duty transportation vehicles.

## *Stationary Storage and Smart Grid*

### Large Energy Storage Systems

The development of the smart grid and the growing demand for alternative energy solutions, such as wind and solar, represent tremendous opportunities for the battery industry. Under the American Recovery and Reinvestment Act (ARRA), the U.S. Government allocated \$4.5 billion for utilities to invest on the U.S. electric grid in order to stimulate investment in smart grid technologies. This funding has supported the Smart Grid Demonstration Program (SGDP) with \$600 million and the Smart Grid Investment Grant (SGIG) Program with \$3.4 billion. Applications for funding, however are no longer being accepted.

When considering the shift to alternative energy solutions such as wind and solar, which can provide sporadic service / energy, utility companies are faced with the challenge of ensuring reliable service. Lithium ion batteries are predicted to play a key role in the grid stabilization of the electric grid market. Wind and solar are not reliable sources of electric power, but with the addition of energy storage and the system becomes a reliable electricity delivery system. Without energy storage, we estimate that nearly 60-70% of the electricity generated from wind is wasted, while energy storage reduces the lost energy to 5-10%. Hence energy storage is an important part of renewable energy applications. The situation is similar for solar energy.

Lithium ion batteries can act as ancillary power units to provide frequency regulation services and help smooth the grid during fluctuations in demand. Lithium ion batteries can also be used to store electricity during off-peak hours, making it available during peak hours. In October, 2012, according to a report from Pike Research (a part of Navigant's Energy Practice), the market for energy storage on the grid, starting from a very low base in 2012, will surpass \$30 billion in annual value by 2022. The total capacity of such systems worldwide will reach almost 56,000 megawatts by 2022, the study concludes.

### Mid-Size Energy Storage Systems

There is a growing demand for energy systems designed to cater to a rapidly growing mid-size residential and industrial energy storage market. Large market potential exists across segments such as residential, distributed solar generation, utility, telecom and data centres.

We believe that distributed PV generation capacity will reach more than 15 GW in the near future. In the telecom and data centre sectors, storage demands are constantly growing and lithium ion batteries are starting to be used to replace lead acid batteries.

## ***Mobile Computing and Communications***

Driven by continued growth in demand for consumer electronics and mobile computing products and accessories, demand for lithium ion batteries is anticipated to remain strong. In addition, as form factors decrease in size, functionality increases and consumers seek longer lasting devices, consumer applications will need high-power energy sources. As such, the demand for advanced battery solutions represents a large and attractive market.

### **2) Competition**

The battery industry is highly competitive. We compete with a large number of market participants including pure-play battery providers, diversified technology and industrial vendors and strategic joint ventures. Our primary competitors include the following:

- *PHEVs.* We compete primarily with LG Chem, Johnson Controls ,SAFT, Samsung, Bosch, Dow Kokam and others.
- *EVs.* We compete primarily with AESC, Kokam, GS Yuasa, Panasonic, Lithium Energy Japan,Valence, Samsung, Bosch, LG Chem and others.
- *Electric Grid Services.* We compete primarily with SAFT.
- *Consumer.* We compete primarily with Panasonic, Sony, Samsung and LG Chem BYD.

To compete successfully, we intend to continue to build on the advantages offered by our technology. In addition, our sales and marketing teams continuously target new major customers.

The clean transportation market is comprised of several small and large companies utilizing different battery system technologies. The market is highly fragmented and consists of large companies including the large OEM automobile manufacturers in North America, Europe, India and elsewhere as well as several start-up companies. The US Department of Energy has made electric plug-in vehicles a cornerstone of its program of moving from oil dependence to clean electricity.

### **3) Our Solution**

We believe that our battery and battery systems offer highly-competitive performance characteristics as follows:

- *Platform technology.* The primary elements of a lithium battery cell are the anode, cathode, separator and electrolyte. Unlike many other battery technologies that rely on advancements in component materials and chemistries (i.e., application of phosphate or manganese chemistries etc. to the cathode), our proprietary platform

*Lithium Ion SuperPolymer*® technology ensures that our technology is not rendered obsolete by changes to the underlying battery chemistry or other component materials. We are therefore able to continuously evolve and benefit from improvements in component materials, including advancements in electrode materials. In this way, our core advantages are maintained as battery performance metrics continue to improve. This platform characteristic differentiates us in an industry that has historically focused on component rather than structural innovations.

- *High energy and power density.* Energy density is widely considered one of the most important metrics of a battery technology as it determines the size and weight of the battery system. Higher energy density translates into smaller, lighter battery systems or applications with longer run-times or ranges. In addition, lithium batteries have been historically optimized for either higher energy (e.g. for consumer laptop or mobile phone market where longer run-times are a premium) or for high power (e.g. for the power tool or hybrid vehicle market where brief, high power pulses are a premium). In general, a trade-off in battery design is required such that a focus on one metric, e.g. power, comes at the expense of the other, e.g. energy. For plug-in hybrids or full electric vehicles, both strong power density and superior energy density is optimal.

As a result of the intrinsic energy density advantage of our battery technology, we believe we are able to optimize our batteries for balanced energy/power density with limited apparent trade-off. Such balanced optimization offers highly-competitive energy and power density and has been developed for PHEV and EV applications.

- *Emission-free manufacturing.* To our knowledge, we are the only major battery manufacturer with a production process that does not require the use of industrial NMP solvents. For instance, our manufacturing process does not utilize N-Methylpyrrolidone (“NMP”), a solvent that is used for many different purposes, including stripping paint as well as for cleaning in the electronics and battery industries. According to the California Department of Health Services (“CDHS”), NMP has proven toxic to the reproduction systems of male and female test animals. While the toxic effects of NMP on humans have not been studied, the CDHS recommends that NMP be treated as a potential human reproductive hazard. Similarly, the European Commission labeled NMP a reproductant toxicant in 2003 and has proposed to label it a toxic chemical. In addition to operating in an NMP-free environment, our manufacturing processes meet the strictest environmental requirements making our benign environmental footprint suitable for manufacture in local urban areas. We believe that our non-toxic electrode



manufacturing process provides us with a competitive advantage unique to the industry. Some manufacturers use water based processing, however, we believe that water processing, especially for cathode electrodes, leads to low quality cells.

- *Scalability and prismatic geometry.* We believe that large-format pouched prismatic (flat) cells represent the best long-term battery technology for use in PHEVs and EVs and that our advances in the design and manufacture of pouched prismatic cells make our battery systems well-suited for many transportation end-markets. Today, cylindrical battery technology is the most common since the mass production of cylindrical cells has been around for some time. However, the use of cylindrical cell technology for larger applications, such as transportation, has limitations in scale-up. We believe cylindrical cells have difficulty in scale-up to large sizes. In addition, cylindrical cells in the past have been shown to demonstrate issues with heat removal as well as safety limitations. While these challenges have been successfully managed for smaller battery systems, it is unclear whether the use of cylindrical battery technology is the best long-term commercially feasible technology for PHEVs or EVs. To efficiently and reliably meet the demand requirements of the transportation battery market, we believe that battery technology must be able to scale up to a large battery / large-format solution. Although large-scale production of large-format prismatic cells is relatively new to the industry, we have successfully designed, developed and manufactured large-format prismatic batteries suitable for the automobile industry. Based on testing of the prismatic battery systems we have been developing for commercial use, we believe that our prismatic cell technology is safer, more reliable and offers important scale-up advantages relative to competing cylindrical battery technologies.

For electric vehicles, our sales and marketing efforts are based primarily on building partnerships with key companies and groups and presenting to, and attending, key trade shows and expositions.

For battery sales and engineering services, we believe the demand for portable energy is large in the aerospace and military sectors.

For the mobile computing business, our focus is on such industry verticals as healthcare, insurance, sales force automation and education. For example, in healthcare, we attend trade shows, place advertisements in trade magazines and are working to establish partnerships with Independent Software Vendors (“ISVs”), Value Added Resellers (“VARs”) and distributors. Where we see a small market opportunity only, we intend to out-source production to take advantage of such opportunities.

We currently have commercially available and in-development batteries and battery systems across various sizes and packaging for a number of end-markets. Historically, we

have focused our development and marketing efforts on the consumer, governmental and aerospace and defense markets. More recently, we have invested in the design and development of our battery technology for advanced electric vehicle applications. Our current focus is on the following end markets: transportation, stationary storage, and mobile computing.

## **Transportation**

By capitalizing on our proprietary *Lithium Ion SuperPolymer*® technology, coupled with our expertise in battery management system and packaging, we have been engaged with a number of leading companies in the transportation sector for the design and development of advanced battery systems for PHEV and EVs, commercial truck and off-road applications, as well as for two-wheel vehicles. While our relationship with each of these parties is at a different stage, we expect that many of them will lead from the developmental stage, to prototyping/testing, and eventually to production.

*Chrysler Dodge Ram PHEV program.* In March, 2010, Electrovaya Inc. announced that it had been chosen by Chrysler Group LLC as the battery supplier for 140 Ram plug-in hybrid electric vehicles in a demonstration program supported by the Department of Energy. The Ram PHEV features a 12kWh lithium ion battery from Electrovaya. A total of 140 Ram PHEVs have been built for a demonstration program running for a period of three years at various geographic and climatic locations across the US. More than 15 Chrysler Group partners across the U.S., including utility companies, government agencies and universities are independently testing the Ram PHEV to provide valuable data for the advancement of the technology. The DOE-supported programs are an important enabler for key suppliers to understand and test customer acceptance and the capability of PHEV systems in real-world conditions. In January, 2011 the Company announced that the Dodge RAM PHEV was showcased at the Washington DC Auto show, where it was on display for members of the media, politicians and the general public to view.

In February, 2011, Electrovaya started delivering another PHEV battery pack for a platform for a major North American OEM. The system design included Electrovaya's SuperPolymer(R) cells along with an intelligent Battery management system (iBMS(R)) and associated thermal, mechanical and power electrical subsystems. In June, 2011 we confirmed that this second platform was with Chrysler for Lithium Ion SuperPolymer® battery systems for 25 minivans that will be part of a demonstration fleet of PHEVs that Chrysler Group LLC has developed in partnership with the United States Department of Energy.

Chrysler also has now presented the majority of the 140 RAM PHEV's to a variety of fleets and utilities including Yuma, Arizona, Sacramento, California, Charlotte, Boston,

Massachusetts, North Carolina, Albany, New York, Houston, Texas and Auburn Hills, Michigan.

Electrovaya completed the delivery of the battery packs for the Dodge RAM PHEV program and is currently in discussion with Chrysler about additional work related to the vehicles.

Miljobil Grenland. Prior to August 30, 2012, the Company owned 850 shares, or approximately 6.4% of the shares of Miljobil Grenland AS (“Miljobil”), an Electric Vehicle company located in Norway and accounted for this investment on a cost basis. The shares are not publicly listed on a stock exchange and hence published price quotes are not available.

During the period August 30, 2012 to September 30, 2012, the Company acquired an additional 93.2% of the shares held by the minority shareholders of Miljobil for nominal consideration resulting in total holdings of 99.6% as at September 30, 2012. The incremental investment in Miljobil was accounted for as a step acquisition which requires that we re-measure the pre-existing investment in Miljobil at fair value and recognize any losses in income. The estimated fair value of our interest was \$456, which resulted in the recognition of a non-cash loss of \$456 during the quarter ended September 30, 2012 which was recorded in “Loss on revalue of investment” in the Consolidated Statement of Operations.

Two-Wheelers. Electrovaya signed a Memorandum of Understanding with Hero Electric in December 2009 that sets out the general principals of a joint venture for the development and sale of zero-emission battery electric scooters and motorcycles. Hero Electric is a wholly-owned subsidiary of Hero Group, which ranks amongst the Top 10 Indian Business Houses with an estimated turnover of US\$4.2 billion for the fiscal year 2008-2009. Its subsidiary Hero MotoCorp (formerly Hero Honda) is the world’s largest manufacturer of two-wheeled electric vehicles and controls over half the market for two-wheelers in India, with over 54 million units sold in the fiscal year 2010-2011.

In April, 2011, we announced further cooperation with Hero Electric, India's leading producer of two-wheeled electric vehicles. Hero's electric scooters, powered by Electrovaya's Lithium Ion SuperPolymer batteries, were showcased at the Toronto International Spring Motorcycle Show on April 9th and 10th, 2011.

In November, 2012, Electrovaya announced that as a result of its acquisition of Miljobil Grenland in Norway and Hero’s expansion of its European operations, a further MOU with Hero Eco Ltd had been signed. Hero intends to market Lithion-Ion powered Electric bikes in less price-sensitive markets of Europe and North America.

In January, 2013 Electrovaya received an initial contract to produce prototypes to deliver complete electric vehicle battery systems for DongFeng Motors' two electric vehicle platforms. DongFeng Motors (DFM) plans to commercially launch these two electric vehicles by late 2013. The Electrovaya 18kWh Lithium Ion SuperPolymer® battery consists of its proprietary high energy density cells and BMS (Battery Management System) along with sub-assemblies of mechanical, thermal, electrical and electronics.

### **Stationary Storage**

We have also begun applying our *Lithium Ion SuperPolymer®* battery technology and systems solutions to the smart grid stationary storage market.

In February, 2010, we announced that we were the energy storage partner for a utility demonstration project that included partners such as major utilities and universities and led by CEATI, based in Montreal, Quebec. The project is partially financed by the Government of Canada's Clean Energy Fund. The total project cost is estimated at approximately \$7.5 million and is intended to demonstrate the capabilities, versatility and economics of utility-scale electricity storage based on Electrovaya's modular Lithium Ion SuperPolymer® battery technology. The following clean energy challenges will be addressed:

- Electricity storage for intermittent renewable energy generation;
- Electricity storage for high-density urban applications to meet growing new electric loads; and
- Investigation into repurposing electric vehicle batteries for Smart Grid application.

In January, 2011, the Company announced that it had been selected by a major US utility to provide a 1.5MWh capacity Lithium Ion SuperPolymer® Battery Energy Storage System ("BESS") for grid storage applications. The BESS will be providing energy storage for the integration of renewable energy sources to the grid. In February, 2012 we confirmed the delivery of the BESS to the Arizona Public Service. There was a recent event in the system and a root cause analysis is underway. It appears that an algorithm glitch may have been the root cause.

In August, 2011 Electrovaya announced it had signed a contract to provide a Lithium-Ion Battery Energy Storage System ("BESS") of approximately 1.2 MWh for demonstration purposes in support of renewable energy generation in Ontario. This program, originally planned to be led by CEATI and mentioned above, is being led by Electrovaya.

In August, 2011 Electrovaya also announced it had signed a contract to develop, construct and demonstrate a utility-sized stationary battery system using end-of-life Electric Vehicle Battery packs. This stationary battery system will be implemented at the

Manitoba HVDC Research Center facility and is part of the ElectroVaya-led \$7.6 million project mentioned above.

In March, 2012, ElectroVaya Inc. announced a new product line, leveraging its utility and automotive products. ElectroVaya has made its first product delivery of a 25kWh, 400V Lithium Ion SuperPolymer® Battery Energy Storage System (PowerBlock 25-400V) to a large Japanese Utility through Nippon Kouatsu Electric Co. Ltd. (“NKE”). The PB25-400V system will be providing energy storage for a program to investigate distributed Energy Storage for Solar Applications. The EnergyBlock line of products is designed to cater to a rapidly growing mid-size residential and industrial energy storage market. The PowerBlock line integrates a complete energy storage system with cells, battery management system and power electronics.

In May, 2012, ElectroVaya showcased its superior grid-scale Energy Storage Systems based on its proprietary, high energy density Lithium Ion SuperPolymer® battery at the annual Electricity Storage Association (ESA) conference in Washington DC. ElectroVaya highlighted its MWh-scale design solution with specific focus on its launch customers for whom industry-leading storage is provided in a small footprint. For example, a 1.5 MWh storage system can be incorporated into a 28’ long container. The smaller product size assures higher reliability with fewer components and additional safety.

Inherently versatile, the modular design structure of ElectroVaya’s Energy Storage System allows the scaling to storage capacity from kWh to MWh applications. Specifically, 28’, 40’ and 53’ containerized units have been designed for several launch customers. The modular design allows for customizable storage capacities and system configurations. Superior safety and performance control are enhanced with multiple redundant system design features including an intelligent Battery Management System.

The utility-scale product line leverages ElectroVaya's expertise as a Tier 1 supplier to automotive OEMs with the demands of high performance, tight packaging constraints, reliability and cost. These product advantages are demonstrated in products designed for Manitoba Hydro and more recently Hydro One.

During the third quarter of fiscal 2012, we launched the EnergyBlock® line of products, designed to cater to a rapidly growing mid-size residential and industrial energy storage market. Large market potential exists across segments such as residential, distributed solar generation, utility, telecom and data centres.

In the telecom and data centre sectors, storage demands are constantly growing and lithium ion batteries are starting to be used to replace lead acid batteries. For example, in November 2012, we announced an MoU with Bhaskar Solar in India which intends to harness ElectroVaya’s Lithium Ion Battery technology in making renewables-based

telecom towers possible. ElectroVaya would work jointly with Bhaskar Solar to implement renewable energy management solutions across Bhaskar's proposed 15,000 telecom tower applications.

### **Mobile Computing & Communications**

When we first commercialized our battery technology, we initially targeted the consumer electronics market, in particular the market for mobile computing solutions. Our products consist of the PowerPad® series of batteries, a source of power for longer run times for notebook computers and other mobile applications, as well as the Scribbler® series of Tablet PCs with the longest run-times in the industry. Our mobile computing products have been used extensively in the healthcare industry. Our PowerPad® line can meet the needs of most mobile computer users, including such products as the i-Pod® and i-Pad, cell phone, PDA, Blackberry®, Palm® and Pocket PC.

We also announced the introduction of the new PowerPad 600. With an enormous 600 Watt hour energy storage capacity, the PowerPad 600 is an ideal replacement for existing lead acid and low energy density Lithium Ion batteries used in Hospitals, Construction sites, Warehouses, Telecommunications, Retail, Standby Power and wherever mobile power is required. The PowerPad 600 extends the PowerPad family of products and is in addition to the existing PowerPad 130.

### **Aerospace and Defense**

In October 2003, NASA (National Aeronautics and Space Administration) awarded us \$3.0 million to provide high-energy lithium ion SuperPolymer® power systems as a power source for Extra-Vehicular Mobility Units (EMUs).

In 2007, we completed a portable energy storage system for a solar tent application for the US Air Force. In December 2009, we delivered a battery system for a hybrid electric vehicle for the US Air Force Research Laboratory.

### **Intellectual Property**

We have over 150 issued and pending patents worldwide, including over 30 US patents. These patents cover our fundamental structural technology innovations, our system level designs including our intelligent battery management system for transportation, as well as some nanomaterial developments. Our patents are issued globally across Europe, India, China, Japan and other countries where potential markets and/or manufacturing activities make patent protection desirable and economically justifiable.

## Overall Performance and Selected Financial Information

Unless otherwise indicated, all comparisons for the year ended September 30, 2012 are to the year ended September 30, 2011, and all comparisons to the first quarter of fiscal 2013 are to the first quarter of fiscal 2012.

For purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows (“cash-generating units” or “CGU”). Cash-generating units are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If any such indication exists, the carrying amount of the asset is tested for impairment. Absent triggering events during the year, we conduct our impairment assessment annually to correspond with our planning cycle.

An impairment loss is recognized when the carrying amount of an asset or CGU exceeds the recoverable amount. The recoverable amount of an asset or CGU is the greater of its value-in-use or its fair value less costs to sell. The process of determining value-in-use, or discounted cash flows, is subjective and requires management to exercise judgment in making assumptions about future results, including revenue and cash flow projections and discount rates. The process of determining fair value less costs to sell requires the valuation and or discounted cash flows when market prices are not available. Impairment losses are recognized in the consolidated statement of operations. Impairment losses recognized in respect of a CGU are allocated to reduce the other assets in the CGU on a pro rata basis.

Impairment losses are reversed if the circumstances that led to the impairment no longer exist. At each reporting date, we review for indicators that could change the estimates used to determine the recoverable amount. The amount of the reversal is limited to restoring the carrying amount to the carrying amount that would have been determined, net of depreciation or amortization, had no impairment loss been recognized in prior periods.

*Years ended September 30, 2012, 2011 and 2010 (CDN GAAP)*

### i) Financial Condition

(\$ thousands)	2012	2011	2010
<b>Cash and Cash Equivalents</b>	5,047	5,265	3,001
<b>Total Assets</b>	21,173	20,437	11,948
<b>Total Long Term Liabilities</b>	5,293	4,377	-
<b>Shareholders' Equity</b>	9,430	12,077	9,289

Our cash and cash equivalents balance increased from 2010 to 2011 by \$2.3 million and decreased from 2011 to 2012 by \$0.2 million.

Cash and Cash Equivalents held in US dollars were approximately \$3.7 million as at September 30, 2012, \$2.0 million as at September 30, 2011 and \$1.6 million as at September 30, 2010.

## ii) Results of Operations and Cash Flow

	<b>IFRS</b>	<b>IFRS</b>	<b>CDN GAAP</b>
(\$ thousands)	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Revenue</b>	\$ 9,854	\$ 10,264	\$ 5,025
<b>Revenue, Less Direct Manufacturing Costs</b>	4,371	2,644	1,369
<b>Loss Before other items</b>	2,485	1,097	1,481
<b>Net Loss for the year</b>	3,872	1,995	2,351
<b>Basic and Diluted Loss per Share</b>	0.05	0.03	0.03
<b>Cash flow from Operating Activities</b>	\$ (714)	\$ (2,421)	\$ (2,707)

The Company has reviewed its operations and determined that it operates in one business segment and has only one reporting unit. The Company develops, manufactures and markets power technology products.

Revenue derived from US and European customers in US dollars, as a percentage of the Company's revenue, was approximately 24% in 2012. Revenue derived from US customers in US dollars as a percentage of the Company's revenue was approximately 71% in 2011 and 85% in 2010. Revenue decreased for the year ended September 30, 2012 compared to 2011 due to a decrease in Large Format Batteries.

For the years ended September 30, 2012, 2011 and 2010, revenues from major business activities were as follows:

	<b>IFRS</b>	<b>IFRS</b>	<b>CDN GAAP</b>
	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Large Format Batteries</b>	\$ 6,722	\$ 10,067	\$ 4,353
<b>Licensing</b>	2,900*	-	-
<b>Consumer electronics</b>	108	61	497
<b>Other</b>	124	136	175
	\$ 9,854	\$ 10,264	\$ 5,025

\* *Licensing revenue from Tata Motors European Technical Centre.*

Consumer electronics revenue has decreased from 2010 to 2012 as the Company gradually re-directed its efforts into large scale batteries (electric vehicles, etc.) where



market opportunities are considered to be significantly better. The consumer electronics market is extremely competitive, especially from Far East manufacturers, and has become commoditized, resulting in severe pressure on pricing, margins and market share opportunities. The majority of the world's production of laptop computers is from China, Korea, Taiwan and Japan where they enjoy significant cost advantages, and this has resulted in a decline in PowerPad and Scribbler sales by ElectroVaya. There are multiple battery companies situated in the Far East, where they also enjoy significant cost advantages and economies of scale.

The decrease in large format batteries revenue from the prior year is primarily due to the completion of the Chrysler PHEV program.

For the years ended September 30, 2012, 2011 and 2010, revenues attributed to regions based on location of customer were as follows:

	<b>IFRS</b>	<b>IFRS</b>	<b>CDN GAAP</b>
	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Canada</b>	\$ 4,595	\$ 2,558	\$ 623
<b>United States</b>	2,352	7,275	4,286
<b>Norway</b>	2,900*	425	-
<b>Others</b>	7	6	116
	\$ 9,854	\$ 10,264	\$ 5,025

\* *Licensing revenue from Tata Motors European Technical Centre.*

The fluctuation in exchange rates has resulted in an increase in labour and manufacturing overhead production costs and other expenses, as these expenses are in Canadian dollars.

Operating loss, represented by Loss Before Interest, Foreign Exchange, Taxes, Repurchase of Licence and Amortization, decreased from 2010 to 2011 due to increased revenues from Large Format Batteries in 2011.

Operating losses, represented by Loss Before Interest, Foreign Exchange, Writedown of Goodwill, Revalue of investments, Taxes and Amortization, increased from 2011 to 2012 because of a significant increase in research and development costs, one-time restructuring costs and decrease in revenue.

The Company has not paid a dividend since inception.

### **Transition to IFRS**

In February 2008, the Canadian Accounting Standards Board announced the adoption of International Financial Reporting Standards ("IFRS") for publicly accountable profit-oriented enterprises, effective January 1, 2011. Our consolidated financial statements for the years ended September, 30, 2012 and 2011 were our first annual financial statements

prepared in accordance with IFRS. The significant accounting policies that we adopted under IFRS are included in Note 2 to the consolidated financial statements and the reconciliations and descriptions of the effect of transitioning from Canadian GAAP to IFRS are included in Note 3 of the consolidated financial statements. In accordance with the transition rules, we have retroactively applied IFRS to our comparative data.

We have restated our fiscal 2011 comparative data throughout this document to reflect the adoption of IFRS, with effect from October 1, 2010 (Transition Date). For the year ended September 30, 2011, our net loss was \$1,995 under IFRS, \$452 lower than under Canadian GAAP. The most significant Canadian GAAP to IFRS adjustment to our Consolidated Financial Statements for fiscal 2011 related to adjustments to the fair value of our Property, Plant and Equipment and Intangible Assets, as well as changes to the fair value of stock options previously issued and awarded. Under IFRS, the deemed cost of Property, Plant and Equipment was set to fair value based on an appraisal from an independent valuator during the summer of 2010. The effect of these changes was to increase the carrying value of the Land, building and building improvements by \$4,022 from \$4,819 to \$8,841 as at October 1, 2010. The carrying value of production, office and related equipment was reduced by \$111 and our intangible assets, consisting of patents and other technology, was reduced by \$378 to NIL.

Under the Company's stock option plan, all options granted under the plan have a maximum term of 10 years and have an exercise price per share of not less than the market value of Electrovaya's common shares on the date of grant. Stock options typically vest one third each year over 3 years. Under Canadian GAAP, each grant was treated as a single arrangement and compensation expense was determined at the time of grant and amortized over the three year vesting period on a straight-line basis. IFRS requires a separate calculation of stock-based compensation expense for awards that vest in instalments. Under IFRS, stock-based compensation expense differs from Canadian GAAP based on the changing fair values used for each instalment and the timing of recognizing stock-based compensation expense. Generally this results in accelerated expense recognition under IFRS. On the Transition Date, we recognized additional compensation expense of \$177 which increased our deficit with a corresponding offset to contributed surplus. Total equity was not affected. Under IFRS as compared to GAAP, stock-based compensation expense for the year ended September 30, 2011 decreased by \$172 to \$539 (three months ended September 30, 2011, decreased by \$154).

The Company has elected to present the Statement of Operations and Deficit by function. The fair value of the Share purchase warrants has been identified separately in the Shareholders equity section, rather than in Contributed surplus as done previously under Canadian GAAP.

Critical Accounting Policies, Management Judgement and Estimates

## Adoption of new and revised standards and interpretations

The IASB issued a number of new and revised International Accounting Standards, International Financial Reporting Standards, amendments and related interpretations which are effective for the Company's financial year beginning on or after October 1, 2011. For the purpose of preparing and presenting the Financial Information for the relevant periods, the Company has consistently adopted all these new standards for the relevant reporting periods.

At the date of authorization of these Financial Statements, the IASB and IFRIC has issued the following new and revised Standards and Interpretations which are not yet effective for the relevant reporting periods.

- IFRS 9 'Financial Instruments: Classification and Measurement' – effective for annual periods beginning on or after January 1, 2015, with early adoption permitted, introduces new requirements for the classification and measurement of financial instruments.
- IFRS 10 'Consolidated Financial Statements' – effective for annual periods beginning on or after January 1, 2013, with early adoption permitted, establishes principles for the presentation and preparation of consolidated financial statements when an entity controls one or more other entities.
- IFRS 11 'Joint Arrangements' - effective for annual periods beginning on or after January 1, 2013, with early adoption permitted, provides for a more realistic reflection of joint arrangements by focusing on the rights and obligations of the arrangement, rather than its legal form.
- IFRS 12 'Disclosure of Interests in Other Entities' - effective for annual periods beginning on or after January 1, 2013, with early adoption permitted, requires the disclosure of information that enables users of financial statements to evaluate the nature of, and risks associated with its interests in other entities and the effects of those interests on its financial position, financial performance and cash flows.
- IFRS 13 'Fair Value Measurement' - effective for annual periods beginning on or after January 1, 2013, with early adoption permitted, provides the guidance on the measurement of fair value and related disclosures through a fair value hierarchy.

The Company anticipates that the above standards will be adopted in the Company's financial statements for the period beginning October 1, 2013, and has not yet considered the impact of the adoption of these standards.

*Significant management judgement in applying accounting policies and estimation uncertainty*

The preparation of financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amount of assets and liabilities, revenue and expenses and the related disclosures of contingent assets and liabilities. Actual results could differ materially from the estimates and assumptions. We review our estimates and assumptions on an ongoing basis. Revisions are recognized in the period in which the estimates are revised and may impact future periods as well.

Significant management judgement

The following are significant management judgements in applying the accounting policies that have the most significant effect on the unaudited interim consolidated financial statements.

Recognition of contract revenues.

Determining when to recognize revenues from after-sales services requires an understanding of the customer's use of the related products, historical experience and knowledge of the market. Recognizing contract revenue also requires significant judgment in determining milestones, actual work performed and the estimated costs to complete the work.

Distinguishing the research and development phases of a new project and determining whether the recognition requirements for the capitalization of development costs are met requires judgement.

After capitalization, management monitors whether the recognition requirements continue to be met and whether there are any indicators that capitalized costs may be impaired.

Estimation uncertainty

Information about estimates and assumptions that have the most significant effect on recognition and measurement of assets, liabilities, income and expenses is provided below. Actual results may be substantially different.

In preparing the financial statements in conformity with International Financial Reporting Standards (IFRS) , management makes estimates and assumptions that affect the reported amounts of sales returns, bad debt reserves and warranty accruals at the date of the financial statements. In view of the current difficult economic conditions, we have again

reviewed the suitability of these estimates and believe that they are appropriate under the circumstances.

The Company's existing policy allows for sales returns ranging from 15 days for direct sales to end users to longer periods for sales to key distributors. Sales returns are estimated at the time of delivery based on past experience and customer specific factors. Each quarter, a provision for sales returns is determined based on the actual experience for the most recent four quarters. Sales returns are applied against revenue for the Scribbler ® and PowerPad ® products, and represented approximately 0% of revenue from consumer electronics for the quarter ended December 31, 2012.

The Company reviews its outstanding accounts receivable on a regular basis. Bad debts are determined based on the ageing of accounts receivable where such amounts are not insured and considered uncollectible.

Warranty accruals are based on the actual warranty experience rate for the past year for each product group and sales during the most recent warranty period. Warranty provisions, excluding the impact of foreign exchange, represented 0% of consumer electronic sales for the quarter ended December 31, 2012. The Company has a potential tax benefit resulting from non-capital losses carried forward, an undeducted pool of scientific research and experimental development expenditures and non-refundable investment tax credits carried forward. In view of the history of net losses incurred, management is of the opinion that it is more likely than not that these tax assets will not be realized in the foreseeable future and hence, a full valuation allowance has been recorded against these future tax assets. Accordingly, no future tax assets are recorded on the balance sheets.

Large format battery sales have been generally comprised of prototype battery systems without warranties, with no rights of return or post-delivery obligations. Where warranties are required, such warranties have been limited to replacing those cells not meeting the specifications as per the agreement between Electrovaya and the customer. Such warranties are not included in a separate agreement or priced separately.

### *Impairment*

In assessing impairment, management estimates the recoverable amount of each asset or cash-generating units based on expected future cash flows and uses an interest rate to discount them. Estimation uncertainty relates to assumptions about future operating results and the determination of a suitable discount rate.

The Company has continued net losses for the year and negative cash flow from operations which has been financed by a combination of debt and equity. The Company's ability to realize its assets and discharge its liabilities in the normal course of business

and continue as a going concern is uncertain and is currently dependent on the continued support of its shareholders and providers of debt. To address its financial requirements, the Company may seek financing through joint venture agreements or debt and equity financing. The outcome of these matters cannot be determined at this time.

#### *Useful lives of depreciable assets*

Management reviews its estimate of the useful lives of depreciable assets at each reporting date, based on the expected utility of the assets. Uncertainties in these estimates relate to technical obsolescence that may change the utility of certain production, testing and other equipment.

#### *Inventories*

Management estimates the net realizable values of inventories, taking into account the most reliable evidence available at each reporting date. The future realization of these inventories may be affected by future technology or other market-driven changes that may reduce future selling prices.

### **Operating Results**

#### *Revenue*

Revenue arises from the sale of goods and the rendering of services. It is measured by reference to the fair value of consideration received or receivable, excluding sales taxes, rebates, and trade discounts. The Company often enters into sales transactions involving a range of the Company's products and services, for example for the delivery of hardware and related services. The Company applies the revenue recognition criteria set out below to each separately identifiable component of the sales transaction. The consideration received from these multiple-component transactions is allocated to each separately identifiable component in proportion to its relative fair value.

#### *Sale of goods*

Sale of goods is recognized when the Company has transferred to the buyer the significant risks and rewards of ownership, generally when the customer has taken undisputed delivery of the goods. Revenue from the sale of goods with no significant service obligation is recognized on delivery. Where significant tailoring, modification or integration is required, revenue is recognized in the same way as contracts for large energy storage systems described below.

## Rendering of services

The Company generates revenues from design engineering services and construction of large energy storage systems. Consideration received for these services is initially deferred, included in other liabilities and is recognised as revenue in the period when the service is performed. Revenue from services is recognized when the services are provided by reference to the contract's stage of completion at the reporting date.

The Company also earns rental income from operating leases of its properties. Rental income is recognized on an accrual basis.

## Contracts for large energy storage systems

Contracts for large energy storage systems specify a price for the development and installation of complete systems. When the outcome can be assessed reliably, contract revenue and associated costs are recognized by reference to the stage of completion of the contract activity at the reporting date. Revenue is measured at the fair value of consideration received or receivable in relation to that activity.

When the Company cannot measure the outcome of a contract reliably, revenue is recognized only to the extent of contract costs that have been incurred and are recoverable. Contract costs are recognised in the period in which they are incurred. In either situation, when it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately in profit or loss.

The contract's stage of completion is assessed by management based on milestones (usually defined in the contract) for the activities to be carried out under the contract and other available relevant information at the reporting date. The maximum amount of revenue recognized for each milestone is determined by estimating relative contract fair values of each contract phase, ie by comparing the Company's overall contract revenue with the expected profit for each corresponding milestone. Progress and related contract revenue in-between milestones is determined by comparing costs incurred to date with the total estimated costs estimated for that particular milestone (a procedure sometimes referred to as the cost-to-cost method).

The gross amount due from customers for contract work is presented within trade and other receivables for all contracts in progress for which costs incurred plus recognised profits (less recognised losses) exceeds progress billings. The gross amount due to customers for contract work is presented within other liabilities for all contracts in progress for which progress billings exceed costs incurred plus recognized profits (less recognised losses).

Revenue from licensing is recognized as amounts are earned under the terms of the applicable agreements, provided no significant obligations exist and collection of the resulting receivable is reasonably assured.

Deferred revenue represents revenues collected but not earned as of December 31, 2012.

For the three month period ended December 31, 2012, total revenue decreased by 37.8% to \$1,557 from \$2,504 for the quarter ended December 31, 2011. The decrease in total revenue primarily resulted from a decrease in service revenue from stationary grid work in 2012 compared to 2011.

Quarterly revenue is as follows:

(\$ thousands)	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
2013	\$ 1,557			
2012	\$ 2,504	\$ 2,393	\$ 1,538	\$ 3,419
2011	\$ 2,235	\$ 2,719	\$ 2,713	\$ 2,597

For the three months ending December 31, 2012 two customers represented more than 10% of total revenue (three months ending December 31, 2011 three customers). Our largest customer accounted for 76% and 50.6% of total revenue for the first quarters of 2013 and of 2012 respectively.

Continued advances in technology and a highly competitive market are more significant factors than general economic conditions and specific price changes when considering major impacts on revenue. In particular, the alternative energy market continues to be robust and the Company believes that new and important opportunities will potentially be available to it despite the current economic environment.

Management is not aware of any fluctuations in revenue due to seasonality.

### *Expenses*

*Direct Manufacturing Costs and Revenue, less Direct Manufacturing Costs.* *Direct Manufacturing Costs* are comprised of the material, labour and manufacturing overhead, excluding amortization, associated with the production of SuperPolymer<sup>®</sup> batteries, battery packs for Electric Vehicles, stationary grid applications and research and engineering service revenues.

For the quarter ended December 31, 2012, direct manufacturing costs decreased by \$628 to \$1,156 from \$1,784 for the quarter ended December 31, 2011 due to lower revenue and hence related direct manufacturing costs of large format batteries.

*Revenue less Direct Manufacturing Costs* was a profit of \$401 or 25.8% of revenue for the three months ended December 31, 2012 compared to \$720 or 28.8% for the three months ended December 31, 2011.



*Research and Development.* Research and development expenses consist primarily of compensation and premises costs for research and development personnel and activities, including independent contractors and consultants, direct materials and allocated overhead.

Research and development expenses, net of investment tax credits (ITC), decreased by \$45 during the quarter ended December 31, 2012 to \$502.

During the quarter we continued our activities on Research and development to improve our cell technology, automate and re-engineer our production processes and enhance our existing Intellectual Property. Electrovaya is finding large interest in both the storage and transportation sector. To meet this increased demand, Electrovaya is in the process of changing over to its next generation cell technology which is expected to exceed 200 Wh/kg in Energy Density. The production flow is undergoing re-engineering to facilitate and deliver this new technology. Higher Energy Density allows smaller systems with lower materials usage.

*Government Assistance.* During the three month period ended December 31, 2012, the Company completed \$1,480 of work related to the MEDT project, resulting in a claim of \$222 or 15% of the total amount. Funding from Norwegian Research Council of \$580 was also recorded for projects related to cell module and battery pack testing and development.

Electrovaya received an advance of \$ 3.3 million (Cdn \$3.3 million) on June 5, 2009 from the Province of Ontario, as represented by the Ministry of Economic Development & Trade (“MEDT”) through a grant from the Next Generation of Jobs Fund Program. \$4.5 million has been earned up to December 31, 2012 as certain pre-commercialization activities were completed.

*Sales and Marketing.* Sales and marketing expenses are comprised of the salaries and benefits of sales and marketing personnel, marketing activities, advertising and other costs associated with the sales of Electrovaya’s product lines.

For the quarters ended December 31, 2012 and 2011, sales and marketing expenses were \$128 and \$163, respectively. The \$35 or 21.5% decrease was primarily due to a decrease in salaries and benefits.

*Warranty expense.* Warranty expenses are comprised of warranty accruals based on actual warranty experience for the past year for each product group and sales during the most recent period.

For both the quarters ended December 31, 2012 and 2011, warranty expenses were NIL due to lower consumer electronics sales and reversal of warranty provisions on products where warranties have expired.

*General and Administrative.* General and administrative expenses include salaries and benefits for corporate personnel, insurance, professional fees, reserves for bad debts and facilities expenses. The Company's corporate administrative staff includes its executive officers and employees engaged in business development, financial planning and control, legal affairs, human resources and information technology.

For the quarters ended December 31, 2012 and 2011, general and administrative expenses were \$454 and \$448, respectively. The \$6 or 1.3% increase was primarily due to a increase in legal and travel costs in the current quarter as compared to the same quarter in the prior year.

*Stock based compensation.* Non-cash stock based compensation expense increased by \$53 to \$153 for the quarter ended December 31, 2012 compared to the same quarter in 2011 due to the expensing of the fair value of stock options that vested during the quarter.

*Financing costs.* The Company has 500,000 share purchase warrants outstanding related to the issuance of the Cdn \$5 million promissory note. The expiry date of these warrants is December 22, 2013. The warrants vest immediately and the exercise price is C\$2.30. The fair value of these warrants is \$623, which is amortized over the life of the promissory note. \$52 and \$35 were amortized during the quarters year ended December 31, 2012 and 2011 respectively.

In December, 2010, the Company raised Cdn \$5 million in consideration of a 6% secured promissory note and 500,000 common share purchase warrants exercisable for a period of 36 months. The promissory note matures on December 31, 2013. The loan is secured by a fixed charge over land and building and interest is payable monthly. During the quarter ended December 31, 2012, interest in the amount of \$75 was expensed and is included in financing cost in the statement of operations. Interest in the amount of \$75 was expensed in the prior year.

*Patent and trademark costs.* Patent and trademark expense decreased from \$30 to \$25 for the quarters ended December 31, 2012 compared to the same quarter in 2011.

*Net Profit/(Loss)*

Quarterly net profit/(losses) are as follows:

(\$ thousands)	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
2013	\$ (394)			
2012	\$ (437)	\$ (587)	\$ (1,871)	\$ (977)
2011	\$ (366)	\$ (1,104)	\$ (280)	\$ (245)

The decrease in the net loss from the first quarter of fiscal 2012 to the first quarter of fiscal 2013 is primarily due to 1) a decrease in cost of goods sold, 2) an increase in

government assistance, 3) a decrease in foreign exchange loss and interest, 4) a decrease in research and development expenses, 5) a decrease in sales and marketing expenses and 6) a decrease in patent and trademark expenses offset by 1) a decrease in revenue, 2) an increase in amortization costs, 3) an increase in stock based compensation expense, 4) an increase in finance costs and 5) an increase in general and administration expenses.

Quarterly net losses (gain) per share are as follows:

(\$ thousands)	<u>Q1</u>	<u>Q2</u>	<u>Q3</u>	<u>Q4</u>
2013	\$ 0.01			
2012	\$ 0.01	\$ 0.00	\$ 0.03	\$ 0.01
2011	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.00

### **Liquidity and Capital Resources**

As of December 31, 2012, the Company had \$3.6 million in cash and cash equivalents compared to \$5 million as at September 30, 2012.

Cash used in operating activities was \$1 million during the quarter ended December 31, 2012 compared to \$0.05 million during the quarter ended December 31, 2011. Net cash used in operating activities during the quarter ended December 31, 2012 primarily reflects the operating loss of \$0.4 million, a decrease in non-cash operating working capital of \$1 million offset by amortization of \$0.2 million, stock compensation expense of \$0.15 million, financing costs of \$0.05 million.

The Company's future minimum lease payments under operating leases for the years ended September 30 are as follows:

2013	\$ 77
2014	\$ 2
Total	\$ <u>79</u>

There were no material changes in specified contractual commitments during the period.

The Company completes an ongoing review of its requirements for additional capital resources. In December, 2010, the Company received \$1.7M from SDTC for Plug-in Hybrid Electric Vehicle Battery Development and also raised Cdn \$5 million in consideration of a 6% secured promissory note and 500,000 common share purchase warrants exercisable for a period of 36 months. In August, 2011, the Company received another \$1.6 million from SDTC for Plug-in Hybrid Electric Vehicle Battery Development. During the quarter ended December 31, 2011, the Company received \$1.3 million from Hydro One and \$0.1 million from Manitoba Hydro. During the quarter ended June 30, 2012, the Company received another \$1.2 million from SDTC for Plug-in Hybrid Electric Vehicle Battery Development and \$0.1 million from Manitoba Hydro.

The authorized and issued capital stock of the Company consists of an unlimited number of Common shares as follows:

	Number	Amount
Balance, October 1, 2010	70,910,278	\$ 64,769
Add: Shares issued during the quarter ended Dec 31, 2010	25,500	21
Fair value of stock options exercised	<u>-</u>	<u>11</u>
Balance, December 31, 2010	<u>70,935,778</u>	<u>\$ 64,811</u>
Add: Shares issued during the quarter ended Mar 31, 2011	4,000	3
Fair value of stock options exercised	<u>-</u>	<u>7</u>
Balance, March 31, 2011	<u>70,939,778</u>	<u>\$ 64,821</u>
Add: Shares issued during the quarter ended June 30, 2011	3,500	2
Fair value of stock options exercised	<u>-</u>	<u>(2)</u>
Balance, June 30, 2011	<u>70,943,278</u>	<u>\$ 64,821</u>
Add: Shares issued during the quarter ended Sept 30, 2011	11,334	7
Fair value of stock options exercised	<u>-</u>	<u>1</u>
Balance, Sep 30, 2011, Sep 30, 2012 and Dec 31, 2012	<u>70,954,612</u>	<u>\$ 64,829</u>

The following table reflects the quarterly stock option activities for the period from September 30, 2009 to December 31, 2012:

Outstanding September 30, 2009, December 31, 2009	3,260,171
Granted	589,000
Options exercised	(265,000)
Cancelled or expired	(64,000)
Outstanding March 31, 2010	3,520,171
Options exercised	(283,666)
Cancelled or expired	(1,500)
Outstanding June 30, 2010	3,235,005
Granted	45,000
Options exercised	(140,170)
Cancelled or expired	(60,000)
Outstanding September 30, 2010	3,079,835
Granted	392,000
Options exercised	(25,500)
Cancelled or expired	(115,666)
Outstanding December 31, 2010	3,330,669
Granted	-
Options exercised	(4,000)
Cancelled or expired	-
Outstanding March 31, 2011	3,326,669
Granted	-

Options exercised	(3,500)
Cancelled or expired	-
<hr/>	
Outstanding June 30, 2011	3,323,169
Granted	-
Options exercised	(11,334)
Cancelled or expired	(83,000)
<hr/>	
Outstanding September 30, 2011	3,228,835
Granted	250,000
<hr/>	
Outstanding Dec 31, 2011, Mar 31 and June 30, 2012	3,478,835
Cancelled or expired	(131,002)
<hr/>	
Outstanding September 30, 2012	3,347,833
Granted	332,000
Cancelled or expired	(20,000)
<hr/>	
Outstanding December 31, 2012	3,659,833
<hr/>	

In March, 2012, the Company received approval at its Annual Shareholders Meeting to increase the number of shares reserved for issuance under the stock option plan by 1,700,000 from 5,400,000 to 7,100,000. Options to purchase common shares of the Company under its stock option plan may be granted by the Board of Directors of the Company to certain full-time and part-time employees, directors and consultants of the Company and its affiliates. Stock options are non-assignable and may be granted for terms of up to 10 years. Stock options vest at various periods from zero to three years.

### **Financial Condition**

**Current Assets.** Cash and cash equivalents includes cash and investments with maturities of less than 90 days. Short-term investments include banker acceptances, commercial paper and term deposits with maturities of up to 90 days. Inventories include raw materials, semi-finished and finished goods.

Cash and cash equivalents were \$3.6 million as at December 31, 2012, \$5 million as at September 30, 2012 and \$3.7 million as at June 30, 2012.

**Capital assets.** Approximately \$0.3 million of capital assets were acquired during the quarter ended December 31, 2012.

**Current Liabilities.** Current liabilities were \$8.8 million as at December 31, 2012 as compared to \$6.5 million as at September 30, 2012.

## **SDTC Contribution Agreements.**

### **SDTC 1**

In July, 2005 and subsequent amended terms, the Company became eligible for a Cdn \$1,859 grant from SDTC towards a Cdn \$5,600 project related to the development and demonstration of Electrovaya's Lithium Ion SuperPolymer® Battery for application in zero-emission commercial fleet vehicles.

The amount is receivable in scheduled installments as provided in the contribution agreement between SDTC and the Company and will be received upon the achievement of various project milestones. Under the terms of the agreement SDTC shall pay the lesser of 33% of the eligible project costs or Cdn \$1,859, and the contribution shall not exceed 50% of the eligible project costs and the Company or consortium members, or both, shall provide at least 25% of the project costs in cash, in-kind goods or services or a combination of both. SDTC shall not have any obligation to pay the contribution unless the Company has obtained a commitment and has the financial capacity to finance all the costs related to the entire project. The project expired on July 31, 2010.

A cash contribution of Cdn \$631 was received by the Company during the quarter ended December 31, 2011. As of December 31, 2011, cumulative claims of Cdn \$1,859 have been received from SDTC. All monies owing under the SDTC 1 grant have been received.

### **SDTC 2**

In December 2010, the Company became eligible for a Cdn \$5,065 grant from SDTC representing 33% of a Cdn \$15,417 project related to the development and demonstration of Electrovaya's Lithium Ion SuperPolymer® Battery for application in Plug-In Hybrid Electric Vehicles, automation of its cell production process and a feasibility study about the potential for repurposing automotive batteries for grid storage applications. The Company received Cdn \$1,742 of this grant in December, 2010 for work completed since November, 2009.

The amount is receivable in scheduled instalments as provided in the contribution agreement between SDTC and the Company and will be received upon the achievement of various project milestones. The Contribution shall not exceed fifty percent (50%) of the Eligible Project Costs for the Project and Electrovaya shall contribute a minimum of twenty-five percent (25%) of the Eligible Project Costs for the Project in cash, in-kind goods or services, or a combination thereof.

The Company recognized Cdn \$1,674 during the year ended September 30, 2011 under this grant.

The Company received Cdn \$1,627 in August 2011 as advance payment on the second milestone of Phase 2 for work completed since November, 2010.

The Company recognized Cdn \$1,695 during the quarter ended March 31, 2012 under this grant and NIL during the quarter ending June 30, 2012.

The Company received Cdn \$1,190 as advance payment on the third milestone of Phase 2 for work started since November, 2011.

As at December 31, 2012, the deferred government grant is Nil (2011 -\$1,667).

In November, 2012, the Company received confirmation from SDTC that the project has been extended to June 30, 2017.

### **Ministry of Economic Development & Trade Conditional Grant Agreement**

On May 5, 2009, the Province of Ontario, as represented by the Minister of Economic Development, signed a Conditional Grant Agreement with Electrovaya Corp. awarding Cdn \$ 16.7 million as a grant. The grant is for pre-commercialization activities over a period of five years ending on December 31, 2013. The grant is 15% of the targeted project cost of Cdn \$111.49 million and is subject to certain targets related to new job creation and investment, which if not achieved, could result in only a portion of the grant being received, or a potential claw-back of funds received by the end of the five year period. The Company continues to review its requirements for additional capital resources and no commitments exist at the present time. In addition to discussions with various Government agencies concerning the potential funding of certain research and development and pre-commercialization activities, the Company is, on a regular basis investigating potential funding from other public and private sources.

Electrovaya received an advance of \$ 3.3 million (Cdn \$3.3 million) on June 5, 2009 and recorded this as deferred revenue. During the year ended September 30, 2011, \$1.3 million and cumulative of \$3 million of activities considered to be eligible costs and therefore reimbursable under the grant were recorded as Government assistance. During the year ended September 30, 2012, \$1.2 million and cumulative of \$4.2 million of activities considered to be eligible costs and therefore reimbursable under the grant were recorded as Government assistance. The full amount of the advance has now been recognized as revenue. During the quarter ended December 31, 2012, \$0.2 million and cumulative of \$4.4 million of activities considered to be eligible costs and therefore reimburseable under the grant were recorded as Government assistance.

**Share capital.** Of an authorized unlimited number of Common shares, 70,954,612 in the amount of \$65 million are issued and outstanding as at December 31, 2012.

## Present Status

During the quarter ended December 31, 2012, the loss before amortization and foreign exchange and interest income increased by \$40 or 25.8% compared to the quarter ended December 31, 2011.

## Qualitative and Quantitative Disclosures about Risks and Uncertainties

The Company may be exposed to risks of varying degrees of significance which could affect its ability to achieve its strategic objectives. The main objectives of the Company's risk management processes are to ensure that the risks are properly identified and that the capital base is adequate in relation to those risks. The principal risks to which the Company is exposed are described below.

### *Capital risk*

The Company manages its capital to ensure that there are adequate capital resources for the Company to maintain and develop its products. The capital structure of the Company consists of shareholders' equity and depends on the underlying profitability of the Company's operations.

### *Credit risk*

Credit risk is the risk that the counter-party fails to discharge an obligation to the Group. The Company is exposed to this risk for various financial instruments, for example, by granting loans and receivables to customers, placing deposits etc. The Company's maximum exposure to credit risk is limited to the carrying amount of financial assets recognized at the reporting date, as summarized below:

	December 31,	
	2012	2011
Cash and cash equivalents	3,639	5,251
Trade and other receivables	1,610	2,897
Carrying amount	5,249	8,148

Cash and cash equivalents are comprised of the following:

	December 31,	
	2012	2011
Cash	2,467	2,684
Cash equivalents	1,172	2,567
	3,639	5,251

The Company's current portfolio consists of certain banker's acceptance and high interest yielding saving accounts deposits. The majority of cash and cash equivalents are held



with financial institutions, each of which had at December 31, 2012 a rating of R-1 mid or above.

The Company manages its credit risk by establishing procedures to establish credit limits and approval policies. The balance in accounts receivable and other receivables is primarily attributable to trade accounts receivables and harmonized sales tax due from the federal Government of Canada which is included in other receivables. In the opinion of management, the credit risk is low and is not material.

#### *Liquidity risk*

The Company is exposed to liquidity risk from accounts payable in the amount of \$1,736 (2011- \$998), Promissory Note of \$4,819 (2011-\$4,553) and the loan from Innovation Norway for \$558 (2011-NIL). Liquidity risk is the risk that the Company is not able to meet its financial obligations as they fall due. The Company manages its liquidity risk by carefully monitoring the cash requirements and balancing them against the cash received from operations and government grants. There can be no assurance that the Company will be able to obtain adequate financing in the future or that the terms of such financing will be favorable. The Company may seek additional financing through debt or equity offerings, but there can be no assurance that such financing will be available on terms acceptable to the Company or at all. Any equity offering will result in dilution to the ownership interest of the Company's shareholders and may result in dilution to the value of such interests. The Company intends to fulfill its obligations. In the opinion of management's the liquidity risk is low and is not material.

#### *Market risk*

Market risk incorporates a range of risks. Movement in risk factors, such as market price risk and currency risk, affect the fair value of financial assets and liabilities. The Company is exposed to these risks as the ability of the Company to develop or market its products and the future profitability of the Company is related to the market price of its primary competitors for similar products.

#### *Interest rate risk*

The Company has cash balances and fixed interest-bearing debt at 6% as well as a loan from Innovation Norway at 5.75%. The Company's current policy is to invest excess cash in investment-grade short-term deposit certificates issued by its banking institutions which are not influenced by fluctuating interest rates.

#### *Foreign currency risk*

The Company is exposed to foreign currency risk. The Company's functional currency is the United States dollar and a majority of its revenue is derived from that source. Purchases are transacted in Canadian dollars and Norwegian krone. The majority of the Company's operations are located primarily in Canada. Management believes the foreign

exchange risk derived from any currency conversions may have a material effect on the results of its operations. The financial instruments impacted by a change in exchange rates include our exposures to the above financial assets or liabilities denominated in non-functional currencies. The amounts held in US dollars were \$2,035 (December 31, 2012) and \$2,060 (December 31, 2011).

If the US dollar to Canadian and Norwegian Kroner foreign exchange rate changed by 2% this would change the recorded Net Loss by \$27.

#### *Price risk*

The Company is exposed to price risk. Price risk is the risk that the commodity prices that the Company charges are significantly influenced by its competitors and the commodity prices that the Company must charge to meet its competitors may not be sufficient to meet its expenses. The Company reduces the price risk by ensuring that it obtains information regarding the prices set by its competitors to ensure that its prices are appropriate. In the opinion of management, the price risk is low and is not material.

#### *Disclosure Control Risks*

The Company's management, with the participation of the Chief Executive Officer and Chief Financial Officer of the Company, have designed disclosure controls and procedures ("DC&P"), or caused them to be designed under their supervision, to provide reasonable assurance that material information relating to the issuer, including its consolidated subsidiaries, is made known, particularly during the period in which interim or annual filings are being prepared, and information required to be disclosed by the Company in its annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation. Although certain weaknesses, however, have been identified, these items do not constitute a material weakness or a weakness in DC&P that are significant. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. DC&P are reviewed on an ongoing basis.

#### *Internal Control Risks*

The Company's management, with the participation of the Chief Executive Officer and Chief Financial Officer of the Company, have designed such internal control over financial reporting ("ICFR"), or caused it to be designed under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards (IFRS) and using the framework and criteria established in Internal Control over Financial Reporting - Guidance for Smaller Public Companies, issued by The Committee of Sponsoring Organizations of the Treadway Commission. The Company relies on entity-wide controls and programs including written codes of conduct and controls over initiating, recording, processing and reporting significant

account balances and classes of transactions. Other controls include centralized processing controls, including a shared services environment and monitoring of operating results.

Based on the evaluation of the design and operating effectiveness of the Company's ICFR, the CEO and CFO concluded that the company's ICFR was effective as at December 31, 2012.

The Company does not believe that it has any material weakness or a weakness in ICFR that are significant. Control deficiencies have been identified within the Company's accounting and finance departments and its financial information systems over segregation of duties and user access respectively. Specifically, certain duties within the accounting and finance departments were not properly segregated due to the small number of individuals employed in these areas. To our knowledge, none of the control deficiencies has resulted in a misstatement to the financial statements. However, these deficiencies may be considered a material weakness resulting in a more-than remote likelihood that a material misstatement of the Company's annual or interim financial statements would not be prevented or detected.

As the Company incurs future growth, we plan to expand the number of individuals involved in the accounting function. At the present time, the CEO and CFO oversee all material transactions and related accounting records. In addition, the Audit Committee reviews on a quarterly basis the financial statements and key risks of the Company and queries management about significant transactions, there is a quarterly review of the company's condensed interim unaudited financial statements by the Company's auditors and daily oversight by the senior management of the Company.

#### Other Risks and Uncertainties

Electrovaya is an early-stage developmental company with revenues from its commercialization efforts. The Company is facing corresponding risks, expenses and difficulties that may affect its outlook and eventual results of its business and commercialization plan.

*Electrovaya may not be able to establish anticipated levels of high-volume production on a timely, cost-effective basis or at all. It has never manufactured batteries in substantially large quantities and it may not be able to maintain future commercial production at planned levels. Additionally, if it is unable to maintain an adequate supply of raw materials or components, its costs could increase or its production could be limited. Because of the above or similar other reasons, Electrovaya may not be able to fulfill new sales purchase orders or deliver them in a timely manner.*

Electrovaya has taken a number of steps to offset these risks:

- Its manufacturing process is modular and flexible.

- Its high-volume facility utilizes machinery and equipment that is similar to the machinery and equipment that it has already designed, built and used in its pilot production plant.
- It has formalized supply arrangements with suppliers to ensure that raw materials required for high-volume production are available at a reasonable cost and on a timely basis.
- It has more than one supplier for critical raw materials and components.
- Its production team plans to increase staff and upgrade the production machinery to make it easier to fulfill sales purchase orders in a timely manner.

*We have had a history of losses, and we may be unable to achieve or sustain profitability.*

We have never been profitable on an annual basis. We expect to incur significant future expenses as we develop and expand our business and our manufacturing capacity. We may incur significant losses in the future for a number of reasons, including the other risks described in this MD&A, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown events. Accordingly, we may not be able to achieve or maintain profitability.

*We have yet to achieve positive cash flow, and our ability to generate positive cash flow is uncertain.*

To rapidly develop and expand our business, we have made significant up-front investments in our manufacturing capacity and incurred research and development, sales and marketing and general and administrative expenses. In addition, our growth has required a significant investment in working capital over the last several years. Under Canadian GAAP, we have had positive cash flow of \$0.8 million for 2009 and negative cash flow of \$2 million for 2010. Under IFRS we have had positive cash flow of \$2.3 million for the year ending September 30, 2011, after including \$5.0 million of financing raised in December 2010, and negative cash flow of \$ 0.2 million for the year ending September 30, 2012. We anticipate that we will continue to have negative cash flow for the foreseeable future as we continue to incur increased research and development, sales and marketing, and general and administrative expenses. Our business will also require significant amounts of working capital to support our growth. Therefore, we may need to raise additional capital from investors to achieve our expected growth, and we may not achieve sufficient revenue growth to generate positive future cash flow. An inability to generate positive cash flow for the foreseeable future or raise additional capital on reasonable terms may decrease our long-term viability.

*The demand for batteries in the transportation and other markets depends on the continuation of current trends resulting from dependence on fossil fuels. Extended periods of low gasoline prices could adversely affect demand for electric and hybrid electric vehicles.*

We believe that much of the present and projected demand for advanced batteries in the transportation and other markets results from recent increases in the cost of oil, the

dependency of the United States on oil from unstable or hostile countries, government regulations and economic incentives promoting fuel efficiency and alternate forms of energy, as well as the belief that climate change results in part from the burning of fossil fuels. If the cost of oil decreased significantly, the outlook for the long-term supply of oil to the United States improved, the government eliminated or modified its regulations or economic incentives related to fuel efficiency and alternate forms of energy, or if there is a change in the perception that the burning of fossil fuels negatively impacts the environment, the demand for our batteries could be reduced, and our business and revenue may be harmed.

Gasoline prices have been extremely volatile, and this continuing volatility is expected to persist. Lower gasoline prices over extended periods of time may lower the perception in government and the private sector that cheaper, more readily available energy alternatives should be developed and produced. If gasoline prices remain at deflated levels for extended periods of time, the demand for hybrid and electric vehicles may decrease, which would have a material adverse effect on our business.

*Our principal competitors have, and any future competitors may have, greater financial and marketing resources than we do, and they may therefore develop batteries or other technologies similar or superior to ours or otherwise compete more successfully than we do.*

Competition in the battery industry is intense. The industry consists of major domestic and international companies, most of which have existing relationships in the markets into which we sell as well as financial, technical, marketing, sales, manufacturing, scaling capacity, distribution and other resources and name recognition substantially greater than ours. These companies may develop batteries or other technologies that perform as well as or better than our batteries. We believe that our primary competitors are existing suppliers of cylindrical lithium-ion, nickel cadmium, nickel metal-hydride and in some cases, non-starting/lighting/ignition lead-acid batteries. A number of our competitors have existing and evolving relationships with our target customers. For example, Bosch and Samsung formed LiMotive to focus on the development, production and marketing of lithium-ion battery systems for application in hybrid and other electric vehicles, and Dow Chemical announced the establishment of a joint venture with Kokam America and others, pending receipt of government incentive funding, to build a facility in Michigan for the manufacture of lithium polymer batteries for use in HEVs and EVs. Dow Kokam's new world-scale manufacturing facility is underway in Midland, Michigan with targeted completion in early 2012. In addition, NEC and Nissan entered into a joint venture to develop lithium-ion batteries in prismatic form, Sanyo and Volkswagen agreed to develop lithium-ion batteries for HEVs, Sanyo already provides nickel metal hydride batteries for Ford and Honda, and Toyota and Panasonic are engaged in a joint venture to make batteries for HEVs and EVs. In the large utility grid energy storage market, it is expected that the major incumbent Companies such as General Electric, Siemens, and others will become significant competitors, in addition to the current competitors. Potential customers may choose to do business with our more established competitors, because of their perception that our competitors are more stable, are more likely to

complete various projects, can scale operations more quickly, have greater manufacturing capacity, are more likely to continue as a going concern and lend greater credibility to any joint venture. If we are unable to compete successfully against manufacturers of other batteries or technologies in any of our targeted applications, our business could suffer, and we could lose or be unable to gain market share.

*The United States stimulus package, as managed by the Department of Energy, includes loan and grant monies for the battery industry. These new monies may benefit Electrovaya's competitors by increasing their financial resources. The effect of the increased competition is not known but may make it more difficult for Electrovaya to increase its market share and revenues.*

Electrovaya will continue to invest in research and development to utilize latest generation advanced materials and improve the process and design of its batteries to maintain or widen the technological gap between its technology and that of its closest competitors. However, the Company has limited knowledge of its competitors' activities in this area.

*Electrovaya may not be able to compete effectively with other manufacturers of compact or large format rechargeable batteries. There is also the possibility its competitors may develop portable power technologies that match or outperform the SuperPolymer® technology, which may diminish the demand for the Company's products. In addition, innovations in the design of portable computer, wireless devices and various power systems may reduce the need for its batteries.*

The market for rechargeable batteries is competitive. Electrovaya believes it is well positioned to compete in the market for compact rechargeable batteries, which is already very large and growing rapidly. There are currently eleven or more principal competitors, primarily well capitalized companies based in USA, China, Japan and Korea, which have in aggregate a dominant market position in the lithium ion and lithium ion polymer battery sector. The Company believes that design innovations in the wireless sector will either not materially extend the run time of existing battery technologies or will be more than offset by the addition of new, enhanced, "power-hungry" features, which will increase the energy requirements of these wireless devices. Finally, miniature fuel cells present potential future competition to batteries in the portable and mobile power applications. However, they are expensive and still have technical hurdles to overcome, thus mitigating the threat to Electrovaya's products in the electronics markets that it targets.

*Our failure to raise additional capital necessary to expand our operations and invest in our products and manufacturing facilities could reduce our ability to compete successfully.*

We may require additional capital in the future and we may not be able to obtain additional debt or equity financing on favorable terms, if at all. If we raise additional equity financing, our shareholders may experience significant dilution of their ownership

interests, and the per-share value of our common shares could decline. If we engage in debt financing, we may be required to accept terms that restrict our ability to incur additional indebtedness and force us to maintain specified liquidity or other ratios. We also seek Canadian and U.S. federal, provincial and state grants, loans and tax incentives some of which we intend to use to expand our operations. We may not be successful in obtaining these funds or incentives. If we need additional capital and cannot raise or otherwise obtain it on acceptable terms, we may not be able to, among other things:

- develop or enhance our products or introduce new products;
- continue to expand our development, sales and marketing and general and administrative organizations and manufacturing operations;
- attract top-tier companies as customers or as our technology and product development partners;
- acquire complementary technologies, products or businesses;
- expand our operations, in Canada, the United States or internationally;
- expand and maintain our manufacturing capacity;
- hire, train and retain employees; or
- respond to competitive pressures or unanticipated working capital requirements.

*We may not be able to successfully recruit and retain skilled employees, particularly scientific, technical and management professionals.*

We believe that our future success will depend in large part on our ability to attract and retain highly skilled technical, managerial and marketing personnel who are familiar with our key customers and experienced in the battery industry. Industry demand for such employees, especially employees with experience in battery chemistry and battery manufacturing processes exceeds the number of personnel available, and the competition for attracting and retaining these employees is intense. This competition will intensify if the advanced battery market continues to grow, possibly requiring increases in compensation for current employees over time. We compete in the market for personnel against numerous companies, including larger, more established competitors who have significantly greater financial resources than we do and may be in a better financial position to offer higher compensation packages to attract and retain human capital. We cannot be certain that we will be successful in attracting and retaining the skilled personnel necessary to operate our business effectively in the future. Because of the highly technical nature of our batteries and battery systems, the loss of any significant number of our existing engineering and project management personnel could have a material adverse effect on our business and operating results.

*Our working capital requirements involve estimates based on demand expectations and may decrease or increase beyond those currently anticipated, which could harm our operating results and financial condition.*

In order to fulfill the product delivery requirements of our customers, we plan for working capital needs in advance of customer orders. As a result, we base our funding and inventory decisions on estimates of future demand. If demand for our products does not increase as quickly as we have estimated or drops off sharply, our inventory and expenses could rise, and our business and operating results could suffer. Alternatively, if we experience sales in excess of our estimates, our working capital needs may be higher than those currently anticipated. Our ability to meet this excess customer demand depends on our ability to arrange for additional financing for any ongoing working capital shortages, since it is likely that cash flow from sales will lag behind these investment requirements.

*Laws regulating the manufacture or transportation of batteries may be enacted which could result in a delay in the production of our batteries or the imposition of additional costs that could harm our ability to be profitable.*

Laws and regulations exist today, and additional laws and regulations may be enacted in the future, which impose environmental, health and safety controls on the storage, use and disposal of certain chemicals and metals used in the manufacture of lithium-ion batteries. Complying with any laws or regulations could require significant time and resources from our technical staff and possible redesign of one or more of our products, which may result in substantial expenditures and delays in the production of one or more of our products, all of which could harm our business and reduce our future profitability. The transportation of lithium and lithium-ion batteries is regulated both domestically and internationally. Compliance with these regulations, when applicable, increases the cost of producing and delivering our products.

*Electrovaya relies upon manufacturers in Taiwan to produce the Scribbler ® Tablet PC and has no long-term supply contracts with them.*

There are numerous suppliers in Taiwan and throughout Asia capable of producing a tablet PC and it is possible to arrange alternative sources of manufacturing, however, this may require additional time and resources, thereby straining the capacity of the Company.

*Electrovaya does not have a collaborative partner to assist it in the development of its batteries, which may limit its ability to develop and commercialize its products on a timely basis. Furthermore, it will continue to incur significant costs and invest considerable resources designing and testing batteries for use with, or incorporation into, specific products. Significant revenue from these investments may not be achieved for a number of years, if at all. Moreover, these batteries may never be profitable and even if they are profitable, operating margins may be low.*

*The development by the Company of new applications for its rechargeable batteries is a complex and time-consuming process. New battery designs and enhancements to existing battery models can require long development and testing periods. Significant delays in*



*new product releases or significant problems in creating new products could negatively impact the Company's revenues.*

Electrovaya believes that the formation of strategic partnerships will be critical for the Company to meet its business objectives. It will continue to seek arrangements with potential partners to mitigate development and commercialization risks going forward, balanced by its objective to maximize market share and penetration by not entering into exclusivity arrangements with a single partner.

*Until the establishment of multiple plants, Electrovaya will be dependent upon the operation of a single manufacturing facility and accidents or other operational problems at this facility, or at neighbouring facilities operated by other businesses, could affect its ability to deliver product to its customers and therefore its ability to generate revenues. In addition, it may be subject to environmental liabilities at its facilities, which could result in material expense and adversely affect its ability to sell or finance its facilities.*

Electrovaya's plant has been established in a modular manner in such a way that production may continue in the event of non-catastrophic operational problems. In addition, it has adopted a formal environmental policy that requires compliance with environmental legislation and an ongoing program of monitoring its environmental compliance.

The Company has its U.S. office at the Saratoga Technology + Energy Park ("STEP"). The Company is also seeking to establish facilities in other parts of the United States, as opportunities arise.

*Electrovaya is exposed to certain risks as a result of being in an industry that manufactures devices or products containing energy. All lithium ion polymer batteries can become hazardous under some circumstances. In the event of a short circuit or other physical, electrical or thermal damage to these batteries, chemical reactions may occur that release excess heat or gases, which could create dangerous situations, including fire, explosions and releases of toxic fumes. The Company's batteries may emit smoke, catch fire or emit gas, any of which may expose Electrovaya to product liability litigation. In addition, these batteries incorporate potentially hazardous materials, which may require special handling, and safety problems may develop in the future. Product failure or improper use of lithium ion polymer battery products, such as the improper management of the charging/discharging system, may also result in dangerous situations. The raising of any health or safety concerns could affect the Company's reputation and sales. Moreover, changes in environmental or other regulations affecting the manufacture, transportation or sale of Electrovaya's products could adversely affect the Company's ability to manufacture or sell its products or result in increased costs or liability.*

*Lithium Ion batteries are inherently risky due to their massive amount of energy and high energy density. Despite devoting significant time and effort to the development of designs which maximize safety and contain fires and explosions, there can be no virtual certainty that certain catastrophic events will not occur.*

*Finally, Electrovaya may be required to devote significant financial and management resources to processing and remedying warranty claims. If product liability issues arise, the Company could incur significant expenses and suffer damage to its reputation and the market acceptance of its products.*

To mitigate the risks of product liability, Electrovaya undertakes extensive internal and external product and safety testing. Unlike certain competing technologies, its products do not contain cadmium or lithium metal, which are considered hazardous materials for purposes of disposal or transportation. In certain situations or applications, battery power may be a more attractive environmental solution than other energy sources utilizing fossil fuels or creating emissions.

*Electrovaya may not be able to successfully market its battery technology to the clean transportation industry because the long-term efficacy of Lithium IonSuperPolymer® battery technology is not known and these batteries may not perform as well as anticipated in Electric Vehicle applications. The Company expects to continue to sell its products directly to corporate customers, but if these parties do not purchase these products or purchase them in lower quantities or over longer time periods than expected, Electrovaya's revenue profile and cash flows may be severely affected. The Company continues to rely upon a limited number of customers for a significant portion of its sales and the loss of any customer could have a material adverse effect on its sales and operating results and make it more difficult to attract and retain other customers.*

*If overall market demand for clean transportation declines significantly, and consumer and corporate spending for such products declines, Electrovaya's revenue growth will be adversely affected. Additionally, the Company's revenues would be unfavorably impacted if customers reduce their purchases of new products or upgrades to the Company's existing product lineup if such new offerings are not perceived to add significant new functionality or other value to prospective purchasers.*

*Electrovaya has developed and manufactured batteries for applications such as life support systems for NASA where a power failure could be catastrophic, adversely affecting the Company's reputation and resulting in increased costs or liability.*

However, it is unlikely that NASA will use these batteries in manned flight, due to complexities in qualifying these cells for the Critical 1 mission requirements of NASA.

*Electrovaya may not be able to successfully market its battery technology and products, and because its SuperPolymer® technology is relatively new, these batteries may not perform as well as anticipated. The Company expects to continue to sell its products directly to corporate customers and through value-added resellers and distributors. But if these parties do not purchase these products or purchase them in lower quantities or over longer time periods than expected, Electrovaya's revenue profile and cash flows may be severely affected. The Company continues to rely upon a limited number of customers for a significant portion of its sales and the loss of any customer could have a*

*material adverse effect on its sales and operating results and make it more difficult to attract and retain other customers.*

*If overall market demand for laptop computers and other portable electronic devices declines significantly, and consumer and corporate spending for such products declines, ElectroVaya's revenue growth will be adversely affected. Additionally, the Company's revenues would be unfavorably impacted if customers reduce their purchases of new products or upgrades to the Company's existing product lineup if such new offerings are not perceived to add significant new functionality or other value to prospective purchasers.*

The PowerPad® products and Scribbler ® Tablet PC series of products have undergone extensive user testing and have now been sold commercially to well-established corporate users, distributors and value added resellers with positive early results. ElectroVaya has a marketing program in place, including trade show participation and advertising campaigns. The Company has a dedicated sales team to market and sell its products in Canada, the United States and elsewhere. ElectroVaya has adopted a multi-channel distribution strategy to reduce its reliance on a single customer or distributor. The Company is targeting different types of users, applications and industries to mitigate the risk if its products do not achieve acceptance in a single market and to ensure it minimizes reliance on any one customer.

*ElectroVaya occasionally receives purchase orders that contain a series of milestones or deliverables, all or a portion of which may need to be completed in serial fashion before each subsequent activity and revenue generating milestones can be achieved. If each required milestone is not achieved, the entire amount of the purchase order may not be realized.*

In January 2007, ElectroVaya launched its "MN-Series" Lithium Ion SuperPolymer® battery technology. The MN-Series Lithium Ion SuperPolymer® technology will complement ElectroVaya's existing roster of Phosphate-Series and (industry standard) Cobaltate-Series Lithium Ion SuperPolymer® technology solutions. The MN-Series, which is a Lithiated Manganese Oxide based system, distinguishes itself with higher energy density and comparable safety characteristics to ElectroVaya's Phosphate-Series solution. ElectroVaya's proprietary Lithium Ion SuperPolymer® technology is independent of the composition of the positive electrode active material. As such, ongoing advances in positive electrode chemistry, such as the MN-Series, are expected to enable better technical performance and safety characteristics at more economical price-points

*Our international operations and sales subject us to a number of risks, including unfavorable political, regulatory, labor and tax conditions.*

Risks inherent to international operations and sales, include, but are not limited to, the following:

- difficulty in enforcing agreements, judgments and arbitration awards in foreign legal systems;
- fluctuations in exchange rates may affect product demand and may adversely affect our profitability in U.S. dollars to the extent the cost of raw materials and labor is denominated in a foreign currency;
- impediments to the flow of foreign exchange capital payments and receipts due to exchange controls instituted by certain foreign governments and the fact that the local currencies of these countries are not freely convertible;
- inability to obtain, maintain or enforce intellectual property rights;
- changes in general economic and political conditions;
- changes in foreign government regulations and technical standards, including additional regulation of rechargeable batteries, power technology, or the transport of lithium or phosphate, which may reduce or eliminate our ability to sell or license in certain markets;
- requirements or preferences of foreign nations for domestic products could reduce demand for our products;
- trade barriers such as export requirements, tariffs, taxes and other restrictions and expenses, which could increase the prices of our products and make us less competitive; and
- longer payment cycles typically associated with international sales and potential difficulties in collecting accounts receivable, which may reduce the future profitability of foreign sales.

Our business in foreign jurisdictions requires us to respond to rapid changes in market conditions in these countries. Our overall success as a global business depends on our ability to succeed in different legal, regulatory, economic, social and political situations and conditions. We may not be able to develop and implement effective policies and strategies in each foreign jurisdiction where we do business.

*Electrovaya is outsourcing certain production items. Outsourcing has inherent risks, including the lack of application of internal quality assurance processes, potential loss of control of the supply chain, potential supplier credit risk, and third party product and financial liability.*

*If the Company fails to manage growth successfully, it could experience delays, cost overruns or other problems. Similarly, the Company is in a specialized industry where qualified, key personnel may be difficult to retain or replace on a cost-effective basis.*

Electrovaya will continue to monitor its staffing requirements for its manufacturing facility and its needs at the senior management levels and for specialized personnel in various disciplines or areas of expertise.

Electrovaya has started building and delivering large MWh sized energy storage systems for Grid Energy Storage. These systems operate at elevated voltages of over 400 V and are large. All the safety concerns noted earlier are further heightened in these systems because now they are even larger contained in a small space with even higher voltages. Furthermore these systems are going into utilities and other electrical energy delivery applications where typical service life is longer than automotive or similar applications. There is a large risk that are our systems will not meet utility and similar industry standards. Furthermore, competition in this industry includes both battery companies listed elsewhere and additional incumbent companies such as General Electric, Siemens, Hitachi, and other and Electrovaya may not be able to compete with these multinationals.

*If Electrovaya fails to protect its proprietary technology, it may lose any competitive advantage it provides. Others may claim that the Company's products infringe on their intellectual property rights, which could result in significant expenses for litigation, developing new technology or licensing existing technologies from third parties. If Electrovaya is unable to maintain registration of its trademarks, or if its trademarks or trade name are found to violate the rights of others, the Company may have to change its trademarks or name and lose the goodwill created in them. In 2009 Electrovaya was served with a claim that its Scribbler Tablet PC product infringes on certain US patents. Electrovaya settled this claim. The terms of settlement of this claim may eliminate the US market for any sale of the Scribbler or increase the cost of sales for the Scribbler into the US market. Generally, the margins are low for hardware sales, hence the terms of settlement of this patent infringement claim may make any sale of the Scribbler into the US market uneconomical.*

Electrovaya will continue to file patent applications and register patents resulting from ongoing research and development activity, acquire or license patents from third parties if appropriate and further develop the trade secrets related to its manufacturing process and the design and operation of the equipment used to manufacture its products.

*There is no formal process concerning management of the major risks to the Company resulting from changing business conditions and internal organizational changes. The lack of a formal process to manage these risks could result in a lack of timely or thorough review of the impact and severity of these risks on the business. Furthermore the current economic and credit crisis can decimate the business opportunities for the Company and lead to further losses.*

Senior management continues to closely monitor changing business conditions to determine the impact, if any, on the success of the business. Where such changes are considered to have a potentially significant adverse effect on the business of the Company, all strategy options are thoroughly reviewed and discussed and the most appropriate course of action implemented as quickly as possible.

*If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they change their recommendations regarding our shares adversely, our share price and trading volume could decline. Additionally,*

*since the bankruptcy of Solyndra and Beacon Power, the DOE and other agencies in the United States may further investigate alternative energy companies which could lead to business dislocation.*

The trading market for our common shares will be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. If any of the analysts who may cover us change their recommendation regarding our shares adversely, or provide more favorable relative recommendations about our competitors, our share price would likely decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our share price or trading volume to decline.

*Our share price may be volatile.*

The market price of our common shares could be subject to significant fluctuations, and it may decline below the price at which you purchased it. Market prices for securities of early stage companies have historically been particularly volatile. As a result of this volatility, you may not be able to sell your common shares at or above the price you paid. Some of the factors that may cause the market price of our common shares to fluctuate include:

- fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- fluctuations in our recorded revenue, even during periods of significant sales order activity;
- changes in estimates of our financial results or recommendations by securities analysts;
- failure of any of our products to achieve or maintain market acceptance;
- product liability issues involving our products or our competitors' products;
- changes in market valuations of similar companies;
- success of competitive products or technologies;
- changes in our capital structure, such as future issuances of securities or the incurrence of debt;
- announcements by us or our competitors of significant services, contracts, acquisitions or strategic alliances;
- regulatory developments in Canada, the United States or foreign countries;
- litigation involving us, our general industry or both;
- additions or departures of key personnel; investors' general perception of us; and
- changes in general economic, industry and market conditions.

In addition, if the market for technology stocks or the stock market in general experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition or results of operations. If any of the foregoing occurs, it could cause our share price to fall and may expose us to class action lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

*We do not expect to declare any dividends in the foreseeable future.*

We do not anticipate declaring any cash dividends to holders of our common shares in the foreseeable future. Consequently, investors may need to rely on sales of their common shares after price appreciation, which may never occur, as the only way to realize any future gains on their investment. Investors seeking cash dividends should not purchase our common shares.

*Adverse business or financial conditions affecting the automobile industry may have a material adverse effect on our development and marketing partners and our battery business. The demonstration projects may not lead to any production contracts.*

*With the advent of Occupy Wall Street and similar activities, there may be more stringent scrutiny of public companies, which may adversely affect the Company, especially when considered in combination with the global recession and potential problems with the Euro and European Union.*

Much of our business depends on and is directly affected by the general economic state of Canada and the United States and the global automobile industry. The effect of the continued economic difficulties of the major automobile manufacturers on our business is unclear. Two major auto manufacturers have filed for bankruptcy and it is possible that more of these companies may encounter financial difficulties. The impact of any such financial difficulties on the automobile industry and its suppliers is unclear and difficult to predict. Possible effects could include reduced spending on alternative energy systems for automobiles, a delay in the introduction of new, or the cancellation of new and existing, hybrid and electric vehicles and programs, and a delay in the conversion of existing batteries to lithium-ion batteries, each of which would have a material adverse effect on our business.

*Our financial results may vary significantly from period-to-period due to the long and unpredictable sales cycles for some of our products and changes in the mix of products we sell during a period, which may lead to volatility in our share price.*

The size and timing of our revenue from sales to our customers is difficult to predict and is market dependent. Our sales efforts often require us to educate our customers about the use and benefits of our products, including their technical and performance characteristics. Customers typically undertake a significant evaluation process that has in the past resulted in a lengthy sales cycle for us, typically many months. In some markets such as the transportation market, there is usually a significant lag time between the

design phase and commercial production. We spend substantial amounts of time and money on our sales efforts and there is no assurance that these investments will produce any sales within expected time frames or at all. Given the potentially large size of battery development and supply contracts, the loss of or delay in the signing of a contract or a customer order could reduce significantly our revenue in any period. Since most of our operating and capital expenses are incurred based on the estimated number of design wins and their timing, they are difficult to adjust in the short term. As a result, if our revenue falls below our expectations or is delayed in any period, we may not be able to reduce proportionately our operating expenses or manufacturing costs for that period, and any reduction of manufacturing capacity could have long-term implications on our ability to accommodate future demand.

Our profitability from period-to-period may also vary significantly due to the mix of products that we sell in different periods. While we have sold most of our products to date into the consumer market, as we expand our business we expect to sell new battery and battery system products into other markets and for other applications. These products are likely to have different cost profiles and will be sold into markets governed by different business dynamics. Consequently, sales of individual products may not necessarily be consistent across periods, which could affect product mix and cause gross and operating profits to vary significantly.

As a result of these factors, we believe that quarter-to-quarter comparisons of our operating results are not necessarily meaningful and that these comparisons cannot be relied upon as indicators of future performance. Moreover, our operating results may not meet expectations of equity research analysts or investors. If this occurs, the trading price of our common shares could fall substantially either suddenly or over time.

*Credit market volatility and illiquidity may affect our ability to raise capital to finance our operations and growth.*

The credit markets have experienced extreme volatility during the last year, and worldwide credit markets have remained illiquid despite injections of capital by the Canadian and U.S. federal governments and foreign governments. Despite the capital injections and government actions, banks and other lenders have significantly increased credit requirements and reduced the amounts available to borrowers. Companies with low credit ratings may not have access to the debt markets until the liquidity improves, if at all. If current credit market conditions do not improve, we may not be able to access debt markets to finance our operations and growth.