## ANNUAL REPORT





## FINANCIAL HIGHLIGHTS

### Summarv



### Forward-looking statements

Carmanah Technologies Corp. public communications and management discussion and analysis may contain forward-looking statements. Often, but not always, forward-looking statements can be identified by the use of words such as "expects," "plans," "estimates," "intends," "believes," "could," "might," "will" or variations of such words and phrases. Forward-looking statements involve known and unknown risks, uncertainties, and other factors which may cause the company's actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. These statements are based on current expectations and beliefs and are subject to a number of risks and uncertainties. Readers should not place undue reliance on forward-looking statements. Carmanah does not assume any obligation to update the forward-looking information contained in this report.

## FINANCIAL HIGHLIGHTS



### Gross Margir



2011

### 2012

### 2012



M704 SOLAR MARINE LANTERN - UNDISCLOSED

R920 RRFB SOLAR FLASHING BEACON - USA

EVERGEN 1710 SOLAR OUTDOOR LIGHT - USA



M708 SOLAR AIRFIELD LIGHT - UNITED KINGDOM

GRID-TIE SOLAR SYSTEM - CANADA GO POWER! SOLAR CHARGING SYSTEM - CANADA

## MESSAGE FROM THE CHAIRMAN

#### Dear Shareholders,

This past year has been one of significant change within the business and the Board has been actively involved in many facets of this change. Early financial results signaled softness within several segments of the Company and the Board responded with oversight on both strategy and execution adjustments. Management has "stepped up" to the issues, considered strategic alternatives thoughtfully, and most importantly, acted with the full support of the Board. 2012 has proven to be a tough and demanding year for Carmanah and the Board remains confident in our stewardship throughout these challenging times.

We also experienced change within the Board roster in 2012. The founder of the company and long standing director, Dr. David Green, resigned from his position effective December 31st. David's contributions to the business are extensive and he most certainly will be missed. We do however respect his personal priorities and accepted his resignation at the end of 2012. David remains a meaningful shareholder in the Company and remains supportive of the Company's direction.

We are delighted to have Daniel Nocente join the board of Carmanah effective March 13, 2013. Daniel is past vice-chairman of National Bank Financial and has considerable experience in the technology sector. Daniel comes to the Board with considerable experience both at a board level as well as relevant industry experience.



Throughout 2012 a number of governance changes were undertaken by the Board to ensure the interests of all shareholders are protected. At the AGM for fiscal 2011, a Shareholder Rights Plan was adopted which outlines constraints to any unsolicited bids for the sale of the company. The plan does not preclude unsolicited bids, simply defines necessary timelines to ensure a full and fair process is undertaken and is consistent with market terms for similar publicly traded technology companies in Canada. As part of the August 2012 Private Placement of Equity initiative, the Board also adopted a Standstill Agreement with participating Directors and insiders to bring further certainty to the alignment of Material Insider Shareholders and the Company. In addition the Board adopted an Advanced Notification Policy in March, 2013, which clearly defines the process and timeline for the nomination of new Director candidates. The policy does not preclude outside nominations and is consistent with current market practices with other similar companies. In all, a number of governance changes designed to protect the interests of all shareholders in the Company and enable a full and fair playing field that reflects current "best practices" from a governance perspective.

The Board wishes to once again recognize the employees of Carmanah. The commitment and enthusiasm of this talented team of individuals is a critical backbone to the business and its prospects. Their continued, strong support is highly valued.

I would also like to thank Shareholders for their commitment and support of Carmanah. The Company's mandate remains unchanged - growth. A tough year is behind us and prospects ahead remain promising. The ability to leverage our brand equity, core technologies and talent remains central to our success in 2013 and the Board remains very positive in this respect.

Respectfully,

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Robert Cruickshank



EVERGEN 1710 SOLAR OUTDOOR LIGHT - NEW ZEALAND

## MESSAGE FROM THE CEO

#### Dear Shareholders,

I would characterize 2012 as a year of significant change for Carmanah. As reported last year the fundamental strategy remains "putting solar to work". In 2012 our emphasis shifted toward our signaling businesses and significant headway was made in both sales channel development and product development, revitalizing these segments of the business. The financial results of this change are not readily apparent in 2012 and we are "betting on the come". I hope the balance of my comments in this note allow you to reach the same positive conclusion I have reached: Meaningful prospects lie ahead for Carmanah and the company is well positioned to meet and convert them.

In terms of revenue performance in 2012, with sales of \$26.4 million (down 26% from the previous year), the executive team is not pleased. Many segments of our markets experienced negative growth in 2012 and an overall decline in Department of Defense (DOD) spending, Feed-in-Tariff (FIT) program uncertainties and an absence of large-scale projects severely impacted our performance. However looking within the numbers demonstrates early evidence of the changes we implemented early in the year already gaining traction. Revenue in the second half of 2012 represented 30% of sales growth over first-half revenue. Several new products were launched during 2012 to which the early market acceptance is strong. The derivation of these results included the closing of the SPOT Devices acquisition on January 4th which provided an important catalyst for our growing traffic business. Our signaling businesses overall continues to drive over half the revenue of the company and progress made in these businesses in 2012 has amplified their trajectory. Our goal remains "playing to win" in all markets. We are well on our way in the traffic business, and extremely well positioned in several other segments to meet our growth expectations.

In terms of financial condition of the business, we remain on reasonable ground. With cash reserves of approximately \$2.7 million as at December 31, 2012 we continue to balance growth expectations with our ability to invest. Our Private Placement in August 2012 of \$1.8 million definitely made a difference in this respect, however the price of such funding is high and we remain very reluctant to pursue this path further. This presents real constraint in a growth company and will certainly bridle our headway.

I would now like to comment further on each of our markets:

 The overall marine signaling market is estimated at \$300 million and presents a crowded, competitive landscape. Several mergers and acquisitions transpired in 2012 to reshape this landscape, presenting new opportunity for CMH. This market remains vital to our future success and our key partnership collaboration with Sabik Oy continues to underpin our focus on



marine. 2012 saw the launch of the 650 GPS and 650 High Intensity together with several new distribution agreements. Our sales channel remains distributor-based and we hold solid relationships therein. The key inflection point within our marine business continues to be monitoring and control functionality. Many of these specific advances remain pending at this time. We have planned more new product launches in this segment in 2013 than in our entire history as a marine franchise. We believe Carmanah-Sabik will redefine market needs in this category producing exciting prospects ahead with the results pending.

Our partnership with ADB, a world leader in airfield lighting solutions, continues to strengthen our presence in the Aviation industry. The overall aviation signaling market is today estimated at \$600 million, with solar applications representing less than 5% of that market today. Our success to-date in this segment remains disappointing, with 2012 representing the lowest sales in the category over the past 5 years. Military spending has historically represented a significant portion of our aviation business and has been

largely absent throughout 2012. Efforts on promoting the adoption of solar based technologies for civil airfields versus military applications has yielded limited success. With the investments made in this segment in previous years, 2013 will be a turning point for the aviation vertical.

- Carmanah made a decision to re-invest in the traffic market in early 2012 and by July, launched a solar-powered rectangular rapid flashing beacon (RRFB). Uptake on this product has been strong and well-timed with the recent acquisition of SPOT Devices assets, our number one competitor in the space. I believe this presents a winning combination as we now find ourselves the category leader in solar-based traffic solutions. In addition to the asset acquisition, the company has the rights to license System Infrastructure Management Application (SIMA), a cloud based technology for remote control and monitoring of our traffic products. This new technology reinforces our strategy for smart devices and we believe provides a compelling, and differentiated value proposition for customers. Exciting changes were realized in this segment this year and we believe meaningful headroom for growth lies ahead.
- Outdoor lighting continues to present the single largest market opportunity for the company, with the market estimated at \$1 billion per year. Our strategy shifted in 2012 toward international markets, with limited success realized. We continued to assess this strategy throughout the year and considered alternate revenue streams from the business. Late in the year this effort culminated in a shift in strategy to an OEM play. Focusing on our strength, solar-based technologies, we have forged a relationship with Acuity Brands, a major lighting OEM, to support their launch of a solar outdoor lighting line that showcases a Carmanah solar engine. We are excited about this development and optimistic about the future of this relationship. We are also pursuing aggressively other similar OEM relationships to further syndicate our investment and risk in this area. We have not abandoned our independent efforts with solar outdoor lighting solutions and will continue to offer a full line with several luminaire choices. Market development within solar outdoor lighting remains a key focus and I believe Carmanah has syndicated well this risk and is well positioned to participate competitively in the business.
- Our Grid-Tie business remains focused in Ontario, Canada, taking advantage of the province's Feed-in Tariff (FIT) program. While the FIT program underwent a significant review in early 2012, commitment was reaffirmed in April 2012 and business resumed immediately thereafter. This

experience served to remind us of our vulnerability of a government subsidy-backed program and the importance of moving beyond this. Our capability as an Engineering, Procurement and Construction ("EPC") services company is strong and we are not tied to Ontario. Our goal remains to continue to exploit the Ontario market and begin to diversify into other jurisdictions where the economics make sense. We believe the broad-based adoption of PV as an alternative energy source will continue globally and we intend to play a role in supporting this.

The Mobile business within Carmanah continues to focus on the recreational vehicle and work truck markets with a broad range of inverter and solar-based products and has had an excellent year. Results in 2012 are up 26%; reaffirming our strength in our brand and channel management. Our geographic focus remains in North America, marketing our products under the "Go Power!" brand name. Our supply chain is robust and scalable, our competitive positioning very strong and we continue to evaluate opportunities to expand the product offering. Mobile remains a very solid contributor to Carmanah and continues to advance the adoption of solar technologies in unique applications.

To recap, we experienced a tough year in 2012 in terms of financial performance. However, in 2012 we have made considerable headway on foundational changes in the business that are needed to stimulate growth in the markets where we are established. I believe that we are poised for recovery in 2013 with significant grounds for long-term growth.

Looking forward, our mandate remains clear – growth. We will do this by continuing to do what we do best.

Sincerely,

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Bruce Cousins, CEO



M702-5 SOLAR MARINE LANTERN - USA

## COMPANY OVERVIEW

### Carmanah Vision – We are setting the standard for solar lighting innovation.

Carmanah designs, manufactures and distributes a range of renewable-energy technology. The company is structured into Lighting and Solar Power Systems Divisions.

### Lighting: Signals and Illumination

Includes the business units of solar LED lighting including beacons, lanterns, lights and outdoor lighting.

Solar Power Systems:

Includes the business units of Mobile (RV & work truck products) and Grid-Tie ("EPC" for rooftop PV).

### **OPERATIONS**

Fiscal 2012 was a busy year for the company. Carmanah embarked on major development efforts for signalling products, which saw several new products launched, most significantly the rectangular rapid flashing beacon ("RRFB"), as well as High Intensity Marine, Aviation and Obstruction Lights. The company negotiated a number of major sales contracts, including 8 Solar EPC Services projects worth over \$5.1 million.

A cornerstone in the company's business strategy, Carmanah continued focus on the development of key partnerships. The company's key partnerships include: Sabik Oy, Marine signalling partner based in Finland; Laser Guidance Inc., a US-based pioneer in aviation precision guidance systems; and Acuity Brands Inc., a leading OEM of LED lighting and lighting controls.

Carmanah also closed a non-brokered private placement of 3,981,722 common shares for net proceeds of \$1.8 million.

In January, 2013, Carmanah successfully acquired the business assets of Spot Devices Inc. underpinning a re-investment effort in the traffic market.



EG320 SOLAR OUTDOOR LIGHTING - MEXICO

## CORPORATE LEADERSHIP



### Bruce Cousins, CEO

- CFO, Ballard Power Systems
- CFO, Xantrex Technology, Inc.
- Founding member & CFO of Aspreva Pharmaceuticals
- 13-year tenure in finance and operations for Johnson and Johnson
- 23 years of entrepreneurial and executive experience in the pharmaceutical, technology and renewable energy industries



### **Roland Sartorius, CFO**

- CFO, Infosat Communications Bell Canada
- 12 years CFO experience with European private equity fund and public and private international and North American-based high growth technology companies
- 8 years, KPMG Corporate Finance and Assurance Services

GRID-TIE SOLAR SYSTEM - CANADA



## BOARD OF DIRECTORS

### Bruce Cousins, CEO

- CFO, Ballard Power Systems;
- CFO, Xantrex Technology, Inc.;
- Founding member & CFO of Aspreva Pharmaceuticals;
- 13-year tenure in finance and operations for Johnson and Johnson;
- 23 years of entrepreneurial and executive experience in the pharmaceutical, technology and renewable energy industries.

### Robert Cruickshank - Chairman of the Board

- Served as President of the British Columbia Technology Industries Association (BCTIA), a not-for-profit, member-funded organization representing the BC technology industry;
- Prior to joining BCTIA, served in many executive roles including over four years as the President of BCTEL Mobility;
- Serves on boards of public and private companies / non-profit organizations.

#### **Bob Wiens - Director**

- 13 years as President and CEO of FACS Records Centre, a document management and storage company;
- 16 years with Arthur Andersen & Co, served as managing partner;
- Served on numerous boards of public and private companies, along with many community organizations.

### Peter Berrang - Director

- More than 30 years experience in many successful high technology companies in BC;
- Founder and President of Seastar Optics Inc for ten years, which was bought by SDL Inc, and subsequently acquired by JDS Uniphase;
- Founding partner, shareholder and director of the Axys Group of Companies;
- Currently serves on numerous boards of public and private companies, and is involved in a variety of venture capital investments.

#### **Daniel Nocente - Director**

- Joined the Carmanah Board of Directors in March, 2013;
- Past Vice Chairman of Corporate and Investment Banking with National Bank Financial, Inc., Vice Chair and BC Georgraphy Head with RBC Dominion Securities and also a Director and Audit Committee Chair with Canada Rapid Transit;
- Currently the Past-Chair of the Nature Trust of BC and member of University of BC's Dean of Arts Advisory Committee and Chairmain of Savary Gold Inc. and Member of the Board for Vancouver Coastal Health;
- Prior Chair of St. Paul's Hospital Foundation, Vice Chair and Director of Providence Healthcare, Director and Head of the Governance Committee with the Arts Club Theatre Company and member of the YMCA Cabinet.

A702 SOLAR AVIATION LIGHTS - AFGHANISTAN

#### For the Three and Twelve Month Periods Ended December 31, 2012

### Caution regarding forward-looking statements

Certain statements in this Management Discussion & Analysis ("MD&A") are forward-looking statements that involve risks and uncertainties. Forward statements are often, but not always, identified by words such as "may", "would", "could", "will", "intend", "should", "expect", "plan", "anticipate", "believe", "estimate", "predict", "potential", "continue" and similar expressions. Forward-looking statements in this MD&A include, but are not limited to, statements relating to the expected growth opportunities and commercial acceptance and demand for on-grid and off-grid LED lighting systems, continued government subsidies for solar grid-tie projects, and the successful development of new products to help penetrate new geographic markets.

By their very nature, forward-looking statements involve inherent risks and uncertainties, both general and specific, and a number of factors could cause actual results or events to differ materially from those anticipated in such forward looking statements. Although the forward-looking statements contained in this MD&A are based upon what we believe to be reasonable assumptions, prospective investors cannot be assured that actual results will be consistent with these forward-looking statements. In evaluating these statements, readers should specifically consider various factors, including the risks discussed under the heading "Risk Factors" in our annual information form dated March 13, 2013. Additionally, factors that could cause or contribute to such differences include, but are not limited to, the following:

- actions of competitors, including competitors with greater name recognition and financial resources;
- our ability to keep pace with rapid changes in lighting technology and evolving industry standards;
- competition with other energy sources;
- slower than anticipated adoption of off-grid LED lighting technology;
- our ability to manage expansion effectively;
- fluctuation in foreign currency exchange rates;
- our reliance on third party manufacturers;
- our reliance on sales agents and third parties with whom we have developed strategic relationships to sell our products, particularly in niche markets and developing and emerging economies;
- our reliance on key employees;
- intellectual property risks;
- environmental and regulatory compliance;
- our reliance on government contracts and subsidies, such as the Ontario, Canada Feed-in Tariff ("FIT") program;
- problems with product quality or reliability;
- downturns in general economic and market conditions;
- our ability to maintain adequate liquidity or raise additional capital when needed; and
- geopolitical or other global or local events.

Readers should not place undue reliance on forward-looking statements. The forward-looking statements in this MD&A are made as of the date hereof. We do not assume any obligation to update the forward-looking information contained in this MD&A other than as required by applicable laws (including without limitation Section 5.8(2) of National Instrument 51-102 Continuous Disclosure Obligations).

### Management's discussion and analysis

This MD&A discusses the consolidated financial condition and operating performance for our Company and should be read together with our audited consolidated financial statements for the year ended December 31, 2012. These documents, along with additional information about our Company, including the Annual Report and Annual Information Form, are available at www.carmanah.com and www.sedar. com. This document contains forward-looking information qualified by reference to and should be read together with, the forward-looking statements above.

Unless otherwise indicated, all financial information presented in this MD&A is in our functional and presentation currency, United States of America ("US") dollars, and has been prepared in accordance with International Financial Reporting Standards ("IFRS"). See Section 6.2, Accounting policy developments, for additional information.

Our consolidated financial statements include our accounts and those of our wholly-owned subsidiaries, Carmanah Solar Power Corporation (formerly AVVA Technologies Corporation), and Carmanah Technologies (US) Corporation (a US incorporated company). In June of 2012, Carmanah Lightech 2010 Ltd (an Israel incorporated wholly owned subsidiary) was dissolved as its sole purpose was to effect the proposed merger with Lightech Electronics Ltd ("Lightech"). Our merger was never completed, and the subsidiary was never active.

### Preparation of the MD&A

Our disclosure controls and procedures are designed to provide reasonable assurance that all relevant information is gathered and reported to our senior management on a timely basis so that appropriate decisions can be made regarding public disclosure. Our management determines whether or not information is material based on whether they believe a reasonable investor's decision to buy, sell or hold securities in our Company would likely be influenced or changed if the information were omitted or misstated. The MD&A and the consolidated financial statements were reviewed by our Audit Committee and approved by our Board of Directors. This MD&A is prepared as of March 13, 2013.

Our management has issued guidance on and reports on certain non-IFRS measures to evaluate performance. As non-IFRS measures generally do not have a standardized meaning, securities regulations require non-IFRS measures to be clearly defined, qualified and reconciled with their nearest IFRS measure. Earnings before Interest, Taxes, Depreciation and Amortization ("EBITDA") used in this document means standardized EBITDA as defined by the Canadian Performance Reporting Board of the Canadian Institute of Chartered Accountants ("CICA"). The term Adjusted EBITDA used in this document deducts from standardized EBITDA, items of an unusual nature that we do not believe reflect our ongoing operations. See Section 8 for the definition, calculation and reconciliation of Adjusted EBITDA.

## **1. FINANCIAL HIGHLIGHTS**

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A. Financial Highlights for the Three and Twelve Month Periods Ended December 31, 2012

	THREE MO	THREE MONTHS ENDED DECEMBER 31			YEAR ENDED DECEMBER 31		
(US\$ THOUSANDS, UNLESS NOTED OTHERWISE)	2012	2011	CHANGE	2012	2011	CHANGE	
CONSOLIDATED STATEMENTS OF INCOME							
Revenue	8,361	7,124	17.4%	26,442	35,904	(26.4)%	
Gross margin %	28.8%	27.5%	1.3%	31.2%	31.4%	(0.2)%	
Operating expenditures	2,984	2,904	2.8%	12,066	11,539	4.6%	
Other income (expenses)	(146)	(3,958)	(96.3)%	(92)	(4,064)	(97.7)%	
Net income (loss)	(721)	(8,888)	(91.9)%	(3,921)	(8,553)	(54.2)%	
CONSOLIDATED STATEMENT OF CASH FLOWS							
Cash provided/(used) in operating activities	(221)	1,160	(119.1)%	(3,551)	63	(5,736)%	
Cash used in investing activities	(96)	(172)	(44.2)%	(431)	(886)	(51.4)%	
Cash provided in financing activities	-	120	(100.0)%	1,761	120	1,367%	
OTHER MEASURES							
Adjusted EBITDA *	8	(423)	(100.9)%	(2,127)	1,329	(260.3)%	

\*Adjusted EBITDA is a Non-IFRS measure - see section 8 for discussion

Overall, we believe the fourth quarter of 2012 was a positive step forward, with the highest quarterly revenue in over a year, strong growth in our sales pipeline, and good progress on the development of key new products. We also believe we are well positioned for revenue growth in 2013. A good portion of that growth will probably come in the latter half of the year as (1) new key products begin production and gain market share and (2) anticipated revenue from major projects begins to flow.

The following is an overview of our results comparing the fourth quarter and year ended December 31, 2012 to the same periods in 2011.

- **Consolidated revenue** increased by \$1.2 million in the fourth quarter of 2012 compared to the same period in 2011. This increase is primarily due to (1) higher engineering, procurement & construction services ("Solar EPC Services", formerly referred to as Gridtie) sales in the quarter as revenues returned to normal levels, while the fourth quarter of 2011 was the first period to feel the effects of the contract uncertainties stemming from the Ontario Feed-in Tariff ("FIT") program review, and (2) higher GoPower! Systems ("GoPower!" formerly referred to as "Mobile") sales as our Recreational Vehicle ("RV") market has continued to improve. For the year ended December 31, 2012, our consolidated revenues decreased by \$9.5 million or 26.4% compared to the same period in 2011. Approximately 50% of this decrease is the result of our significantly lower Solar EPC Services revenues due to delays in contract awards which were caused by industry uncertainties as the Ontario, Canada provincial FIT program was being reviewed by the government during late 2011 and the first half of 2012. We also saw lower sales across the board in our Lighting division due to, amongst other reasons, longer than expected timelines to close sales, competitive pressures on older products, and reduced demand from US Department of Defense ("DOD") for products used to support their activities in the Middle East.
- Gross Margin % increased by 1.3% in the fourth quarter of 2012 compared to the prior year. This increase was primarily driven by higher margins on our Solar EPC Service sales as a result of some cost savings on project materials. Gross margin % for the year ended December 31, 2012 decreased by 0.2% compared to 2011.
- **Operating expenditures** increased by \$0.1 million in the fourth quarter of 2012, compared to the same period in 2011. This increase is primarily due to higher sales and marketing costs with an increase in the number of sales people in an effort to grow sales. For the year-ended December 31, 2012 operating expenditures increased by \$0.5 million compared to the same period in 2011, primarily due to the same reason noted for the increase in the fourth quarter.
- Other expenses were down \$4.0 million for the year-ended December 31, 2012 compared to 2011. In 2011 we had \$4.1 million in other expenses and they primarily related to the write-off of our investment tax credits ("ITC") historically recorded as an asset. The ITCs were written off upon our review of the recoverability of the assets at December 31, 2011 which showed reduced probability for utilizing them in the near term due to our current and anticipated revenue stream, our historical net income results, and our early stage of development in key markets. The \$0.1 million expense recognized in 2012 primarily relate to due diligence and other acquisition related costs associated with merger and acquisition activity primarily related to the successful acquisition of the business assets of Spot Devices Inc. ("Spot Devices") in early 2013.
- **Net loss** in the fourth quarter of 2012 was \$0.7 million, compared to a net loss of \$8.9 million in the same period in 2011. For the year-ended December 31, 2012, net loss was \$3.9 million which was primarily the result of lower than expected sales. This compares to a net loss of \$8.6 million in 2011, which was primarily due to the non-cash write off of our deferred tax assets of \$4.2 million and the \$4.0 million write off of our ITCs noted in the bullet above.
- Adjusted EBITDA for the fourth quarter of 2012 was slightly positive at \$8 thousand compared to a loss of \$0.4 million. For the year ended December 31, 2012, adjusted EBITDA was a loss of \$2.1 million compared to positive \$1.3 million in the same period in 2011. The decline is primarily due to lower revenues in 2012.

Liquidity and capital resources highlights, including a comparison of results for the twelve months ended December 31, 2012, and measures as at December 31, 2012, to those in the same period in 2011.

- We negotiated a new credit facility with the Royal Bank of Canada ("RBC") that replaced an old credit facility we had with the Bank of Montreal which expired in July 2012. Under this new credit facility we are provided a CDN \$5.0 million revolving demand and a CDN \$0.5 million term credit facility. This RBC facility carries certain covenants that currently limit our ability to draw on it.
- Our cash balance declined by \$2.2 million, largely due to our operating loss stemming from lower than expected sales.
  - Cash used in operating activities was \$3.5 million, compared to cash provided of \$0.1 million in the same period in 2011.
  - Cash used in investing activities was \$0.4 million, compared to cash used of \$0.9 million in the same period in the prior year.
  - Cash provided by financing activities \$1.8 million compared to \$0.1 million in the prior year.

#### CARMANAH.COM

## 2. OUR BUSINESS

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

From our headquarters in Victoria, British Columbia, Canada, we design, develop and distribute renewable and energy-efficient technologies. Our business is divided into two operating segments, the "Lighting" division and the "Solar Power Systems" division. Our Lighting division includes two product segments: (1) solar-powered beacons for marine, aviation, traffic and defense applications (referred to as the "Signals" or "Signalling" market sector), and (2) solar-powered outdoor area lighting (referred to as the "Outdoor Lighting" market sector). Our Solar Power Systems division includes grid-tie solar power systems for industrial applications (referred to as Solar EPC Services sector) and mobile power systems (referred to as the Go Power! sector). The sections below provide an overview of these various businesses.

### 2.1 LIGHTING DIVISION

Our Lighting division sells renewable and energy efficient lighting solutions. All of the products in this group essentially combine various components of solar panels, solar charge controllers, batteries, LED drivers, etc., into an end lighting solution for applications where grid electricity is unavailable (e.g. due to location) or unattractive (due to cost or reliability issues). At the heart of these products is an Energy Management System ("EMS"), a proprietary technology that manages the collection, storage and release of energy into lighting through patented firmware.

The underlying technology utilized by our products is continuously improving, allowing the business to enter new markets and to become more competitive with alternative on-grid solutions. To take advantage of these technology improvements, we maintain a strong research and development team to help deliver new and innovative products.

All of the products within our Lighting division are manufactured goods, which are currently being produced by our contract manufacturer, Flextronics Industrial Inc ("Flextronics"), a worldwide electronics manufacturing company. We are presently utilizing one of their facilities in Houston Texas, although the manufacturing will be shifted to a facility in California in 2013 as a result of a restructuring initiative within Flextronics. We don't anticipate any significant production issues or impact to our sales as a result of the move. We have previously shifted our manufacturing between Flextronics facilities with minimal issues.

### Signaling market segment

Our Signals segment encompasses solar powered signals for the marine, aviation and traffic marketplace and forms the historic foundation of our Company. In 2012, this segment generated \$11.5 million / 44% of our total revenues, compared to \$15.9 million / 44% in 2011.

Our initial inroads in the marine segment resulted in a retrofit market of specified navigational aids converting to self-contained solar LED products. These products are characterized as floating aids to navigation (typically mounted on a buoy) with less than 4 nautical mile range of visibility and are typically purchased and managed by local coast guards or port authorities. Following the success of marine applications, our product portfolio was adapted to aviation and industrial use and was adopted by the U.S. Department of Defense for tactical off-shore aviation airfield deployments. We have achieved annual growth of this segment through early military market penetration and previous remote U.S. Department of Defense airfield funding. Competition is limited to several key providers with customer adoption of this new technology as a key market constraint.

Incorporating our proprietary EMS into traffic products created a new market segment for solar LED beacons and flashers, allowing for displacement of equivalent on-grid current devices with a more cost efficient off-grid solution. These traffic systems are primarily utilized by the Canadian and U.S. Departments of Transportation and municipalities for increased public roadway and pedestrian safety. We remain a dominate player in this market, with competition highly fragmented between many small companies.

The marine, aviation and traffic markets all represent meaningful industrial applications. Our company's growth has been through either the creation of a retrofit market within the industry or through rapid initial market share capture based on our proprietary new technology. We also in the early stages of participating in the Obstruction market. An example of a product application in this market is tower lighting, such as cell towers.

In our marine signals market, we have created a series of regional master distributors (the "MDs") who stock our product to increase customer support and service and decrease delivery lead time.

On January 4, 2013, we closed the transaction to acquire certain assets of Spot Devices, a Nevada, USA-based manufacturer of traffic, pedestrian and school zone safety systems. Included in the transaction is a license agreement for the exclusive use of System Infrastructure Management Application {"SIMA"} technology for public roadway applications. SIMA was developed by Cirrus Systems, LLC, a related company to Spot Devices for traffic. Terms of the transaction include the issuance of 2.2 million of our shares to Spot Devices (valued approximately \$0.6 million on close) plus conditional cash payments pursuant to a two-year cash earn-out where Spot Devices is paid 12.5% of any revenues in excess of agreed upon amounts. Upon closing of the transaction, Spot Devices owns approximately 4% of our outstanding shares.

The table below provides a summary of the usual applications for which our Company's Lighting division products are used, the type of customer sold to, and current competitors within each market segment.

MARKET SEGMENT	PRODUCT USES	TYPICAL CUSTOMERS	COMPETITORS
AVIATION	<ul> <li>Taxiway and runway lighting</li> </ul>	<ul> <li>Department of Defense (U.S.)</li> </ul>	<ul> <li>Avlite Systems Pty. Ltd.</li> </ul>
	<ul> <li>Threshold and caution lighting</li> </ul>	Military organizations	Metalite
	<ul> <li>Helipad lighting</li> </ul>	Regional airports	
	<ul> <li>Emergency airfield lighting</li> </ul>	Civilian Regional Airports	
	<ul> <li>Airfield safety and wayfinding</li> </ul>	Military Airfields	
OBSTRUCTION	<ul> <li>Obstruction lighting of tower</li> </ul>	Rail companies	Orga BV
	<ul> <li>Lighting of bridges</li> </ul>	Telecom tower operators	Dialight Plc
	<ul> <li>Railway lights</li> </ul>	Mining companies	
	Mining lights		
MARINE	<ul> <li>Aids-to-navigation lights</li> </ul>	Coast guards	Sealite Pty. Ltd.
	<ul> <li>Marina and dock lighting</li> </ul>	<ul> <li>Marine port authorities</li> </ul>	• Vega
	Port lighting	Marine operators	Tideland
	Oil and off-shore platform marking	Private and public inland waterway and	Automatic Power
	Barge lighting	harbour authorities	<ul> <li>Zeni Light</li> </ul>
	<ul> <li>Bridge nav lighting</li> </ul>	<ul> <li>Private dock operators</li> </ul>	
		Offshore oil and gas companies	
		Barge companies	
TRAFFIC	Pedestrian crosswalk signals	Departments of Transportation (global)	<ul> <li>JS Foster Corporation</li> </ul>
TRAFFIC .	School zone flashers	Governmental agencies	TAPCO (Traffic &
	<ul> <li>24-hr roadway beacons</li> </ul>	Private and commercial industrial	Parking Control Co. Inc.)
	Retro-fit Programmable Time	companies	ELTEC (Electrotechics
	Clocksing		Corporation)
	<ul> <li>Radar feedback signs</li> </ul>		

Our usual route to market in these segments is to sell through established distributors in the various markets and regions we operate. Currently, our aviation/obstruction and marine products are sold worldwide, while our traffic products are only currently sold into the North

America market. In 2012 we began a shift in our route to market in our Traffic segment to a combination of both direct sales and the use of distributors.

To facilitate market share capture and to leverage joint sales channels presence, we have pursued a strategy of establishing strategic relationships:

- Aviation: In late 2009, we formed a relationship with the global airfield lighting technology provider ADB Airfield Solutions, LLC ("ADB"). The relationship provides ADB with a line of ADB-branded self-contained Off-grid LED airfield lighting products and provides our Company with a global route to markets targeting the commercial aviation sector for increased market penetration.
- Marine: In early 2010, we entered into a co-marketing agreement with Sabik Oy ("Sabik"). Sabik is a Finnish company that is a leading provider of marine signaling products with a range of more than four nautical miles a product line that is complementary to our solar lighting marine product portfolio which consists of signaling products with a range of four nautical miles or less. The combined product portfolio and global distribution channels of our Company and Sabik leverages the strengths of both companies. All products under this relationship are branded under the "Carmanah/Sabik" ("Carmanah/Sabik") brand. We believe that the relationships with ADB and Sabik enhance our ability to gain market share in their respective markets. No such partnership currently exists within the traffic segment

### Outdoor Lighting market segment

Through our knowledge and expertise in our involvement within the Signalling market segment, we recognized several years ago that with the significant advancements being made into the performance of white LEDs, our Company could begin to penetrate the Outdoor Lighting market sectors with cost effective solar Off-grid solutions. As incremental gains have been realized in white LED performance, the Outdoor Lighting market sectors that we have been targeting have broadened; starting from low output path and pedestrian applications through parking/area and side street lighting, to more recently full roadway and highway applications.

During 2009 and 2010, we developed a portfolio of outdoor solar lighting products to address the early penetrable market sectors, branded as the EverGEN<sup>™</sup> series. The products incorporate leading LED lighting technology within the luminaire, and high-efficiency LED drivers, charge controllers, as well as our patented energy management algorithms in an integrated luminaire solar engine. Collectively, we refer to the consolidation of the components and functions related to energy storage release and energy management as our EMS, which is at the core of every EverGENTM outdoor solar light, and provides the necessary monitoring of energy collection against energy release to the luminaire and more advanced functionality such as communication between solar lights for adaptive lighting profiles. As the solar lighting portfolio presented a new technological solution to lighting, we enlisted the services of Frog Design Inc., a leading industrial designer, to assist in the product design of an integrated solar outdoor lighting form factor that took into consideration, during the design phase, how the various technologies should be presented to the user to help promote the adoption of this new technology into the industry.

To establish an outdoor solar lighting market presence and to penetrate initial targeted market sectors, our early focus was the North American lighting market. During 2009, we also entered into a three-year agreement with Ruud Lighting, Inc. (recently acquired by Cree, Inc.) ("Ruud") to leverage its recognized BetaLED brand of LED fixtures for increased market exposure and awareness, and to gain access to Ruud's established lighting agent network in order to accelerate the creation of a Carmanah solar lighting agent network throughout North America for sales. This agreement was discontinued in late 2011. We believe this shift away from an exclusive relationship on fixtures allows our customers greater choice in designing specific products for their application. We currently offer multiple manufacturers' luminaire choices within our outdoor lighting products.

Leveraging the learning experiences from North American lighting sales, in 2010 we decided to expand into regional emerging markets, notably Mexico and select Latin American countries, to capitalize on opportunities arising from strong economic growth and limited grid infrastructure in these regions. We used our base technology from the EverGENTM series to create a lower cost portfolio of solar lighting branded as the EG series and focused on the roadway/highway market sector applicable to these growth markets with investment into infrastructure. Recognizing that outside of North America a lighting agent network is not necessarily the primary route to market in early 2010 we announced a partnership agreement with Semex S.A. ("Semex") in Mexico, a regionally dominant provider in the traffic industry that provides synergistic opportunities to offer lighting solutions to roadway concession owners in Mexico.

To further accelerate the growth of our stake in Off-grid lighting in emerging markets, in 2011 and 2012, we broadened our EG portfolio to address market segments from low powered path and area to leading output performance for multi-lane highways with the affordable EG series platform retaining the reliability and performance for which we branded products are known. With this expanded portfolio, we

are now targeting, in addition to Mexico and Latin America, Africa, South East Asia and the Middle East. Similar to Mexico, we expect expansion to these new regions to be through local partnerships, where the route to market models are tailored specifically to the regions' sales process, and leverage the local partner's strength and knowledge of the customers and market. In late 2012, we began marketing the EG series into the US and Canadian markets.

The creation of the EverGEN<sup>™</sup> and EG series of solar LED based outdoor lighting products, together with our ability to leverage our brand strength and establish relationships with new distribution agents and develop existing distribution channels has enabled our Company to enjoy market penetration and early adoption of our products.

Going forward, we will continue to broaden the market offering with a full line of outdoor lighting products. This will be complemented with select, Original Equipment Manufacturer ("OEM") relationships utilizing our solar engines in driving their own lighting solutions. In 2012, our Outdoor Lighting segment contributed \$3.7 million / 14% of our total revenues, compared to \$5.2 million / 15% in 2011. The table below provides a summary of the usual applications for which these products are used, the type of customer sold to, and our current competitors.

PRODUCT USES	TYPICAL CUSTOMERS	COMPETITORS
Outdoor general illumination for	Government facilities (local, federal)	SOL Inc.
pathways, parking lots, and pedestrian	Government Ministries/Agencies (e.g. for	Solar Electric Power Company (SEPCO)
areas	<ul> <li>Transportation, Lighting, Housing)</li> </ul>	Solar One
Highway and street lighting	Defense departments	
Perimeter lighting	<ul> <li>Private utilities providers (power and lighting)</li> </ul>	
	<ul> <li>Highway concession owners (roadway)</li> </ul>	
	<ul> <li>Airports (perimeter, parking)</li> </ul>	
	<ul> <li>Private industry (large commercial, nationals, multi-nationals)</li> </ul>	
	<ul> <li>University, Technology centres</li> </ul>	
	<ul> <li>Parks and recreation bodies</li> </ul>	

Our Outdoor Lighting segment is centered on the growing market for off-grid outdoor solar lighting products. The global market for on-grid or AC outdoor lighting is estimated to be approximately \$8.0 billion annually, with off-grid solar lighting valued at approximately half a billion in 2011. However, as technological advances continue to improve LED and solar panel efficiency, coupled with anticipated increases in energy costs, we expect the off-grid solar lighting market will grow significantly over the next decade and the market will likely reach a \$1.0 billion by 2015.

Our outdoor lighting products target both in the developed and developing markets. Within developed countries, our products are mainly used in specific applications where gaining access to the grid is unattractive or expensive. In most cases this means our products are usually only utilized in new construction projects with limited success in the retrofit market. Within developing countries, our products have a broader opportunity. This is due to the geography, with a lot of developing markets situated in the Sunbelt regions for which solar products are highly suited, the relative lack of infrastructure including roadways and highways coupled with limited or unreliable electrical grids and associated capacity, and the relatively high economic growth rates in these areas.

Over the past few years, the overall price for off-grid solar powered LED lighting systems has been decreasing, due to underlying technology improvements and falling component pricing. This has reduced the break-even capital cost point of off-grid solar versus traditional on-grid or AC solutions and allowed for the development and deployment of higher output systems, especially in regions with strong solar radiation. As a result of significant development efforts over the past few years, we now have a product portfolio that addresses the majority of outdoor lighting opportunities including applications from pedestrian and parking lighting to street, roadway and full highway specification requirements.

Our route to market in the US and Canada is through the traditional lighting agent network. Within the developing markets, we partner with local companies that have established relationships and distribution channels such as Semex in Mexico and other similar local partners in geographic regions such as Latin America, Middle East and Africa.

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### 2.2 SOLAR POWER SYSTEMS DIVISION

The Solar Power Systems division encompasses the Company's Solar EPC Services and Go Power! market segments.

### Solar EPC Services segment

Our Solar EPC Services segment, is operated through our Ontario, Canada based subsidiary, Carmanah Solar Power, and is largely focused on the provision of turn-key design and build services development of grid-connected photovoltaic power solutions. Carmanah is a market leader in the provision of these services for the commercial rooftop sector within the Province of Ontario. Our Company currently focuses on systems ranging from 50 to 500 kilowatts and our completed projects as well as those under construction represent a meaningful amount of these deployments to date in the Province of Ontario. The energy from completed generating facilities is delivered to the local electrical utility and the owner of the generating facility is financially compensated under the Ontario Power Authority's ("OPA") FIT program. Over the last decade, we have installed utility connected systems with aggregate capacity of more than five megawatts across more than seventy installations, amassing the broadest range of installation type and complexity of any EPC provider in Canada.

Under the OPA FIT Program, established in October 2009, owners of electrical service connections, including residents, businesses and government bodies are permitted to sell energy from approved renewable sources back to the electrical distribution system at a rate which will generate a reasonable return on their investment. The tariff rate for photovoltaic projects is tiered across different tranches based on connected capacity. The OPA's review of the FIT Program which began in October of 2011 was completed in the first half of 2012 after extensive consultation with various industry stakeholders. The Ontario government has directed the OPA to continue the program with some amendments, such as prioritizing applications through a modified points system, a revised tariff structure, and policies to protect agricultural lands, etc. The tariff rates under FIT 2.0 currently range from \$0.487/kWh to \$0.549/kWh for commercial rooftop projects. Overall, we are pleased with the positive outcome from this review, which should bring stability to the industry and will help to generate further projects and opportunities for us. The OPA opened the commercial roof-top application window in the fourth quarter of 2012 with a plan to release the next round of contracts in the second quarter of 2013.

During the first half of 2012, we saw a significant decrease in Solar EPC Services revenues over the same period in 2011, as contract awards industry wide were delayed until the OPA review of the FIT program was completed. Consequently, we were focused on a smaller number of larger potential contract bids with the goal of building up the pipeline of work for the remainder of the year.

As a leading Solar EPC Services provider of rooftop grid-connected Systems in Ontario, Canada, we believe that we are well-positioned to support the continued rapid development of the systems the OPA FIT Program facilitates. Should other Canadian provinces replicate the OPA FIT Program, or implement programs of a similar nature, we believe that we are well-positioned to participate. In addition, we continue to monitor opportunities in other jurisdictions beyond the Canadian market, with the potential to deploy similar capabilities to those deployed in Ontario, Canada.

### Go Power! segment

Within the Go Power! (previously referred to as Mobile) segment, we offer various power solutions for the RV, utility and fleet vehicles, and marine markets. Products sold in the segment include everything from complete solar kits, to the sale of individual inverters, solar panels, chargers, batteries, mounts, switches, etc.

The Go Power! segment is a distribution business that is marketed under the 'Go Power!' brand. Sales are made through a wellestablished distribution channel that includes a series of dealers, distributors and agents throughout the US and Canadian markets, as well as through Amazon.com, a large online retailer. Operationally, to support this segment we utilize several 3rd party manufacturers to produce product, branded under the 'Go Power!' name, and utilizes third party logistics warehouses to stock and distribute associated inventory. We have no direct investment in any supply chain infrastructure.

## 3. OPERATIONAL HIGHLIGHTS

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

Fiscal 2012 was a busy year for our company. The following are highlights from a corporate standpoint:

- Embarked on major development efforts for our signalling products, which saw a variety of new products launched, most significantly the rectangular rapid flashing beacon ("RRFB") that improved crosswalk safety, as well as High Intensity Marine, Aviation and Obstruction Lights.
- Negotiated a number of major sales contracts, including 8 Solar EPC Services projects worth over \$5.1 million.
- Expanded our focus on revenue growth with the hiring of additional sales employees to complement the new vertical orientated sales structure. Under this new structure, each market vertical has its own leadership and supporting team and is directly responsible for driving the planning, development and execution within the market.
- Closed a non-brokered private placement of 3,981,722 common shares for net proceeds of \$1.8 million.
- Negotiated and signed two long term exclusive co-operation agreements to enhance our portfolio and strengthen our network of strategic partnerships with the following companies:
  - Sabik Oy ("Sabik"), our marine signalling partner based in Finland, which we have worked with over the past few years. The five
    year agreement expands on our previous two year sales and marketing collaborations to include reciprocal technology access as
    well as joint product development.
  - Laser Guidance Inc., a US-based pioneer in aviation precision guidance systems. The agreement provides us with a five year exclusive world-wide marketing license for a portfolio of Laser Guidance aviation navigation aids.
- Explored a variety of additional partnerships and business acquisition opportunities. These efforts resulted in the successful acquisition of the business assets of Spot Devices Inc in early 2013. See section 2.1 for further details on this acquisition. We were also successful in completing negotiations in early 2013 for a supply agreement with Acuity Brands, Inc ("Acuity"), a leading provider of LED lighting and lighting controls. The agreement provides for the supply of our solar outdoor light engines for integration into certain luminaires provided by Acuity.

The following sections highlight specific events within our divisions and various market segments.

### 3.1 LIGHTING DIVISION

### Signals market segment

In our Aviation and Obstruction market segments, we have focused heavily on launching several exciting new products and on marketing efforts to promote our airfield lighting solutions in new places in the market. Highlights included:

- Launched new products including the OL10A obstruction light and the OL32 obstruction light. These obstruction lights are designed in both standard and high-performance versions and are used for marking towers, cranes and other hazards to aerial navigation. We also applied for and received Intertek certification for International Civil Aviation Organization ("ICAO") Low Intensity Type A and Type B standards for these lights. We also launched an obstruction website and comprehensive catalog and specification sheets to highlight our new products.
- Promoted and marketed our total airfield solution at multiple distributor training events as well as at the Canadian Airport Electrical Association conference, Military Airlift and Rapid Reaction Conference, Washington State Community Airports Association, and the Illuminating Engineering Society of North America Aviation Lighting Committee (IES-ALC) conference. We revamped our global distribution channel and launched a performance-based distribution model which rewards growth and initiative. The Total Airfield Solution, launched in May, offers for the first time a comprehensive LED/solar airfield lighting system that includes the entire range of products needed for complex aviation operations, increasing safety of flight in low visibility weather conditions and breaking down barriers to important new markets for our solar lights. We anticipate some positive impacts to revenues in the first and second quarters of 2013 as a result of these promotions.

- Our ADB-Carmanah partnership delivered many aviation orders as well as a major shipment of 90 solar runway lights, a solar powered wind cone, and a wireless control device for use at a remote installation in Central America. The project includes the deployment of white runway edge lights, red/green threshold lights, and yellow/white caution lights. The wireless, solar system dramatically increases the operational capability at the airfield by ensuring a continuous and reliable light output and light power supply in a remote location.
- Signed a strategic cooperation agreement with Laser Guidance Inc. ("Laser Guidance"), a US-based pioneer in aviation precision guidance systems for a five year exclusive world-wide marketing license for a portfolio of Laser Guidance aviation navigation aids designed and manufactured by Laser Guidance which will enable us to sell comprehensive airfield solutions. The agreement provides fixed payments to Laser Guidance totalling \$0.45 million to be made over 15 months. In addition, during the term of the agreement, a variable payment of 2% of all airfield revenues that include Laser Guidance products as part of the purchase order is payable to Laser Guidance At December 31, 2012, we had recorded an intangible asset of \$0.45 million, \$0.24 million of which has been paid with the remaining balance accrued as a liability. The total is being amortized on a straight-line basis over the 5 year term of the agreement. No variable payments have been made under the agreement, and those costs will be expensed as a cost of sale when the revenue is recognized.

In our Marine segment, we introduced a number of operational changes in an effort to better position ourselves within the market. New personnel were added and introduced to the business, and a key new product was taken from conceptual diagrams to working prototypes. Much of this work, which also included establishing stronger ties with our partners and customer base, was not reflected in the financial performance of the division for the year. A new framework for the business is now in place and a more streamlined sales process is the result. This groundwork laid in 2012 should result in growth and stronger sales in the years ahead. Some of the key Marine highlights in 2012 included:

- Signed an exclusive 5 year cooperation agreement with Sabik in March of 2012. Under this agreement, we will work towards the coordination and alignment of our product offering, development and sales efforts.
- Strengthened relationships with our largest distributors. This included an effort to create exclusive master distributors who maintain stock on hand and will be better positioned to serve their respective local markets and underlying customers.
- Commenced a significant Marine development effort, which should result in a refreshed product line that should help to drive future sales growth.
- Signed a \$10 million non-binding letter of agreement with one of our South American marine distributors to procure commission and
  install various aids to navigation on a major South American waterway. Conditionality by the end customer has been resolved, and
  progress has been made to move forward into the finalization of technical specifications on the product. It is anticipated that this will be
  completed in early 2013 with commencement of delivery of the product throughout 2013 and early 2014.

In our Traffic segment, we saw a significant amount of activity including the hiring of a new Managing Director early in 2012, the successful launch of our new Rectangular Rapid Flash Beacon ("RRFB") crosswalk warning system, and various partnership/acquisition related activities which resulted in the acquisition of the business assets of Spot Devices subsequent to year end. This combined with a further expansion of our sales capabilities in the early part of 2013 should help to grow our sales in this market over the near term.

### Outdoor Lighting market segment

Within our Outdoor Lighting segment, our focus in 2012 was mainly on growing the lead generation for the North America marketplace as well as seeking opportunities outside of North America through our regional partners. Key sales highlights for the year include:

- A highway in Mexico City using 109 units of the EG500, where the EG500 was fully compliant to the required Mexican lighting specifications for a multi-lane highway achieving performance standards equivalent to grid-connected lighting performance yet providing significant capital cost savings during installation;
- the opening of Paseo Ribereno Park in Puebla Mexico which has over 450 EG320 units supplied in late 2011 and early 2012. The park was officially opened in May 2012 to celebrate the 150 year anniversary of Cinquo de Mayo. Felipe Calderon, former Mexican president, gave an inaugural speech for the park opening;
- A deployment in Trinidad, for 75 units of EG320, demonstrating penetration to new non-North American locations with the valueengineered EG series;
- A follow-on order from a customer in Costa Rica of EG145s based on a successful pilot demonstration of the product where the customer valued the light levels provided and net cost of installation;
- A follow-on order from a customer in Malaysia, of EG145s and EG80s, after a successful pilot, again highlighting the performance and value of the new EG series;

• Initial orders in Middle East of our EG40 product in Saudi Arabia for a pathway, and EG340 in UAE for roadway lighting at an oil refinery. The Middle East is an emerging market with huge potential for solar lighting.

We continued to strengthen our distribution channel through the addition of new partners in key markets including Best Light in Mexico and Al-Babtain in Saudi Arabia.

Our near term sales continue to be lumpy as Outdoor Lighting opportunities are typically tied to long lead time non-residential infrastructure construction starts rather than retrofit or modification of existing infrastructure opportunities., Continued uncertainty in both domestic and rest of the world economics is tempering growth in this category. Our key near term strategic activities include the sourcing of a new performance increased/ cost reduced LED luminaire to pair with the EG series. We expect this luminaire will be rolled-out to our full portfolio as well. Carmanah is also exploring other OEM opportunities to increase market presence.

### 3.2 SOLAR POWER DIVISION

### Solar EPC Services market segment

Our Solar EPC Services market was significantly impacted by the suspension of the FIT program in October 2011 which resulted in no new awarded FIT contracts and downward pressure on revenues. Revenues achieved were from FIT contracts awarded prior to 2012. There was significant industry activity in the transaction of legacy FIT contracts that had yet to be built. We focused much of our development time on a smaller group of larger potential contract portfolios with the goal of building up our pipeline. During the last quarter of 2012 we continued to pursue bids of various projects, as well as execute existing projects and prepare for installations that will continue into 2013. Overall we continue to maintain our position as a market leader for EPC services for commercial rooftop solar systems.

At the 2012 Canadian Solar Industry Association's annual conference, the Ontario government announced that the Ontario Power Authority, OPA, would immediately open a 5-week window (on December 14) to accept applications for commercial roof-top scale FIT contracts with an aggregated capacity limit of 200MW. The allowable per project capacities ranged from 10kW to 500kW for rooftop solar and approximately 600MW worth of applications were filed under the revised rules of the FIT program (FIT 2.0). The highest scoring applicant projects are to be subjected to capacity tests to ensure the local distribution and transmission infrastructure is not overburdened. We expect contracts to be awarded in the early summer of 2013 with construction completion mandated for 18 to 36 months after contract award. We are enthusiastic about the re-opening of the FIT program and are investing to secure agreements with contract applicants to build a significant portfolio of projects in 2013 and 2014.

### Go Power! market segment

Our Go Power! market sector continues to show steady growth year over year and appears to have almost fully recovered from the general economic downturn in 2008 that affected the industry overall. With continued sales and marketing efforts we have expanded our market share in a recovering industry. With a general fall in photovoltaic ("PV") pricing our revenue per unit sold has declined. However, overall the reduced prices to our customers have increased additional demand as our solutions become less costly and accessible to more end users which has resulted in high unit volume sales.

During the latter half of 2012, our main focus was on both the RV market and the Go Power! Inverter market where we have seen steady growth. We also continued to build the Go Power! brand with the introduction of a new series of portable solar charging kits which allows further penetration into our existing markets. For 2013, our focus will be to continue supporting the RV dealer markets in both the US and Canada.

## **4. FINANCIAL RESULTS**

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

As previously noted, the information presented in the sections below have been derived from, and should be read in conjunction with our consolidated financial statements for the year-ended December 31, 2012.

### 4.1 QUARTERLY TREND

(US\$ THOUSANDS, EXCEPT EPS AMOUNTS)	2012			2011				
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenue	8,361	6,661	6,063	5,357	7,124	8,503	10,725	9,552
Gross margin	2,411	2,070	1,765	1,993	1,961	2,924	3,281	3,096
Gross margin %	28.8%	31.1%	29.1%	37.2%	27.5%	34.4%	30.6%	32.4%
Operating costs	(2,984)	(2,953)	(3,190)	(2,939)	(2,904)	(2,670)	(3,157)	(2,808)
Other income (expense)	(146)	45	(26)	35	(3,958)	165	(244)	(27)
Income tax recovery (expense)	(2)	-	-	-	(3,987)	(68)	(54)	(103)
Net income/(loss)	(721)	(838)	(1,451)	(911)	(8,888)	351	(174)	158
EPS – Basic	(0.02)	(0.02)	(0.03)	(0.02)	(0.21)	0.01	0.00	0.00
EPS- Diluted	-	-	-	-	-	0.01	-	0.00
Adjusted EBITDA(1)	8	(489)	(1,073)	(573)	(423)	426	633	693

(1) Adjusted EBITDA is a non-IFRS measure defined in section 8

Our quarterly revenues have fluctuated over the past couple of years, primarily due to the nature of our sales within our product lines, which tend to be "lumpy". In addition, a large portion of our revenues are derived from projects that often have longer tender processes and fluctuating timelines, further exacerbating this lumpiness. This is most pronounced within our Solar EPC Services, Aviation/Obstruction, and Outdoor Lighting market segments, and to a lesser extent within our Marine and Traffic markets. Mobile sales on the other hand are more seasonal in nature with higher sales in the first two quarters as our distributors gear up for the busier spring and summer periods. Solar EPC Services sales are also typically lower in the fourth quarter due to limited construction in the winter months. From a quantitative perspective, the lower sales in the fourth quarter of 2011 through the third quarter of 2012 was primarily the result of lower Solar EPC Services revenue as a result of governmental uncertainties in the approval of new projects as the subsidy rates available under the FIT program were under review. Solar EPC revenues recovered in the fourth quarter of 2012 with these uncertainties resolved during the middle part of 2012.

Our gross margin is quite variable on a quarterly basis and reflects the mix of products and any inventory adjustments/write-offs that are tied to changes in component pricing, technology, and product offering/design. Historically, we see lower margins in the fourth quarters of each year as revisions are made to operational and product plans that often impact the recoverability of inventory.

Our operating costs and in particular compensation costs have been relatively stable over the past two years. We have undertaken a number of restructuring initiatives over the past few years, although any savings obtained were directed into other areas of our company.

Our other income (expense) has fluctuated significantly over the quarters. Other income (expense) includes various non-operating items such as foreign exchange gains and losses, major asset write offs, acquisition costs, and other items. The major spike in other expenses in fourth quarter of 2011 was due to the write-off of our ITCs (see section 1). Other fluctuations have mainly related to foreign exchange gains and losses, additional costs surrounding the terminated Lightech acquisition lawsuit, and other costs.

## 4.2 THREE AND TWELVE MONTH PERIODS ENDED DEC. 31, 2012

Revenue and gross margin

(US\$ THOUSANDS, UNLESS NOTED OTHERWISE)		EMONTHS E		YEAR EN	NDED DECEN	IBER 31
	2012	2011	CHANGE	2012	2011	CHANGE
REVENUES						
• Signals	2,979	3,138	(5.1)%	11,570	15,811	(26.8)%
Outdoor lighting	1,331	1,897	(29.8)%	3,676	5,237	(29.8)%
Total Lighting	4,310	5,035	(14.4)%	15,246	21,048	(27.6)%
Solar EPC Services	2,467	1,040	137.2%	4,690	9,709	(51.7)%
Go Power!	1,584	1,049	51.0%	6,506	5,147	26.4%
Total Solar Power Systems	4,051	2,089	93.9%	11,196	14,856	(24.6)%
Total revenue	8,361	7,124	17.4%	26,442	35,904	(26.4)%
GROSS MARGIN %						
• Signals	33.8%	38.7%	(4.9)%	36.0%	41.5%	(5.5)%
Outdoor lighting	32.1%	22.1%	10.0%	26.6%	24.8%	1.8%
Total Lighting	33.3%	32.4%	0.9%	33.8%	37.3%	(3.5)%
Solar EPC Services	27.1%	9.2%	17.9%	24.6%	19.3%	5.3%
Go Power!	19.4%	22.1%	(2.7)%	29.8%	29.8%	-%
Total Solar Power Systems	24.1%	15.7%	8.4%	27.6%	22.9%	4.7%
Total Gross margin %	28.8%	27.5%	1.3%	31.2%	31.4%	(0.2)%

Revenues were \$8.4 million, up \$1.2 million and \$26.4 million, down \$9.5 million respectively, for the three month and twelve month periods ended December 31, 2012 as compared to the same periods in 2011. The majority of our increased revenues in the fourth quarter were due to higher Solar EPC Services revenues as we saw the market recover from the delays caused by the Ontario FIT program review. These delays were first felt by us in the fourth quarter of 2011. About 53% of the annual decrease in sales is due to significantly lower Solar EPC Services revenue due to delays in contract awards stemming from uncertainties in the FIT program, which were resolved in the early part of 2012. The remainder of the revenue decrease is primarily due to the longer than expected timing to close infrastructure/ project sales in our Outdoor Lighting, Marine and Aviation markets.

### Lighting

Our Signals revenues for the year ended December 31, 2012 were \$11.6 million, down from \$15.8 million in the same period of 2011. For the quarter ended December 31, 2012, Signals revenues were \$3.0 million, down from \$3.3 million in the same period in 2011. The results from the various market segments are outlined below:

2012 revenues from our Aviation/Obstruction market were \$3.5 million, down from \$6.3 million in 2011. Fourth quarter 2012 revenues were \$1.0 million, down from \$1.1 million in the same period in 2011. These decreases are due to the timing of major project-based sales involving large aviation installations, and deep US Department of Defense spending cutbacks associated with withdrawal of forces from operations in the Middle East.

2012 revenues from our Marine market were \$5.4 million, down from \$6.4 million in 2011. Fourth quarter 2012 revenues were \$1.3 million, compared to \$1.4 million in same period in 2011. These decreases were primarily due to increased competitive pressures on some of our older product lines. We anticipate that future near term product releases will help to counter this trend.

2012 revenues from our traffic market were \$2.6 million, down from \$3.2 million in 2011. Fourth quarter 2012 revenues were \$0.7 million, up from \$0.6 million in the same period of 2011. The overall decline is primarily due to a reduced focus on this vertical over the past year as we assessed the opportunities in this market. We have re-invested in this market and are starting to see revenue growth for this segment as a result of recent new product introductions and increased focus on development, marketing and sales efforts. We saw some positive momentum in the fourth quarter of 2012 with some modest growth over the same period in 2011.

Our Outdoor lighting revenues for the year ended December 31, 2012 were \$3.7 million, down from \$5.2 million from the prior year. Fourth quarter 2012 revenues were \$1.3 million, down from \$1.9 million in the same period in 2011. The change year-to-date is primarily due to the longer than expected timing of closing infrastructure project sales from emerging countries.

Our Lighting group gross margin percentage during 2012 was 33.8%, down from 37.3% in 2011. This decrease is primarily due to lower margins in Marine market as we adjusted our pricing among major distributors in response to competitive activities.

### **Solar Power Systems**

Our Solar Power Systems revenues for the year ended December 31, 2012 were \$11.2 million, down from \$14.8 million in 2011. Our fourth quarter 2012 revenues were \$4.1 million, up from \$2.1 million in the prior year, primarily due to substantially lower Solar EPC Services sales, which for the 2012 year were down \$4.9 million over 2011 as a result of the industry uncertainty during the Ontario FIT program review in the first half of 2012, which has now been resolved.

The fourth quarter of 2012 saw our Solar EPC Services segment recover further from FIT contract delays affecting the industry, with sales of \$2.5 million. This is an increase of \$1.5 million over the fourth quarter of 2011, which was the first quarter to feel the effects of the contract delays. During the third and fourth quarter of 2012 we saw a significant increase in opportunities and sales activities, and we were awarded 3 new Solar EPC Services projects totalling approximately \$3.0 million. We anticipate further project wins in the coming quarters, which should help the recovery of Solar EPC Services sales in 2013. 2012 Solar EPC Services revenue was \$4.7 million, down from \$9.7 million in the prior year primarily due to the reasons noted above.

In regards to our GoPower! segment, 2012 sales were \$6.5 million, up from \$5.2 million in 2011. Fourth quarter 2012 revenues were \$1.6 million, up from \$1.1 million in the same period in 2011, primarily due to channel developments, new product introductions, a strengthening RV market and general economic conditions improving in the US and Canada.

The gross margin percentage during 2012 for our Solar Power Systems group was 27.6%, up from 22.9% in 2011, primarily due to the sales mix between GoPower! and Solar EPC Services with significantly less lower margin Solar EPC Services revenues in 2012 and a larger volume of higher margin GoPower! revenues recognized in 2012 compared to 2011.

### Sales by geographic region

All of our international revenues have been generated by our Lighting group, as our Solar EPC Services business is currently solely focused on the Canadian market and our GoPower! revenues are generated from the Canadian and US markets.

Approximately 16.2% of our revenues for the twelve months of 2012 were from outside North America, this is down from 19.6% in the same period of 2011, partially due to the decrease in Aviation sales into the Middle East previously discussed above.

We are focused on increasing our international sales by modifying and developing products to serve the rapidly growing markets outside North America, and fostering new and existing partnerships within strategic markets.

(US\$ THOUSANDS, UNLESS NOTED	THREE MOI	EE MONTHS ENDED DECEMBER 31 YEAR ENDED DECEMBER				BER 31
OTHERWISE)	2012	2011	CHANGE	2012	2011	CHANGE
Sales and marketing	1,038	786	32.1%	4,218	2,978	41.6%
Research and development, net	375	357	5.0%	1,606	1,961	(18.1)%
General and administration	1,571	1,761	(10.8)%	6,242	6,600	(5.4)%
Total expenditures	2,984	2,904	2.8%	12,066	11,539	4.6%
Operating expenses (excluding restructuring) as % of sales*	35.7%	40.8%	(5.1)%	45.6%	32.1%	13.5%
Non-cash items:						
Amortization	246	280	(12.1)%	1,099	1,102	(0.3)%
Development credits	-	(23)	(100.0)%	-	(220)	(100.0)%
Stock-based payments	45	147	(69.4)%	257	428	(40.0)%

### **Operating expenses**

Our total operating expenses were \$3.0 million, up \$0.1 million and \$12.1 million, up \$0.6 million respectively, for the three and twelve month periods ended December 31, 2012, compared to the same periods in 2011.

### Sales and marketing

Our sales and marketing expenses were \$1.0 million, up from \$0.8 million and \$4.2 million, up from \$3.0 million respectively for the three and twelve month periods ended December 31, 2012 as compared to the same periods in 2011, primarily due to higher salaries and travel costs as we increased our sales and marketing staffing levels by 13 people, 7 of which were new hires with the remaining 6 coming from transfers from other roles within the Company.

### Research and development

Our research and development (R&D") expenses were \$0.4 million, comparable and \$1.6 million, down from \$2.0 million respectively for the three and twelve month periods ended December 31, 2012 as compared to the same periods in 2011, due to the refocus of development resources into sales and marketing functions within our signalling segments. Although general research and development spending has decreased year over year, more development projects have been undertaken or are in progress throughout 2012.

### General and administration

Our general and administration ("G&A") expenses were \$1.6 million, down from \$1.8 million and \$6.3 million, down from \$6.6 million respectively for the three and twelve month periods ended December 31, 2012 as compared to the same periods in 2011. Overall, lower salary expenditures were partially offset by small increases in rent, insurance, and legal costs.

### Other income (expense)

Our other income (expense) relate mainly to interest, foreign exchange gains or losses and various miscellaneous non-operating items and were \$0.1 million, down from \$4.0 million and \$0.1 million down from \$4.1 million respectively for the three and twelve month periods ended December 31, 2012 as compared to the same periods in 2011. In 2011 we had \$4.1 million in other expenses and they primarily

related to the write-off of our ITCs historically recorded as an asset (see section 1). The \$0.1 million recognized in 2012 primarily relate to due diligence and other acquisition related costs associated with merger and acquisition activity.

#### Income taxes

Our income tax expense was minimal during 2012. This is a decrease from \$4.2 million in 2011, which was the write off of our deferred tax assets as the probability of near term usage was in question due to our current and anticipated revenue stream, our historical net income results, and our early stage of development in key markets.

### **4.3 SELECT ANNUAL INFORMATION**

The following table provides selected financial information for the last three fiscal years.

YEAR ENDED DECEMBER 31			
(IN THOUSANDS US\$, EXCEPT PERCENTAGES)	2012	2011	2010
Sales	26,442	35,904	33,921
Gross margin	8,239	11,262	11,297
Loss from continuing operations	(3,919)	(8,553)	(4,771)
Loss per Share – Basic and Diluted	(0.09)	(0.20)	(0.11)
Net loss	(3,919)	(8,533)	(4,771)
Loss per Share – Basic and Diluted	(0.09)	(0.20)	(0.11)
Total assets	13,177	15,441	26,802
Total long-term financial liabilities	-	-	-
Cash dividend	-	-	-

# 5. LIQUIDITY, CAPITAL RESOURCES AND OTHER DISCLOSURES

The discussion in this section is qualified by the Caution regarding forward-looking statements at the beginning of the MD&A.

### 5.1 SUMMARY OF CONSOLIDATED STATEMENT OF CASH FLOWS

YEAR ENDED DECEMBER 31			
(US\$ THOUSANDS, UNLESS NOTED OTHERWISE)	2012	2011	CHANGE
Cash (used)/provided in operating activities	(3,551)	63	(5,736)%
Cash used in investing activities	(431)	(886)	(51.4)%
Cash provided in financing activities	1,761	120	1,367%
Effects of exchange rate changes on cash	(26)	(53)	(50.9)%
Total change in cash	(2,247)	(756)	197.2%

### Cash used in operating activities

During the twelve months ended 2012, cash used by our operating activities, excluding changes in working capital, was \$2.5 million compared to cash generated of \$1.1 million in the same period the prior year. Changes in working capital were negative \$1.0 million, comparable to the same period in 2011. The swing in working capital in 2012 was primarily due to an increase in inventories, which are up mainly due to support increased demand in our Go Power! market segment which has seen strong sales growth. We actively manage our working capital by monitoring inventory turnover data, collection of accounts receivable, and taking advantage of trade discounts and/or extended payment terms granted by suppliers.

### Cash used by investing activities

During the twelve months ended December 31, 2012, cash used for investing activities was \$0.4 million compared to \$0.9 million used in the same period of the prior year. Both years include relatively minor additions relating to investments in IT hardware and software. Additions of significance in 2011 related to leasehold improvements for our new head office facility. In 2012, the most significant addition relates to an acquisition of a license agreement with Laser Guidance

### Cash provided from financing activities

During the twelve months ended December 31, 2012, cash provided from financing activities was \$1.8 million compared to \$0.1 million in the prior year. During the third quarter of 2012, we closed a non-brokered private placement of 3,981,722 common shares and received net proceeds of \$1.8 million. The placement consisted of common shares priced at CND \$0.45 per common share. The \$0.1 million in 2011 relates to a private placement of 250,000 shares which was purchased by our CEO, Bruce Cousins. The private placement coincided with his CEO appointment on October 11, 2011 and carried a share price of \$0.50 per share which was the market closing price at the date of his employment offer.

### 5.2 LIQUIDITY AND CAPITAL RESOURCE MEASURES

We continue to have no debt. Our total cash balance has decreased by \$2.2 million since December 31, 2011. This decrease was largely the result of substantially lower revenues.

Of the \$2.7 million total cash balance at December 31, 2012, \$0.2 million (December 31, 2011 - \$0.7 million) was externally restricted by our bank due to outstanding performance letters of credit on specific Solar EPC Services projects, and to secure credit associated with our corporate credit cards.

Our overall working capital was \$6.3 million at December 31, 2012, a decrease of \$1.5 million compared to \$7.8 million at December 31, 2011.

The overall decrease in cash in 2012 has primarily been driven by lower than expected revenues, especially in our Solar EPC Services, Outdoor Lighting and Aviation signaling verticals. We believe that our revenues will recover in 2013 coupled with stringent working capital management will reverse this trend. For 2013, we have also reduced our operating expenses to bring them in line with our revenues with the goal of eliminating any future negative cash flow.

We anticipate that our cash and cash equivalents and cash flow from operations will be sufficient to fund future operations and capital expenditures. Our current strategy is to continue to finance our planned organic growth through internally generated funds.

## 5.3 CREDIT FACILITIES

On August 23, 2012, we secured a new CDN \$5.0 million revolving demand and a CDN \$0.5 million term credit facility with Royal Bank of Canada ("RBC"). This new facility replaced a prior credit facility with Bank of Montreal which expired in July 2012. The RBC credit facility carries certain covenants such as earnings and liquidity thresholds that may limit the amount available to us. Specifically, the terms of the agreement requires us to maintain positive EBITDA in the preceding rolling 4 quarters. We are currently prevented from drawing on this credit facility.

### 5.4 CONTRACTUAL OBLIGATIONS AND COMMITMENTS

We have a number of operating leases that cover facilities and equipment as well as several committed contracts covering various IT services. The following table outlines the minimum amounts due under these agreements in future years:

	FACILITY LEASES	EQUIPMENT LEASES	IT SERVICE CONTRACTS	TOTAL
Not later than 1 year	261	32	277	570
2 year to 3 years	505	66	-	570
4 years to 5 years	173	32	-	205
Beyond 5 years	-	-	-	-
Total	939	129	277	1,345

The total lease commitments are expected to be funded by cash flows from operations.

We have a manufacturing services agreement with Flextronics Industrial Ltd. ("Flextronics"), a contract manufacturer, to build and supply a large portion of our manufactured products. Under this agreement, we are required to provide demand forecasts to Flextronics for our expected sales. Flextronics utilizes these forecasts to acquire raw materials and inventory to support that demand. If our sales are below the demand forecasts, we are then required to purchase the excess inventory. The value of the Flextronics inventory held at December 31, 2012 was \$1.1 million (December 31, 2011 - \$1.2 million), and the value of planned purchase orders to support our expected future demand was \$2.2 million (December 31, 2011 - \$2.3 million).

### 5.5 CLAIMS AND LAWSUITS

None

### 5.6 CONTINGENT LIABILITY

None

### 5.7 OFF BALANCE SHEET ARRANGEMENTS

We have not entered into any off balance sheet arrangements other than standard office/facility lease agreements.

### 5.8 RELATED PARTY TRANSACTIONS

On August 28, 2012, we completed a non-brokered private placement ("Placement") of 3,981,722 common shares at a price of \$0.45 CAD a share. We received \$1.81 million in gross proceeds from the issuance and incurred costs of \$0.05 million. The common shares issued are subject to a hold period of four months plus one day from the closing of the Placement. The majority of the private placement was subscribed by "insiders" of the Company, as defined by the regulations of the TSX exchange. In total, directors of the Company were involved with 1,364,444 of the shares issued, of which 444,444 were associated with our current Chief Executive Officer. A further 2,017,278 shares were acquired by MUUS Holding LLC ("MUUS"), a company controlled by Michael Sonnenfeldt. After this private placement, MUUS controlled approximately 19.99% of the outstanding shares of the Company. As of March 13, 2013, Mr. Sonnenfeldt currently holds 19% of the outstanding shares of the Company.

On October 12, 2011, a private placement was completed with the Company's newly appointed Chief Executive Officer ("CEO") which resulted in the issuance of 250,000 shares at \$0.50 (CDN\$) for proceeds of \$0.1 million. There were no significant issuance costs and share price equalled the closing price on the preceding day.

### Outstanding share data

Our common shares trade on the Toronto Stock Exchange ("TSX") (TSX: CMH), and as at December 31, 2012 we had 47,870,313 fully issued and outstanding common shares. The following table summarizes the outstanding shares, options and other outstanding stock units stated in Cdn\$.

			AS AT		
	MARCH 13, 2013	DECEMBER 31, 2012	SEPTEMBER 30, 2012	JUNE 30, 2012	MARCH 31, 2012
Share price – closing (Cdn \$)	0.29	0.27	0.35	0.47	0.46
Market capitalization (Cdn \$ in thousands)	14,539	12,925	16,693	20,374	19,931
Outstanding					
Shares	50,134,071	47,870,313	47,693,789	43,348,547	43,327,716
Options	1,445,800	1,445,800	1,588,756	2,079,656	2,094,156
Restricted share units	128,416	54,340	143,037	317,768	294,151
Performance share units	20,432	24,932	86,336	242,865	243,865

## 6.0 CRITICAL ACCOUNTING ESTIMATES AND ACCOUNTING POLICY DEVELOPMENTS

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

## 6.1 CRITICAL ACCOUNTING ESTIMATES

Our financial statements are prepared in accordance with IFRS. The application of IFRS requires that we make estimates that affect our reported amounts of assets and liabilities and the disclosure of contingencies at the date of the financial statements and the reported amounts of revenues and expenses during the period. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ significantly from these estimates.

The significant accounting policies and estimates are discussed below:

- Warranty reserve A provision for future potential product warranty costs is included in cost of goods sold based primarily on prior warranty experience regarding cost of claims and expected product returns. These future product warranty costs include costs associated with repair or replacement of products returned under warranty. Actual future costs in support of these claims may differ from those estimates. We review the provision quarterly and adjust it prospectively. The total provision as at December 31, 2012 was \$0.6 million, down from \$0.7 million at December 31, 2011. The warranty provision was decreased after we continued to see reduced warranty costs in 2012.
- Valuation of inventory We evaluate inventory balances at each balance sheet date and record a provision as necessary for slow
  moving or obsolete inventory. In performing this review we consider such factors as forecasted sales, demand requirements, product
  lifecycle and product development plans, quality issues, and current inventory levels. If future demand or market conditions for
  our products are less favorable than forecasted or if unforeseen technological changes occur, we may be required to record writedowns which would negatively affect gross margins in the period when the write-downs are recorded and our operating results and
  financial position could be adversely affected. At December 31, 2012 our inventory provision was approximately \$0.7 million, which is
  comparable to the amount in prior year.
- Allowance for doubtful accounts We record an allowance for doubtful accounts related to trade accounts receivable. This allowance is based on our knowledge of the financial condition of our customers, the aging of the receivables, the current business environment and historical experience. A change in one or more of these factors could impact the estimated allowance and provision for bad debts recorded. At December 31, 2012, our allowance for doubtful accounts was \$0.1 million, which is comparable to the amount in prior year.
- Forfeiture rates associated with share-based payments In determining share-based payments expense, we make estimates related to forfeiture rates for each specific grant. Forfeiture rates are used to estimate the number of awards that are expected to vest considering employee turnover rates. The changes in estimates are recognized in the statement of income (loss) and total comprehensive income (loss) in the year that they occur. Current forfeiture rates applied to grants range from 5% to 16% and vary depending upon the employee make-up of the associated grants.

## 6.2 FUTURE CHANGES IN ACCOUNTING POLICIES

Unless stated otherwise, the following standards are required to be applied for periods beginning on or after January 1, 2013 and based upon our current facts and circumstances, we do not expect to be materially affected by the application of the following standards:

- IFRS 9, Financial Instruments, is required to be applied for periods on or after January 1, 2015.
- IFRS 10, Consolidated Financial Statements
- IFRS 11, Joint Arrangements
- IFRS 12, Disclosure of Interests in Other Entities

- IFRS 13, Fair Value Measurement
- IAS 19, Employee Benefits (amended)
- IAS 16, Property Plant and Equipment (amended)
- IAS 34 Interim Financial Reporting (amended)
- IAS 1, Presentation of Financial Statements (amended), is required to be applied for periods beginning on or after January 1, 2013.
- IAS 27, Separate Financial Statements (amended)
- IAS 28, Investments in Associates (amended)

Other than for the disclosure requirements therein, the requirements of IFRS 10, IFRS 11, IFRS 12, IAS 27 (amended 2011) and IAS 28 (amended 2011) must be initially applied concurrently.

### 6.3 DISCLOSURE CONTROLS AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

Disclosure controls and procedures ("DC&P") have been designed to provide reasonable assurance that information required to be disclosed is accumulated and communicated to management as appropriate to allow timely decisions regarding required disclosure. Internal controls over financial reporting have been designed to provide reasonable assurance regarding the reliability of financial reporting. Pursuant to Multilateral Instrument 52-109, the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), collectively referred to as Officers, are responsible for overseeing the establishment and maintenance of disclosure controls and procedures as well as internal controls over financial reporting.

#### **Disclosure Controls**

Our officers and management have evaluated the effectiveness of our DC&P as at December 31, 2012 as required by Canadian securities laws. The evaluation approach involved looking at the size, nature and state of development of the business and thus used a top down risk-based approach to focus evaluation on areas that were deemed to provide the greatest risk to a material misstatement. Our evaluation also took into account our corporate disclosure procedures and the functioning of our Officers, other executive officers, management, Board of Directors, and Audit Committee. Based on this evaluation, our Officers concluded that the Company's disclosure controls and procedures were effective, at a reasonable assurance level, to ensure that material information relating to the Company and its consolidated subsidiaries would be made known to them by others within those entities, particularly during the period in which the MD&A and the Consolidated financial statements contained in this report were being prepared.

#### Internal control over financial reporting

Internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with IFRS and the requirements of the Securities Commission in Canada, as applicable. Our CEO and CFO have assessed the effectiveness of the Company's internal control over financial reporting as at December 31, 2012 in accordance with Internal Control – Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

During 2012, we completed documentation of our refined processes relating to procurement, revenue, inventory, and financial reporting. Process improvements were implemented throughout the year as weaknesses were identified. As at the end of the year, no material weaknesses were identified in the testing of design and operating effectiveness of key controls.

Based on this assessment, our CEO and CFO have determined that the Company's internal control over financial reporting is effective as at December 31, 2012 and will certify Carmanah's annual filings with Canadian securities regulatory authorities.

## 7 RISKS AND RISK MANAGEMENT

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

In the course of our operations, we are exposed to various business risks and uncertainties that can affect our financial condition. While some financial exposures are reduced through insurance, hedging and other risk management measures we have in place, there are certain cases where the market and operating risks are driven by external factors beyond our influence and control. A discussion of certain risks that may affect us is included below.

### **Competitive Environment**

The off-grid LED lighting industry is highly competitive. Our competition includes companies who manufacture, sell and install off-grid lighting devices. We compete on the basis of product performance, product features, price, quality and post-installation product support. Our ability to compete successfully depends on factors within and beyond our control, including successful and timely development of new products, product performance and quality, product availability, intellectual property protection obtained by us and our competitors, customer service, pricing, industry trends and general economic trends. In particular, we anticipate that certain competitors may transition to off-grid lighting in the future. If and when this transition occurs, the greater name recognition and financial resources of these competitors may make it difficult for us to compete.

To be successful, we will need to keep pace with rapid changes in lighting technology, changing customer requirements, new product introductions by competitors and evolving industry standards, any of which could render the our existing products obsolete if it fails to respond in a timely manner. Development of new products incorporating advanced technology is a complex process subject to numerous uncertainties. We have in the past experienced, and could in the future experience, delays in introduction of new products. If effective new sources of light are discovered, our current products and technologies could become less competitive or obsolete. If others develop superior innovative proprietary lighting technology, or if we fail to accurately anticipate technology and market trends, respond on a timely basis with our own development of new products and enhancements to existing products, and achieve broad market acceptance of these products and enhancements, our competitive position may be harmed and it may not achieve sufficient growth in revenue to attain, or sustain, profitability.

### **Competition with Other Energy Sources**

Off-grid LED lighting products compete with products powered by conventional energy and other sources of renewable energy. There is a risk that similar products with alternative power sources will enjoy greater policy support or provide a more cost-effective alternative to conventional lighting than our products.

### **Technological Changes**

Our products rely on us keeping pace with technological changes. Failure to keep pace with state-of-the-art technologies and methodologies may have a materially adverse effect on our results. Evolving industry standards and/or customer needs may have an effect on demand for our products. Our products may be rendered obsolete or less marketable due to technological advances made by competitors. In order to maintain our current market share, we may have to make substantial investments in product innovation and development.

### Anticipated Adoption Rates for Off-Grid LED Lighting

While we have invested heavily in the development of off-grid LED lighting products, off-grid LED lighting is still in its early stages. If the rate of off-grid LED lighting adoption is slower than the anticipated commercial trends and we are unable to meet the forecasted sales volumes, we may not generate sufficient revenues to sustain profitability. In addition, demand for off-grid LED lighting products in our targeted markets may not develop or may develop to a lesser extent than anticipated.

### Ability to Manage Expansion Effectively

We expect to expand our business in the future to meet the anticipated growth in demand for off-grid LED lighting products. If we are unable to manage growth effectively, we may not be able to take advantage of market opportunities, execute our business strategy or respond to competitive pressures. To manage the potential growth of our operations, we may be required to improve operational systems and procedures and expand our relationships with suppliers, manufacturers, distributors and customers. There can be no assurance that the current and planned operations, personnel, systems and internal procedures will be adequate to support future growth.
#### Foreign Exchange

Although we utilize the US Dollar as our functional currency, we are still exposed to fluctuations in the exchange rates between the US and Canadian dollar as a portion of our sales are denominated in currencies other than US dollars. Our exposure to Canadian dollar/US dollar fluctuations is reduced as we purchase a portion of inventory and other cost of sales items in Canadian dollars. If the US dollar rises relative to the Canadian dollar, our operating results may be negatively impacted.

Additionally, we enter into foreign exchange contracts to manage foreign exchange risk as required. We do not use contracts or any other financial instruments, for speculative purposes. As at December 31, 2012, we had no forward exchange contracts outstanding.

#### **Reliance on Third Party Manufacturers**

We rely on third party manufacturers and suppliers to provide certain products used in our components. While we maintain good relationships with suppliers, increased product demand can lead to increased demand on these providers, which they may not be able to meet. The failure of a supplier to meet product demands and/or specifications could result in significant production delays, which could harm our operations. Should a manufacturer or supplier suffer financial difficulties or any other disruption in manufacturing capacity, we may not be able to secure adequate substitute manufacturing sources for our products in a timely manner. While we believe we have sufficient access to manufacturing capacity to meet current and expected future requirements, it is possible that future capacity needs will not be available. Additionally, as we rely on third party manufacturers, we are subject to risks associated with limited control over delivery schedules, reductions in capacity, the possibility of defects, the possibility of increased products costs and variable product quality.

#### **Reliance on Outside Agents and Distributors**

We utilize a mixture of a direct sales force, strategic relationships and distribution agency arrangements to access our target markets. As a consequence, we rely to a significant extent upon our ability to develop strategic alliances with distributors, particularly in niche markets and in developing and emerging economies. Furthermore, market penetration of our products heavily depends on the success levels of our distributors and sales agents. There can be no assurances that we will successfully develop and maintain such alliances or that the sales efforts of our distributors and sales agents will be successful.

#### **Reliance on Key Employees**

Our success depends on our continued ability to identify, attract, hire, train, retain and motivate highly skilled technical, managerial, manufacturing, administrative and sales and marketing personnel. To a significant extent, our success will depend on our senior management team. Competition for these individuals is intense and we may not be able to successfully recruit, assimilate or retain sufficiently qualified personnel. In particular, we may encounter difficulties in recruiting and retaining a sufficient number of qualified technical personnel, which could harm our ability to develop new products and adversely impact our relationships with existing and future customers. The inability to attract and retain necessary technical, managerial, manufacturing, administrative and sales and marketing personnel could harm our ability to obtain new customers and develop new products and could adversely affect our business and operating results.

#### Intellectual Property Risks

We consider our technology and processes proprietary. If we are not able to adequately protect or enforce the proprietary aspects of our technology, competitors may utilize our proprietary technology and our operations could be harmed. We currently attempt to protect our technology through a combination of patent, copyright, trademark and trade secret laws, employee and third party nondisclosure agreements and similar means. Despite our efforts, other parties may attempt to disclose, obtain or use our technologies. Competitors may also be able to independently develop products that are substantially equivalent or superior to our products or design around our patents. In addition, the laws of some foreign countries do not protect proprietary rights as fully as do the laws of Canada. As a result, we may not be able to protect our proprietary rights adequately in Canada or abroad.

Because our patent position involves complex legal, scientific, and factual questions, the issuance, scope, validity and enforceability of our patents cannot be predicted with certainty. Our issued patents may be invalidated or their enforceability challenged, they may be designed around, and they may not provide us with competitive advantages against others with similar products and technology. Furthermore, others may independently develop similar products or technology or duplicate or design around any technologies that we have developed.

# MANAGEMENT DISCUSSION AND ANALYSIS

We may receive notices that claim we have infringed upon the intellectual property of others. Even if these claims are not valid, they could subject us to significant costs. Litigation may be necessary in the future to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation may also be necessary to defend against claims of infringement or invalidity by others. An adverse outcome in litigation or any similar proceedings could subject us to significant liabilities to third parties, require us to license disputed rights from others or require us to cease marketing or using certain products or technologies. We may not be able to obtain any licenses on acceptable terms, if at all. We also may have to indemnify certain customers if it is determined that we have infringed upon or misappropriated another party's intellectual property. Any of these results could adversely affect our business, financial condition and results of operations. In addition, the cost of addressing any intellectual property litigation claim, both in legal fees and expenses, and the diversion of management resources, regardless of whether the claim is valid, could be significant and could materially harm our business, financial condition and results of operations.

#### **Environmental and Regulatory Compliance**

We are subject to a variety of environmental laws, rules and regulations, with which we believe we are in compliance. In certain cases, the cost of compliance with regulations can be substantial. Failure to comply with present or future regulations could result in legal claims, fines, operation suspensions or cessation of operations. Compliance often requires incurring costs and capital expenditures. We face few, if any, of these issues directly as we rely on third party manufacturers.

#### **Government Contracts and Subsidies**

A significant portion of our revenues are derived from government and military agencies. Consequently, any disruption in government funding or in the relationship with those agencies could adversely affect our business.

Additionally, there are many government subsidies and economic incentives for solar energy related businesses, including the FIT Program established by the Government of Ontario. There is no guarantee that these incentives and subsidies will remain in place or that other countries, states, provinces or municipalities will adopt similar programs. The elimination of such subsidies and incentives, or the failure of additional countries, states, provinces or municipalities to adopt similar programs, may have an adverse impact on the solar market, and may result in rapid changes in demand and pricing. Such changes may have an adverse impact on our business and financial condition.

#### Product Quality and Reliability and Warranty Liability Risk

Problems with product quality and/or performance, including defects in products could damage our reputation, or result in a decrease in customers and revenue, unexpected expenses and loss of market share. We cannot test for all defects, and occasionally defects may be detected after products have been shipped or installed. These defects could cause us to incur significant costs, including product replacement, and may adversely affect our customer relations and business reputation. Additionally, because we source many of our components from third party manufacturers, our ability to control product quality is limited.

Our grid tie business strategy is to focus on securing EPC contracts. By their nature, these contracts include construction industry agreement terms including, amongst others, liquidated damages and indemnification obligations. We try to use our commercial best efforts to minimize our liability on such exposure. If negative factors occur that are beyond our control or if disputes arise and are not settled favorably, they may have an adverse impact on our business, financial condition and results of operations.

#### Downturn in Economic and Market Conditions

The lighting industry is susceptible to downturns related to declines in general economic conditions. 2012 continues to be challenging for the solar lighting industry, as demand for solar lighting products and components are adversely impacted by the global financial crisis and corresponding decreases in or postponement of infrastructure spending budgets.

We may continue to be adversely impacted by downturns in general economic and market conditions, both nationally and internationally. Economic downturns generally, or in our markets specifically, would have a material adverse effect on our, cash flows, financial condition and results of operations. Our future results of operations may experience substantial fluctuations from period to period as a consequence of these factors, and such conditions and other factors affecting capital spending may affect the timing of orders. As we sell to governments who continue to suffer from deficit spending and may need to cut spending further, we may experience a softening demand for our products.

Continued economic adversity coupled with a decline in our revenue could adversely affect our ability to meet capital requirements, support working capital requirements and growth objectives, or otherwise adversely affect our business, financial condition and results of operations.

#### Liquidity and Capital Requirements

We face significant challenges in order to achieve profitability. There can be no assurance that we will be able to maintain adequate liquidity or achieve long-term viability. Our ability to meet our obligations in the ordinary course of business is dependent upon our ability to establish profitable operations or raise capital, as needed, through public or private debt or equity financing, or other sources of financing to fund operations. We are currently restricted from borrowing funds under our credit facility with RBC, as we do not currently satisfy earnings thresholds contained in the credit facility.

The disruption of the capital markets and the continued decline in economic conditions, amongst other factors, could negatively impact our ability to achieve profitability or raise additional capital when needed. In order to optimize the growth of the business, we may need to seek to raise additional debt or equity financing. There can be no assurance that we will be able to identify a source of such financing, or that such financing will be available on terms acceptable to it, if at all. Moreover, should the opportunity to raise additional capital arise, any additional debt or equity financing could result in significant dilution of the existing holders of our common shares.

#### **Litigation Risk**

We may in the future become involved in disputes, litigation or arbitration proceedings. The results of these proceedings cannot be predicted with certainty. If we are unable to resolve these disputes favorably, it may have an adverse impact on our business, financial condition and results of operations.

#### Acquisitions or other Business Transactions

We may, when and if the opportunity arises, acquire other products, technologies or businesses involved in activities, or having product lines, that are complementary to our business. Acquisitions involve numerous risks, including difficulties in the assimilation of the operations, technologies and products of the acquired companies, the diversion of management's attention from other business concerns, risks associated with entering new markets or conducting operations in industry segments in which we have no or limited experience and the potential loss of key employees of the acquired company. Moreover, there can be no assurances that any anticipated benefits of an acquisition will be realized. Future acquisitions by us could result in potentially dilutive issuances of equity securities, the use of cash, the incurrence of debt and contingent liabilities, and write-off of acquired research and development costs, all of which could materially adversely affect our financial condition, results of operations and cash flows.

#### Potential Reorganization of Operations or Product Offerings

We routinely review our operations for additional efficiency opportunities or to reduce costs. That analysis may lead to the determination to close, eliminate, rationalize or reduce operations and divisions and/or alter the sales, manufacturing or distribution structure. Should we decide to pursue any such changes, it may incur additional charges and losses in connections with such changes in the future, and such charges and losses may be material. In addition, we could experience difficulties, disruptions or delays in the implementation of any such changes and there can be no assurance that we will be able to implement these programs successfully or on a timely basis.

#### Geopolitical and other Global or Local Events

We currently distribute our products in a number of markets. Accordingly, geopolitical and other global or local events may have a significant effect on our operations. Various events, including natural disasters, extreme weather conditions, labour disputes, civil unrest, war, political instability, terrorism, and contagious illness outbreaks, or the perceived threat of these events, may cause a disruption of our normal operations and may disrupt the domestic and international travel of our distributors and sales agents.

# MANAGEMENT DISCUSSION AND ANALYSIS

### 8. DEFINITIONS AND RECONCILIATIONS

The discussion in this section is qualified in its entirety by the Caution regarding forward-looking statements at the beginning of the MD&A.

#### **Adjusted EBITDA**

For the three and twelve month periods ended December 31, 2012 as well as the respective periods in 2011, we are disclosing adjusted EBITDA, a non-IFRS financial measure, as a supplementary indicator of operating performance. We define adjusted EBITDA as net loss before interest, income taxes, amortization, non-cash stock-based compensation, restructuring/retirement provisions, acquisition costs and terminated Lightech agreement costs/(recovery). We are presenting the non-IFRS financial measure in our filings because we use it internally to make strategic decisions, forecast future results and to evaluate our performance. We are also presenting this measure because we believe that our current and potential investors and many analysts use it to assess our current and future operating results and to make investment decisions. Adjusted EBITDA is not intended as a substitute for IFRS measures.

THREE MONTHS ENDED DECEMBER 31		YEAR ENDED I	DECEMBER 31
2012	2011	2012	2011
(721)	(8,888)	(3,921)	(8,553)
-	-	-	4
2	3,987	2	4,212
246	280	1,099	1,102
(473)	(4,621)	(2,820)	(3,235)
-	-	-	(176)
-	4,051	-	4,051
291	-	291	261
45	147	257	428
145	-	145	-
8	(423)	(2,127)	1,329
	(721) - 2 246 (473) - - 291 45 145	(721)       (8,888)         (721)       (8,888)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (473)       (4,621)         (4,051)       (4,051)         (145)       (147)	(721)       (8,888)       (3,921)         (721)       (8,888)       (3,921)         (100)       (100)       (100)         (100)       (100)       <



R920 RRFB SOLAR FLASHING BEACON - USA

### INDEPENDENT AUDITOR'S REPORT

For the years ended December 31, 2012 and 2011 (Amounts in thousands of U.S. dollars unless otherwise stated)

We have audited the accompanying consolidated financial statements of Carmanah Technologies Corporation, which comprise the consolidated statements of financial position as at December 31, 2012 and December 31, 2011, and the consolidated statements of loss and total comprehensive loss, changes in equity and cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

#### MANAGEMENT'S RESPONSIBILITY FOR THE CONSOLIDATED FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### AUDITOR'S RESPONSIBILITY

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

#### **OPINION**

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Carmanah Technologies Corporation as at December 31, 2012 and December 31, 2011, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards.

Deloitte LIP

Chartered Accountants March 13, 2013 Vancouver, Canada

### CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Expressed in thousands of U.S. dollars)

	NOTES	DECEMBER 31, 2012	DECEMBER 31, 2011
ASSETS			
Cash	5.1	2,533	4,190
Restricted cash	5.1	154	744
Trade and other receivables	5.3	4,501	5,253
Inventories	6	3,226	2,052
Prepaid and other current assets		416	392
Total current assets		10,830	12,631
Equipment and leasehold improvements	7	1,098	1,431
Intangible assets	8	1,248	1,379
Total assets		13,176	15,441
		0.004	4.470
Trade and other payables	5.4	3,861	4,173
Provisions Deferred revenue	9	550 69	660 9
Current liabilities		4,481	4,842
Equity			
Share capital	11	36,982	34,742
Equity reserve	13	2,982	3,204
Deficit		(31,268)	(27,347)
Total equity		8,696	10,599
Total liabilities and equity		13,176	15,441

Commitments and contingencies - note 12

Subsequent events - note 21

Approved and authorized for issue by the Board of Directors on March 13, 2013

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Bruce Cousins, Chief Executive Officer

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Robert Cruickshank, Chair of the Board

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### CONSOLIDATED STATEMENTS OF LOSS AND TOTAL COMPREHENSIVE LOSS

(Expressed in thousands of U.S. dollars, except number of share and per share amounts)

		YEAR ENDED DECE		
	NOTES	2012	2011	
Revenues		26,442	35,904	
Cost of sales		18,203	24,64	
Gross profit		8,239	11,26	
Operating expenditures				
Sales and marketing	15	4,218	2,97	
Research and development, net	15	1,606	1,96	
General and administrative	15	6,242	6,66	
Total operating expenditures		12,066	11,53	
Operating loss		(3,827)	(277	
Other income/(expenses)				
Loss on disposal of assets		(6)	(15	
Other expenditures		(139)	(278	
Impairment of Investment tax credits	19	-	(4,050	
Investment tax credits recognized		-	22	
Terminated Lightech agreement recovery	17	-	18	
Foreign exchange gain/(loss)		53	(124	
		(92)	(4,064	
Loss before taxes		(3,919)	(4,341	
Income tax expense	18	(2)	(4,212	
Net loss and total comprehensive loss		(3,921)	(8,553	
Net loss per share				
Basic and diluted		(0.09)	(0.20	
Weighted average number of shares outstanding:				
Basic and diluted		44,880,257	42,765,708	

### CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Expressed in thousands of U.S. dollars, except number of shares)

	19	SSUED CAPITA	L				
	NOTES	# SHARES ('000)	AMOUNT	EQUITY RESERVE	SUBTOTAL	DEFICIT	TOTAL EQUITY
Balance, January 1, 2011		42,489	34,350	3,048	37,398	(18,794)	18,604
Net loss and total comprehensive loss		-	-	-	-	(8,553)	(8,553)
Share-based payments	13	-	-	428	428	-	428
Shares issued under stock compensation plans		335	272	(272)	-	-	-
Shares issued in private placement	11	250	120	-	120	-	120
Balance, December 31, 2011		43,074	34,742	3,204	37,946	(27,347)	10,599
Net loss and total comprehensive loss		-	-	-	-	(3,921)	(3,921)
Share-based payments	13	-	-	257	257	-	257
Shares issued under stock compensation plans		479	(479)	-	-	-	
Shares issued in private placement, net of issuance costs of \$48	11	3,982	1,761	-	1,761	-	1,761
Balance, December 31, 2012		47,870	36,982	2,982	39,964	(31,268)	8,696

### CONSOLIDATED STATEMENTS OF CASH FLOWS

(Expressed in thousands of U.S. dollars)

		YEAR ENDED DECEMBER	
	NOTES	2012	2011
OPERATING ACTIVITIES			
Net loss		(3,921)	(8,553)
Add back (deduct) items not involving cash:			
Amortization		1,099	1,102
Loss on disposal of assets		6	15
Write-off of investment tax credits		-	4,050
Investment tax credits recognized		-	(220)
Share-based payments		257	428
Deferred tax expense		-	4,206
Unrealized foreign exchange loss		26	53
Decrease in working capital and other items	20	(1,018)	(1,018)
Net cash (used in) provided by operating activities		(3,551)	63
INVESTING ACTIVITIES			
Proceeds from disposal of assets		-	5
Purchase of equipment and leasehold improvements		(130)	(704)
Purchase of intangible assets		(301)	(187)
Net cash used in investing activities		(431)	(886)
FINANCING ACTIVITIES			
Proceeds from private placement	11	1,761	120
Net cash provided by financing activities		1,761	120
Foreign exchange effect on cash		(26)	(53)
Decrease in cash		(2,247)	(756)
Cash and restricted cash at beginning of year		4,934	5,690
Cash and restricted cash at end of year		2,687	4,934

Supplemental cash flow information in note 20

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 1. SUMMARY OF BUSINESS AND BASIS OF PREPARATION

#### 1.1 GENERAL BUSINESS DESCRIPTION

Carmanah Technologies Corporation (the "Company", "Carmanah") was incorporated under the provisions of the Business Corporation Act (Alberta) on March 26, 1996 and was continued under the provisions of the Business Corporations Act (British Columbia) on August 24, 2009. The Company is in the business of developing and distributing renewable and energy-efficient technologies, including solar-power LED lighting, and solar powered systems and equipment.

Carmanah is a publicly listed company incorporated in Canada with limited liability under the legislation of the Province of British Columbia. The Company's shares are listed on the Toronto Stock Exchange ("TSX"). The Company's head office is located at 250 Bay Street, Victoria, British Columbia, Canada, V9A 3K5. The Company's registered and records office is located at Farris, Vaughan, Wills & Murphy LLP, 25th floor, 700 West Georgia Street, Vancouver British Columbia V7Y 1B3.

#### 1.2 BASIS OF PREPARATION AND STATEMENT OF COMPLIANCE

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards.

These consolidated financial statements have been prepared on a going concern basis, under the historical cost convention, except for certain financial assets and financial liabilities which are measured at fair market value.

The principal accounting policies are set out below.

#### 2. SIGNIFICANT ACCOUNTING POLICIES BASIS OF CONSOLIDATION

Carmanah consolidates subsidiaries controlled by the Company. Control exists when the Company has the power, directly or indirectly, to govern the financial and operating policies of an entity so as to obtain benefits from its activities. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

Inter-company balances and transactions, including any income and expenses arising from intercompany transactions, are eliminated in preparing the consolidated financial statements.

These consolidated financial statements include the following subsidiaries:

NAME	CURRENT PRINCIPAL ACTIVITY	PLACE OF INCORPORATION AND OPERATION	OWNERSHIP/VOTING INTEREST HELD BY COMPANY HELD AT:	
			2011	2012
Carmanah Technologies (US) Corporation	Employs US based sales representatives on behalf of the parent company	United States - Nevada	100%	100%
Carmanah Solar Power Corporation (Previously AVVA Technologies prior to 2010)	Used to meet local content requirements of the Ontario Feed in Tariff ("FIT") program which is associated with our Grid-tie market segment	Canada – Ontario (Alberta prior to 2010)	100%	100%

#### 2.2 BUSINESS COMBINATIONS

The identifiable assets, liabilities and contingent liabilities of a subsidiary, which can be measured reliably, are recorded at their provisional fair values at the date of acquisition. Goodwill is the fair value of the consideration transferred (including contingent consideration and previously held non-controlling interests) less the fair value of Carmanah's share of identifiable net assets on acquisition. Transaction costs incurred in connection with the business combination are expensed. Provisional fair values are finalized within twelve months of the acquisition date.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

Where the fair value of the identifiable net assets acquired exceeds the cost of the acquisition, the surplus, which represents the discount on the acquisition, is recognized directly in the statement of income (loss) and total comprehensive income (loss) in the period of acquisition.

For non-wholly owned subsidiaries, non-controlling interests are initially recorded at the non-controlling interest's proportion of the fair values of net assets recognized at acquisition.

#### 2.3 FOREIGN CURRENCIES

The functional and presentation currency of Carmanah and its subsidiaries is the US dollar.

Transactions in currencies other than the functional currency are recorded at the rates of exchange at the date of the transaction. At each financial position reporting date, monetary assets and liabilities that are denominated in foreign currencies are translated at the rates prevailing at the period end date. Non-monetary items that are measured in terms of historical cost are translated using the historical rates. All gains and losses on translation of those foreign currency transactions are recorded in comprehensive income.

#### 2.4 FINANCIAL INSTRUMENTS

Financial instruments are classified into one of the following categories: (1) Fair value through profit and loss ("FVTPL"), (2) held-tomaturity ("HTM"), (3) loans and receivables, (4) available-for-sale ("AFS") financial assets or (5) other financial liabilities. The classification determines the accounting treatment of the instrument. Carmanah determines the classification when the financial instrument is initially recorded, based on the underlying purpose of the instrument.

#### FINANCIAL ASSETS

#### Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and on demand deposits, together with short term, highly liquid investments that are readily convertible to a known amount of cash and that are subject to an insignificant risk of changes in value. Cash and cash equivalents are classified as loans and receivables and are measured at amortized cost.

For the purposes of the consolidated statement of cash flows, total cash and cash equivalents include cash at banks and on hand and restricted cash at banks.

#### Trade and other receivables

Trade receivables do not incur any interest, are short term in nature and are measured at their nominal value net of appropriate allowance for estimated amounts that are not expected to be recovered. Such allowances are raised based on an assessment of debtor ageing, past experience or known customer circumstances.

#### Investments

Investments, other than investments in subsidiaries, joint ventures and associates, are financial asset investments and are initially recognized at fair value. At subsequent reporting dates, financial assets that the Company has the expressed intention and ability to hold to maturity (held to maturity) as well as loans and receivables are measured at amortized cost, less any impairment losses. The amortization of any discount or premium on the acquisition of a held to maturity investment is recognized in the statement of income (loss) and total comprehensive income (loss) in each period using the effective interest method.

Investments other than those classified as held to maturity or loans and receivables are classified as either at fair value through profit or loss (which includes investments held for trading) or available for sale financial assets. Both categories are subsequently measured at fair value. Where investments are held for trading purposes, realized/unrealized gains and losses for the period are included in the statement of income (loss) and comprehensive income (loss) within other gains and losses. For available for sale investments, realized/unrealized gains and losses are recognized in equity until the investment is disposed or impaired, at which time the cumulative gain or loss previously recognized in equity is included in the statement of income (loss) and total comprehensive income (loss).

#### Impairment of financial assets (including receivables)

A financial asset not measured at fair value through profit or loss is assessed at each reporting date to determine whether there is any objective evidence that it is impaired. A financial asset is impaired if objective evidence indicates that a loss event has occurred after the initial recognition of the asset.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

An impairment loss in respect of a financial asset measured at amortized cost is calculated as the difference between its carrying amount and the present value of the estimated cash flows discounted at the asset's original effective interest rate. Losses are recognized in the statement of income (loss) and total comprehensive income (loss). When a subsequent event causes the amount of impairment loss to decrease, the decrease in impairment loss is reversed through the statement of income (loss) and total comprehensive income (loss).

Impairment losses relating to available for sale investments are recognized when the decline in fair value is considered significant or prolonged. These impairment losses are recognized by transferring the cumulative loss that has been recognized in comprehensive income to net income (loss). The loss recognized in the statement of income (loss) and total comprehensive income (loss) is the difference between the acquisition cost and the current fair value.

#### Financial liabilities and equity instruments

Financial liabilities and equity instruments are classified and accounted for as debt or equity according to the substance of the contractual arrangements entered into. An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

#### **Equity instruments**

Equity instruments issued by Carmanah; are recorded at the proceeds received, net of direct issue costs.

#### Trade and other payables

Trade payables are not interest bearing and are measured at their nominal value until settled.

#### Derecognition of financial assets and financial liabilities

Financial assets are derecognized when the rights to receive cash flows from the asset have expired, the right to receive cash flows has been retained but an obligation to pay them in full without material delay has been assumed or the right to receive cash flows has been transferred together with substantially all the risks and rewards of ownership.

Financial liabilities are derecognized when the associated obligation has been discharged, cancelled or has expired.

#### Offsetting financial assets and liabilities

Financial assets and liabilities are offset and the net amount is presented in the statement of financial position when, and only when, the Company has a legal right to offset the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

#### **Derivative financial instruments**

From time to time Carmanah enters into a variety of derivative financial instruments to manage its exposure to foreign exchange risks, including foreign exchange forward and option contracts.

Derivatives are initially recognized at fair value at the date the derivative contracts are entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately. The Company does not currently apply hedge accounting for derivatives.

Derivatives embedded in non-derivative host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contract and the host contracts are not measured at fair value through profit and loss.

#### 2.5 INVENTORIES

Inventories are valued at the lower of cost and net realizable value. Cost is determined on a weighted average basis and includes all costs of purchase, costs of conversion (direct costs and an allocation of fixed and variable production overheads) and other costs incurred in bringing the inventory to their present location and condition. Net realizable value is the estimated selling price less estimated costs to complete.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### 2.6 EQUIPMENT AND LEASEHOLD IMPROVEMENTS

Equipment and leasehold improvements are carried at cost, less accumulated depreciation and accumulated impairment losses. The cost of an item of equipment and leasehold improvements consists of the purchase price, any costs directly attributable to bringing the asset to the location and condition necessary for its intended use, and an initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.

Depreciation is recognized at rates calculated to write off the cost of equipment and leasehold improvements, less their estimated residual value, using the straight-line method. The periods/rates are outlined below:

ASSET	RATE/YEARS
Computer hardware	3-5
Leasehold improvements	Term of lease
Office equipment	5-7
Production equipment	5
Research and tradeshow equipment	5

Estimated useful lives, depreciation methods, rates and residual values are reviewed on a periodic basis, with any changes in these estimates accounted for on a prospective basis.

An item of equipment and leasehold improvements is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on disposal of the asset, determined as the difference between the net disposal proceeds and the carrying amount of the asset, is recognized in profit or loss in the consolidated statement of total comprehensive income/(loss). Where an item of equipment and leasehold improvements comprises major components with different useful lives, the components are accounted for as separate items of plant and equipment. Expenditures incurred to replace a component of an item of equipment and leasehold improvements that are accounted for separately, including major inspection and overhaul expenditures, are capitalized and amortized over their estimated useful life.

#### 2.7 INTANGIBLE ASSETS

Intangible assets consist of product development assets, computer software, license rights, trademarks, and patents. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at the end of each year end.

Product development assets relate to internal development efforts for research and development which have met certain capitalization criteria outlined in 2.12. Product development assets are amortized on a straight line basis over their estimated useful lives once the related technology has been commercialized and sales commence. The current product development assets have an estimated useful life of 3 years.

Computer software relates to expenditures incurred to acquire and implement software used within the business. Software assets are amortized over their estimated useful lives which various between 3 and 5 years.

License rights relates to expenditures incurred to license the rights to various technologies for use in our product offering. These assets are amortized over the term of the agreement.

Patent and trademark assets consist of professional fees incurred for the filing of patents and the registration of trademarks for product marketing purposes. Patent and trademark registration and maintenance fees paid are amortized on a 25% declining balance basis.

#### 2.8 IMPAIRMENT OF NON-FINANCIAL ASSETS

The Company's tangible and intangible assets are reviewed for an indication of impairment at each statement of financial position date. If indication of impairment exists, the asset's recoverable amount is estimated.

An impairment loss is recognized when the carrying amount of an asset, or its cash-generating unit, exceeds its recoverable amount. A cash-generating unit is the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets. Impairment losses are recognized in profit and loss for the period. Impairment losses recognized in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to cash-generating units, if any, and then to reduce the carrying amount of the other assets in the unit on a pro-rata basis.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

The recoverable amount is the greater of the asset's fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

An impairment loss is reversed if there is an indication that there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. An impairment loss with respect to goodwill is never reversed.

#### 2.9 **PROVISIONS**

Provisions are recorded when a present legal or constructive obligation exists as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the statement of financial position date, taking into account the risks and uncertainties surrounding the obligation. When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount receivable can be measured reliably.

#### 2.10 SHARE-BASED PAYMENTS

For equity-settled share-based compensation, expense is based on the grant date fair value of the awards expected to vest over the vesting period. For cash-settled share-based compensation, the expense is determined based on the fair value of the award at the end of the reporting period until it is settled. The expense is recognized over the vesting period, which is the period over which all of the specified vesting conditions are satisfied. For awards with graded vesting, the fair value of each tranche is recognized over its respective vesting period. At the end of each reporting period, the Company re-assesses its estimates of the number of awards that are expected to vest and recognizes the impact of the revisions in the statement of loss and total comprehensive loss.

The fair value of the stock options granted is measured using the Black-Scholes option pricing model taking into account the terms and conditions upon which the options were granted. The fair value of the stock units granted is measured using the common share price at the time of the grant.

#### 2.11 REVENUE RECOGNITION

Carmanah measures revenue at the fair value of the consideration received or receivable.

#### SALE OF GOODS:

Revenue from the sale of products is recognized when all of the following conditions have been met:

- title and risk involving the products are transferred to the buyer;
- the Company's managerial involvement over the goods ceases to exist;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the transaction will flow to the Company; and
- the costs incurred in respect of the transaction can be measured reliably.

If there is a requirement for customer acceptance of any products shipped, revenue is recognized only after customer acceptance has been received. Payments received in advance of the satisfaction of the Company's revenue recognition criteria are recorded as deferred revenue.

Provisions are established for estimated product returns and warranty costs at the time revenue is recognized based on historical experience for the product.

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### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### SALE OF SERVICES:

Revenue from the rendering of services is recognized when the following criteria are met:

- the amount of revenue can be measured reliably;
- the stage of completion can be measured reliably;
- the receipt of economic benefits is probable; and
- costs incurred and to be incurred can be measured reliably.

#### **PROJECTS**:

Revenue from projects, which can include both the sale of goods and services, is generally recorded on a percentage of completion basis. To determine the amount of revenue to recognize, the Company will:

Measure the stage of completion by reviewing the proportion of costs incurred for work performed to date compared to the total estimated contract costs.

The Company periodically revises the estimates of the percentage of completion of each project by comparing the actual costs incurred to the total estimated costs for the project. These estimates of total cost are subject to change, which would have an impact on the timing of revenue recognized.

#### 2.12 RESEARCH AND DEVELOPMENT COSTS

Carmanah is engaged in research and development activities. Research costs are expensed as incurred. Development costs are expensed, unless all of the following can be demonstrated:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale;
- The intention to complete the intangible asset and use or sell it;
- The ability to use or sell the intangible asset;
- How the intangible asset will generate probable future economic benefits;
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above, less investment tax credits, if applicable.

#### 2.13 INVESTMENT TAX CREDITS

Carmanah is entitled to certain Canadian federal and provincial tax incentives for qualified scientific research and experimental development activities. The associated investment tax credits ("ITCs") are available to the Company to reduce actual income taxes payable and are recorded when it is probable that such credits will be utilized. The utilization is dependent upon the generation of future taxable income. Management assesses the probability of usage based upon forecasted results utilizing a sensitivity analysis on various factors that impact profitability.

ITCs are recorded on the consolidated statement of income/(loss) and total comprehensive income/(loss) as non-operating income under the caption "Investment tax credits recognized". The corresponding impairment of investment tax credits, if any, is also recognized as a non-operating expense.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### 2.14 INCOME TAXES

Income tax on the profit or loss for the periods presented comprises current and deferred tax. Income tax is recognized in profit or loss except to the extent that it relates to items recognized directly in equity, in which case it is recognized in equity.

Current tax expense is the expected tax payable on the taxable income for the year, using tax rates substantively enacted at period end, adjusted for amendments to tax payable with regards to previous years.

Deferred tax is recognized, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the statement of financial position. Deferred tax is calculated using tax rates and laws that have been substantively enacted at the end of the reporting period, and which are expected to apply when the related deferred income tax asset is realized or the deferred income tax liability is settled.

#### **DEFERRED TAX LIABILITIES**

- are generally recognized for all taxable temporary differences;
- are recognized for taxable temporary differences arising on investments in subsidiaries, associates and joint ventures, except where the reversal of the temporary difference can be controlled and it is probable that the difference will not reverse in the foreseeable future; and
- are not recognized on temporary differences that arise from goodwill which is not deductible for tax purposes.

#### **DEFERRED TAX ASSETS:**

- are recognized to the extent it is probable that taxable profits will be available against which the deductible temporary differences can be utilized; and
- are reviewed at the end of the reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are not recognized in respect of temporary differences that arise on initial recognition of assets and liabilities acquired other than in a business combination.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Company intends to settle its current tax assets and liabilities on a net basis.

#### 2.15 EARNINGS (LOSS) PER SHARE

The Company presents basic and diluted earnings (loss) per share data for its common shares, calculated by dividing the loss attributable to common shareholders of Carmanah by the weighted average number of common shares outstanding during the period. Diluted earnings (loss) per share is determined by adjusting the profit or loss attributable to common shareholders and the weighted average number of common shares outstanding for the effects of all dilutive potential common shares, which are comprised of restricted shares and share options granted to employees and directors of the Company.

All dilutive potential common shares are anti-dilutive for the years presented.

#### 2.16 SEGMENT REPORTING

Carmanah's operating segments are organized around the markets it serves and are reported in a manner consistent with the internal reporting provided to the Chief Executive Officer ("CEO"). The CEO is considered the chief operating decision-maker ("CODM") and has the authority for resource allocation and is responsible for assessing the Company's performance.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 3. SIGNIFICANT ACCOUNT JUDGEMENTS AND ESTIMATES

The preparation of financial statements requires management to make estimates and judgments about the future.

Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Accounting estimates will, by definition, seldom equal the actual results. The following discussion sets forth management's most critical estimates and assumptions in determining the value of assets and liabilities; and most critical judgments in applying accounting policies.

#### 3.1 CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS

#### ALLOWANCE FOR DOUBTFUL ACCOUNTS

Carmanah must make an assessment of whether trade receivables are collectible from customers. Accordingly, management establishes an allowance for estimated losses arising from non-payment and other sales adjustments, taking into consideration customer creditworthiness, current economic trends and past experience. If future collections differ from estimates, future earnings would be affected. At December 31, 2012, the combined allowances were \$0.1 million, or 3.0% of the gross trade accounts receivable balance of approximately \$4.6 million. See financial statement note 5.3 for further discussions on trade receivables and the associated allowance.

#### INVENTORY VALUATION

The Company adjusts inventory values so that the carrying value does not exceed net realizable value. The valuation of inventory at the lower of average cost or net realizable value requires the use of estimates regarding the amount of current inventory that will be sold and the prices at which it will be sold and an assessment of expected orders from customers. Additionally, the estimates reflect changes in products or changes in demand because of various factors, including the market for our products, obsolescence, production discontinuation, technology changes and competition. At December 31, 2012, the Company had provisions of \$0.7 million, or approximately 18% of the value of gross inventory.

#### WARRANTY RESERVE

Provisions are made at the time of sale for warranties, which are based on historical experience and are regularly monitored. If the estimates for warranties and returns are too low, additional charges will be incurred in future periods and these additional charges could have a material adverse effect on our financial position and results of operations. Carmanah has a provision of \$0.6 million at December 31, 2012, which is down from \$0.7 million at December 31, 2011. This decrease is partially due to lower sales and also due to lower overall warranty claims. Recent historical estimates have not required significant adjustment due to actual experience.

#### SHARE-BASED PAYMENTS

In determining share-based payments expense, Carmanah makes estimates related to forfeiture rates for each specific grant. Forfeiture rates are used to estimate the number of awards that are expected to vest considering employee turnover rates. The changes in estimates are recognized in the statement of loss and total comprehensive loss in the year that they occur. Current forfeiture rates applied to grants range from 5% to 16% and vary depending upon the employee make-up of the associated grants.

#### **INCOME TAXES**

Carmanah calculates income tax provisions in each of the jurisdictions in which it operates. Actual amounts of income tax expense only become final upon filing and acceptance of the tax return by the relevant authorities, which occurs subsequent to the issuance of the financial statements. Additionally, estimation of income taxes includes evaluating the recoverability of deferred tax assets based on an assessment of the ability to use the underlying tax deductions before they expire against future taxable income. The assessment is based upon existing tax laws and estimates of future taxable income. To the extent estimates differ from the final tax returns, earnings would be affected in a subsequent period. The Company has not recognized deferred tax assets at December 31, 2012 or 2011.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

# 4. ACCOUNTING STANDARDS ISSUED BUT NOT YET EFFECTIVE

Certain pronouncements were issued by the IASB or the International Financial Reporting Interpretations Committee ("IFRIC") that are mandatory for accounting periods after December 31, 2012.

The IASB issued the following new and revised standards addressing the accounting for consolidation, involvements in joint arrangements and disclosure of involvements with other entities:

- IFRS 10, Consolidated Financial Statements ("IFRS 10") replaces the consolidation guidance in IAS 27 (2008), Consolidated and Separate Financial Statements ("IAS 27 (2008)"), and SIC-12,
- Consolidated Special Purpose Entities, by introducing a single consolidation model for all entities based on control, irrespective of the nature of the investee.
- IFRS 11, Joint Arrangements ("IFRS 11") replaces IAS 31, Interests in Joint Ventures. The option to apply the proportional consolidation method when accounting for jointly controlled entities is removed.
- IFRS 12, Disclosure of Interests in Other Entities ("IFRS 12") requires enhanced disclosures about the entity's interests in subsidiaries, joint arrangements and associates, and unconsolidated structured entities.
- IAS 27 (2011), Separate Financial Statements the consolidation requirements previously forming part of IAS 27 (2008) have been revised and are now contained in IFRS 10.
- IAS 28 (2011), Investments in Associates and Joint Ventures amended to conform to changes based on the issuance of IFRS 10, IFRS 11, and IFRS 12.

These five standards must be adopted concurrently and are effective for annual periods beginning on or after January 1, 2013. The Company is assessing the impact that these standards will have on the Company's consolidated financial statements.

The IASB also issued the following new and revised accounting pronouncements, for which the Company is assessing the impact that these standards will have on the Company's consolidated financial statements:

Effective for annual periods beginning on or after January 1, 2013:

- IAS 1, Presentation of Financial Statements amended to clarify the requirements for comparative information in the financial statements.
- IAS 19, Employee Benefits (2011) amended to change the accounting for defined benefit plans and terminations benefits, and
  improve the understandability and usefulness of disclosures.
- IAS 16, Property, Plant and Equipment ("IAS 16") amended to clarify the classification of servicing equipment.
- IAS 32, Financial Instruments: Presentation amended to clarify that the tax effect of a distribution to holders of equity instruments should be accounted for in accordance with IAS 12.
- IAS 34, Interim Financial Reporting amended to clarify the requirements for segment information related to total assets and total liabilities.
- IFRS 13, Fair Value Measurement provides a precise definition of fair value and a single source of fair value measurement and disclosure requirements for use across IFRSs.

Effective for annual periods beginning on or after January 1, 2015:

IFRS 9, Financial Instruments ("IFRS 9") – replaces IAS 39, Financial Instruments: Recognition and measurement ("IAS 39"). IFRS 9 simplifies the classification and measurement requirements for financial instruments, which replaces the multiple classification and measurement models in IAS 39.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 5. FINANCIAL INSTRUMENTS

CLASSIFICATION AND CARRYING VALUE

The following table summarizes information regarding the classification and carrying values of Carmanah's financial instruments:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Loans and receivables		
Cash and restricted cash	2,687	4,934
Trade and other receivables	4,501	5,253
Other financial liabilities		
Trade and other payables	3,861	4,173

FAIR VALUE

The following fair value measurement hierarchy is used for financial instruments that are measured in the statement of financial position at fair value:

- · Level 1 quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (that is, as prices) or indirectly (that is, derived from prices); and
- Level 3 inputs for the asset or liability that are not based on observable market data (that is, unobservable inputs).

The Company does not have any financial instruments at fair value at December 31, 2012.

The carrying value of cash and restricted cash, trade and other receivables, and trade and other payables approximates their fair value due to the relatively short-term maturity of these financial instruments.

#### **OFFSET FINANCIAL INSTRUMENTS**

Carmanah offsets and settles all of its trade receivables due from its contract manufacturer against associated trade payables. At December 31, 2012, trade receivables of \$0.3 million (December 31, 2011 - \$0.2 million) have been netted against trade payables.

#### FOREIGN CURRENCY RISK MANAGEMENT

Carmanah transacts business in multiple currencies, which gives rise to market risks exposure associated with fluctuating foreign currency values. Most significantly, the Company has potential exposure to currency fluctuations between the U.S. and Canadian dollars.

A breakdown of the Carmanah's financial instruments by currency is provided below:

	U.S	CANADIAN	OTHER	TOTAL
Balance at December 31, 2012				
Cash and cash equivalents	1,363	1,161	163	2,687
Trade and other receivables	3,123	1,188	190	4,501
Trade and other payables	2,471	1,390	-	3,861
Balance at December 31, 2011				
Cash and cash equivalents	3,247	1,649	38	4,934
Trade and other receivables	3,474	1,566	213	5,253
Trade and other payables	2,887	1,286	-	4,173

Given the relative currency mix noted above, Carmanah estimates a five percent change in the Canadian dollar relative to the U.S. dollar would result in a \$0.1 million impact to operating income.

The Company attempts to manage the exposure to foreign currency fluctuations by (1) entering into various currency derivative contracts based on expected cash flows, and (2) managing the amount of foreign denominated working capital held. The success of these efforts is often limited due to the uncertainty surrounding the timing and magnitude of foreign currency sales and associated cash flows.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### **CREDIT RISK MANAGEMENT**

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Company. This risk is mainly associated with trade and other receivables and is discussed in detail within note 5.3.

#### 5.1 CASH

Cash represents cash in banks and cash on hand. There were no cash equivalents at December 31, 2012 (December 31, 2011: \$Nil).

Restricted cash represents the balance in our bank that is restricted as a result of a facility with the Bank of Montreal. The restrictions relate to current outstanding standby letters of credit required to secure various sales contracts with customers, and amounts to secure corporate credit cards.

#### 5.2 DERIVATIVE FINANCIAL ASSETS

The Company had no outstanding derivative financial instruments at December 31, 2012 or 2011.

#### 5.3 TRADE AND OTHER RECEIVABLES

Trade and other receivables are comprised of the following:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Trade receivables	3,943	5,097
Allowance for doubtful accounts	(113)	(110)
Net trade receivables	3,830	4,987
Other receivables	671	266
Total trade and other receivables	4,501	5,253

#### 5.3.1 NET TRADE RECEIVABLES

#### TRADE RECEIVABLES

Trade receivables generally carry 30 day terms, although this can vary for certain customers. Generally, no interest is charged on trade receivables.

#### ALLOWANCE FOR DOUBTFUL ACCOUNTS/CREDIT RISK MANAGEMENT

Before extending credit terms to a new customer, Carmanah assesses the potential customer's credit quality by performing external credit checks and references. Credit limits and terms for existing customers are reviewed on an as needed basis based on order and payment history.

At each period end, Carmanah reviews the collectability of outstanding receivables. In general, the Company provides an allowance of (1) 100% on accounts that have been transferred to a collection agency or for which there have been no recent communication, and (2) a variable percentage (between 10%-50%) on accounts that have had irregular communications, originate from a higher risk country, or have slow payment history. The percentage provided is based on reference to historical experience on defaults and an analysis of the counterparty's current financial situation. The specific accounts are only written off once all collections avenues have been explored or when legal bankruptcy has occurred. The following is a reconciliation of the allowance account:

RECONCILIATION OF THE ALLOWANCE FOR DOUBTFUL ACCOUNTS	DECEMBER 31, 2012	DECEMBER 31, 2011
Balance, beginning of year	110	180
Write offs of specific accounts	(107)	(98)
Recoveries	36	-
Change in provision	74	28
Balance, end of year	113	110

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

At December 31, 2012, approximately 76% (December 31, 2011: 73%) of the trade receivables are either current or are past due but was not impaired, and \$1.7 million (December 31, 2011: \$2.0 million) is due from the five largest accounts.

Total trade receivables disclosed include amounts that are past due at the end of the reporting period for which the Company has not recognized an allowance for doubtful accounts because there has not been a significant decrease in credit quality and are still considered fully recoverable. The following table outlines the relative age of these receivables that are past due but not impaired:

ACCOUNTS OVERDUE BUT NOT IMPAIRED	DECEMBER 31, 2012	DECEMBER 31, 2011
1-30 days	406	886
31-90	100	622
90+	23	72
Total	529	1,580

#### 5.3.2 OTHER RECEIVABLES

Other receivables primarily relate to statutory holdbacks on major grid-tie construction projects. These construction projects typically carry contractual obligations of holdbacks amounting to 10% of the project revenues recognized and are transferred to trade receivables once projects reach substantial completion. Holdbacks are generally paid 45 days after substantial completion.

#### 5.4 TRADE AND OTHER PAYABLES

The Company's trade payables and accrued liabilities are broken down as follows:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Trade payables	2,850	3,181
Accrued liabilities	1,011	992
	3,861	4,173

#### 5.5 CAPITAL MANAGEMENT

Carmanah defines capital that it manages as the aggregate of short-term and long-term debt, share capital, equity reserve, and deficit. Changes are made to the capital structure in light of economic conditions and upon approval from the Company's Board of Directors or shareholders as required. Carmanah has no outstanding debt and the current objectives are to meet the capital requirements through funds generated from operations without issuing any long-term debt. The Company's overall strategy with respect to management of capital remains unchanged from the year ended December 31, 2011.

The Company is currently not subject to any externally imposed capital requirements and does not presently utilize any quantitative measures to monitor its capital.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 6. INVENTORIES

	DECEMBER 31, 2012	DECEMBER 31, 2011
Finished goods	2,319	1,008
Raw materials	1,613	1,717
Provision for obsolescence	(706)	(673)
Net inventories	3,226	2,052

For the year ended December 31, 2012, inventory recognized as an expense in cost of sales amounted to \$17.2 million (2011 - \$23.4 million). Included in the above amounts were inventory write downs of \$0.4 million (2011 - \$0.5 million). There were no reversals of previous recorded inventory write downs. As at December 31, 2012, the Company anticipates the net inventory will be realized within one year.

### 7. EQUIPMENT AND LEASEHOLD IMPROVEMENTS

The Company's equipment and leasehold improvements are broken down as follows:

	COMPUTER HARDWARE	LEASEHOLD IMPROVEMENTS	OFFICE EQUIPMENT	PRODUCTION EQUIPMENT	RESEARCH AND TRADESHOW EQUIPMENT	TOTAL
Cost						
Balance January 1, 2011	857	507	132	796	534	2,826
Additions	41	597	48	10	8	704
Disposals	-	(483)	(51)	-	-	(534)
Balance December 31, 2011	898	621	129	806	542	2,996
Additions	84	-	-	30	16	130
Disposals	-	-	(21)	(68)	(33)	(122)
Balance December 31, 2012	982	621	108	768	525	3,004
Accumulated amortization						
Balance January 1, 2011	676	464	80	213	219	1,652
Amortization for the year	98	62	17	148	103	428
Disposals	-	(480)	(35)	-	-	(515)
Balance December 31, 2011	774	46	62	361	322	1,565
Amortization for the year	78	124	15	143	97	457
Disposals	-	-	(21)	(63)	(32)	(116)
Balance December 31, 2012	852	170	56	441	387	1,906
Carrying amounts						
At December 31, 2011	124	575	67	445	220	1,431
At December 31, 2012	130	451	52	327	138	1,098

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 8. INTANGIBLE ASSETS

The Company's intangible assets are broken down as follows:

	PATENTS AND TRADEMARKS	SOFTWARE	LICENSE RIGHTS	PRODUCT DEVELOPMENT ASSETS	TOTAL
Cost					
Balance January 1, 2011	586	2,055	-	545	3,186
Additions	83	104	-	-	187
Balance December 31, 2011	669	2,159	-	545	3,373
Additions	60	1	450	-	511
Balance December 31, 2012	729	2,160	450	545	3,884
Accumulated amortization					
Balance January 1, 2011	273	815	-	232	1,320
Amortization for the year	91	402	-	181	674
Balance December 31, 2011	364	1,217	-	413	1,994
Amortization for the year	86	361	63	132	642
Bal. December 31, 2012	450	1,578	63	545	2,636
Carrying amounts					
At December 31, 2011	305	942	-	132	1,379
At December 31, 2012	279	582	387	-	1,248

#### LICENSE RIGHTS

In April 2012, the Company signed a five year exclusive cooperation agreement with Laser Guidance Inc. ("LG"). Under this agreement, the Company obtained the exclusive world-wide marketing license for a portfolio of aviation navigation aids designed and manufactured by LG which will enable Carmanah to sell comprehensive airfield solutions. The agreement provides fixed payments to LG totaling \$0.45 million to be made over 12 months. In addition, during the term of the agreement, a variable payment of 2% of all airfield revenues that include LG products as part of the purchase order is payable to LG. The Company has recorded an intangible asset of \$0.45 million, and as at December 31, 2012 \$0.24 million of this has been paid with the remaining balance accrued as a liability. The total is being amortized on a straight-line basis over the 5 year term of the agreement. No variable payments have been made under the agreement, and those costs will be expensed in cost of sales when the revenue is recognized.

### 9. PROVISIONS

	DECEMBER 31, 2012	DECEMBER 31, 2011
Warranty provision	550	660
	550	660

#### WARRANTY PROVISION

Carmanah provides its customers with a limited right of return for defective products. All warranty returns must be authorized by the Company prior to acceptance. The warranty term varies between 1 and 5 years depending on the product and customer sold to. The estimates surrounding the warranty provision are reviewed on a regular basis and updated for recent experience and known product issues.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

The following is a reconciliation of the warranty provision during the year:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Opening provision	660	671
Warranty costs incurred	(270)	(300)
Warranty provision additions/changes	380	289
Closing provision	550	660

Due to the uncertainty surrounding the timing of warranty returns, the entire provision has been classified as current.

### 10. CREDIT FACILITIES

On August 23, 2012, the Company secured a new CDN \$5.0 million revolving demand and a CDN \$0.5 million term credit facility with Royal Bank of Canada ("RBC"). This new facility replaces a prior credit facility with Bank of Montreal which expired in July 2012. The RBC credit facility carries certain covenants such as earnings and liquidity thresholds that may limit the amount available to the Company. Specifically, the terms of the agreement requires the Company to maintain positive EBITDA in the preceding rolling 4 quarters. As the Company is not currently in compliance, it is prevented from drawing on the facility.

### 11. SHARE CAPITAL

All shares are fully paid common shares which have no par value.

On August 28, 2012, the Company completed a non-brokered private placement ("Placement") of 3,981,722 common shares at a price of \$0.45 CAD a share. The Company received \$1.81 million in gross proceeds from the issuance and incurred costs of \$0.05 million. The common shares issued were subject to a hold period of four months plus one day from the closing of the Placement. The majority of the private placement was subscribed by "insiders" of the Company, as defined by the regulations of the TSX. In total, directors of the Company at that time were involved with 1,364,444 of the shares issued, of which 444,444 were associated with the current Chief Executive Officer. A further 2,017,278 shares were acquired by MUUS Holding LLC ("MUUS"), a company controlled by Michael Sonnenfeldt. After this private placement, MUUS controlled about 19.9% of the outstanding shares of the Company. As of the date of these consolidated financial statements, Mr Sonnenfeldt holds approximately 19% of the outstanding shares of the Company.

On October 12, 2011, a private placement was completed with the Company's newly appointed Chief Executive Officer ("CEO") which resulted in the issuance of 250,000 shares at \$0.50 (CDN\$) for proceeds of \$0.1 million. There were no significant issuance costs and share price equaled the closing price on the preceding day.

### 12. SHARE-BASED PAYMENTS

At the 2011 Annual General Meeting, Carmanah's shareholders approved the replacement of the Company's old share-based payments plans issued in 2007 with a new Incentive Awards Plan ("the new Plan"). Under the new Plan the maximum number of issuable shares for share-based payments is equal to 10% of the aggregate issued and outstanding shares. The new Plan allows for the issuance of stock options, stock appreciation rights ("SARs"), restricted share units ("RSUs"), performance share units ("PSUs"), and deferred share units ("DSUs"). The vesting terms and conditions of stock options, SARs, RSUs, PSUs, and DSUs are determined by the Board of Directors at the time of grant. The following table summarizes the valuation methods used to measure the fair value of each type of award and the vesting periods.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

TYPE OF AWARD	TERM AND VESTING PERIOD	FAIR VALUE MEASUREMENT	EQUITY SETTLED	CASH SETTLED XPENSE BASED ON
Stock options	Maximum term is 10 years and typical is 5 years. Vesting is typically 3 years	Black-Scholes option pricing model	Fair value on next business day after grant date	Fair value at reporting date
Stock units (RSU, PSU, DSU)	Typical vesting period is between 0 to 3 years. Maximum term for RSUs is 3 years.	Closing share price	Fair value on next business day after grant date	Fair value at reporting date
SARs (none outstanding)	Maximum term is 10 years	Closing share price	Fair value at reporting date	Fair value at reporting date

Prior to June 2011, the following plans were in place:

A Restricted Stock Unit (RSU) Plan and a Performance Stock Unit (PSU) Plan which were created in 2007. There were a combined 2,200,000 shares reserved under these plans. Each RSU and each PSU entitles the holder to receive one common share of the Company upon vesting. The RSUs and the PSUs vest between zero and 36 months from the date of grant. The awards granted under this 2007 `plan will continue to be governed by the terms and conditions of this plan.

A fixed stock option plan also created in 2007 that enabled the Company to grant options to its directors, officers, employees and other service providers. Each option agreement with the grantee sets forth, among other things, the number of options granted, the exercise price and the vesting conditions of the options. The Company reserved 2,850,000 common shares under the 2007 plan. The options vest between 18 and 36 months from the date of grant and have a maximum term of five years. The options granted under this 2007 plan will continue to be governed by the terms and conditions of this plan.

The total compensation expense associated with these share-based payment plans are outlined in the table below:

YEARS ENDED DECEMBER 31,	2012	2011
Stock options	113	111
Stock units	144	317
Total compensation expense	257	428

Currently, all outstanding awards issued under these plans are equity settled, although the plans do allow for cash settlement if elected by the Board of Directors.

The following table provides a reconciliation of the maximum shares issuable under stock based compensation plans as at December 31, 2012:

4787031
(1,445,800)
(79,272)
3,261,959

The details on how these compensation costs were calculated are outlined in the respective sections below.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### 12.1 STOCK OPTIONS

The following is a summary of the status of the stock options outstanding and exercisable at December 31, 2012 and 2011. The weighted average exercise price is stated in Canadian dollars.

	2012	2	2011	
	NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER OF OPTIONS	WEIGHTED AVERAGE EXERCISE PRICE
Balance, January 1	2,094,156	0.78	1,984,356	1.13
Granted	-	-	755,800	0.50
Forfeited	(538,356)	0.44	(563,500)	1.33
Expired	(110,000)	1.52	(82,500)	3.08
Balance, December 31	1,445,800	0.65	2,094,156	0.78

The following table summarizes the stock options outstanding and exercisable at December 31, 2012 and 2011. The weighted average exercise price is stated in Canadian dollars:

		OPTION	IS OUTSTANDING		ΟΡΤΙΟ	NS EXERCISABLE
RANGE (EXERCISE PRICE)	NUMBER	WA <sup>1</sup> REMAINING LIFE <sup>2</sup>	WA <sup>1</sup> EXERCISE PRICE	NUMBER	WA <sup>1</sup> REMAINING LIFE <sup>2</sup>	WA <sup>1</sup> EXERCISE PRICE
At December 31, 2011						
\$0.50 to \$0.52	750,000	4.8	\$0.50	-	-	-
\$0.53 to \$0.72	318,000	4.0	\$0.53	106,000	4.0	\$0.53
\$0.73 to \$0.96	50,000	2.4	\$0.91	41,666	2.4	\$0.91
\$0.97 to \$1.02	823,356	2.0	\$1.00	577,355	2.0	\$1.00
\$1.03 to \$1.57	152,800	0.8	\$1.39	152,800	0.8	\$1.39
	2,094,156	3.2	\$0.78	877,821	2.0	\$1.01
At December 31, 2012						
\$0.50 to \$0.52	750,000	3.8	\$0.50	250,000	3.8	\$0.50
\$0.53 to \$0.72	282,000	3.0	\$0.53	188,000	3.0	\$0.53
\$0.73 to \$1.03	413,800	1.0	\$1.00	413,800	1.0	\$1.00
	1,445,800	2.8	\$0.65	851,800	2.3	\$0.75

 $^{\scriptscriptstyle 1}$  WA – weighted average

 $^{2}$  – Life in years

Using the Black-Scholes option pricing model, the weighted average fair value of the options granted during the year ended December 31, 2011 is \$0.24 CDN per share. There were no options granted in 2012. The option valuations for 2011 were determined using the following weighted average assumptions:

	YEAR ENDED DECEMBER 31,
	2011
Risk-free interest rate	1.25%
Expected dividend yield	0%
Stock price volatility	67%
Expected life of options	3.5 years

Stock price volatility was determined solely using the historical volatility of the Company's share price using the same period as the expected life of the options.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

#### 12.2 SHARE UNITS (RSU/PSU/DSU)

During the year ended December 31, 2012, Carmanah granted 177,079 RSUs (2011 – 277,786) with a weighted average fair value of \$0.41 CDN per unit (2011 - \$0.55 CDN), and no PSUs. During 2011, Carmanah granted 337,990 PSUs with a weighted average fair value of \$0.54 CDN per unit.

A reconciliation of share unit activity during the period is outlined below:

	RESTRICTED SHARE UNITS	PERFORMANCE SHARE UNITS	TOTAL SHARE UNITS
Balance January 1, 2011	407,717	42,500	450,217
Granted	277,786	337,990	615,776
Forfeited	-	(2,000)	(2,000)
Vested and issued	(280,766)	(54,857)	(335,623)
Balance December 31, 2011	404,737	323,633	728,370
Granted	177,079	-	177,079
Forfeited	(4,855)	(6,758)	(11,613)
Vested and issued	(522,621)	(291,943)	(814,564)
Balance December 31, 2012	54,340	24,932	79,272

Of the share units outstanding at December 31, 2012, 37,036 RSUs were vested but not issued. All of these units vested on December 31, 2012 and were issued in early January 2013 as the markets were closed. Of the share units outstanding at December 31, 2011, 66,069 RSUs and 73,187 PSUs were vested but not issued. All of these units vested on December 31, 2011 and were issued in early January 2012 as the markets were closed.

There are no performance criteria for any of the share units outstanding at December 31, 2012 and 2011 other than continued employment within the Company.

### 13. COMMITMENTS AND CONTINGENCIES

13.1 OPERATING LEASE AND COMMITTED SERVICE ARRANGEMENTS

Carmanah has a number of operating leases that cover facilities and equipment as well as several committed contracts covering various IT services. The following table outlines the minimum amounts due under these agreements in future years:

	FACILITY LEASES	EQUIPMENT LEASES	IT AND OTHER CONTRACTS	TOTAL
Not later than 1 year	261	32	277	570
2 year to 3 years	505	65	-	570
4 years to 5 years	173	32	-	205
Beyond 5 years	-	-	-	-
Total	939	129	277	1,345

Lease payments recognized as expenses in 2012 amounted to \$0.6 million (2011: \$0.5 million).

#### 13.2 OTHER COMMITMENTS

Carmanah has an agreement with a contract manufacturer to build and supply a large portion of its manufactured products. Under this agreement, the Company provides demand forecasts to the contract manufacturer outlining expected sales levels. The contract manufacturer utilizes these demand forecasts to acquire raw materials and inventory to support that demand. If sales are below the forecast, the Company will be required to purchase the excess inventory. During the year, Carmanah bought back excess inventory of \$0.6 million (December 31, 2011 - \$0.7 million). At December 31, 2012, the contract manufacturer held approximately \$1.1 million (December 31, 2011 - \$1.2 million) in inventory and \$2.2 million (December 31, 2011 - \$2.3 million) in outstanding committed purchase orders.

#### 13.3 CONTINGENT ASSETS AND LIABILITIES

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

From time to time, provisions are set up to cover potential legal settlements. There were no legal provisions at December 31, 2012 or 2011. No settlement amounts were paid out in the year ended December 31, 2012 or 2011.

### 14. RELATED PARTY TRANSACTIONS

Compensation of key management personnel

The Company's key management personnel have authority and responsibility for overseeing, planning, directing and controlling the activities of the Company and consist of the Company's Board of Directors and the Company's Executive Leadership Team. The Executive Leadership Team consists of the CEO and Chief Financial Officer ("CFO").

Total compensation expense for key management personnel, and the composition thereof, is as follows:

	YEAR	YEARS ENDED DECEMBER 31	
	2012	2011	
Short-term benefits	562	680	
Termination benefits	-	261	
Share-based compensations	200	252	
Total	762	1,193	

Employment agreements with the members of the Executive Leadership Team provide for severance payments if the executive's employment is terminated, either without cause or due to a change in control of the Company. Under a termination without cause (1) the CEO is entitled to 12 months base salary plus applicable cash based incentives plus an acceleration of non-cash incentives that would have vested in that period, and (2) the CFO is entitled to 9 months base salary plus applicable cash based incentives plus an acceleration of non-cash incentives plus an acceleration of non-cash incentives that would have vested in that period. Under a change in control, both the CEO and CFO are entitled to 12 months base salary plus applicable cash based incentives plus an acceleration of non-cash incentives that would have vested in that period.

Other transactions with key management personnel

Other than the private placement described in note 11, there were no other related party transactions with key management or other related parties.

### 15. OPERATING EXPENDITURES

The components of operating expenditures by nature are outlined below:

	YEAR ENDED DECEMBER 31,	
	2012	2011
Salaries, commissions and other direct compensation	7,423	6,768
Share-based payments	257	428
Marketing, advertising and other related expenses	381	452
Development expenses	264	217
Travel and related expenses	617	581
Occupancy costs	433	397
Telecom and IT expenses	651	571
Professional fees, insurance and public company costs	764	847
Amortization	957	953
Bank charges and bad debts	186	239
Other expenses	133	86
Total operating expenditures	12,066	11,539

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 16. SEGMENTED INFORMATION

Carmanah operates in four main industry sectors which are reported on within two reporting segments: the "Lighting" division (Signals and Outdoor Lighting sectors) and the "Solar Power Systems" division (Grid-tie and Mobile sectors).

The Lighting division primarily consists of off-grid LED outdoor signaling ("Signals") products including solar-powered beacons for marine, aviation, traffic and defense applications, and off-grid LED outdoor lighting ("Outdoor Lighting") products, used for solar-powered area lighting. The Solar Power Systems division primarily consists of grid-tie solar power systems in the Canadian industrial market ("Grid-tie"), and mobile power systems ("Mobile") which focuses on the sale of power solutions into the recreational vehicle and work truck/fleet markets.

Management evaluates segment performance based on gross margin as other expenses are not generally allocated to the segments. The segments share certain inventory, equipment and leasehold improvements; therefore management does not classify non-current asset information on a segmented basis.

YEAR ENDED DECEMBER 31, 2012				
	Lighting	Solar Power systems	Corporate (unallocated)	Total
Revenue	15,246	11,196	-	26,442
Gross profit	5,148	3,091	-	8,239
Gross margin %	33.8%	27.6%	-	31.2%
Operating expenses	-	-	(12,066)	(12,066)
Operating loss	-	-	-	(3,827)
Other expense	-	-	(92)	(92)
Loss before taxes	-	-	-	(3,919)

#### YEAR ENDED DECEMBER 31, 2011

TEAR ENDED DECEMBER 31, 2011				
	Lighting	Solar Power systems	Corporate (unallocated)	Total
Revenue	21,048	14,856	-	35,904
Gross profit	7,856	3,406	-	11,262
Gross margin %	37.3%	22.9%	-	31.4%
Operating expenses	-	-	(11,539)	(11,539)
Operating income	-	-	-	(277)
Other expenses	-	-	(4,064)	(4,064)
Loss before taxes	-	-	-	(4,341)

#### **GEOGRAPHIC**

For geographical reporting, revenues are attributed to the geographic location in which the customer is located:

	YEAR I	YEAR ENDED DECEMBER 31,	
	2012	2011	
North America	22,152	28,864	
South America	1,264	2,416	
Europe	1,925	2,972	
Middle East and Africa	317	725	
Asia Pacific	784	927	
Total operating expenses	26,442	35,904	

As at December 31, 2012, substantially all of the assets related to the Company's operations were located in Canada except for inventory on hand in the United States of America of \$1.2 million (December 31, 2011 - \$1.5 million).

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 17. LIGHTECH TERMINATION

Terminated Lightech agreement recovery/(costs) captures the expenses and recoveries associated with the attempted acquisition of Lightech Electronic Industries Ltd ("Lightech"). Costs and recoveries incurred in fiscal 2011 related to litigation surrounding the termination of the associated merger agreement. A settlement was reached in September of 2011.

### **18. INCOME TAXES**

The components of tax expense for 2012 and 2011 were as follows:

	YEAI	YEAR ENDED DECEMBER 31,	
	2012	2011	
Current tax expense	(2)	(6)	
Deferred tax expense	-	(4,206)	
Total income tax expense	(2)	(4,212)	

Current income tax expense in 2012 and 2011 relate to taxes paid in the United States.

The following is a reconciliation of income taxes calculated at the Canadian statutory corporate tax rate to the tax (expense)/recovery for 2012 and 2011:

	YEAR ENDED DECEMBER 31,	
	2012	2011
Loss before taxes	(3,919)	(4,341)
Computed tax recovery at 25.0% (2011 – 26.5%)	980	1,150
Adjusted for the effects of:		
Expenses not deductible for tax purposes	(80)	(116)
Current year unused tax losses and deductible temporary differences not recognized as deferred tax assets	(899)	(1,032)
Write-off of previously recognized unused tax losses and deductible temporary differences	-	(4,206)
Effects of tax rate changes and other adjustments	(3)	(8)
Income tax (expense)/recovery	(2)	(4,212)

As of January 1, 2012, the applicable income tax rate in Canada was reduced from 26.5% to 25% due to changes in the federal tax rate. The change in tax rate has no income tax impact because of the unrecognized deductible temporary differences disclosed in note 19.

Non-deductible expenses consist primarily of stock-based compensation expense, certain expenditures made in relation to the failed Lightech acquisition, and meals and entertainment costs. The valuation adjustments associated with the investment tax credits and unused tax losses and temporary deductible difference are described in financial statement note 19.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### **19. INVESTMENT TAX CREDITS AND DEFERRED TAXES**

The following is a summary of the deferred tax assets/(liabilities) presented in the consolidated statement of financial position:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Deferred tax assets		
Other	-	33
	-	33
Deferred tax liabilities		
Deferred development costs	-	(33)
	-	(33)
Deferred tax assets	-	-

In the year ended December 31, 2011, the Company reassessed the probability of utilizing the deferred tax assets and ITC assets in the near term, it was concluded that it was no longer appropriate to recognize these assets. The decision to derecognize the non-cash tax assets was made following a review of their carrying value in comparison to a number of factors including Carmanah's current stage of development, the Company's current and anticipated revenue stream and its historical net income results. The Company did not recognize any deferred tax assets and ITC assets in 2012.

The following table is a summary of the unrecognized deductible temporary differences, unused tax losses and unused tax credits:

	DECEMBER 31, 2012	DECEMBER 31, 2011
Temporary differences and unused tax losses available to reduce taxable income		
Scientific research & experimental development	9,361	8,201
Losses available for future periods	6,249	4,982
Equipment and leasehold improvements	4,568	3,591
Warranty	550	660
Intangibles	975	983
Other	987	807
	22,690	19,224

Tax credits available to reduce taxes payable		
Investment tax credits	4,379	4,109

The ITCs expire between 2015 and 2032. The losses available for future periods are non-capital in nature and expire between 2027 and 2032. All other tax deductible temporary differences do not have an expiry date.

#### Temporary differences associated with investment in subsidiaries

As at December 31, 2012, temporary differences of \$134 (2011 – \$125) associated with an investments in a subsidiary has not been recognized as the Company is able to control the timing of the reversal of this difference which is not expected to reverse in the foreseeable future.

(Expressed in thousands of U.S. dollars, except number of share and per share amounts) For the years ended December 31, 2012 and 2011

### 20. SUPPLEMENTAL CASH FLOW INFORMATION

The following table outlines the changes in non-cash working capital.

	YEAR ENDED DECEMBER 31,	
	2012	2011
Trade and other receivables	752	110
Inventories	(1,175)	2,316
Prepaids and other current assets	(24)	(87)
Trade and other payables	(521)	(2,513)
Provisions	(110)	(11)
Deferred revenue	60	(832)
Other	-	(1)
Cash flows from changes in working capital	(1,018)	(1,018)

The change in trade and other payables includes an adjustment of \$0.24 million, which is related to an unpaid balance associated with an acquired intangible assets. See note 8 for additional information.

### 21. SUBSEQUENT EVENTS

On October 16, 2012, a letter of intent was signed by Carmanah to acquire the business assets of Spot Devices Inc ("SDI" or "Spot") and to secure a license for the use of a proprietary System Infrastructure Management Application ("SIMA") software from an associated company of Spot, Cirrus Systems, LLC ("Cirrus"). Spot is a US manufacturer of a complete line of pedestrian and school zone traffic device systems that have an available unique remote monitoring and management system (SIMA) which was exclusive to Spot.

The deal closed subsequent to year-end on January 4, 2013, with the signing of an asset purchase agreement which provided for the transfer of various business assets to Carmanah. As of the date of these consolidated financial statements were issued, management is still negotiating terms surrounding the license of SIMA from Cirrus. The outcome of these negotiations may impact the preliminary purchase price allocation.

This acquisition was determined to be a business combination. The asset acquired included inventory, equipment, and various identifiable intangible assets related to products produced and sold by Spot including patents, trademarks, marketing material, contracts, and technical information. The primary driver behind the acquisition was to expand our product portfolio, gain access to new customers, and build economies of scale within this market vertical.

The initial payment was made through the issuance of 2.2 million common shares of Carmanah issued upon closing for total consideration of \$0.6 million. The agreement also includes a conditional payment payable in cash which is calculated as 12.5% of cumulative gross revenues earned over the calendar years 2013 and 2014 for combined traffic products which exceeds \$17.5 million. The current forecasted revenues for 2013 and 2014 within the Traffic vertical fall below the threshold and the fair value of the contingent consideration is expected to be \$nil. The Company is in the process of determining the allocation of the purchase price of the assets acquired and the liabilities assumed, which includes inventory, equipment, provision for warranty liability, and the identifiable assets noted above.





EG320 SOLAR OUTDOOR LIGHT - MEXICO

## **INVESTOR RELATIONS**

#### **Roland Sartorius, Chief Financial Officer**

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#### **Investment Information**

Common Shares Stock Exchange: Toronto Stock Exchange (TSX) Stock Symbol: CMH Issued and Outstanding: 47,870,313 (as at December 31, 2012)

Corporate Financial Year-End: December 31 Auditor: Deloitte LLP 4 Bentall Centre, PO Box 49279 Vancouver, British Columbia V7X 1P4 Tel: 604.643.7100 Fax: 604.643.7900

Legal Counsel: Farris, Vaughan, Wills & Murphy, LLP P.O. Box 10026, Pacific Centre South 25th Floor, 700 W GEorgia Street Vancouver, British Columbia V7Y 1B3 Canada Tel: 604.684.9151 Fax: 604.661.9349

Transfer Agent: Computershare 510 Burrard Street, 3rd Floor, Vancouver, British Columbia V6C 3B9 Tel: 604.661.9438 Fax: 604.661.9401

#### **Annual General Meeting**

The Annual General Meeting of Carmanah Technologies Corporation will be held on April 30, 2013 Carmanah Headquarters 250 Bay Street Victoria, B.C., V9A 3K5 Canada

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