# CARMANAH TECHNOLOGIES CORPORATION

carmanah®
we put solar to work

**MANAGEMENT'S DISCUSSION AND ANALYSIS**
**FOR THE THREE AND TWELVE MONTH PERIODS ENDED DECEMBER 31, 2013**

**March 14, 2014**

## About this MD&A

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, 2013. These documents, along with additional information about our Company, including the Annual Report, Annual Information Form and recently filed Short Form Prospectus, are available at www.carmanah.com and www.sedar.com. This document contains forward-looking information qualified by reference to the forward-looking statements in the next section.

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"). Section 6.2 outlines any relevant recent or pending Accounting policy developments that may impact our financials.

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).

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 14, 2014.

Our management reports on certain non-IFRS measures which is used to evaluate financial 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"). See Section 8 for the definition, calculation and reconciliation of.

# 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 (Light-emitting diode) lighting systems, continued government subsidies for solar grid-tie projects, and the successful development of new products to help penetrate new geographic markets. Specific examples of forward-looking information in this MD&A include, but are not limited to, statements with respect to: the future success of our recent restructuring initiative and our ability to produce positive operating income.

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 14, 2014. 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. Some of the specific forward looking statements may include estimates surrounding capital plans, future restructuring costs and anticipated amounts to be raised under the offering. 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).

# 1. FINANCIAL HIGHLIGHTS

## Financial Highlights for the Three and Twelve Month Periods Ended December 31, 2013 and 2012

| | Three months ended December 31 | | | Year ended December 31 | | |
|---|---|---|---|---|---|---|
| *(US$ thousands, unless noted otherwise)* | 2013 | 2012 | Change | 2013 | 2012 | Change |
| **Consolidated statements of loss** | | | | | | |
| Revenue | 7,755 | 8,361 | (7.2)% | 25,902 | 26,442 | (2.0)% |
| Gross margin % | 33.3% | 28.8% | 4.5% | 28.5% | 31.2% | (2.7)% |
| Operating expenditures | (2,364) | (2,984) | (20.8)% | (10,803) | (12,066) | (10.5)% |
| Other operating expenditures | (1,062) | - | n/a | (2,027) | - | n/a |
| Other income (expenses) | (90) | (146) | (38.4)% | (113) | (92) | 22.8% |
| Net income (loss) | (933) | (721) | 29.4% | (5,564) | (3,921) | 41.9% |
| **Consolidated statement of cash flows** | | | | | | |
| Cash provided/(used) in operating activities | (1,707) | (221) | (672.0)% | (2,457) | (3,551) | 30.8% |
| Cash used in investing activities | (59) | (96) | 38.5% | (263) | (431) | 39.0% |
| Cash provided in financing activities | 5,345 | - | n/a | 5,219 | 1,761 | (196.4)% |
| **Other measures** | | | | | | |
| EBITDA * | (689) | (473) | 45.7% | (4,623) | (2,820) | 63.9% |

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

Our fourth quarter 2013 revenues rebounded to $7.8 million from a low of $4.9 million in the third quarter of 2013. Our third quarter revenues were lower than expected primarily due to the timing of project sales and some delayed shipments caused by production problems which arose from production transition between contract manufacturing facilities. During the fourth quarter we successfully completed a rights offering which raised net proceeds of $5.2 million. These funds were partially used to fund restructuring activities that were rolled out in the quarter. The restructuring activities focused on reducing our fixed costs to reduce our breakeven point, but also included a number of initiatives to streamline our operations going forward. A total of $0.6 million of costs were recognized associated with the restructuring and primarily related to severance payments. During the quarter we also recognized approximately $0.5 million in asset impairments which were identified during restructuring planning activities.

**Q4 2013 vs Q4 2012**

Revenues for the fourth quarter of 2013 were $7.8 million, down from $8.4 million in the same period in 2012. This decrease is primarily due to lower sales in our Solar EPC services and Outdoor Lighting segments, which are down $1.6 million and $0.4 million respectively. These declines are generally due to the timing of project based sales. Offsetting these declines were higher Traffic sales, which were up $1.0 million in the quarter of prior year. This increase is due to a variety of reasons, including production delays caused by the change in contract manufacturing facilities, recent investments in the segments sales and marketing efforts, and new product offerings. Gross margin % for the fourth quarter of 2013 was 33.3%, up from 28.8% in the same period in 2012. This increase is partially due to a change in product mix, with lower sales from Solar EPC services which is a lower margin business. Normalized operating expenditures in the fourth quarter of 2013 were $2.4 million, down from $3.0 million in the same period in 2012. This decrease was largely due to reduced staffing levels.

**Fiscal 2013 vs fiscal 2012**

Revenues for fiscal 2013 were $25.9 million, down from $26.4 million in the same period in 2012. We saw decreases in our Solar EPC services, Outdoor Lighting, and Marine segments, which were down $1.6 million, $1.7 million and $1.3 million respectively. The decreases in Solar EPC services and Outdoor Lighting sales resulted from a lack of large project based sales. The decrease in Marine was the result of lower sales in the first three quarters as the segment suffered from increased competition and an aging product line. The launch of several new Marine products occurred part way through the year which began the reverse of this trend. Gross margin % for fiscal 2013 was 28.5%, down from 31.2%. This decrease is due to product discounting, changes in product revenue mix and increased inventory write off. Normalized operating expenditures in fiscal 2013 were $10.8 million, down from $12.1 million in fiscal 2012. This decrease was largely due to a reduction of staffing levels.

# 2. OUR BUSINESS

From our headquarters in Victoria, British Columbia, Canada, we design, develop and distribute solar LED lights and solar power systems. As one of the most trusted names in solar technology, we have earned a reputation for delivering strong and effective products for industrial applications worldwide. Industry-proven to perform reliably in some of the world's harshest environments, our solar LED lights and solar power systems provide a durable, dependable and cost-effective energy alternative. We currently serve the following markets:

| **Industrial Signalling** | |
|---|---|
| Aviation | Carmanah Aviation specializes in solving the airfield lighting challenges encountered by clients in off-grid or weak-grid locations. Our self-contained solar airfield lights support daily flight operations at helipads and airstrips in demanding environments around the globe from South Africa to the Jordanian desert and northern Alaska. Our aviation customers include both military and civilian airports. In 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 us with a global route to markets targeting the commercial aviation sector for increased market penetration. Our main competitors in our Aviation market include Avlite Systems Pty Ltd and Metalite. |
| Obstruction | Carmanah Obstruction division provides practical and cost-effective solutions for ground hazard marking, fence and barricade lighting, way-finding, railway blue flag protection, equipment marking and more. Through rugged and wire-free designs our self-contained, solar powered obstruction lights and hazard markers are ideally suited to withstand the harsh environments typically encountered in oil and gas development projects, mining operations and other industrial development sites across all regions of the globe. Our main competitors in our Obstruction market include Orga BV and Dialight Plc. |
| Marine | Since initially working with the Canadian and US Coast Guards to create a new generation of aids-to-navigation lanterns, the Carmanah Marine division has become an established supplier to Coast Guards, marine authorities, navies and ports around the globe. In 2010, we partnered with the Sabik Group with a vision to deliver one of the most comprehensive lines of short and long-range marine navigation aids on the market. Our main competitors in our Marine market include Sealite Pty Ltd, Vega, and Tideland. |
| Traffic | Carmanah solar flashing beacons have been in use across North America for well over a decade, working as reliably in the harsh winter climates of Ohio as they do in the hot Florida sun. Departments of transport, traffic agencies, and active transportation groups continue to call on Carmanah beacons when they are looking for reliable, cost-effective products backed by a friendly and knowledgeable team of experts. Products include pedestrian crosswalk signals, school zone flashers and 24-hr roadway beacons. Our main competitors in our Traffic market include JS Foster Corporation and TAPCO (Traffic & Parking Control Company Inc). |

| **Solar Powered Outdoor Lighting** | |
|---|---|
| Outdoor Lighting | Carmanah Outdoor Lighting division provides products for use in general illumination applications for pathways, parking lots, and pedestrian areas, as well as highway/street lighting and perimeter lighting. Our outdoor lighting division serves local and federal government facilities, government ministries, departments of defense, private utilities (power and lighting), highway concession owners, national and multi-national commercial facilities and public institutions. Our main competitors in the Outdoor Lighting area are SOL Inc., Solar Electric Power Company (SEPCO) and Solar One. |

All of the products sold into the Solar Power Outdoor Lighting and Industrial Signalling markets are manufactured goods, which are built by contract manufacturers. Our main contract manufacturer is Flextronics Industrial Inc ("Flextronics"), a worldwide electronics manufacturing company. In 2013, our manufacturing shifted from their plant in Houston Texas to one of their facilities in Charlotte North Carolina. The move was initiated by Flextronics as it was working to close the plant in Texas.

Our usual route to market in our Industrial Signalling market 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 sold only in North America. Our route to market for our Solar Power Outdoor Lighting is through traditional lighting agent networks in Canada and the US. Outside North America, our main route to market is to partner with local companies that have established relationships and distribution channels.

**Solar Power Systems**

| | |
|---|---|
| Solar EPC | The Solar Engineering Procurement and Construction ("EPC") Services segment is focused on the development and construction of roof top commercial solar grid-connected systems. It is operated through our Ontario, Canada based subsidiary, Carmanah Solar Power Corporation ("CSPC"). Over the past 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. Currently this business is primarily focused on the Ontario market due to a Feed-in-Tariff ("FIT") program introduced there by the provincial government. As a leading Solar EPC Services provider, we believe we are well-positioned to support the continued rapid development of the systems the OPA FIT Program facilitates. We continue to monitor opportunities in other jurisdictions beyond the Canadian market. |
| Go Power! | Marketed under the Go Power! brand, this distribution business provides solar kits, solar panels, inverters, chargers, batteries and other power accessories for the RV, utility and fleet vehicles, and marine markets. Our sales are made through an established channel of dealers, distributors and agents throughout the US and Canadian markets, as well as through Amazon.com, a large online retailer. Operationally we utilize several 3rd party manufacturers and logistics warehouses to stock and distribute associated inventory. Some of our competitors in the Go Power! market area include Xantrex and Samlex. |

**Industry trends and outlook**

A number of our products integrate solar panels, solar charge controllers, LEDs, LED optics and LED drivers into products that provide off-grid lighting and signalling solutions. These products suit a variety of applications, usually where grid electricity is unavailable, unreliable or expensive. The underlying technology used by our products is continuously improving, allowing us to enter new markets and to become more competitive with on-grid solutions. The most notable technological trend that is currently shaping these businesses is the continued increase in LED efficiency. As LED improve, the supporting solar power system can be reduced in size and cost, making the whole product more competitive against grid powered products. Improvements in battery and solar panel technology also play a role, but are improving at a much slower rate.

The solar industry in the United States is facing an escalating trade dispute with China and Taiwan which could ultimately impact our business. The trade dispute is driven by certain US solar manufacturers who allege that Chinese solar manufacturers receive unfair subsidies in the production of solar modules. An initial trade action launched in 2011 resulted in heavy duties on the importation of Chinese solar modules which came into effect in October 2012. These duties were specific to modules that had solar cells produced in China or Taiwan. Our business had no direct exposure as our suppliers secure cells for modules we purchase from outside China and Taiwan. On December 31, 2013, the same US manufacturers filed another petition to the US International Trade Commission ("ITC") to expand the action to include cells that are completed or partially manufactured within a customs territory other than that subject country, using ingots that are manufactured in the subject country, wafers that are manufactured in the subject country, or cells where the manufacturing process begins in the subject country and is completed in a non-subject country. On February 14, 2014, the ITC found there was reason to think that damage was occurring to the US market and passed the case onto the US Department of Commerce ("DOC"). We are confident that the new scope of the investigation proposed by the ITC will not have an impact on our business because the ingots, wafers and cells used in our modules are entirely produced in Germany or Malaysia. However, we are also currently exploring other options to mitigate future exposure if the scope is further expanded, which includes sourcing modules from other countries.

Our initial outlook for 2014 indicates that our restructuring has been successful. Our Q1 2014 revenues continue to show improvement over Q4 2013, our margins are stable and our operating costs are lower than comparable periods. As a result we expect positive operating income for the first time in a number of years. Although progress has been made, we have limited visibility beyond Q1 2014 and cannot rule out revenue variability during the balance of year which may impact results.

# 3. OPERATIONAL AND BUSINESS HIGHLIGHTS

Our 2013 operational and business highlights are discussed below.

**Spot Devices Inc acquisition**

On January 4, 2013, we closed the transaction to acquire certain assets of Spot Devices, Inc. ("Spot"), a Nevada, USA-based manufacturer of traffic, pedestrian and school zone safety systems. Included in the transaction was the right to 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 for traffic. SIMA basically provides customers access to control and monitor certain aspects of their products. Terms of the transaction include the issuance of 2.2 million of our shares to Spot (valued approximately $0.6 million on close) plus conditional cash payments pursuant to a two-year cash earn-out where Spot is paid 12.5% of the portion of cumulative 2013 and 2014 Gross Traffic revenues exceeding $17.5 million. At present, our two year revenue forecasts for Traffic products fall short of this earn out target. This transaction was accounted for as a business combination. One of the outstanding items related to this transaction was the negotiation and signing of the SIMA software license agreement ("SLA") with Cirrus.

Due to a variety of events that have occurred subsequent to the acquisition, an impairment loss of $0.6 million was recognized during the second quarter of 2013. The reasons for the impairment included our inability to secure an economically viable SIMA license agreement and a higher than expected churn rate associated with legacy customers.

Section 6.1 outlines a number of provisions that have been recorded as a result of this acquisition.

**Board Changes**

There have been a significant number of changes to the board during 2013. These changes were initiated by shareholder vote at the annual general meeting on April 30, 2013. In addition, several other changes took place including:

- Rob Cruickshank and Daniel Nocente resigned from the board on June 19, 2013.
- Michael Sonnenfeldt and John Simmons were appointed to the board on June 26, 2013.
- Michael Sonnenfeldt was elected as Chairman on July 15, 2013.
- Bob Wiens resigned from the board, effective October 1, 2013.
- Jim Meekison and Terry Holland were appointed to the board on December 2, 2013.

**Executive Changes**

There have been significant changes in the executive management of the Company including:

- The resignation of Bruce Cousins as CEO, announced on June 19, 2013 but effective August 1, 2013
- The appointment of John Simmons as CEO effective August 1, 2013.
- The termination of Roland Sartorius as CFO effective September 12, 2013.
- The appointment of Stuart Williams as CFO effective September 12, 2013.

**Restructuring Activity**

During the third and fourth quarters, we began to work on a restructuring plan in an effort to restore profitability and position the Company for future growth. The plan focused on streamlining our operations in an effort to reduce salary costs to sustainable levels. It also included a variety of changes to our organization structure, business practises and processes and supporting IT systems. Items of significance include our decision to (1) close our remote development office in Burnaby and (2) replace our current ERP and CRM systems with a more cost effective solution. As a result of these restructuring plans we have incurred a charge of $0.6 million in 2013. The majority of this relates to severance payments.

**Rights offering**

We completed a shareholder rights offering (the "Offering") in the fourth quarter which raised net proceeds of $5.2 million. Under the Offering, each shareholder was given one right for each share held on the applicable record date. Each right was exercisable for one common share at a subscription price of $0.12 (CAD). In connection with the Offering, we entered into a binding standby purchase agreement with a group of investors, who had committed, subject to certain conditions, to purchase up to $5.5 million (CAD) of the rights shares that were not otherwise subscribed for by other holders. The offering closed on November 19, 2013 without the need for the standby investor group. A total of 50,294,200 shares were issued. Gross proceeds were $6.0 million (CAD) and issuance costs were $0.5 million (CAD).

Below are some of the business highlights within each of our market verticals:

- **Marine** – During the year we launched several new products, including the M800 series lantern and the M550. Both of these products offer significant performance over our older M502 and M700 series which are both in the processes of being discontinued. These new lanterns continue our tradition of rugged reliability while offering improved efficiency, lighter per unit weight, and simplified user experience.
- **Traffic** – Within our Traffic segment, we closed the acquisition of certain assets of Spot Devices, Inc., expanded our sales team and continued development work on new iterations of our products. Marketing efforts were also expanded, highlights of which included several new social media campaigns and the development of various sales tools.
- **Aviation/Obstruction** - Within our Aviation/Obstruction segment, the main focus has been on closing sales opportunities and continuing to split out and grow our Obstruction market. We introduced a number of Obstruction specific lanterns along with related sales and marketing materials. Obstruction and Aviation will be segregated as independent sales verticals starting in 2014.
- **Outdoor Lighting** - Within our Outdoor Lighting segment, we have been focused on building partnerships, expanding our OEM strategy and on closing sales. In the early part of the year, we signed a supply agreement with Acuity Brands, Inc. ("Acuity"), a leading provider of LED lighting and lighting controls, which provides for the supply and integration of our solar outdoor light engines into certain of their luminaires. To date this partnership hasn't produced significant results. We are currently evaluating our go to market strategy within this market.
- **Go Power!** - Within our mobile segment, we have continued to focus on expanding our product offering and sales channels and continuing our investment in our social media presence and website. We saw some strong growth from our Recreational Vehicle ("RV") market where we had a 23% performance increase over the same period in 2012 as a result of our annual Canadian booking program. Success in our RV market is attributed to a continuing reduction in solar material costs, resulting in greater value proposition to the dealer network and an increase demand for solar

products. We also continued to build the Go Power! brand with the introduction of the Portable Solar Kit series and the release of our largest single panel solar kit to date.

- **Solar EPC –** Our Solar EPC segment saw a number of developments within the Ontario FIT program including the release of 146.5 megawatts of new contracts under FIT 2.0 and the opening of applications under FIT 3.0. During the year, our team focused on completing construction of our remaining backlog of FIT 1.0 projects and pursuing contract opportunities under FIT 2.0. During the year, we secured two additional projects worth $2.0 million, with a portion of this work completed prior to the end of the year. The team continues to pursue a significant portfolio of projects which it hopes to secure in early to mid-2014 and build out in the latter half of the year.

# 4. FINANCIAL RESULTS

As previously noted, the information presented in the sections below have been derived from, and should be read in conjunction with our consolidated annual financial statements for the year ended December 31, 2013.

## 4.1. Three and twelve month periods ended December 31, 2013 and 2012

### Revenue and gross margin

| | Three months ended December 31, | | | Year ended December, 31 | | |
|---|---|---|---|---|---|---|
| *(US$ thousands, unless noted otherwise)* | 2013 | 2012 | Change | 2013 | 2012 | Change |
| **Revenues** | | | | | | |
| Traffic | 1,680 | 693 | 142.5% | 5,067 | 2,597 | 95.1% |
| Marine | 1,454 | 1,322 | 10.0% | 4,161 | 5,451 | (23.7)% |
| Aviation/Obstruction | 1,150 | 964 | 19.3% | 3,712 | 3,521 | 5.4% |
| Outdoor Lighting | 921 | 1,331 | (30.8)% | 1,942 | 3,676 | (47.2)% |
| GoPower! | 1,729 | 1,584 | 9.1% | 7,962 | 6,507 | 22.4% |
| Solar EPC Services | 821 | 2,467 | (66.7)% | 3,058 | 4,690 | (34.8)% |
| **Total revenue** | **7,755** | **8,361** | **(7.2)%** | **25,902** | **26,442** | **(2.0)%** |
| **Gross margin %** | | | | | | |
| Traffic | 47.3% | 39.5% | 7.8% | 41.7% | 37.8 % | 3.8% |
| Marine | 35.8% | 29.3% | 6.5% | 30.3% | 32.2% | (1.9)% |
| Aviation/Obstruction | 39.8% | 35.8% | 4.0% | 29.9% | 40.6% | (10.7)% |
| Outdoor Lighting | 17.2% | 32.1% | (14.9)% | 6.2% | 26.6% | (20.5)% |
| GoPower! | 26.4% | 19.4% | 6.9% | 28.1% | 29.8% | (1.7)% |
| Solar EPC Services | 23.7% | 27.1% | (3.5)% | 17.7% | 24.6% | (6.9)% |
| **Total Gross margin %** | **33.3%** | **28.8%** | **4.5%** | **28.5%** | **31.2%** | **(2.7)%** |

Consolidated revenues for the year ended 2013 were down $0.5 million over the same period in 2012. Overall, our gross margin for the year ended 2013 was 28.5%, down from 31.2% in the same period in 2012. The following section summarizes the changes by segment.

- **Traffic** – Year to date revenues were $5.1 million, up from $2.6 million in the same period in 2012. Revenues for the fourth quarter of 2013 were $1.7 million, up from $0.7 million from the same period in 2012. These increases were due to additional investment in sales, marketing and product development, as well as the asset acquisition of Spot. Year to date our gross margins have increased to 41.7%, up from 37.8 %.
- **Marine** – Year to date revenues were $4.2 million, down from $5.4 million in the same period in 2012. Revenues for the fourth quarter of 2013 were $1.5 million, up from $1.3 million in the same period in 2012. The year to date decrease is due to lower sales from some of our aging product lines and increased competitive pressures. We experienced a slight uptake in sales in the third and fourth quarter of 2013 with the launch of several new products in the middle of the year. From a gross margin perspective, our year to date margin was 30.3%, down from 32.2% largely due to competitive pressures and write-offs associated with discontinued products.
- **Aviation/Obstruction** – Year to date revenues were $3.7 million, up from $3.5 million in the same period in 2012. Revenues for the fourth quarter of 2013 were $1.2 million, up from $1.0 million from 2012. Obstruction sales have been a contributor to growth this year as we continue to develop this market with the introduction of obstruction specific products. In the fourth quarter we hired a dedicated sales person to help further develop this market. Aviation revenues continue to have a large amount of variability quarter to quarter due to the timing of project base sales. Year to date gross margins were 29.9%, down from 40.6% in 2012, primarily the result of our efforts to clear out older generation inventory and an

increase in sales of Obstruction products which generally carry a lower margin than Aviation products.

- **Outdoor Lighting** – Year to date revenues were $1.9 million, down from $3.7 million in the same period in 2012. Revenues for the fourth quarter of 2013 were $0.9 million, down from $1.3 million in the same period in 2012. These declines are largely due to timing of project sales and difficulties competing in the market. Year to date gross margin was 6.2%, down from 26.6% in the prior year due to inventory write offs of slower moving product lines and higher sales of lower margin products.
- **GoPower!** – Year to date revenues were $8.0 million, up from $6.5 million in 2012. Revenues in the fourth quarter of 2013 were $1.7 million, up from $1.6 million in the same period in 2012. This significant growth year over year is due to a number of factors, including an expansion of our distribution channels. The introduction of innovative products, such as our folding portable solar kits, and an underlying uptake in the industry with declining prices for solar technologies providing a greater value proposition for our products to our underlying customers. Year to date gross margin was 28.1%, down from 29.8% from the same period in 2012, largely due to higher inbound freight charges as we worked to maintain our inventory levels given higher sales levels, and increased warehousing charges due to higher transaction fees as a result of price increases and higher storage costs due to higher inventory levels year over year.
- **Solar EPC Services** – Year to date revenues were $3.0 million which is down from $4.7 million from the same period in 2012. Revenues for the fourth quarter of 2013 were $0.8 million, down from $2.5 million in the same period in 2012. The decline is mainly due to a timing of when projects are won and ultimately constructed. We are continuing to pursue a meaningful book of business which we hope to secure in 2014. Year to date gross margin was 17.7%, down from 24.6% in 2012. This decline is due to pricing pressures in the market space.

**Sales by geographic region**
All of our international revenues have been generated by our Aviation/Obstruction, Marine and Outdoor Lighting segments. Our Solar EPC Services business is currently solely focused on the Canadian market and our GoPower! and Traffic segments sell into both the Canadian and US markets.

Approximately 16.9% of our revenues for 2013 were from outside North America. This is up slightly from 16.2% in the same period of 2012. Fluctuations are largely due to the timing of significant project sales outside the North America market.

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.

## Operating expenses

| | Three months ended December 31 | | | Year ended December 31 | | |
|---|---|---|---|---|---|---|
| *(US$ thousands, unless noted otherwise)* | 2013 | 2012 | Change | 2013 | 2012 | Change |
| Sales and marketing | 687 | 1,038 | (33.8)% | 3,439 | 4,218 | (18.5)% |
| Research and development | 460 | 474 | (3.0)% | 1,925 | 2,065 | (6.8)% |
| General and administration | 1,217 | 1,472 | (17.3)% | 5,439 | 5,783 | (5.9)% |
| **Total operating expenditures** | **2,364** | **2,984** | **(20.8)%** | **10,803** | **12,066** | **(10.5)%** |
| Operating expenses (excluding restructuring) as % of sales* | 30.5% | 35.7% | (5.2)% | 41.7% | 45.6% | (3.9)% |
| *Non-cash items:* | | | | | | |
| *Amortization* | *244* | *246* | *0.8%* | *936* | *1,099* | *(14.8)%* |
| *Stock-based payments* | *13* | *45* | *(71.1)%* | *46* | *257* | *(82.1)%* |

** A Non-IFRS measure*

Our total operating expenses for the year ended of 2013 were $10.8 million, down from $12.1 million in 2012. For the three months ended December 31, 2013, our total operating expenses were $2.4 million, down from $3.0 million from the prior year. These decreases are largely due to lower salaries with a net reduction of seven full time staff equivalents year over year.

**Sales and marketing**
Our sales and marketing expenses for the year ended 2013 were $3.4 million, down from $4.2 million in the same period in 2012. Sales and marketing expenses in the fourth quarter of 2013 were $0.7 million, down from $1.0 million in the same period of 2012. These decreases were largely the result of lower travel costs and lower agent commissions paid to outside companies due to changes in our sales strategies.

**Research, engineering and development**
Our research, engineering and development expenses for the year ended 2013 were $1.9 million, which is down from $2.1 million from the same period in 2012. For the fourth quarter of 2013, these expenses were $0.5 million, unchanged from the same period in 2012. This annual decline is primarily due to reduced development activities.

**General and administration**

Our general and administration ("G&A") expenses for the year ended 2013 were $5.4 million, which is down from $5.8 million in the same period in 2012. For the fourth quarter of 2013, these expenses were $1.2 million, down from $1.5 million in the same period in 2012. Within G&A expenses for the year ended 2013, we have seen an increase in legal and bad debt expenses. This was offset by reductions in salaries costs, with a net reduction of five FTEs year over year. A number of these positions were eliminated, while others transitioned into other areas of the organization.

## Other operating expenses

During the year ended December 31, 2013, we incurred a number of operating expenses that are non-recurring in nature and have been separately disclosed for better clarity and presentation. These expenses are described below.

**Restructuring**

During the fourth quarter of 2013 we recognized restructuring charges of $0.6 million as outlined in section 3. These charges mainly relate to severance and termination payments, although there were some miscellaneous costs associated with closing our remote product development office. $0.3 million of these restructuring charges were paid out prior to December 31, 2013. The remaining balance is expected to be paid out in the first couple of quarters.

**Asset impairments**

During the year ended December 31, 2013 we recognized various intangible and tangible asset impairments totalling $2.0 million.

- We recognized an impairment loss of $0.3 million relating to a license asset that covered a portfolio of specialized Aviation mobile precision laser guidance approach systems. It was written off after a review of the potential sales pipeline no longer included products covered under the agreement.
- We recognized an impairment loss of $0.6 million associated with the Spot acquisition. This was required after we were unable to secure an economically viable license agreement for a service that underpinned a number of products which Spot (see 3. Operational & Business Highlights) previously sold.
- We recognized an impairment loss of $0.1 million related to patents on various products. The patents impaired related to obsolete or discontinued product lines where there was no future benefit potential.
- We recognized an impairment loss of $0.2 million relating to our ERP system. The write off was determined by management during the restructuring initiative which showed it was too expensive and highly inefficient.
- We recognized an impairment loss of $0.2 million for production equipment relating to our outdoor lighting segment. These production assets primarily relate to the higher end product offering we have within this market segment. Revenues from these higher priced systems have been declining recently due to competitive pressures and internal product cannibalization as customers switch to our lower cost systems, a trend we expect to continue.

## Other income (expense)

Other expenses were $0.1 million for the year ended 2013, which is comparable to the same period in 2012. The 2013 amount is primarily relates to foreign exchange losses and due diligence. The 2012 amount primarily relates to due diligence and other acquisition related costs associated with the asset acquisition of Spot Devices Inc. .

## Income taxes

Our income tax expense for the year ended December 2013 relates to US state taxes.

## 4.2. Quarterly trends

| *(US$ thousands, except EPS amounts)* | 2013 | | | | 2012 | | | |
|---|---|---|---|---|---|---|---|---|
| | Q4 | Q3 | Q2 | Q1 | Q4 | Q3 | Q2 | Q1 |
| Revenue | 7,755 | 4,863 | 6,319 | 6,965 | 8,361 | 6,661 | 6,063 | 5,357 |
| Gross margin | 2,583 | 1,152 | 1,542 | 2,107 | 2,411 | 2,070 | 1,765 | 1,993 |
| Gross margin % | 33.3% | 23.7% | 24.4% | 30.3% | 28.8% | 31.1% | 29.1% | 37.2% |
| Operating costs | (2,364) | (2,599) | (3,039) | (2,801) | (2,984) | (2,953) | (3,190) | (2,939) |
| Other operating expenditures | (1,062) | - | (965) | - | - | - | - | - |
| Other income (expense) | (90) | 8 | (15) | (16) | (146) | 45 | (26) | 35 |
| Income tax (expense) | - | (3) | - | (2) | (2) | - | - | - |
| Net (loss)/income | (933) | (1,442) | (2,477) | (712) | (721) | (838) | (1,451) | (911) |
| EPS – Basic | (0.01) | (0.03) | (0.05) | (0.01) | (0.02) | (0.02) | (0.03) | (0.02) |
| EPS– Diluted | (0.01) | (0.03) | (0.05) | (0.01) | (0.02) | (0.02) | (0.03) | (0.02) |
| EBITDA[(1)] | (689) | (1,222) | (2,237) | (475) | (473) | (550) | (1,163) | (634) |

[(1)] *EBITDA is a non-IFRS measure defined in section 8*

Our quarterly revenues have fluctuated over the past several years, primarily due to product mix and the nature of our sales within our market segments. A large portion of our revenues are derived from infrastructure projects that typically often have longer tender processes and fluctuating timelines. This is most pronounced within our Solar EPC Services, Aviation and Outdoor Lighting market segments and to a lesser extent within our Marine and Traffic markets. GoPower! revenues are more seasonal in nature with higher sales in the first two quarters of the year as our distributors gear up for the busier spring and summer periods. The reasons for the largest quarterly swings in revenue are explained below:

- At $8.4 million, Q4 2012 was our largest quarter for revenue in the past two years. This spike was primarily the result of a few larger projects that hit at the same time and resulted in substantially higher sales from our Solar EPC and Outdoor Lighting segments.
- At $4.9 million, Q3 2013 revenues were substantially under our trend. This was primarily due to lower sales in our Aviation, Outdoor Lighting and Solar EPC segments. A good portion of this was due to timing of project sales. The quarter also suffered a bit from production problems caused by our transition between contract manufacturing facilities.

Our gross margin on a quarterly basis is variable 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 were relatively stable at around $3 million a quarter up until the end of Q2 2013. Q3 and Q4 of 2013 trended lower due to restructuring initiatives. These initiatives resulted in lower salaries expense, development expenditures, travel and marketing and advertising costs.

Other operating expenditures include restructuring charges of $0.5 million in the fourth quarter of 2013, which primarily related to severance costs associated with a reduction of our staffing levels, and asset impairments of $0.5 million in the fourth quarter and $1.0 million in the second quarter of 2012. See section 4.1 for a description of the asset impairments incurred during 2013.

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, acquisition costs, and other items. The fourth quarter of 2012 included costs associated with the acquisition of assets from Spot Devices, Inc.

## 4.3. Select annual information

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

| *Year ended December 31*<br>*(in thousands US$, unless noted otherwise)* | 2013 | 2012 | 2011 |
|---|---|---|---|
| Sales | 25,902 | 26,442 | 35,904 |
| Gross margin | 7,384 | 8,239 | 11,262 |
| Loss from continuing operations | (5,564) | (3,921) | (8,553) |
| Loss per Share – Basic and Diluted | (0.10) | (0.09) | (0.20) |
| Net loss | (5,564) | (3,921) | (8,533) |
| Loss per Share – Basic and Diluted | (0.10) | (0.09) | (0.20) |
| Total assets | 14,957 | 13,176 | 15,441 |
| Total long-term financial liabilities | - | - | - |
| Cash dividend | - | - | - |

The significant drop in revenue between 2011 and 2012 was the result of lower sales from our Solar EPC, Aviation and Outdoor Lighting segments. These sales declined due to a variety of reasons including our failure to secure significant new projects and a general softening in these markets. The most obvious of the market changes was within our Aviation segment with sales to the US military dropping off substantially as the wars in the Middle East were starting to wind down.

The significant net loss in 2011 was due to the write off of our investment tax credits and future tax assets. These were impaired after management reassessed our future earnings potential which resulted in a reduced likelihood of their eventual utilization.

# 5. LIQUIDITY, CAPITAL RESOURCES AND OTHER DISCLOSURES

## 5.1. Summary of consolidated statement of cash flows

| Year ended December 31<br>*(US$ thousands, unless noted otherwise)* | 2013 | 2012 | Change |
|---|---|---|---|
| Cash provided/(used) in operating activities | (2,457) | (3,551) | 30.8% |
| Cash used in investing activities | (263) | (431) | 39.0% |
| Cash provided from investing activities | 5,219 | 1,761 | 196.4% |
| Effects of exchange rate changes on cash | 56 | (26) | 315.4% |
| **Total increase/(decrease) in cash** | **2,555** | **(2,247)** | **213.7%** |

### Cash used in operating activities

During the year ended December 31, 2013, cash used by our operating activities, excluding changes in working capital, was $3.0 million which is up from $2.5 million in the same period in 2012. Changes in non-cash working capital were positive $0.6 million, up from a use of cash of $1.0 million from the same period in 2012. 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 year ended December 31, 2013, cash used for investing activities was $0.3 million, down from $0.4 million in the same period in 2012. The additions in 2013 mainly related to production equipment, while 2012 additions mainly included minor additions relating to investments in IT hardware and software.

### Cash provided from financing activities

During the year ended December 31, 2013, cash provided by financing activities was $5.2 million compared to $1.8 million in the same period in 2012. In 2013, we completed a rights offering which raised approximately $5.7 million ($6.0 million CDN) in gross proceeds. Costs associated with this rights offering were approximately $0.5 million. Section 3 provides more details associated with this transaction. In 2012, we completed a non-brokered private placement which raised net proceeds of $1.8 million.

## 5.2. Liquidity and capital resource measures

On December 31, 2013, our overall working capital was $8.1 million, an increase of $1.8 million compared to $6.3 million at December 31, 2012. This increase is primarily due to the rights offering previously discussed. Without this rights offering our working capital would have declined substantially as a result of our operating losses during the year.

We previously disclosed that the proceeds from the offering would be used for general corporate purposes including, but not limited to: (1) funding restructuring costs and process improvement expenditures all of which will be directed at reducing operating costs; (2) investments in new product development activities to meet market demands and improve gross margins; (3) funding an increase in inventory to meet customer demands and, if required by a change in manufacturing strategy, to buy back parts inventory from the Company's contract manufacturer; and (4) funding operating losses until the results of (1) and (2) can be achieved. To date, the proceeds have been used for working capital needs and in the execution of our restructuring plan previously outlined in section 3. The following table outlines the use of proceeds to December 31, 2013 for items other than working capital:

| *(US$ thousands)* | As per previous disclosure | Incurred to December 31, 2013 |
|---|---|---|
| Restructuring activities | Cash amounts not specified* | 324 |

* - previous disclosure of the restructuring activities estimated the restructuring charges at $0.9 million. Actual restructuring expenses incurred amounted to $0.6 million, of which $0.3 million were paid out prior to December 31, 2013. The previous estimate of $0.9 million had included some asset write offs which have been separately disclosed for clearer presentation.

Our capital plans for the 2014 include the replacement of our current ERP and CRM systems. This decision was primarily made in an effort to streamline business processes and reduce ongoing operating costs associated with the legacy systems. We anticipate that the new systems will be in place by the middle of 2014 and will cost somewhere between $0.3 million to $0.5 million.

We are continuing to evaluate our operations in an effort to improve our ability to meet our customer's needs in a profitable manner. Future changes in our inventory management and manufacturing arrangements may occur which could have a significant impact on our liquidity and working capital positions.

## 5.3. Credit facilities

We currently do not have access to a credit facility. Prior to July 2013, we had access to a facility from the Royal Bank of Canada ("RBC"). This facility provided access to a $5.0 million CDN revolving demand loan and a CDN $0.5 million term credit facility. The facility was cancelled on July 16, 2013. As a result, all credit extended to us by RBC, for products such as letters of credits, credit cards, and foreign exchange hedges are on a cash secured basis until we are able to meet the covenant requirements.

## 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 as at December 31, 2013:

| *(US$ thousands, unless noted otherwise)* | Facility leases | Equipment leases | IT service contracts | Total |
|---|---|---|---|---|
| Not later than 1 year | 233 | 30 | 138 | 401 |
| 2 year to 3 years | 401 | 60 | - | 461 |
| Total | 634 | 90 | 138 | 862 |

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

We have a number of contract manufacturers who build and supply our manufactured products. Our agreements with these contract manufacturers generally require us to be liable for inventory and outstanding committed purchase orders they have outstanding to support our business. If one of these agreements is terminated, we would be required to purchase the associated underlying inventory or arrange for a new contract manufacturer to acquire and hold it in a similar capacity. Our largest contract manufacturer, Flextronics, also requires us to purchase excess raw inventory which arises in situations where our demand forecasts for particular product is less than our actual use or sales in a given period. The value of the Flextronics inventory held at December 31, 2013 was $0.9 million (December 31, 2012 - $1.1 million), and the value of planned purchase orders to support our expected future demand was $1.8 million (December 31, 2012 - $2.2 million). Inventory held at other contract manufacturers is approximately $0.2 million in aggregate.

## 5.5. Claims and lawsuits

On July 18, 2013, we were named in a United States District Court lawsuit filed by R.D. Jones, Stop Experts, Inc., and RRFB Global, Inc. (all of which are related parties – collectively the "Plaintiffs") alleging patent infringement with respect to a specific flash pattern used with respect to our solar powered flashing beacons for the traffic safety market. Various actions have been taken in regards to this matter, including an unsuccessful application by the Plaintiff for a temporary restraining order and a motion for a preliminary injunction and a countersuit against the Plaintiffs with respects to patent of a similar nature that we hold. Subsequent to year-end, our application to re-examine a number of aspects of the Plaintiffs patent was accepted by the US patent office. The outcome of the review was positive, with the examiner agreeing with our position. The Plaintiff can appeal this decision. We are not certain of the outcome of this case and we intend to continue to defend ourselves and will file additional appropriate responses to the Court as required to do so. As the outcome of these matters is not currently determinable, no provision has been made at December 31, 2013.

## 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 and vendor managed inventory as noted under section 5.4, Contractual obligations and commitments.

## 5.8. Financial instruments and other instruments

The fair value of our accounts receivable, accounts payable and accrued liabilities approximates their carrying value due to the immediate or short-term maturity of these financial instruments.

We are exposed to foreign exchange risks as we transact business and have working capital denominated in multiple currencies. We attempt to minimize our exposure through managing our working capital and entering into foreign exchange products or contracts when are where appropriate. At December 31, 2013, our net CDN dollar denominated working capital is higher than normal due the recent closure of our rights offering. Given the recent changes in the business, we are currently reviewing our situation with respects to foreign exchange and our associated policies.

## 5.9. Related party transactions

Our CEO and Chairman of the Board, John Simmons and Michael Sonnenfeldt respectively, were part of the investor group involved in the standby purchase agreement associated with the rights offering previously described under section 3. John Simmons was committed under the agreement to a maximum of $0.7 million. MUUS Holdings LLC, a company controlled by Michael Sonnenfeldt, was committed under the agreement to a maximum of $1.8 million. As a result of the standby purchase agreement, John Simmons and MUUS Holdings LLC were paid $0.01 million and $0.04 million respectively for their commitment.

## 5.10. Proposed transaction

None

## Outstanding share data

Our common shares trade on the Toronto Stock Exchange ("TSX") (TSX: CMH), and as at December 31, 2013 we had 100,612,011 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, 2014 | December 31, 2013 | September 30, 2013 | June 30, 2013 | March 31, 2013 |
| Share price – closing (Cdn $) | 0.19 | 0.15 | 0.16 | 0.29 | 0.30 |
| Market capitalization (Cdn $ in thousands) | 19,116 | 15,092 | 8,047 | 14,554 | 15,040 |
| **Outstanding** | | | | | |
| Shares | 100,612,011 | 100,612,011 | 50,294,000 | 50,186,854 | 50,134,071 |
| Options | 3,972,000 | 4,114,000 | 1,792,000 | 2,998,000 | 2,810,000 |
| Restricted share units | - | - | 6,944 | 88,420 | 153,418 |
| Performance share units | - | - | - | 20,432 | 20,432 |

# 6. CRITICAL ACCOUNTING ESTIMATES AND ACCOUNTING POLICY DEVELOPMENTS

## 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:

| Accounting policy | Estimates |
|---|---|
| **Warranty provision** | 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, 2013 was $0.9 million, up from $0.6 million at December 31, 2012. The increase in the warranty provision during the year was mainly due to the acquisition of Spot, with the agreement requiring us to pick up their historical warranty claims, up to a maximum of $0.2 million. At December 31, 2013, the remaining historical warranty provision for Spot was $0.1 million. |
| **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 write-down 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, 2013 our inventory provision was approximately $1.0 million, up from $0.7 million at December 31, 2012, mainly due to additions to the provision for slow moving Outdoor Lighting inventory. |
| **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, 2013, our allowance for doubtful accounts was $0.1 million, unchanged from December 31, 2012. |
| **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 25% and vary depending upon the employee make-up of the associated grants. |

As noted in section 3, significant estimates have also been made surrounding provisions relating to the Spot acquisition and SIMA services.

- $0.1 million has been provided for to cover costs associated with monitoring services provided by Cirrus for SIMA enabled products which we sold. As described in section 3, we were never able to secure an economically viable license agreement for SIMA monitoring services which are provided by Cirrus, a related company to Spot. During 2013, we sold approximately 220 SIMA-enabled units with service terms ranging from 1 to 10 years. This provision covers current and future costs associated with this service. It is based upon our understanding of Cirrus's cost structure and preliminary monthly fee ranges discussed during negotiations with Cirrus.
- $0.1 million has been provided to cover potential returns or product replacements associated with an offer we extended to customers who purchased SIMA enabled products from us. During the third quarter of 2013, concerns about the reliability of SIMA enabled products were brought to management's attention. In some situations SIMA enabled products can suddenly or unexpectedly fail which could result in a safety hazard. As a result, we extended an offer to customers who purchased SIMA enabled product from us the ability to obtain replacement products on a free or a substantially discounted basis. We estimate the total maximum exposure associated with this offer is approximately $0.2 million, which is the cost of the SIMA-enabled product we sold during the period. We have recorded $0.1 million as a provision which is our best estimate given the wide range of options open to the end

customers. These options include everything from modifying the product, upgrading their solution, or retaining the risk or lost functionality.

- $0.1 million has been provided to cover product warranty for legacy customers/installations. This amount is based upon an analysis of the installation base, including what products are still under warranty and our experience with claim rates and costs.

## 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, 2014 and based upon our current facts and circumstances, we are evaluating the impact of the application of the following standards:

Effective for annual periods beginning on or after January 1, 2014

- IAS 32, Financial Instruments: Presentation ("IAS 32") – IAS 32 has been clarified to read that financial assets and financial liabilities can only be offset when an entity has a legal enforceable right in the normal course of business to offset.
- IFRIC 21, Levies ("IFRIC 21") – IFRIC 21 provides guidance on timing of recognition of liabilities related to levies imposed by a government.

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

- IFRS 9, Financial Instruments, initially to be applied for periods on or after January 1, 2015 but the effective date has been deferred. On July 24, 2013, the IASB tentatively decided to defer the mandatory effective date, with earlier adoption still permitted.

## 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. ICFR 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, 2013 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**

The recent change in our CFOs has impacted internal accounting and finance processes relating to reporting. These changes and their impacts to our internal controls over financial reporting indicated that there are some segregation of duties issues and a lack of review in certain areas. Some of these issues were addressed late in the fourth quarter, although further work is required to fully validate the controls are appropriately designed and operating effectively prior to full certification. We do not believe these control issues are material weaknesses and we will work to addresses these early in 2014.

# 7. RISKS AND RISK MANAGEMENT

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.

| Area of Risk | Description |
|---|---|
| **Competitive Environment** | 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.<br><br>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 others develop superior innovative proprietary lighting technology 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.<br><br>Additionally, we enter into foreign exchange contracts to manage foreign exchange risk as required. In 2013 we had not entered into any foreign exchange contracts and thus have none outstanding at December 31, 2013. We do not use contracts or any other financial instruments, for speculative purposes. |

| | |
|---|---|
| **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** | 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. |
| **Intellectual Property Risks** | 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.<br><br>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.<br><br>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 and could materially harm our business. 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. |
| **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.<br><br>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.<br><br>We operate in a market where product reliability is essential as our products are often used as safety devices. A significant product failure could expose us to liability claims. While we maintain insurance to cover these risks, the adequacy of this coverage may be insufficient and litigation may extend beyond coverage held by the Company.<br><br>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.<br><br>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. 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.<br><br>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.<br><br>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 obligations 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 don't currently have access to a credit facility.<br><br>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. 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 with activities or 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. There can be no assurances that any anticipated benefits of an acquisition will be realized. Future acquisitions 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 which 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** | Geopolitical and other global or local events may have a significant effect on our operations as we operate in numerous foreign countries. 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. |

# 8. Definitions and reconciliations

## EBITDA

For the three months and year ended December 31, 2013 as well as the respective periods in 2012, we are disclosing EBITDA, a non-IFRS financial measure, as a supplementary indicator of operating performance. We define EBITDA as net loss before interest, income taxes, and amortization. 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. EBITDA is not intended as a substitute for IFRS measures.

| EBITDA reconciliation | Three months ended December 31 | | Year ended December 31 | |
|---|---|---|---|---|
| *(US$ in thousands)* | 2013 | 2012 | 2013 | 2012 |
| Net loss | (933) | (721) | (5,564) | (3,921) |
| Add/(deduct): | | | | |
| Income tax expense | - | 2 | 5 | 2 |
| Amortization | 244 | 246 | 936 | 1,099 |
| **EBITDA*** | **(689)** | **(473)** | **(4,623)** | **(2,820)** |

* A Non-IFRS measure