

MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE THREE AND SIX MONTHS PERIODS ENDED JUNE 30, 2016

AUGUST 9, 2016

## **ABOUT THIS MD&A**

This Management Discussion and Analysis ("MD&A") discusses the consolidated financial condition and operating performance for Carmanah Technologies Corporation (the "Company") and should be read together with our condensed consolidated interim financial statements for the three and six months ended June 30, 2016, and our audited consolidated financial statements for the year ended December 31, 2015. References to the "Company", "Carmanah", "we", "us" or "our" are to be taken as references to Carmanah Technologies Corporation These documents, along with additional information about our Company, including the Company's Annual MD&A Report and Annual Information Form for the year ended December 31, 2015 are available at <u>www.carmanah.com</u> and <u>www.sedar.com</u>. This document contains forward-looking information qualified by 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 8 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, Carmanah Technologies (US) Corporation, and Sol, Inc. ("Sol"). The statements also include the results from the Sabik Group of Companies ("Sabik", "Sabik Group", or the "Group") acquired on July 2, 2015. The Sabik Group includes Sabik Oy, Sabik Offshore GmbH, Sabik Pte Ltd, Sabik Limited and Sabik Offshore Limited.

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 August 9, 2016.

Our management reports on certain non-IFRS measures which are used to evaluate financial performance. As non-IFRS measures generally do not have a standardized meaning and therefore may not be comparable to similar measures presented by other issuers, securities regulations require non-IFRS measures to be clearly defined, qualified and reconciled with their nearest IFRS measure. See Section 4 for the definition, calculation and reconciliation of these figures.

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## CAUTION REGARDING FORWARD-LOOKING STATEMENTS

Certain statements in this 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;
- the successful development of new and innovative products to help penetrate new geographic markets;
- the future success of our recent restructuring initiative and our ability to produce positive operating income;
- the outcome of claims and lawsuits;
- our belief that we are well-positioned to support the continued rapid development of the systems the Ontario Power Authority FIT Program facilitates and our continued monitoring of opportunities in other jurisdictions;
- our intention to be a leader or top contender in each of the market segments we operate within and our specific plan to achieve that goal;
- our belief that the signals industry is ready for consolidation;
- our plan to explore synergy opportunities that may exist in overlapping product lines, commercial efficiencies, R&D projects and potentially manufacturing competencies;
- our belief that "connected" devices are likely to be data gateways that provide a variety of sensor data that will increase safety and further reduce operating costs;
- our expectation that the current installed base of signaling products will become obsolete and result in increases in growth rates for the signals industry;
- our expectation of growth in solar LED illumination;
- our expectation that manufacturing costs will continue to improve as solar becomes increasingly competitive with other forms of power generation and our positive outlook for solar power businesses
- our plan to continue to pursue several significant portfolios of FIT (defined below) 4.0 projects which we hope to secure in and begin build out in the latter half of 2016; and
- our expectation that a majority of the On-Grid receivables will be collected in 2016.

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, but not limited to, the risks discussed under the heading "Risk Factors" in our annual information form dated March 29, 2016. 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;
- risk that we may become involved in disputes, litigation or arbitration proceedings; and
- geopolitical or other global or local events.

Except as otherwise indicated, forward-looking statements do not reflect the potential impact of any non-recurring or other unusual items or of any dispositions, mergers, acquisitions, other business combinations or other transactions that may be announced or that may occur after the date hereof. The financial impact of these transactions and non-recurring and other unusual items can be complex and depends on the facts particular to each of them. Carmanah therefore cannot describe the expected impact in a meaningful way or in the same way the Company presents known risks affecting its business.

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).

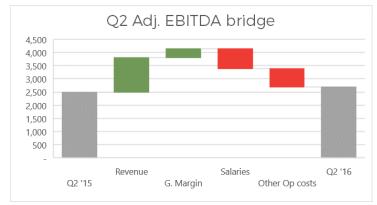
# 1. Financial Highlights

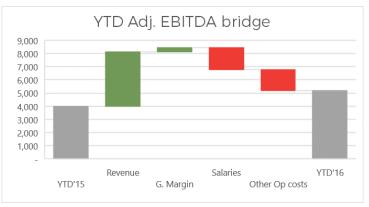
## FINANCIAL HIGHLIGHTS FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2016 AND 2015

	Three	months end	ed June 30,	June 30, Six months ended			
US\$ thousands	2016	2015	Change	2016	Change		
Revenue	19,490	15,715	24.0%	38,939	27,029	44.1%	
Gross margin %	36.2%	34.4%	1.8%	35.6%	34.7%	0.9%	
Core operating expenditures *	(5,157)	(3,256)	58.4%	(10,174)	(6,265)	62.4%	
Net income	1,289	10,332	(87.5%)	2,986	10,362	(71.2%)	
Adjusted EBITDA *	2,693	2,499	7.8%	5,184	3,980	30.3%	

\*Adjusted EBITDA and Core operating expenditures are Non-IFRS measures

## **ADJUSTED EBITDA BRIDGES**





## **BACKLOG RECONCILIATION**

US\$ thousands		Bookings	Revenue	Q2 closing
Signals	7,570	9,115	10,672	6,013
Illumination	2,399	1,594	3,180	813
Power	3,837	7,455	5,638	5,654
Total	13,806	18,164	19,490	12,480

## SECOND QUARTER REVENUES, PROFITABILITY AND CASH GENERATION

In the second quarter of 2016 the Company generated revenues of \$19.5 million, up \$3.8 million or 24% over Q2 2015 revenues of \$15.7 million. Overall revenue growth resulted from a mix of comparative revenue improvements and declines. Revenues resulting from the acquisition of the Sabik Group of Companies contributed \$6.0 million to the revenue increase. Overall growth was also aided by the Illumination Division, which saw revenues grow by \$0.7 million or 26% in the quarter on a comparative basis. These increases were tempered by a comparative decline in the quarter from the Signals Division of \$0.8 million and the Power Division of \$2.1 million.

Of these declines, the Signals Division's Airfield Ground Lighting business was well behind its comparative quarter due to the completion of a particularly large project in the prior period. Absent this variance, all other Signals businesses posted organic growth which averaged 18% when compared to the second quarter in 2015. The Company also had a comparative decline in its Power Division of \$2.1 million. This decline was the result of temporary On-Grid project delays beyond the Company's control. Revenues from these temporarily delayed projects are expected to be realized in the third and fourth quarters of 2016.

Carmanah management relies on Adjusted EBITDA (a non-IFRS measure) to gauge financial performance. In the second quarter of 2016, the Company generated Adjusted EBITDA of \$2.7 million, or 14% of revenue, up 8% from \$2.5 million, or 16% of revenue, in the same period in 2015. A table reconciling net income and Adjusted EBITDA is included in section 4. Net income in the second quarter of 2016 was \$1.3 million down from net income of \$10.3 million in the second quarter of 2015. The comparative decrease in net income was attributable to the recognition of \$9.9 million in tax assets in 2015. Excluding the effect of the tax assets in 2015, second quarter net income was up \$0.9 million or 69%.

Cash generated from operations in the second quarter of 2016 was \$4.3 million up from negative \$3.8 million in the second quarter of 2015. The improvement is the result of continued profitability and the Company's focus on cash conversion cycles. As at June 30, 2016 the Company's cash balance was \$18.9 million.

# 2. Overview - Vision, Strategy & Tactics

## **BUSINESS OVERVIEW**

Carmanah designs, develops and distributes a portfolio of products focused on energy optimized LED solutions for infrastructure. Since 1996, we have earned a global reputation for delivering durable, dependable, efficient and costeffective solutions for industrial applications that perform in some of the world's harshest environments. We manage our business within three reportable segments: Signals, Illumination and Power. The Signals segment serves the Airfield Ground Lighting, Aviation Obstruction, Offshore Wind, Marine and Traffic markets. The Illumination segment provides solar powered LED outdoor lights for municipal and commercial customers. The Power segment serves both On-Grid and Off-Grid verticals.

The tables below provide an overview of these segments and the verticals or businesses they serve.

#### Signals

Airfield



Our Airfield Ground Lighting business specializes in solving the airfield lighting challenges for 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 and include both military and civilian airports. Our main competitors for this business include Avlite Systems Pty Ltd and Metalite Aviation Lighting.

Obstruction



Our Aviation Obstruction business provides practical and cost-effective solutions for aviation hazard marking, barricade lighting, way-finding, railway blue flag protection, equipment marking and more by way of our solar powered self-contained LED lighting products. Our main competitors in our Obstruction sector include Avlite Systems Pty Ltd, Dialight PLC and Flash Technology LLC.

Offshore Wind

Our Offshore Wind business specializes in the provision of comprehensive safety and marking systems for offshore wind farms. Our main offshore wind competitors include Dialight BTI, Pintsch Aben BV, Sealite Pty Ltd, MSM Spain SLL, and Vega Industries Inc.

Marine

Our Marine business provides total marine aids to navigation products and systems for Coast Guards, marine authorities, navies and ports around the globe. Our main competitors in the Marine market include Sealite Pty Ltd, Vega Industries Inc, and Tideland Signals Corporation.

#### Signals

Traffic



Carmanah serves the North American traffic safety market through the provision of solar powered flashing beacons for pedestrian crosswalk signals, school zone flashers and 24-hr roadway beacons. Our main competitors to our Traffic vertical include JS Foster Corporation and TAPCO (Traffic & Parking Control Company Inc).

The product offering across the Signals segment verticals are similar in nature and share common technology, form factor and components.

#### Illumination

Outdoor Lighting



Our Outdoor Lighting business provides advanced solar powered LED illumination products for pathways, parking lots and streets. Our main competitors in the North American market within outdoor lighting are Solar Electric Power Company (SEPCO) and Solar One Solutions Inc. Internationally we have variety of competitors operating in different areas of the world.

Power

On-Grid



Our On-Grid power generation business constructs commercial solar grid-connected systems. Most of our customers are solar power developers that develop roof top and ground mount projects within the scope of the Government of Ontario's Feed-in-Tariff ("FIT") program. Our main competitors include Panasonic Eco Solutions Canada Inc., RESCo Energy Inc. and Deltro Electric Ltd.

Off-Grid



Our Off-Grid power 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, direct to consumer through online retailer Amazon, and on an OEM basis to major new motorhome manufacturers. Some of our Off-Grid competitors are Xantrex Technologies and Samlex America Inc.

### VISION - Clobal Leader of Signaling and Solar Lighting for Infrastructure

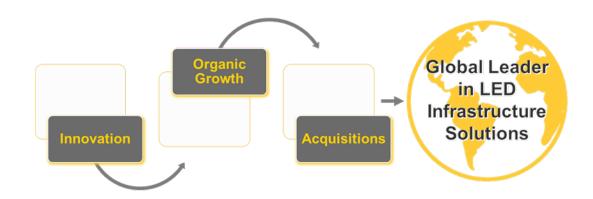
Carmanah aspires to be the global leader of signaling and solar lighting solutions for infrastructure through unique product and system solutions that allow us to attain and maintain high gross margins and great growth prospects.

## STRATEGY - Provide Solutions that Combine Cost Savings with Environmental Sensitivity

We understand that while our customers are increasingly interested in environmentally sensitive solutions they are also motivated to make purchase decisions that are economically sound. We believe that our customers need not choose one of these important attributes over the other. Accordingly, our strategy is to provide solutions for our customers that combine the greatest cost savings with the highest environmental sensitivity.

## **TACTICS - Innovation, Organic Growth and Acquisitions**

Tactically we plan to realize our strategy through innovation, organic growth and acquisitions.



### **INNOVATION**

In the second quarter our research and development expense was \$0.9 million of which \$0.6 million related specifically to product innovation. In each of the next 3 years we expect research and development to remain at approximately 5% of revenues. We believe this is a level of spending sufficient to meet our technology sustainment needs and fund our strategic initiatives. That said, compelling strategic projects may arise from time to time that management chooses to undertake that would temporarily result in a higher level of research and development expense. When these extraordinary projects are undertaken we will report on these separately.

Our research and development is focused on technology innovation that keeps in mind our strategy to:

- provide the most environmentally sensitive signaling and lighting products for infrastructure; and
- equally, to provide solutions that provide our customers with the greatest economic benefit.

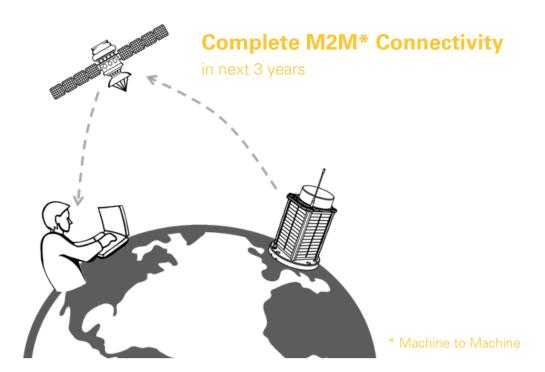
To help us realize on our strategy our Sustainment Development Team is constantly improving our products to make them smaller, lighter and more energy efficient without performance compromise. These activities help us to maintain our market competitiveness as well as attractive product margins.

However, our overarching innovation goal is to develop solutions for our customers that help them to reduce ancillary costs – including maintenance and operating costs – while maintaining or enhancing efficacy. In this respect our Strategic Development Team is working on broad platform initiatives that keep these goals in mind.

While we cannot disclose our detailed strategic initiatives for competitive reasons, a resounding theme is our commitment to adding connectivity to all of our devices so that every deployed device can be monitored, and in some cases controlled, in central locations. This "machine-to-machine" capability and remote monitoring provides a new range of benefits including:

- the ability to determine the need for preventative maintenance before outages occur thereby reducing outage incidents;
- the ability of our customers to respond to damaged devices more quickly;
- our ability to monitor the functioning of products for performance enhancement and warranty administration; and
- the potential for new service based business models.

Currently, 8 of our 30 strategic product platforms have machine-to-machine connection capability. Our goal is for all strategic products to have machine-to-machine communications capability by the end of 2018. We will continue to report on this important initiative and other strategic product development activities on a quarterly basis so that shareholders may evaluate our progress.



In early 2016, we started to work on our new solar LED lighting platform to take advantage of technology trends and lowering cost curves. Through the balance of 2016 we intend to ramp up our R&D spending by approximately \$.3 million to complete this project. Our goal is to announce our new product platform and channel to market early in 2017 after which we expect our research and development spending to return to historical levels.

Our expectation is that our new platform will become a viable economic competitor to grid connected lighting for new construction in a growing portion of the developed world and as such our addressable market will expand exponentially.

Over the next few quarters, culminating with the launch of our new solar LED platform, we will report separately on our progress with this project.

## **ORGANIC GROWTH**

In all markets, and with few exceptions, Carmanah relies on some form of "last mile" partner to be the final interface with the end users of our products. Over the next five years, we expect to markedly improve our global distribution by working to appoint new last mile partners in parts of the world where Carmanah products are currently not represented. It is also our plan to work to improve the quality and capability of our last mile partners in all markets. We believe that these two initiatives can double the effectiveness of our distribution over the coming 5-year period.

## LAST MILE PARTNERS - SIGNALS AND ILLUMINATION

We currently have approximately 300 "last mile" partners with whom we work globally within our Signals and Illumination segments. Approximately 10% of these partners would be considered top-tier, which we define as having the majority of the following attributes:

- being fully trained as to Carmanah products and components;
- being capable of responding to customer needs with the optimal selection of Carmanah products and/or systems;
- having the financial capability to conduct business and realize on Carmanah sales potential without compromise;
- having an annual business development plan agreed to by Carmanah that sets out goals and activity commitments for both the partner and Carmanah; and
- the ability to use all of Carmanah's ERP solutions to actively record sales potential, forecast and execute order entry.

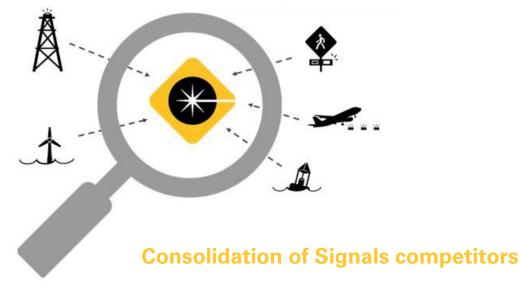
Our goal is to significantly expand the number of "top-tier" partners over the next 5 years and to ensure we cover all significant regions throughout the world.

## ACQUISITIONS

We believe that there are signals competitor candidates that, if acquired prudently, can accelerate our ability to realize our vision of becoming the global industry leader. In this respect, we look for candidates that can deliver the following attributes:

- highly capable management teams that will be retained post-transaction;
- unique products or product line extensions that are complementary to Carmanah's offering;
- market share or distribution that would enhance Carmanah's partner network;
- transactions that meet or exceed minimum accretion levels; and,
- attractive synergies that can be realized reasonably promptly post-transaction.

Carmanah devotes resources to identify and build relationships with potential acquisition candidates and, at any given time, we have multiple discussions underway. And while we would like to add to our company by way of acquisitions we are committed to being very disciplined. Moreover, we only proceed with transactions that score highly against our attribute criteria and where attractive financing options are available. Proposed transactions, if any, that result from these efforts will be announced on a timely manner by way of news release.



# 3. Performance Scorecard

## **KEY PERFORMANCE MEASURES**

The financial performance scorecard highlights the key performance measures that management believes are critical to adding shareholder value. We believe this approach best tracks how efficiently we deploy and manage our assets.

US\$ thousands	2014	2015	TTM *
Average Net Assets **	9,039	33,616	51,125
Cash cycle ***	42 days	89 days	100 days
Revenue	43,733	68,206	80,116
Adj. EBITDA	3,970	8,569	9,772
Adj. EBITDA / Revenue	9.08%	12,56%	12.20%
Adj. EBITDA / Net Assets	43.92%	25.49%	19.11%
Revenue/ Net Assets	4.84	2.03	1.57

\* TTM = Trailing twelve months

\*\* Average Net Assets excludes cash, tax assets/liabilities and bank debt

\*\*\* Cash cycle = Average days' inventory outstanding plus average days' sales outstanding less average days' payable outstanding

### **TARGETS**

In line with our strategic initiatives we have set targets for profitability, asset efficiency and cash conversion. We believe these targets can be achieved through organic growth, continued focus on high margin product offering, operating leverage and a disciplined approach to cash management.

# 4. EBITDA and Adj. EBITDA

## **RECONCILIATON EBITDA AND ADJUSTED EBITDA**

For the three and six months ended June 30, 2016, we are disclosing EBITDA and adjusted EBITDA, both of which are non-IFRS financial measures, as supplementary indicators of operating performance. We define EBITDA as net income or loss before interest, income taxes, amortization, and non-cash stock based compensation. Adjusted EBITDA removes unusual or non-operating items from EBITDA, such as merger and acquisition costs, restructuring charges, asset write offs, and foreign exchange gains and losses. We are presenting the non-IFRS financial measures in our filings because we use them internally to make strategic decisions, forecast future results and to evaluate our performance. We are also presenting these measures because we believe that our current and potential investors, and many analysts, use them to assess our current and future operating results and to make investment decisions. EBITDA and Adjusted EBITDA are not intended as a substitute for IFRS measures.

	Three months en	Three months ended June 30,		ded June 30,
US\$ thousands	2016	2015	2016	2015
Net income	1,289	10,332	2,986	10,362
Add/(deduct):				
Interest	63	-	175	-
Income taxes expense/(recovery)	595	(5,505)	1,148	(5,505)
Amortization	434	153	820	301
Non-cash stock based compensation	140	155	409	291
EBITDA*	2,521	5,135	5,538	5,449
Merger and acquisition costs	131	710	266	772
Extraordinary legal costs	42	24	47	25
Investment tax credits - initial recognition	-	(4,320)	-	(4,320)
Restructuring and asset write offs	-	-	-	404
Other inventory write downs	-	132	-	389
Foreign exchange (gain)/loss	(1)	818	(667)	1,261
Adjusted EBITDA *	2,693	2,499	5,184	3,980

\*A Non-IFRS measure defined above

# 5. Operational and Business Highlights

## **CREDIT FACILITY CHANGE**

As described in section 7.3, in June 2016 we signed an updated credit facility agreement with Canadian Imperial Bank of Commerce ("CIBC"). Under the previous agreement, one tranche of the term acquisition facility required Export Development Canada ("EDC") backing. The new agreement removed the need for that backing and reduced the overall interest rate to US LIBOR plus 3.0% for both tranches.

## **SHARE BUYBACK**

On March 9, 2016, we announced that the Toronto Stock Exchange ("TSX") accepted our notice of intention to commence a Normal Course Issuer Bid ("NCIB"), which allows us to repurchase up to 1,426,386 of our common shares, representing approximately 10% of our public float as of March 7, 2016. The program commenced on March 14, 2016 and will continue until March 13, 2017 or an earlier date should we repurchase the full amount permitted under the NCIB.

The average daily trading volume of our common shares over the six-month period ending February 29, 2016, as calculated per the TSX rules, was 39,836 common shares. Consequently, under TSX rules, we are allowed to purchase daily, through the facilities of the TSX, a maximum of 9,959 common shares representing 25% of such average daily trading volume, subject to certain exceptions for block purchases. We will pay the market price at the time of acquisition of any common shares in accordance with the rules and policies of the TSX and applicable securities laws. All common shares acquired under the NCIB will be cancelled and purchases will be funded out of our working capital.

No purchases were made under this program during the quarter ended June 30, 2016. However, subsequent to the quarter, 29,877 shares were purchased for \$0.1 million at a volume weighted average price paid of \$3.98 CAD per common share.

## **AUDITOR CHANGE**

On May 26, 2016, we announced the appointment of KPMG LLP ("KPMG") as our auditors, replacing Deloitte LLP ("Deloitte"). This decision was made based on the audit committee's recommendation to the board. Deloitte resigned as auditors at the board request. There were no reservations in the report of Deloitte for the audit of the most recently completed fiscal period or at any point prior to the appointment of KPMG and there were no reportable events. A reportable event is a disagreement, consultation, or unresolved issue which, when present, may be viewed as a contributing factor in a change of auditor.

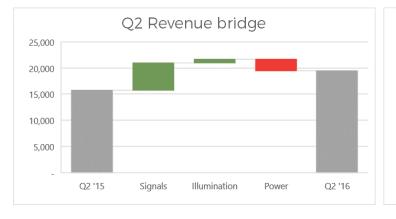
REVENUE

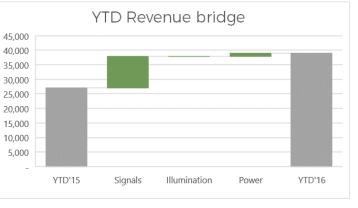
# 6. Financial Results

As previously noted, the information presented in the sections below have been derived from, and should be read in conjunction with our condensed consolidated interim financial statements for the three and six months ended June 30, 2016.

# 6.1 THREE AND SIX MONTHS ENDING JUNE 30, 2016 AND 2015

	Three	Three months ended June 30,				Six months ended June 30,			
US\$ thousands	2016	2015	Change	2016 2015 Cha					
Revenues									
Signals	10,672	5,421	96.9%	21,072	10,247	105.6%			
Illumination	3,180	2,514	26.5%	4,640	4,603	0.8%			
Power	5,638	7,780	(27.5%)	13,227	12,179	8.6%			
Total revenue	19,490	15,715	24.0%	38,939	27,029	44.1%			





Consolidated revenues for the three months ended June 30, 2016 were up \$3.8 million, or 24%, over 2015. On a year to date basis, revenues were up \$11.9 million, or 44%. A significant portion of this revenue increase was due to the inclusion of Sabik's results. For the second quarter, Sabik contributed revenue of \$6.0 million while our Illumination segment also grew by \$0.7 million, or 26%. Offsetting this growth was a comparative revenue decline from the remainder of the Signals segment of \$0.8 million and a decline in the Power segment of \$2.1 million.

The Signals segment decline was largely due to our Airfield Ground Lighting vertical which was down by \$1.4 million in the second quarter of 2016. This was due to a significant large project shipped in the same period of 2015, with no comparable project shipped in 2016. The decline in the Power segment of \$2.1 million was entirely due to lower sales in our On-Grid vertical which suffered from project delays, pushing expected revenue realization to the third and fourth quarters of 2016. Second quarter sales in the Off-Grid vertical were up 10% in the same period in 2015.

## SALES BY GEOGRAPHIC REGION

Approximately 36.5% of our revenues for the first two quarters of 2016 were from outside North America, up significantly from 14.7% in the same period in 2015. This increase was mainly due to the acquisition of Sabik since the majority of its sales are in Europe.

## **GROSS MARGINS**

	Three	months er	Six months ended June 30,			
US\$ thousands	2016	2015	Change	2016 2015		Change
Gross margin %						
Signals	42.9%	43.7%	(0.9%)	44.2%	43.6%	0.6%
Illumination	35.4%	44.0%	(8.7%)	35.7%	37.2%	(1.5%)
Power	23.9%	24.9%	(1.0%)	21.8%	26.3%	(4.5%)
Total Gross margin %	36.2%	34.4%	1.8%	35.6%	34.7%	0.9%





Carmanah's consolidated gross margin percentage was up 1.8% in the three months to June 30, 2016 compared to the same period in 2015. On a year to date basis it was up 0.9%. These consolidated increases are due to a shift in the overall revenue to the higher margin Signals segment from the lower margin Power segment.

On a segmented basis, our Signals segment margins were relatively stable between 2016 and 2015. Our Illumination segment margin was down by 1.5% for the year and 8.7% for the second quarter. A large portion of this decline was due to anomalies that increased gross margin % by about 7% in Q2 2015. These Q2 2015 anomalies relate to (1) a reduction in warranty provision recognized due to lower than expected warranty claims, and (2) some recoveries realized on inventory previously written off during the final integration of Sol. Absent these anomalies the Q2 2015 gross margin would have been 37.0%. The 1.0% (Q2) and 4.5% (YTD) declines in our Power segment were largely due to lower margins in our On-grid vertical due to cost overruns on a number of projects which occurred to complete the work on schedule.

## **OPERATING EXPENSES**

	Three	months end	ed June 30,	Six	Six months ended June 30,				
US\$ thousands	2016	2015	Change	2016	2015	Change			
Sales and marketing	1,682	1,223	37.5%	3,308	2,505	32.1%			
Research, engineering and development	872	475	83.6%	1,775	925	91.1%			
General and administration	2,603	1,558	67.1%	5,091	2,835	79.6%			
Other operating recoveries	-	(4,188)	(100%)	-	(3,804)	(100%)			
Total operating expenditures	5,157	(932)	NA	10,174	2,461	313.4%			
Non-cash items:									
Amortization	434	153	183.7%	820	301	172.4%			
Stock-based payments	140	155	(9.7%)	409	291	40.5%			

	Q3 '14	Q4 '14	Q1 '15	Q2 '15	Q3 '15	Q4 '15	Q1 '16	Q2 '16
Sales and marketing	13.1%	12.6%	11.3%	7.8%	7.7%	8.0%	8.4%	8.6%
Research, engineering and development	3.7%	3.5%	4.0%	3.0%	4.7%	4.9%	4.6%	4.5%
General and administration	12.9%	12.6%	11.3%	9.9%	17.9%	14.6%	12.8%	13.4%
Total core operating expenditures	29.7%	28.8%	26.6%	20.7%	30.3%	27.6%	25.8%	26.5%

Our total operating expenses for the three months ended June 30, 2016 were up \$6.1 million over the same period in 2015. This was largely due to the initial recognition of \$4.3 million of investment tax credits recognized in the second quarter of 2015. Excluding unusual items, operating expenses for Q2 2016 were up \$1.9 million over the same period in the prior year. The majority of this increase was associated with the incremental operating costs of Sabik, which we acquired on July 2, 2015.

### SALES AND MARKETING

Our sales and marketing expenses for the three months ended June 30, 2016 were up \$0.5 million. The majority of this increase was due to the inclusion of Sabik, which added approximately \$0.4 million of those costs for the quarter. On a year-to-date basis, sales and marketing costs were up \$0.8 million, with Sabik contributing substantially all of this increase.

### RESEARCH, ENGINEERING AND DEVELOPMENT

Our research, engineering and development expenses for the three months ended June 30, 2016 were up \$0.4 million from the same period last year, and up \$0.8 million for the year to date. The inclusion of Sabik's costs in this component amounted to approximately \$0.4 million for the second quarter and approximately \$0.6 million on a year to date basis. Excluding Sabik, Carmanah's core spend on development staff is up year over year, with compensation expenses climbing \$0.2 million. This increase was partially offset by slightly lower costs on development materials and external contractors, which were down mainly due to timing of ongoing projects. We expect development expenditures to climb to by approximately \$.3 million through the remainder of 2016 as we invest in innovative new products and services.

#### GENERAL AND ADMINISTRATION

Our general and administration ("G&A") expenses for the three months ended June 30, 2016 were up \$1.0 million compared to the same period in 2015. On a year to date basis, G&A costs were up \$2.3 million over the prior year. Substantially all of these increases were due to the inclusion of Sabik's general and administrative costs.

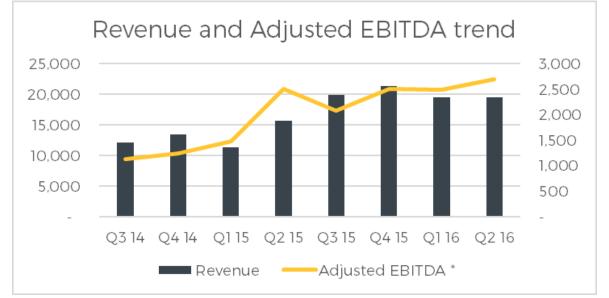
### **OTHER INCOME (EXPENSE)**

Other income or expenses include various non-operating expenditures, including merger and acquisition costs, foreign exchange, and restructuring charges. In the six months to June 30, 2016, we had other income of \$0.5 million, made up of \$0.7 million of foreign exchange gains on our foreign denominated working capital, offset by \$0.2 million of merger and integration costs. In the six months to June 30, 2015, we had a net other expense of \$2.1 million. This amount was made up foreign exchange losses of \$1.3 million and merger and acquisition related expenditures of \$0.8 million, which were mainly associated with the acquisition of Sabik.

### **INCOME TAXES**

Income tax expense for the six months ended June 30, 2016 was \$1.1 million, compared to a recovery of \$5.5 million in the same period in 2015. The significant recovery in 2015 related to the recognition of previously unrecognized tax assets. These assets relate to both investment tax credits and deferred income taxes, both of which will allow us to reduce taxes on current and future earnings realized within Canada. The decision to reinstate these assets was based on our financial performance which made it probable these assets will be utilized.

# **6.2 QUARTERLY TRENDS**



## **REVENUE AND ADJUSTED EBITDA TREND**

' EBITDA and Adjusted EBTIDA are non-IFRS measures see section 4 for discussion.

	2	014		2015			2016	
US\$ thousands	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Revenue	12,168	13,451	11,314	15,715	19,850	21,327	19,449	19,490
Gross margin %	35.4%	34.3%	35.1%	34.4%	33.4%	32.3%	35.0%	36.2%
Net income/(loss)	195	284	30	10,332	(283)	601	1,697	1,289
EPS – Basic	0.01	0.02	0.00	0.48	(0.01)	0.02	0.07	0.05
EPS – Diluted	0.01	0.02	0.00	0.47	(0.01)	0.02	0.07	0.05
Adjusted EBITDA(1)	1,121	1,234	1,481	2,499	2,084	2,505	2,491	2,693

() EBITDA and Adjusted EBTIDA are non-IFRS measures see section 4 for discussion.

Our quarterly revenues naturally fluctuate within our business segments 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 often have longer tender processes and fluctuating timelines. This is most pronounced within our On-Grid, Airfield Ground Lighting, Offshore, and Illumination businesses and to a lesser extent within our Marine and Traffic verticals. Off-Grid 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. Our quarterly performance is affected by natural sales fluctuations within our business. The following are comments on quarter to quarter changes:

- Q3 2014 to Q4 2014 The \$1.3 million increase in revenue and \$0.1 million increase in net income was driven by increased sales in our Signals segment which had a relatively soft Q3 due to a lack of large project deliveries and strong performance in our Illumination segment in Q4.
- Q4 2014 to Q1 2015 The \$2.1 million decrease in revenue and \$0.3 million decrease in net income was primarily due to lower Illumination sales which (a) came off a record Q4 and (b) had a dip in sales due to a reduction in product offering associated with the Sol integration.
- Q1 2015 to Q2 2015 The \$4.4 million increase in revenue was largely driven by sales increases within our On-Grid vertical which benefited from a number of large project secured early in the year and a large portion of the engineering and construction work on those projects was completed in Q2 and Q3 2015. The significant

spike in net income was largely attributable to the recognition of various tax assets.

- Q2 2015 to Q3 2015 The \$4.1 million increase in revenue over Q2 2015 was largely due to the inclusion of Sabik, which resulted in a \$6.0 million increase in Signals sales. This was partially offset by a soft quarter in our Illumination segment which suffered from a lack of large projects being delivered in the quarter. The \$0.3 million net loss was largely attributable to the purchase price allocation of the Sabik acquisition, and more specifically the amortization associated with the significant order backlog which we initially estimated at \$1.3 million, although that value was later reduced to \$0.9 million.
- Q3 2015 to Q4 2015 The \$1.5 million increase in revenue over Q3 was largely attributable to a spike in sales in our Illumination Segment which rebounded from a soft third quarter. This was partially offset by lower sales in our On-Grid vertical which came off a strong third quarter. Net income rebounded due to a combination of higher overall sales and lower operating costs.
- Q4 2015 to Q1 2016 The \$1.9 million decrease in revenue was attributable to lower Signals and Illumination sales, both of which were primarily due to large project shipments in the quarter. This was partially offset by higher Power sales which had a strong first quarter with substantial construction activity in our On-Grid vertical and strong sales growth within our Off-Grid vertical. Net income was up by about \$1.5 million over the fourth quarter. This was primarily due to (1) strong gross margin % which offset the lower revenues, (2) lower operating costs due to decreased amortization associated with the Sabik acquisition and lower compensation costs with Q4 2015 being burdened with higher variable compensation attributable to overachievement of budget, and (3) a positive impact from foreign exchange on our working capital balances.
- Q1 2016 to Q2 2016 Although overall revenue was flat between Q1 and Q2 2016, we saw a substantial increase in our Illumination segment which rebounded from a soft first quarter. This was offset by a slower quarter for our On-Grid vertical which suffered from project delays. Net income decreased slightly, primarily due to foreign exchange, with essentially no impact in Q2 while foreign exchange had a \$0.7 million positive impact in the first quarter.

# 7. Liquidity, Capital Resources and Other Disclosures

## 7.1. SUMMARY OF CONSOLIDATED STATEMENT OF CASH FLOWS

	Six m	Six months ended June 30,					
US\$ thousands	2016	2015	CHANGE				
Net Cash provided/(used) in operating activities	4,806	(3,822)	NA				
Net Cash used in investing activities	(431)	(307)	40.4%				
Net Cash (used)/provided from financing activities	(437)	34,765	NA				
Net Effect of exchange rate changes on cash	114	(404)	NA				
Total increase in cash	4,052	30,232	(86.6%)				

## **CASH USED IN OPERATING ACTIVITIES**

During the six months ended June 30, 2016, cash provided by our operating activities, excluding changes in working capital, was \$4.9 million, up from \$1.4 million in the same period in 2015. This is largely due to stronger earnings in 2016 and higher non-cash expenditures (amortization and share-based payments). Changes in non-cash working capital were negative \$0.2 million first quarter of 2016, down from negative \$0.6 million in the same period in 2015. 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 six months ended June 30, 2016, cash used for investing activities was \$0.4 million, up from \$0.3 million in the same period in 2015. In both periods, these amounts primarily relate to software additions, as we have worked to improve our ERP, CRM and other supporting systems, and production assets.

## **CASH PROVIDED FROM FINANCING ACTIVITIES**

During the six months ended June 30, 2016, cash used in financing activities was \$0.5 million, versus cash generation of \$34.8 million in the same period of 2015. The 2016 amounts relate to proceeds from the exercise of broker warrants and employee stock options, which amounted to \$1.0 million, offset by debt repayments of \$1.4 million. The 2015 amount is primarily made up of \$24.7 million in proceeds on a share issuance completed in May of 2015 and \$10.0 million drawn on a term acquisition loan. A significant portion of these funds were used to acquire Sabik at the start of the third quarter of 2015.

## 7.2 LIQUIDITY AND CAPITAL RESOURCE MEASURES

On June 30, 2016, our overall working capital was \$34.0 million, up from \$28.3 million at December 31, 2015.

In the past, our primary source of liquidity has been from equity issuances and, to a lesser extent, our credit facility, which is discussed in the section below. We believe we have sufficient capital resources and liquidity to run our current business for the foreseeable future. Future acquisitions could require that we raise additional equity or debt.

## 7.3 CREDIT FACILITIES

In early 2015, we signed a new credit facility (the "Facility") with CIBC. The multifaceted Facility provides credit up to \$25.75 million through (1) a \$10 million 364-Day Revolving Credit, (2) a \$10 million Term Acquisition Credit Facility, (3) \$3.75 million for Letters of Credit, and (4) \$2.0 million for trading room and other liabilities. Our ability to draw on the 364-Day revolver, the credit for the letters of credit, and credit for trading room contingent liabilities is subject to certain covenants. Access to the Term Acquisition Credit Facility required CIBCs review and approval of the specific acquisition transaction.

On June 25, 2015, we obtained approval from CIBC to draw on the term acquisition credit for the Sabik acquisition as outlined in Section 3. On June 30, 2015, a total of \$10 million was drawn on the facility in anticipation of closure of the acquisition. The associated debt is repayable on a monthly basis over a five-year term and is broken into two \$5 million tranches, both of which are repayable on demand. The first tranche was supported by a 100% guarantee from EDC and carried an interest rate of US LIBOR plus 1.5%. The EDC fees associated with their guarantee was approximately 4.5% per annum on the outstanding balance. The second tranche carried an interest rate of US LIBOR plus 3.5%. On June 16, 2016, we signed an updated credit facility agreement with CIBC which improved the terms of the Facility by eliminating the need for the first tranche to be supported by EDC, and setting the interest rate on both tranches to US LIBOR plus 3.0%.

The Facility is secured by a General Security Agreement and share pledges of the Company's subsidiaries. The Company is also subject to financial covenants and reporting requirements typical of a facility of this nature.

At June 30, 2016, the principal amount outstanding on the \$10.0 million term acquisition loan was \$8.0 million.

The Sabik Group of Companies has access to an operating line and loan with Nordea, a Finnish financial institution. This debt is secured by Carmanah through a letter of credit drawn from the CIBC credit facility noted above. In March 2016, the Company's German entity, Sabik Offshore GmbH, secured a new credit facility with the Deutsche Bank (the "Deutsche Facility"). The Deutsche Facility provides credit up to  $\leq$ 3.0 million through  $\leq$ 2.0 million of revolving credit and  $\leq$ 1.0 million for guarantees and was secured to support ongoing working capital needs. Interest on the revolving credit facility is variable and is based on EURIBOR plus 1.5%. The Deutsche Facility has been guaranteed through a  $\leq$ 2.0 million Letter of Credit issued on the CIBC Facility and a security over inventory within Sabik Offshore GmbH. At June 30, 2016, approximately \$0.7 million had been drawn on this new revolving credit facility.

## 7.4 CONTRACTUAL OBLIGATIONS AND COMMITMENTS

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. At present, we are dealing with two significant contract manufacturers, Creation Technologies LP and Star Precision Fabricating Ltd. We previously had Flextronics as our main contract manufacturer; however, we have now fully moved manufacturing away from that facility. Under the terms of the contract manufacturing agreements, we are required to purchase excess raw inventory in situations where our demand forecasts for particular products is less than actual use or sales in a given period. At June 30, 2016, our contract manufacturers held approximately \$1.8 million (December 31, 2015 - \$1.5 million) in inventory and \$0.9 million (December 31, 2015 - \$0.7 million) in outstanding committed purchase orders.

Future commitments and contractual obligations that were outlined in the section "5.4 Contractual obligations and commitments" in our MD&A for the three and twelve months ended December 31, 2015 remain largely unchanged.

## 7.5 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 in our solar powered flashing beacons for the traffic safety market and other claims relating to advertising and business practices. Various actions were taken in regards to this matter, including a successful application to have the underlying patents reexamined by the U.S patent office which resulted in many aspects of the patents being rejected. The Plaintiff has appealed this judgment in court. Pending that action, the original court proceedings have been stayed.

In early March 2015, we filed a civil lawsuit in the Supreme Court of British Columbia against Royal & Sun Alliance Insurance Company of Canada ("RSA") and Integro (Canada) Ltd. ("Integro") operating as Integro Insurance Brokers. The lawsuit has been filed against RSA in an effort to obtain coverage of the claims brought in the US and indemnity of defence costs incurred in the US litigation. The lawsuit against Integro is in negligence for failing to notify RSA of the above-noted US claims in a timely manner. The lawsuit seeks a declaration of coverage and to recover legal defence costs with respect to the US litigation. In late April 2016, we reached a settlement with the defendants during mediation as described in section 3. Under the settlement, we received CAD \$0.5 million for past defense costs and damages. These funds were received in late July 2016 once all of the terms of the settlement agreement were finalized. According to the agreement, RSA has agreed to cover 70% of future defense costs incurred on a go forward basis. However, in the event that the underlying action proceeds to trial and a verdict is rendered, a reallocation of the go forward defense costs may occur.

In June 2016, we were named in another lawsuit filed in a United States District Court filed by the same Plaintiffs above alleging additional patent infringement with respect to the same specific flash pattern used in our solar powered flashing beacons. This lawsuit revolves around a new patent that was granted in September 2015. We believe this patent will not withstand a re-examination. The outcome of this and the previous case are not certain and we intend to continue to defend ourselves and file additional responses to the Court as required. As the outcome of these matters is not currently determinable, no provision has been made at June 30, 2016.

## 7.6 CONTINGENT LIABILITY

Nothing not previously disclosed.

## 7.7 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 7.4, Contractual obligations and commitments.

## 7.8 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.

## 7.9 RELATED PARTY TRANSACTIONS

None.

## 7.10 PROPOSED TRANSACTION

None.

## 7.11 SUBSEQUENT EVENTS

In mid-July 2016, we executed on the NCIB program described in section 5. A total of 29,877 shares have been purchased under the NCIB for \$0.1 million.

## **OUTSTANDING SHARE DATA**

Our common shares trade on the Toronto Stock Exchange ("TSX") (TSX: CMH), and as at June 30, 2016 we had 24,888,543 fully issued and outstanding common shares. The following table summarizes the outstanding shares, options and other outstanding stock units stated in CAD.

	AUCUST 9, 2016	JUNE 30, 2016	MARCH 31, 2016	DECEMBER 31, 2015	SEPTEMBER 30, 2015
Share price - closing (CAD\$)	4.20	3.99	5.42	5.68	5.57
Market capitalization (CAD \$ in thousands)	104,417	99,305	134,865	139,822	136,913
Outstanding					
Shares	24,861,228	24,888,543	24,882,904	24,616,600	24,580,406
Options	1,856,595	1,863,781	1,999,868	2,052,620	2,164,183
Warrants	-	-	79,860	319,440	319,440

# 8. Critical Accounting Estimates and Accounting Policy Developments

## 8.1 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. Unless otherwise noted the estimates are inclusive of all of our reportable market segments described in section 2.

The significant accounting policies and estimates are dis	scussed below:
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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 June 30, 2016 was \$1.2 million, unchanged from December 31, 2015.
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 a write-down that 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 June 30, 2016 our inventory provision was approximately \$0.3 million, unchanged from December 31, 2015.
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 June 30, 2016, our allowance for doubtful accounts was \$0.2 million, up from \$0.1 million from December 31, 2015.
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 14% to 26% and vary depending upon the employee make-up of the associated grants.

ACCOUNTING POLICY	ESTIMATES
Impairment of assets	Each year we make significant judgments in assessing if goodwill, tangible or intangible assets have suffered an impairment loss. Our impairment analysis involves the use of an income approach that relies on estimating the future net cash flows and applying the appropriate discount rate to those future cash flows. Significant management judgment is necessary to evaluate the impact of operating and economic changes on each CGU or underlying asset. Critical assumptions include projected sales growth and market opportunities, future profitability of system sales, operating and administrative expense, capital expenditures, an appropriate discount rate, and in some situations the cost of disposal. In 2015, there were no impairment losses and management believes there have been no impairment indicators in the first part of 2016.
	Our impairment analysis at December 31, 2015 involved the use of income approach that relied on estimating the future net cash flows and applying an appropriate discount rate to those future cash flows. This approach employed the following key assumptions: anticipated sales growth in key markets, changes in gross margins due to pricing changes for materials and the cost of manufacturing, changes in operating and administrative expenses, anticipated capital expenditures, and an appropriate discount rate. The forecast period utilized in the analysis covered 2016 through 2020. Key drivers in this assessment include anticipated overall sales growth, estimated to be between 3% - 10% a year, a terminal growth rate of between 2% - 4% and a weighted average cost of capital of 14.5%. The analysis indicated an excess over carrying value of \$6.4 million for Sol and \$19.1 million for Sabik. Management considers the future sales growth rate a key factor in this analysis. In 2015 and Q2 2016, there were no impairment losses.
Revenue recognition	Our On-Grid vertical includes revenues from projects including both good and services. Revenue is recognized on a percentage of completion basis at the measurement of total costs, including internal labour hours completed and external costs. At the start of each project the hours to complete and total external costs are estimated and revised periodically as the project progresses. An external labour rate is then applied to hours completed at the end of each reporting period to determine internal costs and added to external costs to determine the amount of revenue to recognize in accordance with the contracts in place.
	As a result of the above revenue recognition approach, we will at times have unbilled receivables that arise when project revenues are earned prior to our ability to invoice in accordance with the contract terms. These amounts are disclosed on the Consolidated

statement of Financial Position.

**ESTIMATES** 

#### ACCOUNTING POLICY

Fair values of assets and liabilities acquired in business combinations In a business combination, we acquire various assets and assume certain liabilities of an acquired entity. The estimate of fair values for these transactions involves judgment in determining the fair values assigned to the tangible and intangible assets (e.g. technology, brand, order backlog, etc.) acquired and the liabilities assumed on the acquisition. The determination of these fair values involves a variety of assumptions, including estimates surrounding costs to acquire or reproduce a similar asset, expected cash flows, discount rates, etc. Contingent consideration resulting from business combinations is recorded at fair value at the acquisition date as part of the business combination based on expected discounted cash flows, and is subsequently remeasured to fair value at each reporting date with any subsequent change in fair value recognized in the Consolidated Statement of Earnings and Comprehensive Income.

During 2015, significant judgment was required to determine the fair value associated with the acquisition of Sabik, which was acquired on July 2, 2015. The transaction was described in Section 3 above. The determination of the purchase price and the associated allocation within our December 31, 2015 audit financial statements was preliminary but as of June 30, 2016's unaudited financial statement is now final. There were no changes between the preliminary allocation in the December 31, 2015 statements and those presented in the June 30, 2016 statements. The following are the major areas of judgement in the accounting for the acquisition:

- The value of the 1,180,414 shares issued on July 2, 2015 was determined to be \$4.5 million. If these shares were valued as per the closing price on July 2, 2015, it would have been \$6.4 million based on the closing share price of \$6.79 CAD and a US/CAD exchange rate of 0.7958. However, 948,842 of the shares issued were subject to an escrow or hold period, with approximately 118,605 shares being released from the hold period every three months over a two-year period. As a result, the fair value of these shares has been adjusted downward utilizing a Black Scholes model calculation. The major assumptions for this calculation related to an estimate of our share price volatility, which ranged from 59.5% to 85.8% in the calculations utilized.
- We have made a number of estimates and judgements with respects to intangible assets that have been recognized as a result of the acquisition. The major items recognized include Sabik's sales order backlog, product development assets, customer lists and other similar intangibles.

## 8.2 FUTURE CHANGES IN ACCOUNTING POLICIES

Certain pronouncements have been issued by the International Accounting Standards Board ("IASB") or the International Financial Reporting Interpretations Committee ("IFRIC") that will become effective in future accounting periods. The following is a summary of significant standards that may have an impact on our future financial statements.

- 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. It is anticipated that these changes would be effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted.
- IFRS 15, Revenue from Contracts with Customers ("IFRS15"). IFRS 15 clarifies the principles for recognizing revenue and cash flows arising from contracts with customers. It is anticipated this changes will be effective for annual periods beginning on or after January 1, 2017, although this was tentatively pushed back to January 1, 2018 at the IASB's meeting on April 28, 2015.
- IFRS 16, Leases ("IFRS 16"). IFRS 16 replaces IAS 17. Under IFRS 16, a lease will exist when a customer controls the right to use an identified asset as demonstrated by the customer having exclusive use of the asset for a period of time. IFRS 16 introduces a single accounting model for lessees and all leases will require an asset and liability to be recognized on the Statement of Financial Position at inception. The accounting treatment for lessors will remain largely the same as under IAS 17. The standard is effective for annual periods beginning on or after January 1, 2019 with early adoption permitted, but only if the entity is also applying IFRS 15.

We are assessing the impact that these standards will have on our consolidated financial statements.

## 8.3 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 over- seeing 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 June 30, 2016 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 DC&P 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

Management is responsible for establishing and maintaining adequate internal control over financial reporting ("ICFR"). ICFR is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. Due to its inherent limitations, ICFR may not prevent or detect misstatements. Management has assessed the effectiveness of the Company's ICFR using the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013). Based on this assessment, management has determined that the Company's ICFR was effective as of June 30, 2016.

## LIMITATION ON SCOPE OF DESIGN

Prior to the third quarter of 2015, the scope of DC&P and ICFR was limited to exclude controls, policies and procedures of Sol which was acquired on July 2, 2014. During the second quarter of 2015, we completed the integration of all of Sol's significant processes and as a result we are no longer relying on the associated scope limitation. However, we have been relying on the same scope limitation for both DC&P and ICFR surrounding the Sabik acquisition, which closed on July 2, 2015. During the second quarter of 2016 we completed our initial assessment of Sabik's processes, procedures and associated controls and expect to be able to remove this scope limitation during the third quarter of 2016.

# 9. 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 in our MD&A and annual information form for the year ended December 31, 2016 filed on SEDAR at www.sedar.com.