



**MANAGEMENT'S DISCUSSION & ANALYSIS**

**For the Quarter Ended November 30, 2017**

### Introduction

This Management Discussion and Analysis (MD&A) explains the material changes in Thermal Energy International Inc.'s ("Thermal Energy" or the "Company") financial condition and results of operations for the second quarter of Fiscal Year 2018, ended November 30, 2017. The unaudited condensed consolidated interim financial statements and accompanying notes constitute an integral part of the discussion and should be read in conjunction with this MD&A. During the period ended November 30, 2017, the Company's critical accounting estimates, significant accounting policies and risk factors have remained substantially unchanged. Additional information relating to the Company is available on SEDAR at [www.sedar.com](http://www.sedar.com).

### Currency

All financial information in this report is stated in Canadian Dollars, which is both the presentation and functional currency of the Company. Approximately 55% of our operations, assets and liabilities are denominated in British Pound Sterling. As such, foreign currency fluctuations affect the reported values of individual lines on our statement of financial position and income statement. When the Canadian dollar strengthens, the reported values decrease and the opposite occurs when the Canadian dollar weakens.

### Review and Approval by the Board of Directors

The Board of Directors, on recommendation of the Audit Committee, approved the content of this MD&A on January 25, 2018. Disclosure contained in this document is current to this date, unless otherwise stated.

### Forward-Looking Statements

This MD&A may include statements that are forward-looking. These statements are not guarantees of future performance and are subject to risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. We discuss the principal risks of our business in Section 7 of this MD&A. We cannot provide any assurance that forecasted financial or operational performance will actually be achieved. If it is achieved, we cannot provide assurance that it will result in an increase in our share price. See Section 8 entitled "Forward-Looking Information".

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## 1. Our Business

### 1.1 Company Overview

Thermal Energy, established in 1991, is an innovative cleantech company and a global provider of proprietary and proven energy and water efficiency and emission reduction products and solutions to the industrial, commercial and institutional markets. The Company is headquartered in Ottawa, Canada, with offices in the U.K., Italy, U.S., China and sales worldwide.

Thermal Energy engages clients through a unique mix of process, energy, environmental and financial expertise to save our customers money and improve their bottom lines by reducing their fuel use and carbon emissions. The Company's award-winning products have an excellent track record of longevity, proven reliability and performance and have been shown to provide: significant energy savings; improved water efficiency; reduced greenhouse gas emissions; lower maintenance costs; improved product quality; and increased production efficiency. Thermal Energy's products are effective in a wide range of industries and applications.

More information on Thermal Energy can be found at [www.thermalenergy.com](http://www.thermalenergy.com). **GEM™**, **FLU-ACE®**, **THERMALONOX™**, and **DRY-REX™** are trademarks of Thermal Energy.

### 1.2 Core Businesses

The Company operates in the energy efficiency industry in North America, Europe, China and the rest of the world. The Company markets, sells, engineers, fabricates, constructs, installs and supports two technology lines – heat recovery solutions (**FLU-ACE®**) and condensate return system solutions (**GEM™** steam traps). The Company is also developing a third technology line - low temperature biomass drying systems (**DRY-REX™**).

Before 2007, the Company concentrated mainly on the selling of heat recovery systems but had begun selling **GEM™** product through a distribution agreement with Gardner Energy Management Limited, based in the U.K. In 2008, the Company acquired Gardner Energy Management Limited, which sells the **GEM™** product throughout the world. As part of this transaction, the Company also acquired the 67% share of GEMchem Ltd, a UK-based water treatment company providing services within the UK only.

The acquisition of Gardner Energy Management Limited resulted in the Company having two primary operational bases, one in Ottawa, Canada covering North America and China ("Thermal Energy Ottawa") and the other in Bristol, United Kingdom, covering Europe and the rest of the world ("Thermal Energy Bristol"). Although the Ottawa base is deemed to be the center of excellence for the heat recovery side of the business, and Bristol the center of excellence for condensate return system solutions, continuous cross-training means that both bases have expertise across both major product lines.

Although the Company markets its products throughout the world, the majority of sales are from within North America and Europe, due to the proximity to the Company's bases. While this continues to be the key focus, the Company also continues to look for new distributors in regions deemed to have potential.

### 1.3 Strategy

The Company's mission is to be a best-in-class provider of return on investment-driven thermal energy efficiency technology and solutions to the industrial, institutional, and commercial sectors, helping our clients around the world improve their bottom line, move towards sustainable operations and reduce their environmental and carbon foot print. The Company's products and services are "best-in-class" with world-wide application in a broad range of sectors.

The Company has representation in 28 countries around the world but our current focus is on the key markets of North America, Europe and the Middle East. Despite significant growth over the last few years, Thermal Energy's penetration in these markets remains low and therefore the Company plans to continue growing our sales and distribution capabilities in these markets while at the same time begin to build our business in other energy-intensive markets around the world.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

We have sold our proprietary and proven products to hundreds of companies and institutions, including approximately 50 large multinational companies in the pharmaceutical, food and beverage, pulp and paper, chemical and petrochemical sectors. So far, the Company has only partially penetrated 100 of the more than 2,000 global sites of these multi-national companies. Thermal Energy has executed a corporate-wide global roll-out of our product with two of these multi-national companies and is currently working with additional companies with the goal of executing similar corporate roll-outs.

With a global sales and distribution network the Company also has the opportunity to introduce new synergistic products and services, and acquire complementary products and businesses that can be distributed through our existing network.

## 2. Performance Measures

In addition to the quarterly financial statements, the following performance measures provide useful information to both management and investors to better understand the financial performance and financial position of the Company.

### 2.1 Adjusted Operating Cash Flow

Adjusted operating cash flow (defined as income (loss) for the period, as adjusted for revenue recorded upon signing of a finance lease, plus items not involving cash but excluding any changes in working capital items, plus finance lease payments received) is a performance measure used to gauge the cash generating capability of the Company. The impact changes in working capital items has on cash balances is excluded from the calculation of operating cash flow because changes in working capital items are usually only temporary and can fluctuate significantly from period to period and therefore are not a good indicator of the Company's longer-term cash generating capabilities.

It is important to note that cash flow is not the same as net income, which includes transactions that did not involve actual cash outflows and excludes some transactions that did involve actual cash inflows. The calculation of adjusted operating cash flow starts with net income as identified in the Consolidated Statements of Comprehensive Income and then adds or subtracts a number of items identified in the Statement of Cash Flows. Adjusted operating cash flow does not have a standardized meaning prescribed by International Financial Reporting Standards and therefore may not be comparable to similar measures presented by other companies. The most directly comparable measure calculated in accordance with generally accepted accounting principles within the financial statements is net cash provided (used) in operating activities, as disclosed in the statement of cash flows.

### 2.2 EBITDAS

Management believes that EBITDAS (earnings before interest, taxation, depreciation, amortization, impairment of goodwill and other intangible assets, share-based compensation expense and net write down of lease) is a useful performance measure as it approximates cash generated from operations, before tax, capital expenditures and changes in working capital and excludes non-operating items. EBITDAS also assists comparison among companies as it eliminates the differences in earnings due to how a company is financed. EBITDAS does not have a standardized meaning prescribed by International Financial Reporting Standards and therefore may not be comparable to similar measures presented by other companies. The most directly comparable measure calculated in accordance with generally accepted accounting principles within the financial statements is income (loss) before income taxes, as disclosed in the statements of comprehensive income.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

### 2.3 Order Backlog

Order backlog is a useful performance measure that Management uses as an indicator of the short-term future revenue of our Company resulting from already recognized orders. The Company includes in "order backlog" any purchase orders that have been received by the Company but have not yet been reflected as revenue in the Company's published financial statements. It is important to note that once an order or partial order is recorded as revenue, the order backlog is reduced by the amount of the newly reported revenue. Order backlog does not have a standardized meaning prescribed by generally accepted accounting principles or International Financial Reporting Standards and therefore may not be comparable to similar measures presented by other companies.

## 3. Performance

### 3.1 Summary of Second Quarter Results

	Q2 2018	Q2 2017
	\$	\$
Revenue	3,729,447	3,078,744
Cost of Sales	(1,875,937)	(1,149,630)
Gross Profit	1,853,510	1,929,114
Administration, selling, marketing and business development expenses	(1,740,214)	(1,651,216)
Research and development expenses	(37,263)	(35,683)
Operating income	76,033	242,215
Finance Revenue	8,353	2,621
Income before income taxes	84,386	244,836
Income taxes (expense) recovery	(13,872)	(69,678)
Net income for the period	70,514	175,158
Exchange differences on translation of overseas operations	215,155	(67,235)
Total comprehensive income for the period	285,669	107,923
Adjusted operating cash flow	252,894	273,813
EBITDAS	108,711	285,307
Order backlog	5.3 million	6.5 million

#### Revenues and Gross Profits

Revenues were \$3,729,447 in the quarter ended November 30, 2017, representing an increase of \$650,703, or 21.1%, over the \$3,078,744 recognized in the quarter ended November 30, 2016. Sales of heat recovery systems increased by \$1,169,328 (108.0%) over the same period of the previous year, while sales of GEM condensate return systems decreased by \$518,625 (26.0%).

The second quarter of FY 2018 saw heat recovery revenues from the partial installation of a system at a leading producer of industrial and fuel alcohols, as announced September 28, 2016, as well as the substantial completion of an installation at a major hospital, plus progress of a project at a sixth site of a leading Fortune 500 food and beverage producer, as announced July 6, 2017. This compared to the early stages of an installation at a major hospital, as announced July 25, 2016 plus an installation at a major food producer, as announced May 3, 2016 and the partial installation of a system at a global brewing company, as announced August 8, 2016 in the second quarter of FY 2017.

GEM condensate return system sales in the quarter ended November 30, 2017 included further orders from a leading performance materials company. In comparison, as well as orders from the same leading performance materials company, the second quarter of the previous year saw the partial fulfilment of an order received from a hospital, as announced September 14, 2016.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

The gross profit of \$1,853,510 in the quarter ended November 30, 2017 represented a decrease of \$75,604, or 3.9%, from the \$1,929,114 achieved in the quarter ended November 30, 2016, despite an increase in revenue of 21%. This was the result of the product split, with the current quarter seeing a higher proportion of revenues deriving from the sale of heat recovery systems. These results expressed as a percentage of sales were 49.7% in the second quarter of FY 2018 compared with 62.7% in the second quarter of FY 2017.

### *Expenses*

*Administration, selling, marketing and business development expenses* in the quarter ended November 30, 2017 totaled \$1,740,214 compared to \$1,651,216 in the quarter ended November 30, 2016, an increase of \$88,998, or 5.4%. Increases associated with new sales and technical staff, the timing of audit fee invoices and foreign exchange losses experienced in the quarter were partially offset by the decrease in staff incentive payable.

*Research and development costs* in the second quarter of FY 2018 of \$37,263 compared to \$35,683 in the second quarter of FY 2017.

*Finance revenue* in the quarter ended November 30, 2017 of \$8,353 compared to \$2,621 recognized in the quarter ended November 30, 2016. The finance lease was extended for a further three-year period in May 2017 and the interest rate implicit in the lease of 14.3% is applied against the reducing finance lease receivable balance.

*Income before income taxes* for the quarter ended November 30, 2017 was \$84,386 compared to \$244,836 in the same quarter of the previous year.

*Income tax charge* in the second quarter of FY 2018 was \$13,872, compared to \$69,678 in the second quarter of FY 2017. Both the U.K. and U.S entities are subject to tax charges and fluctuations in the tax charge are the result of changing profitability in those entities.

*Net income* for the quarter ended November 30, 2017 was \$70,514 compared to \$175,158 in the same quarter of the previous year.

*Comprehensive income* was \$285,669 for the second quarter of FY 2018 compared to \$107,923 for the second quarter of FY 2017. The current period experienced a strengthening of the pound sterling against the Canadian dollar, whereas the comparative period saw the reverse.

### *Related Party Transactions*

Options outstanding for Directors (excluding the CEO) as at November 30, 2017 were 1,000,000 of which 750,000 were exercisable. There were no warrants outstanding for Directors.

Options outstanding for Senior Management (including the CEO) as at November 30, 2017 were 8,085,787 of which 6,748,335 were exercisable. There were no warrants outstanding for Senior Management.

### *Directors and Senior Management Compensation*

During the quarter ended November 30, 2017 compensation arrangements for directors was as follows:

\$13,500 per annum per Director plus an additional \$8,100 per annum payable to the Chairman of the Board, \$5,400 per annum payable to the chairperson of the Audit Committee, \$5,400 per annum payable to the chairperson of the Ethics, Governance and Compliance Committee and \$1,000 payable for each in-person meeting.

During the quarter ended November 30, 2017, Directors fees paid were \$20,250. Fees to the Chairperson of the Audit Committee and to the Chairperson of the Ethics, Governance and Compliance Committee were \$1,350 each; fees paid to the Chairman were \$2,025. Two in-person meetings were held during the period.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Compensation payable to directors and officers during the quarter ended November 30, (inclusive of the amounts described above but excluding stock based compensation) was as per the table below:

	Salaries and fees		Incentives		Other short-term benefits		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
	\$	\$	\$	\$	\$	\$	\$	\$
<b>Directors</b>								
M. Williams	5,375	7,187	-	-	-	-	5,375	7,187
J. Kelly	7,400	7,980	-	-	-	-	7,400	7,980
W. Ollerhead	6,725	5,783	-	-	-	-	6,725	5,783
B. Linton <sup>(1)</sup>	-	-	-	-	-	-	-	-
J. Schoenmakers	5,725	6,232	-	-	-	-	5,725	6,232
D. Spagnolo	5,375	5,737	-	-	-	-	5,375	5,737
W. White <sup>(1)</sup>	4,375	1,113	-	-	-	-	4,375	1,113
K. Milsom <sup>(1)(2)</sup>	-	113	-	-	-	-	-	113
<b>Total</b>	<b>34,975</b>	<b>34,145</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>34,975</b>	<b>34,145</b>
<b>Senior Management</b>								
W. Crossland	60,000	60,000	-	-	-	-	60,000	60,000
J. Flynn <sup>(3)</sup>	36,525	37,860	-	-	6,980	5,891	43,505	43,751
R. Triebe	45,250	38,424	-	-	1,040	865	46,290	39,289
S. Mawby <sup>(3)(4)</sup>	17,588	37,173	-	-	3,034	5,702	20,622	42,875
<b>Total</b>	<b>159,363</b>	<b>173,457</b>	<b>-</b>	<b>-</b>	<b>11,054</b>	<b>12,458</b>	<b>170,417</b>	<b>185,915</b>
<b>Total Related Party Transactions</b>	<b>194,338</b>	<b>207,602</b>	<b>-</b>	<b>-</b>	<b>11,054</b>	<b>12,458</b>	<b>205,392</b>	<b>220,060</b>

Other short-term benefits include cash payments for social security costs, employee benefits, and payments made into defined contribution pension plans of the Company's UK based subsidiaries.

- (1) Mr. Linton resigned and Ms. Milsom and Mr. White were appointed on November 28, 2016.
- (2) Ms. Milsom resigned on August 31, 2017.
- (3) Ms. Flynn and Mr. Mawby are compensated in UK Pound sterling. Average exchange rate to Canadian dollar was 1.6642 and 1.6762 in the second quarter of FY 2018, and the second quarter of FY 2017 respectively.
- (4) Mr. Mawby was on parental leave during the period September 1, 2017 to November 5, 2017.

### 3.2 Summary of Year to Date Results

	Six months ended Nov 30, 2017	Six months ended Nov 30, 2016
	\$	\$
Revenue	6,827,031	5,213,497
Cost of Sales	(3,455,724)	(1,828,698)
Gross Profit	3,371,307	3,384,799
Administration, selling, marketing and business development expenses	(3,444,233)	(3,107,905)
Research and development expenses	(70,990)	(69,962)
Operating income (loss)	(143,916)	206,932
Finance Revenue	17,407	6,407
Income (loss) before income taxes	(126,509)	213,339
Income taxes (expense) recovery	16,243	(117,911)
Net income (loss) for the period	(110,266)	95,428
Exchange differences on translation of overseas operations	(26,159)	(323,241)
Total comprehensive income (loss) for the period	(136,425)	(227,813)



## Management Discussion and Analysis for Quarter Ended November 30, 2017

	<b>Six months ended Nov 30, 2017</b>	Six months ended Nov 30, 2016
Adjusted operating cash flow	<b>(65,380)</b>	258,338
EBITDAS	<b>(77,558)</b>	288,609
Order backlog	<b>5.3 million</b>	6.5 million

### *Revenues and Gross Profits*

Revenues of \$6,827,031 in the first half of FY 2018, represented an increase of \$1,613,534, or 30.9%, over the \$5,213,497 recognized in the first half of FY 2017. Sales of heat recovery systems increased by \$2,399,728 (132.4%) over the same period of the previous year, while sales of GEM™ Condensate return systems decreased by \$786,194 (23.1%).

Heat recovery revenue in the first half of FY 2018 included revenue from five major ongoing projects, compared with three in the same period of the previous year. Current year projects include the partial installation of a system at a leading producer of industrial and fuel alcohols, as announced September 28, 2016, as well as an installation at a major hospital, the final stages of two other hospital installations plus the substantial completion of a project at a sixth site of a leading Fortune 500 food and beverage producer, as announced July 6, 2017. Prior year projects included one at a leading food products business, as announced May 3, 2016, the partial installation of a heat recovery system at a global brewing company, as announced August 8, 2016, and the early stages of a heat recovery extension project at multi-site hospital group, as announced July 25, 2016.

GEM™ revenue in the first six months of FY 2018 included more orders from a leading performance materials company, as mentioned in the September 20, 2016 announcement. In addition to orders from the same leading performance materials company, the first six months of FY 2017 saw partial fulfilment of orders received from two major hospitals as announced August 8, 2016 and September 14, 2016, as well as orders from an international textiles manufacturer and a multinational biotech company, as reported in the press release dated September 20, 2016.

The gross profit of \$3,371,307 in the six months ended November 30, 2017 represented a decrease of \$13,492, or 0.4%, from the \$3,384,799 achieved in the six months ended November 30, 2016. These results expressed as a percentage of sales were 49.4% in the first half of FY 2018 compared with 64.9% in the first half of FY 2017, the decrease being the result of product split, with a lower proportion of revenue coming from GEM sales in the current period than in the previous period.

### *Expenses*

*Administration, selling, marketing and business development expenses* for the six months ended November 30, 2017 totaled \$3,444,233 compared to \$3,107,905 for the six months ended November 30, 2016, an increase of \$336,328, or 10.8%. Increases in commissions payable and costs associated with additional sales and technical staff and strategic planning were partially offset by a reduction in staff incentive. The strengthening of the pound sterling in the first half of FY 2018 was in contrast to a weakening in the same period of the previous year, resulting in current year exchange losses compared to a gain in the first half of FY 2017.

*Research and development* costs in the first half of FY 2018 totaled \$70,990 compared to \$69,962 in the first half of FY 2017.

*Finance revenue* in the six months ended November 30, 2017 of \$17,407 compared to \$6,407 recognized in the six months ended November 30, 2016. The finance lease was extended for a further three-year period in May 2017 and the interest rate implicit in the lease of 14.3% is applied against the reducing finance lease receivable balance.



## Management Discussion and Analysis for Quarter Ended November 30, 2017

**Loss before income taxes** for the six months ended November 30, 2017 was \$126,509 compared to income of \$213,339 in the same period of the previous year. This was due to cost increases associated with the Company's growth strategy.

**Income tax recovery** in the first half of FY 2018 was \$16,243, compared to a charge of \$117,911 in the first half of FY 2017. This was the result of losses within the UK entity in the first six months of the current year, compared to profits in the same period of the prior year.

**Net loss** for the six months ended November 30, 2017 was \$110,266 compared to net income of \$95,428 in the same period of the previous year.

**Comprehensive loss** was \$136,425 for the first half of FY 2018 compared to \$227,813 for the first half of FY 2017. The first half of FY 2017 saw a greater weakening of the pound sterling against the Canadian dollar.

### 3.3 Liquidity & Capital Resources

The working capital was \$1,350,618 at November 30, 2017 compared to working capital of \$1,430,797 at May 31, 2017 – a decrease of \$80,179, with the Company's net cash position (Cash and cash equivalents less Bank loans) decreasing by \$1,117,018 from \$2,950,140 at May 31, 2017 to \$1,833,122 as at November 30, 2017.

The Company's working capital position over the last eight quarters can be summarized as follows:

	Feb 29, 2016 \$	May 31, 2016 \$	Aug 31, 2016 \$	Nov 30, 2016 \$	Feb 28, 2017 \$	May 31, 2017 \$	Aug 31, 2017 \$	Nov 30, 2017 \$
Current Assets	4,018,307	3,834,124	3,400,711	5,066,120	5,363,954	6,221,714	4,245,864	4,450,013
Current Liabilities	3,317,835	2,857,750	2,502,425	3,806,596	4,149,552	4,790,917	3,079,805	3,099,395
Working Capital	700,472	976,374	898,286	1,259,524	1,214,402	1,430,797	1,166,059	1,350,618

### Q2 FY 2018 Changes

Current assets increased in the second quarter of FY 2018 by \$204,149 to \$4,450,013, with the cash balance increasing by \$503,538, as trade receivables fell by \$191,832. Prepayments decreased by \$213,846 as net deposits paid to suppliers relating to heat recovery contracts were reversed as work was performed, while other net increases totaled \$106,289.

Current liabilities increased by \$19,590 to \$3,099,395. Accounts payable decreased by \$118,637, due to the payment of a number of heat recovery project related invoices subsequent to the previous quarter end, while other net liabilities increased by \$138,227.

As at November 30, 2017, \$77,251 (5.7%) of the Company's trade receivables balance was over 90 days past due. None of the overdue balance is considered impaired as at November 30, 2017.

At November 30, 2017, the Company has operating lease commitments as shown below. The Company had no purchase obligations:

	Total \$	Less than 1 year \$	1-5 years \$	More than 5 years \$
Operating Leases	222,758	125,046	97,712	nil

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Net cash provided by operating activities in the quarter ended November 30, 2017 was \$548,454 compared to \$543,090 in the quarter ended November 30, 2016. Much of the current period increase was the result of movement in trade receivables, prepayments and payables relating to ongoing heat recovery projects.

Net cash provided by investing activities for the quarter ended November 30, 2017 of \$10,638 comprised \$15,702 finance lease principal payments received less \$5,064 paid for additions to property, plant and equipment. This compared to \$26,433 finance lease principal payments received less \$17,146 paid for additions to property, plant and equipment during the quarter ended November 30, 2016.

After allowing negative \$55,554 for the effect of exchange rate fluctuations on cash and cash equivalents, the net result of the above activities was an increase in cash balance of \$503,538 over the second quarter of FY 2018, compared to an increase of \$685,693 over the second three months of FY 2017.

Adjusted operating cash outflow (defined as net income or loss, plus items not involving cash, after net tax and interest cash inflows or outflows, plus finance lease payments received) for the quarter ended November 30, 2017 was \$252,894 compared to \$273,813 for the quarter ended November 30, 2016.

In addition to its net cash balance of \$1,833,122 as at November 30, 2017, the Company also had an estimated \$354,000 of unused borrowing capacity under its bank loans. With cash balances and unused borrowing capacity of approximately \$2,187,122, management believes that it has sufficient capital resources to fund existing operations and anticipated capital requirements in FY 2018. Order backlog as at November 30, 2017 was approximately \$5.3 million compared to \$6.5 million at the same time last year. As at January 25, 2018, the Company had \$17.5 million in purchase orders that had not yet been reflected as revenue in the Company's published quarterly financial statements.

The Company's ability to realize its assets and discharge its liabilities depends on its ability to arrange debt or equity financing and its ability to generate sufficient cash from operations. No assurance can be given that any such additional funding will be available or that, if available, it can be obtained on terms favorable to the Company.

Management is of the opinion that sufficient working capital will be obtained from future cash flows by achieving profitable operations through continuing to manage expenditures and concentrating on building upon the revenue levels experienced in 2016 and 2017. The Company cannot be certain that cash generated from its operations will be sufficient to satisfy its liquidity requirements and it may need to raise capital by obtaining financing.

A reconciliation of Net cash provided (used) in operating activities to adjusted operating cash flow is shown below:

	Three months ended		Six months ended	
	Nov 2017 \$	Nov 2016 \$	Nov 2017 \$	Nov 2016 \$
Net cash provided (used) in operating activities	548,454	543,090	(1,110,222)	230,243
Changes in working capital	(311,262)	(295,710)	1,009,694	(30,552)
Finance lease principal payments received	15,702	26,433	35,148	58,647
Adjusted operating cash flow	252,894	273,813	(65,380)	258,338

### **Net Investment in Lease**

The Company's net investment in lease includes the following:

	November 30, 2017 \$	May 31, 2017 \$
Total estimated minimum lease payments receivable	266,607	319,161
Less: unearned income	(42,028)	(59,434)
	224,579	259,727
Less: current portion	(83,025)	(77,328)
	141,554	182,399

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Finance lease receivable relates to one arrangement. The estimated minimum lease payments receivable in this lease represent the estimated monthly energy outputs of the leased asset and are based on assumptions regarding the efficiency of the asset, the operations of the plant in which it is located and penalty payments resulting from temporary plant shut-downs. On December 31, 2012, the lease with Fortress Specialty Cellulose, as signed on June 29, 2010, expired. On November 27, 2012, an agreement was signed whereby the customer agreed to purchase the recovered energy for a further two years, after which the customer had the option to renew for an additional 24 months on substantially the same terms or purchase the asset from the Company.

On December 22, 2013, the site commenced a market downtime for a period of ten weeks, following the imposition of an interim duty in China on the import of Canadian dissolving pulp, further to which on April 11, 2014, an agreement was made to further extend the existing lease by five months to mid-May 2015.

On May 1, 2015, the customer signed a further extension for 24 months to May 1, 2017. Pursuant to this new extension, the customer has agreed to pay up to \$12,000 per month over two years, at the end of which the customer has the option to purchase the asset from the Company.

On May 1, 2017, a final extension agreement was signed for 36 months to May 1, 2020. Pursuant to this new extension, the customer has agreed to pay up to \$9,500 per month over three years, at the end of which the customer assumes full ownership of the equipment.

Until the expiry of the new lease on May 1, 2020, finance revenue will be recognized within the consolidated statements of comprehensive income at the interest rate implicit in the lease.

The estimated minimum lease payments receivable in this lease represent the estimated monthly energy outputs of the leased asset and are based on assumptions regarding the efficiency of the asset and the operations of the plant in which it is located.

Future estimated minimum lease payments receivable, and expected residual value of equipment at the end of the lease, under the sales-type lease are as follows:

	\$
Less than one year	109,554
Between two and five years	157,053
Residual value of equipment	-
	266,607

### 3.4 Segmented information

In the quarters and six-month periods ended November 30, 2017 and November 30, 2016, the Company operated in the energy efficiency industry in North America, Europe, China and the rest of the world. The Company markets, sells, engineers, fabricates, constructs, installs and supports two technology lines – heat recovery solutions and condensate return system solutions. The Company is also developing a third technology line - low temperature biomass drying systems. Assets are located in Canada, Europe and China.

Management reporting comprises analysis of revenue and gross profit by product segment within two distinct geographical areas. All other items of revenue and expenses are considered on a geographical and/or global basis in making strategic decisions regarding the Company's future. The Company has two operational bases ("reporting units"), one in Canada covering North America and China ("Thermal Energy Ottawa"), and the other in Bristol, United Kingdom, covering Europe and the rest of the world ("Thermal Energy Bristol"). These areas are determined by proximity of the region to the reporting unit, plus the location of the contracts in existence with agents and distributors in the respective areas and the historical relationships with those agents and distributors. Corporate costs that cannot easily be attributed to either of the two reporting units are included in reconciling items. The chief operating decision maker focuses on revenues and costs by geographical segments, but manages assets and liabilities on a global basis.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Segment information for the quarter ended November 30, 2017 and the comparative period are detailed in the table below.

	Thermal Energy Ottawa		Thermal Energy Bristol		Reconciling items		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
	\$	\$	\$	\$	\$	\$	\$	\$
Total revenue	<b>3,030,026</b>	1,173,978	<b>699,421</b>	1,904,766	-	-	<b>3,729,447</b>	3,078,744
Cost of sales	<b>(1,731,263)</b>	(371,123)	<b>(144,674)</b>	(778,507)	-	-	<b>(1,875,937)</b>	(1,149,630)
Gross profit	<b>1,298,763</b>	802,855	<b>554,747</b>	1,126,259	-	-	<b>1,853,510</b>	1,929,114
Other expenses	<b>(771,296)</b>	(677,429)	<b>(699,697)</b>	(738,009)	<b>(306,484)</b>	(271,461)	<b>(1,777,477)</b>	(1,686,899)
Finance revenue	<b>8,353</b>	2,621	-	-	-	-	<b>8,353</b>	2,621
Income (loss) before income taxes	<b>535,820</b>	128,047	<b>(144,950)</b>	388,250	<b>(306,484)</b>	(271,461)	<b>84,386</b>	244,836
Income taxes (expense) recovery	<b>(29,612)</b>	-	<b>15,369</b>	(107,580)	<b>371</b>	37,902	<b>(13,872)</b>	(69,678)
Net income (loss)	<b>506,208</b>	128,047	<b>(129,581)</b>	280,680	<b>(306,113)</b>	(233,559)	<b>70,514</b>	175,158
Attributable to:								
Owners of the parent	<b>507,027</b>	135,407	<b>(124,677)</b>	277,197	<b>(306,113)</b>	(233,559)	<b>76,237</b>	179,045
Non-controlling interest	<b>(819)</b>	(7,360)	<b>(4,904)</b>	3,473	-	-	<b>(5,723)</b>	(3,887)

Segment information for the six months ended November 30, 2017 and the comparative period are detailed in the table below.

	Thermal Energy Ottawa		Thermal Energy Bristol		Reconciling items		Total	
	2017	2016	2017	2016	2017	2016	2017	2016
	\$	\$	\$	\$	\$	\$	\$	\$
Total revenue	<b>5,091,555</b>	1,855,353	<b>1,735,476</b>	3,358,144	-	-	<b>6,827,031</b>	5,213,497
Cost of sales	<b>(2,938,443)</b>	(569,749)	<b>(517,281)</b>	(1,258,949)	-	-	<b>(3,455,724)</b>	(1,828,698)
Gross profit	<b>2,153,112</b>	1,285,604	<b>1,218,195</b>	2,099,195	-	-	<b>3,371,307</b>	3,384,799
Other expenses	<b>(1,459,260)</b>	(1,270,778)	<b>(1,442,563)</b>	(1,399,621)	<b>(613,400)</b>	(507,468)	<b>(3,515,223)</b>	(3,177,867)
Finance revenue	<b>17,407</b>	6,407	-	-	-	-	<b>17,407</b>	6,407
Income (loss) before income taxes	<b>711,259</b>	21,233	<b>(224,368)</b>	699,574	<b>(613,400)</b>	(507,468)	<b>(126,509)</b>	213,339
Income taxes (expense) recovery	<b>(48,480)</b>	24	<b>44,424</b>	(159,042)	<b>20,299</b>	41,107	<b>16,243</b>	(117,911)
Net income (loss)	<b>662,779</b>	21,257	<b>(179,944)</b>	540,532	<b>(593,101)</b>	(466,361)	<b>(110,266)</b>	95,428
Attributable to:								
Owners of the parent	<b>673,022</b>	34,148	<b>(180,069)</b>	528,240	<b>(593,101)</b>	(466,361)	<b>(100,148)</b>	96,027
Non-controlling interest	<b>(10,243)</b>	(12,891)	<b>125</b>	12,292	-	-	<b>(10,118)</b>	(599)

Other expenses within reconciling items comprise the following:

	Three months ended November 30		Six months ended November 30	
	2017	2016	2017	2016
	\$	\$	\$	\$
Corporate admin costs	<b>218,934</b>	234,140	<b>455,205</b>	429,010
Stock-based compensation	<b>13,923</b>	29,298	<b>27,845</b>	55,152
Professional fees	<b>3,141</b>	23,592	<b>83,261</b>	119,094
Depreciation of property, plant and equipment	<b>9,930</b>	10,235	<b>20,177</b>	18,097
Bank charges and interest	<b>8,561</b>	10,956	<b>17,302</b>	19,329
Foreign exchange differences	<b>51,995</b>	(36,760)	<b>9,610</b>	(133,214)
Total	<b>306,484</b>	271,461	<b>613,400</b>	507,468

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Corporate administration costs include directors' fees, all costs relating to both the CEO and CFO, directors and officers' insurance, corporate legal costs, public relations costs, professional fees relating to group tax planning and corporate filing costs and strategic planning.

During the three months ended November 30, 2017, Thermal Energy Ottawa had three customers that accounted for 11%, 12% and 35% respectively of total group revenue.

During the three months ended November 30, 2016, Thermal Energy Ottawa had one customer that accounted for 14% and Thermal Energy Bristol had one customer that accounted for 17% of total group revenue.

During the six months ended November 30, 2017, Thermal Energy Ottawa had three customers that accounted for 10% 19% and 20% respectively of total group revenue.

During the six months ended November 30, 2016, Thermal Energy Ottawa had one customer that accounted for 11% and Thermal Energy Bristol had one customer that accounted for 11% of total group revenue.

Further geographical analysis:

	Revenue for the six months ended		Property, Plant and Equipment as at		Goodwill and other Intangible assets as at		Finance lease receivable (non-current) as at	
	November 30, 2017	November 30, 2016	November 30, 2017	May 31, 2017	November 30, 2017	May 31, 2017	November 30, 2017	May 31, 2017
	\$	\$	\$	\$	\$	\$	\$	\$
Canada	1,142,504	216,332	40,621	40,984	-	-	141,554	182,399
U.S.A.	3,947,519	1,639,021	-	-	-	-	-	-
U.K.	1,188,843	1,864,638	39,346	35,639	1,876,362	1,874,529	-	-
Germany	138,116	66,776	-	-	-	-	-	-
Italy	135,635	1,163,482	-	-	-	-	-	-
Netherlands	26,606	27,412	-	-	-	-	-	-
Ireland	20,518	61,683	-	-	-	-	-	-
Greece	-	41,970	-	-	-	-	-	-
Slovenia	32,879	51,657	-	-	-	-	-	-
Norway	44,196	-	-	-	-	-	-	-
Rest of Europe	11,938	23,672	-	-	-	-	-	-
Kenya	43,997	23,231	-	-	-	-	-	-
India	42,687	28,399	-	-	-	-	-	-
China	1,532	-	-	-	-	-	-	-
United Arab Emirates	46,607	-	-	-	-	-	-	-
Rest of world	3,454	5,224	-	-	-	-	-	-
<b>Total</b>	<b>6,827,031</b>	<b>5,213,497</b>	<b>79,967</b>	<b>76,623</b>	<b>1,876,362</b>	<b>1,874,529</b>	<b>141,554</b>	<b>182,399</b>

### Material Segmentation Variances

#### Revenue

Thermal Energy Ottawa: revenue for the quarter ended November 30, 2017 was \$3,030,026 compared to \$1,173,978 for the quarter ended November 30, 2016. Heat recovery revenue increased by \$2,042,796, with the current period seeing the substantial installation at a hospital as well as continuing progress of an installation at a leading producer of industrial and fuel alcohols plus continuation of a project at a leading Fortune 500 food and beverage producer. Revenue from sales of GEM products meanwhile decreased by \$186,748 with the same period of the previous year seeing a number of orders being converted by the end of the period.

Revenue for the six months ended November 30, 2017 of \$5,091,555 represented an increase of \$3,236,202 (174.4%) over the \$1,855,353 achieved in the first six months of the previous year. Whereas the first few months of FY 2017 saw little work on new heat recovery projects, although work did commence on two new projects towards the end of the second quarter, the first half of FY 2018 saw ongoing work on three

## Management Discussion and Analysis for Quarter Ended November 30, 2017

projects. Revenue from sales of GEM™ product fell by \$287,449 from the same period of year, due to a lower number of larger orders.

Thermal Energy Bristol: revenue for the quarter ended November 30, 2017 was \$699,421 compared to \$1,904,766 for the same period of the previous year, a decrease of \$1,205,345. Heat recovery revenue decreased by \$873,468, with the current quarter seeing no projects compared to the completion of projects at two hospitals in the same quarter of the previous year. The decrease in revenue from sales of GEM products of \$331,877 was the result of no hospital conversions in the current period, compared to one in the comparative period.

For the six months ended November 30, 2017, revenue was \$1,735,476, representing a decrease of \$1,622,668 (48.3%) from the six months ended November 30, 2016, with no new heat recovery projects being started and GEM™ sales falling by \$498,745 due to the lack of orders replacing those from two hospitals in the same period of the prior year.

### *Segment Income (loss) Before Tax*

Thermal Energy Ottawa's gross profit increased by \$495,908 in the quarter ended November 30, 2017 over the same quarter of the preceding year due to the increase heat recovery revenue. An increase of \$93,867 in other expenses, mainly due to commissions and additional staff expenses, plus an increase in finance revenue of \$5,732 following the extension of the finance lease, resulted in a net income before tax of \$535,820 for the second quarter of FY 2018 compared to \$128,047 for the second quarter of FY 2017.

In the first half of FY 2018, Thermal Energy Ottawa's gross profit increased by \$867,508 compared to the first half of FY 2017, as a result of the increased heat recovery revenue. Other expenses increased by \$188,482, again due mainly to commissions and additional staff expenses, while finance revenue increased by \$11,000, resulting in an improvement in income before tax of \$690,026.

Thermal Energy Bristol's gross profit decreased by \$571,512 in the quarter ended November 30, 2017 from the same quarter of the preceding year, due to the decreased revenues. Other net costs decreased by \$38,312, the largest decrease in commissions payable being partially offset by increases related to additional staff in the current quarter. This resulted in a loss before tax of \$144,950 for the second quarter of FY 2018 compared to income of \$388,250 for the second quarter of FY 2017.

In the first half of FY 2018, Thermal Energy Bristol's gross profit decreased by \$881,000 from the first half of FY 2017, due to the fall in revenue. Other expenses increased by \$42,942, with increased costs relating to additional staff being mostly offset by reduced commissions payable. The net effect was a decrease in profitability before tax of \$923,942.

Other expenses within Reconciling items, which incorporates all costs not specifically attributable to the either regional operational center, amounted to \$306,484 in the second quarter of FY 2018 compared to \$271,461 in the second quarter of FY 2017, the main variance being less favorable exchange rate fluctuations in the current quarter than in the same period of the previous year.

For the six months ended November 30, 2017, other expenses within Reconciling items were \$613,400, an increase of \$105,932, mostly caused by foreign exchange differences.

Quarterly financial information (unaudited)

For the eight quarters ended November 30, 2017

Quarter ended	30-Nov-17 \$	31-Aug-17 \$	31-May-17 \$	28-Feb-17 \$
Revenue	3,729,447	3,097,584	4,754,080	3,224,530
Gross Profit	1,853,510	1,517,797	2,378,543	1,675,233
Gross Profit Percentage	49.7%	49.0%	50.0%	52.0%
EBITDAS <sup>(1)</sup>	108,711	(186,269)	462,964	(1,811)
Total net income (loss)	70,514	(180,780)	353,776	(56,472)
Income (loss) per share, basic and diluted	0.000	(0.001)	0.002	(0.000)

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Quarter ended	30-Nov-16	31-Aug-16	31-May-16	29-Feb-16
	\$	\$	\$	\$
Revenue	3,078,744	2,134,753	4,123,246	3,220,621
Gross Profit	1,929,114	1,455,685	2,047,713	2,029,240
Gross Profit Percentage	62.7%	68.2%	49.7%	63.0%
EBITDAS <sup>(1)</sup>	285,307	3,302	376,858	504,654
Total net income (loss)	175,158	(79,730)	268,113	417,722
Income (loss) per share, basic and diluted	0.001	(0.001)	0.001	0.003

(1) EBITDAS represents earnings before interest, taxation, depreciation, amortization, share-based compensation expense and net write down of lease.

A reconciliation of Net income (loss) to EBITDAS is shown below for the periods ended November 30:

	Three months ended		Six months ended	
	2017	2016	2017	2016
	\$	\$	\$	\$
Total net income (loss) attributable to owners of the parent	76,237	179,045	(100,148)	96,027
Total net income (loss) attributable to non-controlling interest	(5,723)	(3,887)	(10,118)	(599)
Interest paid	499	1,104	999	2,209
Interest received	(27)	(165)	(71)	(188)
Taxation	13,872	69,678	(16,243)	117,911
Depreciation	9,930	10,235	20,178	18,097
Share based compensation	13,923	29,297	27,845	55,152
EBITDAS	108,711	285,307	(77,558)	288,609

## 4. Business Outlook

Governments around the world are taking unprecedented action, including increasing regulations, to reduce carbon emissions. Energy efficiency can make the transition toward a clean energy economy faster and cheaper than other initiatives, and therefore is an important element in energy policies around the world. As such, the industrial sector has begun to feel the pressing need to adopt measures that can improve the energy efficiency of internal processes and operations, thus contributing to an increased demand for energy efficiency products, solutions and services globally.

Other than our order backlog, we do not provide specific financial performance guidance. However, we believe that we are well positioned to benefit from this increased demand, particularly in our key markets of North America, the United Kingdom, and the European Union. As mentioned in Section 2.3 earlier, Management uses order backlog as an indicator of the short-term future revenue of our Company resulting from already recognized orders.

The Company's order backlog as at November 30, 2017 was approximately \$5.3 million. As at January 25, 2018, the Company had an order backlog of approximately \$17.5 million, of which approximately \$0.3 million is related to long term contracts and is not expected to be reflected in revenue within the next 12 months.

	2015	2016	2017
	\$ million	\$ million	\$ million
Order backlog as at November 30	6.5	6.5	5.3
Order backlog as at January reporting date	6.9	7.1	17.5

- In December 2017, the Company announced that it has been engaged by an existing pulp and paper customer to design, develop and implement a major energy efficiency improvement and greenhouse gas reduction project. The project includes the installation of two of Thermal Energy's proprietary FLU-ACE<sup>®</sup> Heat Recovery Systems and the conversion of the mill's steam traps to Thermal Energy's proprietary GEM<sup>™</sup> Steam Trap system.



## Management Discussion and Analysis for Quarter Ended November 30, 2017

Working closely with the customer, the Company helped secure \$5 million in funding for the project from the Ministry of Research, Innovation and Science through the TargetGHG Industrial Demonstration Program (“TargetGHG Stream 1 Program”) administered by Ontario Centres of Excellence (OCE). The order is expected to be fulfilled and the revenue earned over the next eighteen months.

- In October 2017, the Company announced that it had received a \$1.32 million order for the installation of a heat recovery system at a further site of an existing hospital customer. The order is expected to be fulfilled and the revenue earned over the next six months.
- In August 2017, the Company announced that it had received a Super-Efficient Cogeneration Heat Recovery order from a leading Fortune 500 food and beverage producer for approximately \$1,460,000. This order is expected to be fulfilled and the revenue earned over the next six months.
- In July 2017, the Company announced that it had received a sixth heat recovery solution order from a leading Fortune 500 food and beverage producer for approximately \$1,820,000. As at November 30, 2017 this order was just over 75% complete and is expected to be fulfilled and the remaining revenue earned over the next three to six months.
- In March 2017, the Company announced that it had received a third heat recovery solution order from a major hospital group for approximately \$1,700,000. This order was 80% complete at quarter end and is expected to be completed and the remaining revenue earned over the next three months.
- In June 2012, the Company received an order for approximately \$562,000 from a publicly owned hospital for a heat recovery solution. This order was partially completed in FY 2013 and the customer is currently deciding on changes it may wish to be made before the project is continued. It is not yet known when this project may be completed.

## 5. Summary of Outstanding Shares and Dilutive Instruments

The Company currently has the following shares and dilutive instruments outstanding:

### Shares

159,088,950 class A common shares.

### Options

Range of exercise prices	Options outstanding			Options exercisable	
	Number outstanding	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable	Weighted average exercise price
0.05-0.07	5,991,500	2.62	0.05	3,895,667	0.05
0.07-0.10	4,071,360	2.72	0.08	2,797,570	0.08
0.10-0.12	10,432,671	0.80	0.10	10,099,335	0.10
	20,495,531	1.71	0.08	16,792,572	0.09

## 6. Critical Accounting Estimates and Changes in Accounting Standards

### **Critical Accounting Estimates**

The preparation of financial statements in accordance with IFRS necessitates the use of management estimates, assumptions and judgment that affect reported amounts of assets, liabilities, revenues and expenses and disclosure of contingent assets and liabilities at the date of the financial statements. Although management reviews its estimates on an ongoing basis, actual results may differ from these estimates as confirming events occur. The following components of the financial statements depend most heavily on such management estimates, assumptions and judgment, any changes in which may have a material impact on the Company's financial condition or results of operations. For more information about certain assumptions and risks that may affect these estimates, assumptions and judgments, please see the "Forward Looking Information" section of this MD&A.

#### ***Valuation of goodwill and intangible assets and asset impairment***

Goodwill and intangible assets are tested annually for impairment, or earlier if circumstances indicate an impairment.

An impairment loss is recognized for the amount by which an asset's or cash-generating unit's carrying amount exceeds its recoverable amount. To determine the recoverable amount, management estimates expected future cash flows from each asset or cash-generating unit and determines a suitable interest rate in order to calculate the present value of those cash flows. In the process of measuring expected future cash flows management makes assumptions about future operating results. These assumptions relate to future events and circumstances. The actual results may vary, and may cause significant adjustments to the Company's assets within the next financial year.

In most cases, determining the applicable discount rate involves estimating the appropriate adjustment to market risk and the appropriate adjustment to asset-specific risk factors.

#### ***Future production outputs relating to the finance lease***

When a new finance lease or amendment is signed, in determining minimum lease payments receivable, management makes estimates regarding monthly energy outputs of the leased asset based on assumptions regarding the efficiency of the asset, the operations of the plant in which it is located, penalty payments resulting from temporary plant shut-downs and residual value of the equipment. These assumptions relate to future events and circumstances.

#### ***Assumptions used in the Black-Scholes fair value calculations***

The estimation of share-based payment expense requires the selection of an appropriate valuation model and consideration as to the inputs necessary for the valuation model chosen. In calculating the share-based payment expense, key estimates such as the rate of forfeiture of options granted, the expected life of the option, the volatility of the Company's stock price and the risk-free interest rate are used.

#### ***Revenue Recognition relating to contracts for heat recovery solutions***

The stage of completion of any heat recovery solutions contract is assessed by management by taking into consideration all information available at the reporting date. In this process, management exercises significant estimate about milestones, actual work performed and the estimated costs to complete work.

### *Deferred tax assets*

Deferred tax assets are recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable income will be available against which they can be utilized. These estimates are reviewed at every reporting date. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of the reversal of existing differences, future taxable income and future tax planning strategies.

### **Changes in Accounting Standards**

The Company has adopted the following new or amended accounting standards.

#### *Amendments to IAS 16 “Property, Plant and Equipment” and IAS 38 “Intangible Assets”*

In May 2014, the IASB issued amendments to IAS 16 Property, Plant and Equipment and IAS 38 Intangible Assets. These amendments prohibit entities from using a revenue-based depreciation method for items of property, plant and equipment. They also introduce a rebuttable presumption that revenue is not an appropriate basis for amortization of an intangible asset. The amendments explain that an expected future reduction in selling prices could be indicative of a reduction of the future economic benefits embodied in an asset. These amendments are to be applied prospectively for annual periods beginning on or after January 1, 2016. The Company adopted the amendments on June 1, 2016. The adoption of the amendments to IAS 16 and IAS 38 did not have a material impact on the consolidated financial statements.

#### *Amendments to IAS 7: Statement of Cash Flows (“IAS 7”)*

In January 2016, the IASB issued amendments to IAS 7. These amendments require entities to provide disclosures that help users of the financial statements to better understand changes in liabilities that arise from financing activities, including both changes arising from cash flow and non-cash changes. These amendments became effective for annual periods beginning on or after January 1, 2017. The Company adopted the amendments on June 1, 2017. The adoption of these amendments did not have a material impact on the consolidated financial statements.

#### *Amendments to IAS 12: Income Taxes (“IAS 12”)*

In January 2016, the IASB issued amendments to IAS 12. The amendments clarify the accounting for deferred tax assets for unrealized losses on debt instruments measured at fair value. These amendments became effective for annual periods beginning on or after January 1, 2017. The Company adopted the amendments on June 1, 2017. The adoption of these amendments did not have a material impact on the consolidated financial statements.

At the date of approval of the accompanying condensed consolidated interim financial statements, certain new standards, amendments and interpretations to existing standards have been published but are not yet effective, and have not been adopted early by the Company. These standards will be adopted at the effective date.

Management anticipates that all of the pronouncements will be adopted in the Company’s accounting policy for the first period beginning after the effective date of the pronouncement. Information on new standards, amendments and interpretations that are expected to be relevant to the Company’s consolidated financial statements is provided below. Certain other new standards and interpretations have been issued, but are not expected to have an impact on the Company’s consolidated financial statements.

#### *IFRS 9, “Financial Instruments”*

In July 2014, the IASB issued the final version of IFRS 9, bringing together the classification and measurement, impairment and hedge accounting phases of the project to replace IAS 39, “Financial Instruments: Recognition and Measurement. This standard simplifies the classification of a financial asset as either at amortized cost or at fair value as opposed to the multiple classifications which were permitted under IAS 39. This standard also requires the use of a single impairment method as opposed to the multiple methods in IAS 39. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. The standard also adds guidance on the classification and measurement of financial liabilities. IFRS 9 is to be applied retrospectively for annual periods beginning on or after January 1, 2018. Early application is permitted. The Company does not intend to adopt this standard early and is currently evaluating the impact of adopting this standard on the consolidated financial statements.

***IFRS 15, “Revenue from Contracts with Customers”***

In May 2014, the IASB issued IFRS 15, which provides a single, principles-based five-step model for revenue recognition to be applied to all customer contracts, and requires enhanced disclosures. The standard also provides guidance relating to recognition of customer acquisition costs. In April 2016, the IASB issued Clarifications to IFRS 15 in relation to the identification of performance obligations, principal versus agent considerations, as well as licensing application guidance. This standard will be effective for annual periods beginning on or after January 1, 2018 and allows early adoption. The Company does not intend to adopt this standard early and is currently evaluating the impact of adopting this standard on the consolidated financial statements.

***IFRS 16, “Leases”***

In January 2016, the IASB issued IFRS 16, Leases, which specifies how to recognize, measure present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize all assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Consistent with its predecessor, IAS 17, the new lease standard continues to require lessors to classify leases as operating or finance. IFRS 16 is to be applied retrospectively for annual periods beginning on or after January 1, 2019. Earlier application is permitted if IFRS 15 Revenue from Contracts with Customers has also been applied. The Company does not intend to adopt this standard early and is currently evaluating the impact of adopting this standard on the consolidated financial statements.

***Amendments to IFRS 2: Share Based Payments (“IFRS 2”)***

In June 2016, the IASB issued amendments to IFRS 2. The amendments, which were developed through the IFRS Interpretations Committee, provide requirements for accounting for the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payments. They also provide guidance on the accounting for share-based payment transactions with a net settlement feature for withholding tax obligations; and a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. These amendments are to be applied prospectively for annual periods beginning on or after January 1, 2018. Early adoption is allowed and specific transitional provisions apply. The Company does not intend to adopt this standard early and is currently evaluating the impact of adopting these amendments on the consolidated financial statements.

## 7. Risk Factors and Risk Management

Management is confident about our long-term prospects, but does recognize that the company is exposed to a number of risks in the normal course of business that could negatively impact the financial condition of the Company.

Operational risks of the company include the ability to continue to secure and implement sales contracts for its GEM™ and FLU-ACE® technology solutions.

Financial risks and uncertainties of the Company include:

- The Company’s history of operating losses and uncertainty of future profitability;
- The ability to grow sales through the establishment of new cooperative partnerships and strategic alliances;
- The ability to grow sales through the licensing of the corporation’s technologies;
- The ability to secure and maintain the required outside working capital financing;
- The ability to achieve profitable operations through increased sales,
- Reliance on third party collaborations and license arrangements;
- Reliance on proprietary technology;
- Competition in the energy conservation and environmental compliance solutions;
- Product liability claims and insurance;
- Reliance on key personnel;
- The ongoing litigation with its former President & CEO;
- The ability to control costs and achieve a positive gross margin on projects;

## Management Discussion and Analysis for Quarter Ended November 30, 2017

- The effect of a continuing prolonged recession in Canada, USA and Europe to the financial markets in securing project financing and in particular to industrial and commercial customers in committing capital to projects; and
- The impact of the pending potential departure from the European Union by the U.K.

### *Management's addressing of the risks:*

FY 2012 saw the Company's first ever net profit, which was the result of increased revenues and strict cost control. FY 2013, however, produced an operating loss of \$844,328, resulting from diminished revenues and increasing costs. Despite further cost increases as management continue to build the sales force, FY 2014 produced the company's best ever post-tax income of \$634,023 as well as an increase in cash balance of \$742,022, but this was again followed by a net loss of \$2,154,817, accompanied by a cash decrease of \$1,331,074 in FY 2015. FY 2016 year saw a return to profitability and an increase in cash balances of \$427,805 which was further improved upon in FY 2017.

The Company actively protects its proprietary technology through registered trademarks and confidentiality agreements.

The Company maintains adequate forms of general liability insurance including product liability and errors and omission coverage.

Management still believes that competition against its core technology of GEM™, FLU-ACE® and DRY-REX™ is limited at this time and believes that the market place is sufficiently large to mitigate the risk of stronger competition in the future.

On June 23, 2016 a referendum was held in the U.K., resulting in the decision to leave the European Union. One immediate effect was a significant fall in the value of U.K. Pound Sterling against most other major currencies. Negotiations regarding how trade will continue after the U.K. leaves are ongoing, the outcome of which is difficult to predict. Management continues to monitor the situation, but at this point cannot comment on how the eventual break will impact the Company. In the meantime, business continues as normal.

Management continues to focus on strengthening relationships with key customers, as well as securing new relationships with multi-site organizations, which is anticipated to provide repeat business into the foreseeable future. Management continually monitors costs and cash flow to ensure that the Company has sufficient funds for operations while providing for future growth.

## 8. Forward-Looking Information

This MD&A contains certain "forward-looking statements." All statements, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future (including, without limitation, statements regarding financial and business prospects and financial outlook) are forward looking statements. These forward-looking statements reflect the current expectations or beliefs of Management, based on information currently available to the Company. Forward-looking statements are subject to a number of risks, uncertainties and assumptions that may cause the actual results of the Company to differ materially from those discussed in the forward-looking statements and, even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on the Company. Factors that could cause actual results or events to differ materially from current expectations include, among other things, changes in general economic and market conditions, changes to regulations affecting the Company's activities, and uncertainties relating to the availability and costs of financing needed in the future. Any forward-looking statement speaks only as at the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise.

## Management Discussion and Analysis for Quarter Ended November 30, 2017

Although Management believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and, accordingly, undue reliance should not be put on such statements due to the inherent uncertainty therein.

### 9. Management's Responsibility for Financial Reporting

In compliance with the Canadian Securities Administrators' National Instrument 52-109 ("NI 52-109"), the Company has filed with applicable Canadian securities regulatory authorities, certificates signed by its Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO") that, among other things, report on the design and effectiveness of disclosure controls and procedures and the design of internal controls over financial reporting.

Under the supervision of the CEO and CFO, the Company maintains systems of internal accounting and administrative controls to provide reasonable assurance that the financial information is relevant, reliable and accurate and that transactions are authorized, assets are safeguarded and proper records are maintained. Internal controls over financial reporting, no matter how well designed, have inherent limitations and may not prevent or detect all misstatements. There were no changes to the Company's internal control over financial reporting during the quarter ended November 30, 2017 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

The Board of Directors is responsible for ensuring that management fulfills its responsibility principally through its Audit Committee.