MANAGEMENT'S DISCUSSION & ANALYSIS

For the Quarter Ended August 31, 2019

Introduction

This Management Discussion and Analysis (MD&A) explains the material changes in Thermal Energy International Inc.'s ("Thermal Energy" or the "Company") financial position and financial performance for the first quarter of Fiscal Year 2020, ended August 31, 2019. 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. Unless otherwise indicated, all comparisons to the first quarter of FY 2020 are against the first quarter of FY 2019. Additional information relating to the Company is available on SEDAR at 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 25% our operations, assets and liabilities are denominated in British Pound Sterling and 20% in US Dollar. 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 October 24, 2019. Disclosure contained in this document is current to October 24, 2019, 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 8 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 9 entitled "Forward-Looking Information".

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1. Our Business

1.1 Company Overview

Thermal Energy, established in 1991, is 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, Germany, U.S., and China.

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. **GEM™, FLU-ACE®, THERMALONOx™** and **DRY-REX™** are trademarks of Thermal Energy.

1.2 Core Businesses

The Company operates primarily in North America and Europe but also sells its products and services through representative agents throughout the rest of the world. The Company markets, sells, engineers, fabricates, constructs, installs and supports two technology lines – heat recovery solutions, including direct contact heat recovery solutions (e.g. **FLU-ACE®**) and indirect contact heat recovery solutions (**HEATSPONGE** and **SIDEKICK**), and condensate return system solutions (**GEM™** steam traps). The Company is also developing a number of other technology lines, including low, temperature biomass drying systems (**DRY-REX™**).

In 2008, the Company acquired Gardner Energy Management Limited, which owns, manufactures and sells the GEM™ steam traps 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. On June 29, 2018, the Company acquired Boilerroom Equipment Inc., a company based in the U.S., which owns, manufactures and sells HEATSPONGE and SIDEKICK indirect contact heat recovery units.

The Company has two primary operational bases of operation, one in Ottawa, Canada covering North America ("Thermal Energy Ottawa"), and the other in Bristol, United Kingdom, covering Europe and the rest of the world ("Thermal Energy Bristol"). Although the Thermal Energy Ottawa is considered to be the center of excellence for heat recovery engineering and technical support, and Thermal Energy Bristol the center of excellence for GEM™ steam traps and condensate return systems engineering and technical support, continuous cross-training means that both Ottawa and Bristol 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 where the Company has direct sales and engineering staff. While North American and European markets continue to be the Company's strategic focus, the Company also continues to look for new agents and distributors in other 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 footprint. 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 with a current focus on the key markets of North America and Europe. Thermal Energy's penetration in these markets remains low and therefore the Company plans to continue growing its sales and distribution capabilities in these markets while at the same time begin to build its business in other energy-intensive markets around the world.

We have sold our proprietary and proven products to hundreds of companies and institutions, including approximately 50 large companies in the pharmaceutical, food and beverage, pulp and paper, chemical and petrochemical sectors.

With an established global sales and distribution network, the Company is looking to develop and/or acquire additional complementary products and services that can be distributed through its existing network.

2. Performance Measures

The Company believes 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 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 International Financial Reporting Standards within the financial statements is income (loss) before income taxes, as disclosed in the statements of comprehensive income.

2.2 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 International Financial Reporting Standards and therefore may not be comparable to similar measures presented by other companies.

3. Performance

3.1 Summary of First Quarter Results

	Q1 2020	Q1 2019
	$	$
Revenue	**4,965,789**	6,800,861
Cost of sales[1]	**(2,775,271)**	(4,854,826)
Gross profit	**2,190,518**	1,946,035
Administration, selling, marketing and business development expenses[1]	**(1,835,969)**	(2,031,893)
Research and development expenses	**(54,092)**	(29,958)
Operating income (loss)	**300,457**	(115,816)
Finance costs	**(83,277)**	(36,440)
Finance revenue	**3,033**	6,258
Income (loss) before income taxes	**220,213**	(145,998)
Income taxes recovery	**21,048**	96,540
Net income (loss) for the period	**241,261**	(49,458)
Exchange differences on translation of overseas operations	**(161,056)**	(26,291)
Total comprehensive income (loss) for the period	**80,205**	(75,749)
EBITDAS for the first quarter	**471,786**	(50,736)
Order backlog as at August 31	**12.8 million**	7.3 million
Order backlog as at October reporting date	**14.6 million**	9.3 million

1.The Company reclassified commission expense from selling, marketing and business development expense to cost of sales effective June 1, 2019. As a result, commission expense in the amount of $263,850 for the comparative period was reclassified from selling, marketing and business development expense to cost of sales.

Revenues and Gross Profits

Revenues were $4,965,789 in the quarter ended August 31, 2019, representing a decrease of $1,835,072, or 27.0%, compared to $6,800,861 in the quarter ended August 31, 2018. The decrease of revenue in the first quarter of FY 2020 was mainly due to the decrease in sales of heat recovery systems. This was because in the first quarter of the previous year, the Company had partially delivered a heat recovery project to an existing Pulp & Paper customer with total contract value of $11 million. In the first quarter of FY 2020, sales were from multiple projects with relatively smaller contract value.

The gross profit of $2,190,518 in the quarter ended August 31, 2019 represented an increase of $244,483, or 12.6%, from the $1,946,035 in the quarter ended August 31, 2018. Gross profit expressed as a percentage of sales was 44.1% in the first quarter of FY 2020 compared with 28.6% in the first quarter of FY 2019. The increase was mainly the result of the increased gross margin on heat recovery projects.

Expenses

Administration, selling, marketing and business development expenses ("Operating Expenses") in the quarter ended August 31, 2019 totaled $1,835,969 compared to $2,031,893 in the quarter ended August 31, 2018, a decrease of $195,924. The decrease was mainly due to the decrease in acquisition cost and the change in foreign exchange. In the first quarter of the previous year, the Company acquired Boilerroom Equipment Inc. and incurred acquisition related cost of $107,342. There was no acquisition related cost incurred in the first quarter of the current year. In the first quarter of the current year, the Company recognized foreign exchange gain of $85,588, whereas in the first quarter of FY 2019, the Company recognized foreign exchange loss of $12,259.

Research and development ("R&D") expenses related to expenditures on various research and development programs. The Company receives credits from the R&D claims related to product development and the credits are accounted as a reduction of research and development expenses. The total expenses in the first quarter of FY 2020 was $54,092, compared to $29,958 in the first quarter of FY 2019.

Finance costs and finance revenue: finance costs include interest expense on the long-term debt, interest accretion on contingent payable and holdback payable related to acquisition, interest accretion on lease obligations, and amortization on financing cost. The first quarter of FY 2020 incurred finance cost of $83,277. The cost was higher than the first quarter of FY 2019 of $36,440 because the interest expense on the long-term debt was only for one month in the first quarter of FY 2019 as compared to three months for the first quarter of FY 2020.

Income before income taxes for the quarter ended August 31, 2019 was $220,213 compared to a loss of $145,998 in the same quarter of the previous year. Income before income taxes increased by $366,211 mainly due to the increase in gross profit of $244,483, the decrease in acquisition cost of $107,342, the foreign exchange gain of $85,588, offset by the increase in R&D expense of $24,134 and the increase in finance cost of $46,837.

Income tax recovery in the first quarter of FY 2020 was $21,048, as compared to $96,540 in the first quarter of FY 2019, a decrease of $75,492. In the first quarter of FY 2019, the Company's subsidiary based in UK had an operational loss and recognized an income tax recovery of $96,540. In the first quarter of FY 2020, income tax recovery of $21,048 was mainly related to the decrease in the deferred tax liability for a US subsidiary.

Net income for the first quarter of FY 2020 was $241,261 compared to a net loss of $49,458 in the same quarter of the previous year, representing an increase of $290,719. The increase in net income was mainly due to the increase of $366,211 in income before income taxes offset by the decrease in income tax recovery of $75,492.

Comprehensive income was $80,205 for the first quarter of FY 2020 compared to a comprehensive loss of $75,749 for the first quarter of FY 2019. In the first quarter of FY 2020 and FY 2019, the pound sterling was weakened against the Canadian dollar which resulted in other comprehensive loss of $161,056 and $26,291, respectively.

EBITDAS was $471,786 for the first quarter of FY 2020 compared to a negative $50,736 for the same quarter of the previous year, an increase of $522,522. The increase was mainly due to the increase in income before income taxes.

3.2 Liquidity & Capital Resources

Current assets increased by $1,560,371 to $9,544,737, mostly due to in the increase in cash balances of $1,423,071. Current liabilities increased by $1,466,497 to $7,423,040 mainly due to the increase in deferred revenue of $1,557,624 relating to upfront cash deposits received on heat recovery projects.

Working capital increased by $93,874 to $2,121,697 at August 31, 2019 compared to $2,027,823 at May 31, 2019. The increase was mainly due to the decrease in trade payables and accrued liabilities of $172,761 offset by the addition of lease obligations of $99,021, which arose upon the adoption of the new accounting guideline- IFRS 16 Leases in the first quarter of FY 2020.

The Company's net cash position (Cash and cash equivalents less operating bank loans) was $5,600,331 as at August 31, 2019 compared to $4,177,260 at May 31, 2019, representing an increase of $1,423,071. The increase was mainly due to the increase in deferred revenue of $1,557,624 relating to upfront cash deposits received on heat recovery projects, offset by the additions to property, plant and equipment of $20,024, the repayment of the long-term debt of $65,588 and lease obligations of $24,182.

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

	Nov 30, 2017 $	Feb 28, 2018 $	May 31, 2018 $	Aug 31, 2018 $	Nov 30, 2018 $	Feb 28, 2019 $	May 31, 2019 $	Aug 31, 2019 $
Current Assets	4,450,013	4,933,877	6,613,125	8,310,609	7,244,731	7,337,334	7,984,367	9,544,737
Current Liabilities	3,099,395	3,706,345	4,586,122	5,984,275	5,178,449	8,816,994	5,956,544	7,423,040
Working Capital	1,350,618	1,227,532	2,027,003	2,326,334	2,066,282	(1,479,660)	2,027,823	2,121,697

The Company has two covenants on its long-term debt, namely Total Funded Debt to EBITDA ratio and Debt Service Coverage ratio. As at August 31, 2019, the Company was in breach of both debt covenants. The lender issued a waiver on August 31, 2019 to waive the covenant breach.

At August 31, 2019, $274,792 (11.1%) of the Company's trade receivables balance was over 90 days past due, but not impaired. At May 31, 2019, $123,223 (6.2%) of the Company's trade receivables balance was over 90 days past due. $22,864 of the past due balance was impaired at May 31, 2019.

The following table presents the contractual undiscounted cash flows for lease obligations as of August 31, 2019:

Less than one year	$ 108,829
One to five years	105,177
Total undiscounted lease obligations	$ 214,006

The Company's ability to realize its assets and discharge its liabilities depends on its ability to generate sufficient cash from operations or its ability to arrange debt or equity financing. 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, concentrating on building upon revenue levels experienced from FY 2016 to FY 2019, and growing revenues at growth rates experienced in the years ended May 31, 2010 through May 31, 2019.

3.3 Segmentation Information

In the quarters ended August 31, 2019 and August 31, 2018, the Company operated in the energy efficiency industry in North America, Europe, China and 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, U.S. and Europe.

Management reporting comprises analysis of revenue and gross profit 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 Ottawa, Canada covering North America and China, and the other in Bristol, United Kingdom, covering Europe and the rest of the world. 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.

Segment information for the period ended August 31, 2019 and the comparative period are detailed in the table below:

	Thermal Energy Ottawa		Thermal Energy Bristol		Reconciling Items		Total	
	2019 **$**	2018 $	**2019** **$**	2018 $	**2019** **$**	2018 $	**2019** **$**	2018 $
Total revenue	**3,762,692**	5,654,400	**1,203,097**	1,146,461	**-**	-	**4,965,789**	6,800,861
Cost of sales[1]	**(2,244,034)**	(4,179,314)	**(531,237)**	(675,512)	**-**	-	**(2,775,271)**	(4,854,826)
Gross profit	**1,518,658**	1,475,086	**671,860**	470,949	**-**	-	**2,190,518**	1,946,035
Other expenses[1]	**(814,101)**	(741,557)	**(784,451)**	(776,538)	**(291,509)**	(543,756)	**(1,890,061)**	(2,061,851)
Net finance (costs) income	**3,033**	6,258	**-**	-	**(83,277)**	(36,440)[2]	**(80,244)**	(30,182)
Income (loss) before taxation	**707,590**	739,787	**(112,591)**	(305,589)	**(374,786)**	(580,196)	**220,213**	(145,998)
Tax (expense) recovery	**-**	-	**-**	60,441	**21,048**	36,099	**21,048**	96,540
Net income (loss)	**707,590**	739,787	**(112,591)**	(245,148)	**(353,738)**	(544,097)	**241,261**	(49,458)
Attributable to:								
Owners of the parent	**712,553**	744,426	**(112,879)**	(255,733)	**(353,738)**	(544,097)	**245,936**	(55,404)
Non-controlling interest	**(4,963)**	(4,639)	**288**	10,585	**-**	-	**(4,675)**	5,946

1. The Company reclassified commission expenses from other expenses to cost of sales for the three months ended August 31, 2019. As a result, commission expenses in the amount of $263,850 for the three months ended August 31, 2018 were also reclassified to cost of sales to conform to the current period presentation.
2. Finance costs of $36,440 for the three months ended August 31, 2018 were reclassified from "Thermal Energy Ottawa" to "Reconciling Items" to conform to the current period presentation.

Reconciling items comprise the following:

	Three months ended August 31	
	2019 **$**	2018 $
Corporate admin costs	**149,914**	289,874
Share-based compensation	**51,666**	4,125
Professional fees	**58,887**	75,446
Depreciation of property, plant and equipment	**21,754**	16,969
Depreciation of right-of-use assets	**25,693**	-
Amortization of intangible assets	**69,183**	37,741
Acquisition costs	**-**	107,342
Foreign exchange differences	**(85,588)**	12,259
Total	**291,509**	543,756

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 as well as the Annual General Meeting.

Finance costs within the reconciling items include interest and deferred financing charge on the long-term debt, interest accretion on lease obligations, and interest accretion on contingent consideration and holdback payable following the acquisition of Boilerroom Equipment Inc.

Material Segmentation Variances

Thermal Energy Ottawa:

For the quarter ended August 31, 2019, revenue was $3,762,692 as compared to $5,654,400 for the same quarter of prior year, a decrease of $1,891,708. The decrease was mainly due to the decrease in heat recovery revenue. In the first quarter of prior year, the Company partially delivered a $11 million mega project with a Pulp & Paper Customer. In the first quarter of current year, the Company did not have a mega project, instead, the heat recovery revenues were from multiple projects with smaller contract value.

Gross profit increased by $43,572 in the first quarter of FY 2020 over the same quarter of FY 2019 despite the decrease in revenue. The increase in gross profit was mainly due to the increased gross margin in heat recovery systems. As a percentage of revenue, gross profit was 40.4% in the first quarter of FY 2020, compared to 26.1% achieved in the first quarter of FY 2019.

Other expenses in the region increased by $72,544 (9.8%). In the first quarter of FY 2019, only two months of operating expenses of Boilerroom Equipment Inc. were integrated to the consolidated results, whereas in the first quarter of FY 2020, three months of operating expenses were included to the consolidated results. The increase was also partially due to the additional costs related to new hires.

With finance revenue decreasing by $3,225 as the finance lease is being paid off by the customer, the resulting segment income before tax of $707,590 represented a decrease of $32,197 from the same period of previous year.

Thermal Energy Bristol:

Revenue for the quarter ended August 31, 2019 was $1,203,097 compared to $1,146,461 for the same quarter of previous year, an increase of $56,636. The increase was mainly due to increased revenue in the Europe and rest of world market for the condensate return systems, offset by the decreased revenue in heat recovery systems.

Gross profit increased in the first quarter of FY 2020 by $200,911 compared to the same quarter last year. The increase in gross profit was mainly due to the increased gross margin in both heat recovery systems and condensate return systems. As a percentage of revenue, gross profit was 55.8% in the first quarter of FY 2020, compared to 41.1% achieved in the first quarter of FY 2019.

Other expenses increased slightly by $7,913 due to additional costs related to new sales staff hired. The resulting pre-tax loss was $112,591 for the current quarter as compared to $305,589 for the same quarter of prior year. The loss decreased by $192,998 due to the increased revenue and increased gross margin as a percentage of revenue.

Other expenses within Reconciling items, which incorporates all costs not specifically attributable to either regional operational center, decreased from prior period by $252,247. The decrease was mainly due to the decrease in corporate admin costs and acquisition costs, plus the increase in foreign exchange gain of $97,847, offset by the increase in the stock-based compensation expense.

3.4 Quarterly financial information (unaudited)

For the eight quarters ended Aug 31, 2019

Quarter ended	31-Aug-19 $	31-May-19 $	28-Feb-19 $	30-Nov-18 $
Revenue	4,965,789	5,974,546	3,114,757	5,193,092
Gross Profit(1)	2,190,518	3,117,297	1,143,104	1,834,770
Gross Profit Percentage	44.1%	52.2%	36.7%	35.3%
EBITDAS(2)	471,786	1,029,103	(734,366)	(67,995)
Total net income (loss)	241,261	599,958	(889,481)	(112,122)
Income (loss) per share, basic and diluted	0.002	0.004	(0.006)	(0.001)

Quarter ended	31-Aug-18 $	31-May-18 $	28-Feb-18 $	30-Nov-17 $
Revenue	6,800,861	7,352,794	3,228,386	3,729,447
Gross Profit(1)	1,946,035	2,786,145	1,344,871	1,559,110
Gross Profit Percentage	28.6%	37.9%	41.7%	41.8%
EBITDAS(2)	(50,736)	850,479	(156,016)	108,711
Total net income (loss)	(49,458)	888,389	(158,644)	70,514
Income (loss) per share, basic and diluted	0.00	0.006	(0.001)	0.00

(1) The Company reclassified commission expense from selling, marketing and business development expense to cost of sales effective June 1, 2019. As a result, commission expense for the past seven quarters was reclassified from selling, marketing and business development expense to cost of sales to conform to the current period presentation.

(2) EBITDAS represents earnings before interest, taxation, depreciation, amortization, impairment of goodwill and other intangible assets, share-based compensation expense and net write down of lease.

A reconciliation of Net income (loss) to EBITDAS is shown below for the quarters ended August 31:

	2019 $	2018 $
Total net income (loss) attributable to owners of the parent	245,936	(55,404)
Total net income (loss) attributable to non-controlling interest	(4,675)	5,946
Interest charge	83,277	36,440
Interest received	-	(13)
Taxation	(21,048)	(96,540)
Depreciation and amortization	116,630	54,710
Share based compensation	51,666	4,125
EBITDAS	471,786	(50,736)

4. Related Party Transactions

Options outstanding for Directors (excluding the CEO) as at August 31, 2019 were 1,250,000 of which 416,667 were exercisable. There were no warrants outstanding for Directors.

Options outstanding for Senior Management (including the CEO) as at August 31, 2019 were 4,383,360 of which 2,008,360 were exercisable. There were no warrants outstanding for Senior Management.

Directors and Senior Management Compensation

During the quarter ended August 31, 2019 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 Committee and $1,000 payable for each in-person meeting.

During the quarter ended August 31, 2019, Directors fees paid were $16,875. Fees to the Chairperson of the Audit Committee were $1,350; fees to the Chairperson of the Ethics, Governance and Compliance Committee were $1,350, fees paid to the Chairman were $2,025. One in-person meeting was held during the period, a total cost of $5,000.

Compensation paid to directors and officers during the quarter ended August 31, 2019 (inclusive of the amounts described above but excluding share-based compensation) was as follows:

	Salaries and fees		Incentives		Other short-term benefits		Total	
	2019	2018	**2019**	2018	**2019**	2018	**2019**	2018
	$	$	**$**	$	**$**	$	**$**	$
Directors								
M. Williams	**4,375**	4,375	**-**	-	**-**	-	**4,375**	4,375
J. Kelly	**6,400**	6,400	**-**	-	**-**	-	**6,400**	6,400
W. Ollerhead	**5,725**	5,725	**-**	-	**-**	-	**5,725**	5,725
J. Schoenmakers(1)	**-**	5,725	**-**	-	**-**	-	**-**	5,725
D. Spagnolo	**5,725**	4,375	**-**	-	**-**	-	**5,725**	4,375
W. White	**4,375**	4,375	**-**	-	**-**	-	**4,375**	4,375
Total	**26,600**	30,975	**-**	-	**-**	-	**26,600**	30,975
Senior Management								
W. Crossland	**60,000**	60,000	**-**	-	**-**	-	**60,000**	60,000
J. Flynn(2) (3)	**-**	35,429	**-**	-	**-**	5,619	**-**	41,048
J. Zhang(3)	**31,250**	10,417	**-**	-	**1,055**	811	**32,305**	11,227
R. Triebe	**45,250**	45,250	**-**	-	**880**	845	**46,130**	46,095
S. Mawby(2)	**37,558**	38,108	**-**	-	**6,062**	5,815	**43,620**	43,923
Total	**174,058**	189,204	**-**	-	**7,997**	13,090	**182,055**	202,294
Total Related Party Transactions	**200,658**	220,179	**-**	-	**7,997**	13,090	**208,655**	233,269

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 U.K. based subsidiaries.

(1) Mr. Schoenmakers resigned on November 27, 2018.

(2) Ms. Flynn and Mr. Mawby are compensated in UK Pound sterling. Average exchange rate to Canadian dollar was 1.6428 and 1.7169 in the first quarter of FY 2020 and FY 2019 respectively.

(3) Ms. Flynn stepped down as Chief Financial Officer effective July 31, 2018 and Ms. Zhang was appointed Chief Financial Officer of the Corporation effective the same date.

5. 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 2.2 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 August 31, 2019 was approximately $12.8 million. As at October 24, 2019, the Company had an order backlog of approximately $14.6 million.

	2017 $ million	2018 $ million	2019 $ million
Order backlog as at August 31	5.8	7.3	12.8
Order backlog as at October reporting date	7.8	9.5	14.6

- On October 16, 2019, the company announced that it had been commissioned by a leading European meat processing company to install an innovative heat recovery system. The FLU-ACE® heat recovery project, valued at approximately $738,000, is designed to improve site efficiency and sustainability. The project is expected to provide a utility saving of over $614,000 per year.

- On August 22, 2019, the company announced that it had been commissioned by a multi-national food-products corporation to install a turn-key energy saving heat recovery system. The FLU-ACE® heat recovery project, valued at approximately $1.4 million, is designed to improve efficiency and reduce emissions at the manufacturer's infant milk processing plant. Preliminary analysis shows it could improve fuel use by up to 12%, equating to an annual energy saving of up to $570,000.

- On August 7, 2019, the company announced that it had been commissioned by a leading European brewer to install a high-efficiency heat recovery system. The FLU-ACE® heat recovery project, valued at over $650,000, is designed to optimize efficiency at the UK production facility, helping the site to reach its sustainability goals. Preliminary analysis shows the initiative will provide an expected utility saving of $400,000 per year.

- On May 21, 2019, the company announced that it had been commissioned by a leading snack food manufacturer to install a heat recovery system designed to support its sustainability goals. The custom-designed condensing project, valued at over $1.5 million, is the first of its kind to be developed with this multinational snack company. Upon commissioning, the installation will provide an expected natural gas saving of almost $400,000 per year.

- On April 1, 2019, the Company announced that it had been commissioned by a leading tissue manufacturer for a heat recovery system at one of its flagship production plants. The project, valued at $850,000, will include the deployment of the Company's proprietary FLU-ACE® heat recovery technology, in a solution set to provide the site with natural gas savings of over $350,000 a year.

- On March 27, 2019, the Company announced that it had been commissioned by a leading multinational animal nutrition and agricultural products company to improve energy efficiency at one of its European facilities. The project, valued at approximately $2.3 million, will see the Company install two of its proprietary FLU-ACE® heat recovery systems to delivery greater fuel efficiency.

- On March 11, 2019, the Company announced that it had been commissioned by a major US dairy group to design and implement an extensive heat recovery project. This project, valued at $1.8 million, will utilize the Company's recently acquired HEATSPONGE technology to heat boiler feed and process water. It is the first project between the Company and the diary group.

- On January 29, 2019, the Company announced that it had been commissioned by a leading food ingredient company to install an innovative heat recovery system at one of its processing plants. This FLU-ACE® heat recovery project, valued at over $2.4 million, is the first time Thermal Energy will apply its proprietary heat recovery technology in this Food & Beverage sub-sector.

- On December 13, 2018, the Company announced that it had been commissioned by a multinational food and beverage conglomerate to add a second FLU-ACE® to its existing heat recovery system. This heat recovery project, valued at approximately $2.4 million, is an extension to the Company's proprietary FLU-ACE® technology already deployed at the beverage processing plant.

- On November 19, 2018, the Company announced that it had been commissioned by a leading speciality chemicals producer to design, manufacture and install a turnkey heat recovery project. This $960,000 contract is set to be implemented as part of a company-wide resource productivity and sustainability initiative and follows the successful deployment of a GEM™ Trap installation at the same location, which was designed to maximize steam system and energy efficiency via optimal steam trapping.

- On October 25, 2018, the Company announced that it had been commissioned by a leading Fortune 500 food and beverage company to implement a water recovery system as part of an ongoing sustainability drive. This landmark project has an order value of approximately $1.3 million and highlights the Company's strategic goal of expanding its products and capabilities beyond energy efficiency to include water recovery and the broader sustainability market.

6. Summary of Outstanding Shares and Dilutive Instruments

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

Shares

161,885,616 class A common shares.

Options

	Options outstanding			Options exercisable	
Range of exercise prices	Number outstanding August 31, 2019	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable at August 31, 2019	Weighted average exercise price
0.05-0.07	2,770,833	1.75	0.05	2,770,833	0.05
0.08-0.10	11,238,360	3.13	0.08	3,563,360	0.08
0.11-0.12	250,000	2.24	0.12	166,666	0.12
	14,259,193	2.85	0.07	6,500,859	0.07

7. 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.

Business combinations

The identifiable assets acquired and liabilities assumed as part of a business combination are measured at the date of acquisition at their fair values. In estimating fair value the Company uses market observable data to the extent it is available. In cases when Level 1 inputs are not available, the measurement of fair value involves the selection of an appropriate valuation model and consideration as to the inputs necessary for the valuation model chosen.

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 and, in the case of other intangible assets, determines an applicable royalty rate. 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 period.

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. Actual results may vary from estimate.

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.

Expected credit loss

The valuation of allowances for uncollectable trade receivables requires assumptions including estimated credit losses based on the Company’s knowledge of the financial conditions of its customers, historical experience and general economic conditions.

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 standard.

IFRS 16, “Leases”

Effective June 1, 2019, the Company adopted IFRS 16, which specifies how to recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all major leases. The impact of the transition is shown in (b).

(a) Accounting policy under IFRS 16:

At inception of a contract, the Company assesses whether a contract is, or contains, a lease based on whether the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company has elected to apply the practical expedient to account for each lease component and any non-lease components as a single lease component.

The Company recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured based on the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received. The assets are depreciated to the earlier of the end of the useful life of the right-to-use asset or the lease term using the straight-line method as this most closely reflects the expected pattern of consumption of the future economic benefits. The lease term includes periods covered by an option to extend if the Company is reasonably certain to exercise that option. Lease terms range from 2 to 4 years for vehicles, equipment and offices. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. Generally, the Company uses its incremental borrowing rate as the discount rate.

The lease liability is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Company's estimate of the amount expected to be payable under a residual value guarantee, or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Company has elected to apply the practical expedient not to recognize right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low-value assets. The lease payments associated with these leases is recognized as an expense on a straight-line basis over the lease term.

(b) Impact of transition to IFRS 16:

Effective June 1, 2019, the Company adopted IFRS 16 using the modified retrospective approach and accordingly the information presented for 2018 comparative period has not be restated. It remains as previously reported under IAS 17 and related interpretations.

On initial application, the Company has elected to record right-of-use assets based on the corresponding lease liability. Right-of-use assets and lease obligations of $231,780 were recorded as of June 1, 2019, with no net impact on retained earnings. When measuring lease liabilities, the Company discounted lease payments using its incremental borrowing rate as at June 1, 2019. The weighted-average rate applied is 6.6%.

The Company has elected to apply the practical expedient not to recognize right-of-use assets and lease liabilities for leases of low-value assets or for which the lease term ends within 12 months of the date of initial application.

The Company has elected to apply the practical expedient to grandfather the assessment of which transactions are leases on the date of initial application, as previously assessed under IAS 17 and IFRIC 4. The Company applied the definition of a lease under IFRS 16 to contracts entered into or changed on or after June 1, 2019.

The following table reconciles the Company's operating lease obligations as at May 31, 2019, as previously disclosed in the Company's consolidated financial statements, to the lease obligations recognized on initial application of IFRS 16 at June 1, 2019.

Aggregate lease commitments as disclosed at May 31, 2019	$1,351,406
*Less: lease committed but not commenced as at June 1, 2019	(1,074,642)
Less: recognition exemption for short-term leases (leases that expire on or prior to May 31, 2020)	(85,955)
Less: recognition exemption for low-value assets	(14,493)
Add: extension options reasonably certain to be exercised	75,994
Less: foreign exchange and other adjustments	16
Adjusted lease commitments	252,326
Less: impact of present value	(20,546)
Opening IFRS 16 lease liability as at June 1, 2019	$ 231,780

*The company entered a 10-year lease for an office space before May 31, 2019. The lease was included in the lease commitment note in the consolidated financial statements at May 31, 2019. The lease commencement date was September 1, 2019. On June 1, 2019, the Company did not recognize the lease obligation and the right-of-use asset for this lease because the lease term had not started.

The following table summarizes the impact of adopting IFRS 16 on the Company's condensed consolidated interim statements of financial position as at August 31, 2019:

	August 31, 2019 as reported	Adjustments	August 31, 2019 without adoption of IFRS 16
	$		$
Assets			
Current assets:			
Cash and cash equivalents	5,600,331	-	5,600,331
Trade and other receivables	3,111,856	-	3,111,856
Current tax receivable	40,840	-	40,840
Inventory	723,921	-	723,921
Finance lease receivable	67,789	-	67,789
	9,544,737	-	9,544,737
Non-current assets:			
Property, plant and equipment	253,400	-	253,400
Right-of-use assets	196,239	(196,239)	-
Intangible assets	2,046,540	-	2,046,540
Goodwill	2,435,839	-	2,435,839
Deferred tax assets	102,161	-	102,161
	5,034,179	(196,239)	4,837,940
Total assets	14,578,916	(196,239)	14,382,677
Liabilities			
Current liabilities:			
Trade payables and accrued liabilities	2,376,809	-	2,376,809
Current tax liabilities	6,313	-	6,313
Pensions and other employer obligations	105,939	-	105,939
Current portion of long-term debt	392,630	-	392,630
Deferred revenue	4,162,214	-	4,162,214
Provisions	280,114	-	280,114
Lease obligations	99,021	(99,021)	-
	7,423,040	(99,021)	7,324,019
Non-current liabilities:			-
Contingent payable	112,701	-	112,701
Long-term debt	2,496,110	-	2,496,110
Lease obligations	98,709	(98,709)	-
Deferred tax liabilities	421,933	-	421,933
	3,129,453	(98,709)	3,030,744
Total liabilities	10,552,493	(197,730)	10,354,763
Equity			
Capital stock	32,464,780	-	32,464,780
Contributed surplus	4,054,349	-	4,054,349
Accumulated other comprehensive income	111,196	(20)	111,176
Deficit	(32,514,286)	1,511	(32,512,775)
Equity attributable to owners of the parent	4,116,039	1,491	4,117,530
Non-controlling interest	(89,616)	-	(89,616)
Total equity	4,026,423	1,491	4,027,914
Total liabilities and equity	14,578,916	(196,239)	14,382,677

The following table summarizes the impact of adopting IFRS 16 on the Company's condensed consolidated interim statements of comprehensive income for the three months ended August 31, 2019:

	August 31, 2019 as reported	Adjustments	August 31, 2019 without adoption of IFRS 16
	$	$	$
Revenue	4,965,789	-	4,965,789
Cost of sales	2,775,271	-	2,775,271
Gross profit	2,190,518	-	2,190,518
Expenses:			
Administration	972,428	(5,250)	967,178
Selling, marketing and business development	863,541	7,113	870,654
Research and development	54,092	-	54,092
	1,890,061	1,863	1,891,924
Operating income	300,457	(1,863)	298,594
Finance costs	(83,277)	3,374	(79,903)
Finance revenue	3,033	-	3,033
Income before income taxes	220,213	1,511	221,724
Income taxes recovery	21,048	-	21,048
Net income for the period	241,261	1,511	242,772
Items that may be reclassified subsequently to profit or loss:			
Exchange differences arising on translation of overseas operations	(161,056)	(20)	(161,076)
Total comprehensive income for the period	80,205	1,491	81,696
Net income (loss) for the period attributable to:			
Owners of the parent	245,936	1,511	247,447
Non-controlling interest	(4,675)	-	(4,675)
Net income for the period	241,261	1,511	242,772
Total comprehensive income (loss) for the period attributable to:			
Owners of the parent	89,243	1,491	90,734
Non-controlling interest	(9,038)	-	(9,038)
Total comprehensive income for the period	80,205	1,491	81,696
Net income per share - basic and diluted	0.002	0.00	0.002

The following table summarizes the impact of adopting IFRS 16 on the Company's condensed consolidated interim statements of cash flows for the three months ended August 31, 2019:

	August 31, 2019 as reported	Adjustments	August 31, 2019 without adoption of IFRS 16
	$	$	$
Net cash flows from operating activities	1,520,093	(24,182)	1,495,911
Net cash flows used in financing activities	(89,770)	24,182	(65,588)

8. 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;
- The effect of a continuing prolonged recession in Canada, U.S.A. and Europe to the financial markets in securing project financing and in particular to industrial and commercial customers in committing capital to projects.
- The impact of the pending 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 and FY 2017 saw a return to profitability and an increase in cash balances of $427,805 and $1,806,992 respectively, and this was followed in FY 2018 by another profitable year which saw cash balances increase by $336,334. In FY 2019, sales increased by 21.1% due to the increase revenue in heat recovery systems and the acquisition of Boilerroom Equipment Inc.

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 technologies is limited at this time and believes that the market place is sufficiently large enough 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, although it has now stabilized. Negotiations regarding how trade will continue after 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.

9. 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. 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.

10. 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 August 31, 2019 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.