MANAGEMENT'S DISCUSSION & ANALYSIS

For the Quarter Ended November 30, 2021

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 second quarter of Fiscal Year 2022, ended November 30, 2021 (or "Q2 2022"), and compares the Q2 2022 financial results to the previous quarter ended November 30, 2020 (or "Q2 2021"). 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 second quarter of FY 2022 are against the second quarter of FY 2021. 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 36% of our operations, assets and liabilities are denominated in British Pound Sterling and 34% 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 January 20, 2022. Disclosure contained in this document is current to January 20, 2022, 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 9 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 10 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, and U.S.

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; lowered 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®**), indirect contact heat recovery solutions (**HEATSPONGE** and **SIDEKICK**), and condensate return system solutions (**GEM™** steam traps). The Company is also developing several 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 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 GEMTM 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, most 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, 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 EBITDA

Management believes that EBITDA (earnings before interest, taxation, depreciation, amortization, impairment of intangible assets, and share-based compensation expense) is a useful performance measure as it approximates cash generated from operations, before tax, capital expenditures and changes in working capital, and excludes impairment of intangible assets. EBITDA also assists comparison among companies as it eliminates the differences in earnings due to how a company is financed. EBITDA does not have a standardized meaning prescribed by International Financial Reporting Standards ("IFRS") and therefore may not be comparable to similar measures presented by other companies. There is no direct comparable IFRS measure for EBITDA.

A reconciliation of net income (loss) to EBITDA is shown below:

	Three months ended		Six months ended	
	Nov 30, 2021 $	Nov 30, 2020 $	**Nov 30, 2021 $**	Nov 30, 2020 $
Total net income (loss) attributable to owners of the parent	**(657,310)**	569,339	**(838,693)**	344,265
Total net income (loss) attributable to non-controlling interest	**16,982**	11,086	**44,485**	18,060
Interest charge	**83,201**	71,504	**163,133**	170,749
Taxation	**(1,078)**	(12,287)	**(6,269)**	(28,538)
Depreciation and amortization	**109,272**	98,599	**215,325**	198,473
Share based compensation	**53,842**	50,230	**107,684**	100,460
EBITDA	**(395,091)**	788,471	**(314,335)**	803,469

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.

The Company's order backlog as at November 30, 2021 was approximately $7.0 million. As at January 20, 2022, the Company had an order backlog of approximately $7.5 million.

	2019 $ million	2020 $ million	2021 $ million
Order backlog as at November 30	8.2	5.5	7.0
Order backlog as at January reporting date	9.1	7.2	7.5

3. Performance

3.1 Quarterly Financial Information (unaudited)

For the most recent eight quarters ended:

Quarter ended	28-Feb-21 $	31-May-21 $	31-Aug-21 $	30-Nov-21 $
Revenue	3,735,968	3,765,814	3,879,256	4,076,808
Gross Profit	1,644,265	1,352,379	1,643,717	1,712,230
Gross Profit Percentage	44%	35.9%	42.4%	42.0%
EBITDA(1)	171,726	(38,846)	80,756	(395,091)
Total net loss	(33,757)	(105,603)	(153,880)	(640,328)
Loss per share, basic and diluted	(0.000)	(0.001)	(0.001)	(0.004)

Quarter ended	29-Feb-20 $	31-May-20 $	31-Aug-20 $	30-Nov-20 $
Revenue	5,811,626	2,790,664	2,827,862	5,019,682
Gross Profit	2,417,450	1,427,728	1,324,203	2,430,242
Gross Profit Percentage	41.6%	51.2%	46.8%	48.4%
EBITDA(1)	709,115	31,412	14,998	788,471
Total net income (loss)	429,787	(2,953,186)	(218,100)	580,425
Income (loss) per share, basic and diluted	0.003	(0.019)	(0.001)	0.004

(1) EBITDA represents earnings before interest, taxation, depreciation, amortization, impairment of intangible assets, and share-based compensation expense.

3.2 Summary of Second Quarter Results

	Q2 2022	Q2 2021
	$	$
Revenue	**4,076,808**	5,019,682
Cost of sales	**2,364,578**	2,589,440
Gross profit	**1,712,230**	2,430,242
Expenses:		
Administration, selling, marketing and business development	**2,270,059**	1,786,678
Research and development	**376**	3,922
	2,270,435	1,790,600
Operating (loss) income	**(558,205)**	639,642
Finance costs	**(83,201)**	(71,504)
(Loss) income before income taxes	**(641,406)**	568,138
Income taxes recovery	**1,078**	12,287
Net (loss) income for the period	**(640,328)**	580,425
Exchange differences on translation of overseas operations	**(105,568)**	195
Total comprehensive (loss) income for the period	**(745,896)**	580,620
EBITDA for the quarter[1 2]	**(395,091)**	788,471
Order backlog as at November 30 [3]	**7.0 million**	5.5 million
Order backlog as at reporting date [3]	**7.5 million**	7.2 million

1. A reconciliation of net income (loss) to EBITDA is shown in section 2.1 Performance Measures - EBITDA.
2. EBITDA represents earnings before interest, taxation, depreciation, amortization, impairment of intangible assets, and share-based compensation expense.
3. Order backlog represents 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.

Revenue and Gross Profit

Revenues were $4,076,808 in the second quarter ended November 30, 2021, representing a decrease of $942,874, or 18.8%, compared to $5,019,682 in the quarter ended November 30, 2020. The decrease of revenue in the second quarter of FY 2022 was mainly due to the decrease of revenues from both heat recovery systems and condensate return systems. The COVID-19 pandemic continues to cause delays on heat recovery projects in the second quarter. The shortage of labour has resulted in delays on heat recovery project execution because it was difficult for subcontractors to deliver installation work on time. While most of our customers are essential businesses and continue to operate, the pandemic also has impacts on many of them, including delays in making purchasing decisions on long-term heat recovery projects. As a result, orders received from heat recovery projects have been declining. The decrease in revenue of condensate return systems was mainly due to the delay caused by the travel restrictions. Our technical team could not travel to sites to gather information in time for the production team to fabricate the products despite the fact that the orders received remain strong.

The gross profit of $1,712,230 in the quarter ended November 30, 2021 represented a decrease of $718,012, or 29.5%, from the $2,430,242 in the quarter ended November 30, 2020. This decrease in gross profit was partially due to the decrease in revenue. The decrease was also caused by decreased gross margin on both heat recovery systems and condensate return systems. Gross profit expressed as a percentage of sales was 42.0% in the second quarter of FY 2022 compared with 48.4% in the same quarter of FY 2021. For heat recovery projects, the cost on subcontractors' installation work continued increasing due to the shortage of labour, which decreased the gross margin on heat recovery projects. For condensate return systems, the gross margin decreased because the cost of the material also increased due to the pandemic.

Expenses

Administration, selling, marketing and business development expenses ("Operating Expenses") in the quarter ended November 30, 2021, totaled $2,270,059 compared to $1,786,678 in the quarter ended November 30, 2020, an increase of $483,381, or 27.1%. During the second quarter of the previous year, the Company recognized government subsidies of $212,109. During the second quarter of current year, the Company recognized government wage subsidies of $39,277, representing a decrease of $172,832. The government wage subsidies were recorded as a reduction to the Operating Expenses. The Company's other operating expenses increased by $285,962, compared to the same quarter of prior year. During the second quarter of prior year, the Company implemented some temporary cost control measures in order to prepare for the potential adverse financial impact from COVID-19, including reducing non-essential and discretionary expenditures. Some of these cost control measures were no longer in place in the current year. The staff's salary expense also increased in order to catch up with the increased inflation rate. As a result, the other operating costs increased compared to the same quarter of prior year. In addition, the Company incurred $85,683 acquisition related cost for the purchase of the technology from Sofame Technologies Inc. The increase in operating expenses was partially offset by the increase in foreign exchange gain of $61,096 compared to the same quarter of the previous year.

Research and development ("R&D") expenses in the quarter ended November 30, 2021 totaled $376, as compared to $3,922 in the quarter ended November 30, 2020.

Finance costs include interest expense on the long-term debt, amortization of deferred financing cost, and interest accretion on lease obligations. The second quarter of FY 2022 incurred finance costs of $83,201. The costs were higher than the second quarter of FY 2021 by $11,697 mainly due to the increased interest accretion on lease obligations. The Company's US subsidiary, Boilerroom Equipment Inc., signed a ten-year lease in February 2021 for its new production facility, which increased the lease obligation by $990,605 at the start of the lease. During the same quarter of the prior year, there was no lease obligation recorded for the production facility at Boilerroom Equipment Inc.

Loss before income taxes for the quarter ended November 30, 2021 was $641,406, compared to an income before taxes of $568,138 in the same quarter of the previous year, a decrease of $1,209,544. The decrease was mainly due to the decreased gross profit of $718,012 caused by decreased revenue and decreased margin on both heat recovery projects and condensate return systems, and the increased expenses of $483,381 caused by increased operating expenses, increased acquisition related cost, and decreased government wage subsidies received compared to the same quarter of the previous year.

Income tax recovery in the second quarter of FY 2022 was $1,078, as compared to a recovery of $12,287 in the second quarter of FY 2021, a decrease of $11,209.

Net loss for the second quarter of FY 2022 was $640,328, compared to a net income of $580,425 in the same quarter of the previous year, representing a decrease of $1,220,753. The decrease in net income was mainly due to the decrease of $718,012 in gross profit resulting from decreased revenue and decreased margin, and the increase in operating expenses of $285,962 and acquisition cost of $85,683, plus the decrease of the wage subsidies recognized of $172,832 compared to the same quarter of the previous year.

Comprehensive loss was $745,896 for the second quarter of FY 2022, compared to an income of $580,620 for the second quarter of FY 2021, a decrease of $1,326,516. The decrease was due to the increase of net loss of $1,220,753 and the increase of exchange loss arising on translation of overseas operations of $105,763 as compared to the same quarter of the previous year.

EBITDA was negative $395,091 for the second quarter of FY 2022, compared to $788,471 for the same quarter of the previous year, representing a decrease of $1,183,562. The decrease in EBITDA was mainly due to the loss before taxes of $641,406, compared to income before taxes of $568,138 in the same quarter of prior year, resulting in a decrease of $1,209,544.

3.3 Summary of Year to Date Results

	Six months Ended Nov 30, 2021	Six months Ended Nov 30, 2020
	$	$
Revenue	**7,956,064**	7,847,544
Cost of sales	**4,600,117**	4,093,099
Gross profit	**3,355,947**	3,754,445
Expenses:		
Administration, selling, marketing and business development	**3,992,356**	3,228,501
Research and development	**935**	21,408
	3,993,291	3,249,909
Operating (loss) income	**(637,344)**	504,536
Finance costs	**(163,133)**	(170,749)
(Loss) income before income taxes	**(800,477)**	333,787
Income taxes recovery	**6,269**	28,538
Net (loss) income for the period	**(794,208)**	362,325
Exchange differences on translation of overseas operations	**(168,236)**	175,893
Total comprehensive (loss) income for the period	**(962,444)**	538,218
EBITDA for the quarter[1 2]	**(314,335)**	803,469
Order backlog as at November 30 [3]	**7.0 million**	5.5 million
Order backlog as at reporting date [3]	**7.5 million**	7.2 million

1. A reconciliation of net income (loss) to EBITDA is shown in section 2.1 Performance Measures - EBITDA.
2. EBITDA represents earnings before interest, taxation, depreciation, amortization, impairment of intangible assets, and share-based compensation expense.
3. Order backlog represents 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.

Revenue and Gross Profit

Revenues were $7,956,064 in the six months ended November 30, 2021, representing an increase of $108,520, or 1.4%, from the $7,847,544 recognized in the six months ended November 30, 2020. The increase in revenues was mainly due to the increased revenue from indirect contact heat recovery systems delivered by Boilerroom Equipment Inc., a US subsidiary of the Company, offset by the decrease of revenues from condensate returns systems and direct contract heat recovery systems. The amount of orders received by Boilerroom Equipment Inc. in the first half of FY 2022 was more than doubled that received in the same period of prior year. As a result, the revenue from indirect contact systems increased. The decrease in revenues from direct contact heat recovery systems and condensate return systems was mainly due to less orders received in the North America markets for these two product lines.

The gross profit of $3,355,947 in the first two quarters of FY 2022 represented a decrease of $398,498, or 10.6%, from the $3,754,445 achieved in the same period of FY 2021. Although the revenue increased in the first two quarters by 1.4% compared to the same period of prior year, the gross profit decreased by 10.6%. This is because the cost of materials increased due to the recent global supply chain issue and the cost of labour also increased due to the shortage of labour caused by the pandemic. The continued shortage of materials and labour resulted in the decrease in gross margin on direct and indirect contact heat recovery systems. The gross margin on condensate return systems also decreased due to the fact a significant discount was provided to a customer with a large order in the EU market. Overall, gross profit expressed as a percentage of sales was 42.2% in the first six months of FY 2022 compared with 47.8% in the same period of FY 2021.

Expenses

Administration, selling, marketing and business development expenses ("Operating Expenses") in the six months ended November 30, 2021 totaled $3,992,356 compared to $3,228,501 in the six months ended November 30, 2020, representing an increase of $763,855, or 23.7%. During the first six months of FY 2022, the Company recognized government wage subsidies in the amount of $187,846, compared to $620,672 recognized in the same period of the previous year, representing a decrease of $432,826. The Company's other operating expenses increased by $668,846, compared to the same period of prior year. During the first six months of prior year, the Company implemented some temporary cost control measures in order to prepare for the potential adverse financial impact from COVID-19, including reducing non-essential and discretionary expenditures. Some of these measures were no longer in place in the current year. The staff's salary expense also increased in the current year in order to catch up with the significantly increased annual inflation rate. As a result, the other operating costs increased compared to the same period of prior year. In addition, the Company incurred $106,782 acquisition related cost for the purchase of the technology from Sofame Technologies Inc., an increase of $93,321 compared to the cost incurred in the same period of the previous year. The increase in operating expenses was partially offset by the increase in foreign exchange gain of $431,138 compared to the same period of the previous year. As mentioned earlier, approximately 36% of our operations, assets and liabilities are denominated in British Pound Sterling and 34% in US Dollar. Foreign currency fluctuations affect the values reported in the statement of profit and loss.

Research and development expenses in the first half of FY 2022 were $935, compared to $21,408 in the same period of FY 2021.

Finance costs include interest expense on the long-term debt, amortization of deferred financing cost, and interest accretion on lease obligations. Finance costs decreased by $7,616 to $163,133 from $170,749 in the six months ended November 30, 2021. The decrease was mainly due to the decreased interest expense of $47,460 on the long-term debt, offset by the increased interest accretion on lease obligations of $39,844. The Company's US subsidiary, Boilerroom Equipment Inc., signed a ten-year lease in February 2021 for its new production facility, which increased the lease obligation by $990,605 at the end of February 2021. During the same period of prior year, there was no lease obligation recorded for the production facility at Boilerroom Equipment Inc. As a result, the interest accretion on lease obligations increased by $39,844 compared to the same period of prior year.

Loss before income taxes for the six months ended November 30, 2021 was $800,477 compared to income of $333,787 in the same period of the previous year, representing a decrease of $1,134,264. The decrease was mainly due to the reduction in gross profit by $398,498 resulting from decreased margin on both heat recovery solution sales and condensate return systems, and the increased expenses of $763,855 caused by increased operating expenses, increased acquisition related cost, and decreased government wage subsidies received compared to the same quarter of the previous year.

Income tax recovery in the first half of FY 2022 was $6,269, compared to $28,538 in the first half of FY 2021. Both the U.K. and the U.S. entities are subject to tax charges. Fluctuations in the tax charges are the result of changing profitability in those entities.

Net loss for the six months ended November 30, 2021 was $794,208 compared to a net income $362,325 in the same period of the previous year, representing an increase of loss of $1,156,533. The loss increase was mainly due to the increase in loss before income taxes of $1,134,264 as described earlier.

Comprehensive loss was $962,444 for the first half of FY 2022, compared to income of $538,218 for the first six months of FY 2021, a loss increase of $1,500,662. The comprehensive loss increased due to the increase in net loss of $1,156,533 plus the increase in translation loss of overseas operations of $344,129.

EBITDA was negative $314,335 for the first six months of FY 2022 compared to $803,469 for the same period of the previous year, representing a decrease of $1,117,804. The decrease was mainly due to loss before taxes of $800,477 incurred for the six months ended November 30, 2021, compared to income before taxes of $333,787 achieved in the same period of prior year, resulting in a decrease of $1,134,264.

3.4 Liquidity & Capital Resources

Current assets decreased by $1,500,273 to $7,080,511 at November 30, 2021, compared to $8,580,784 at May 31, 2021. The decrease was mainly due to the decrease in cash and cash equivalents of $1,692,974, offset by increase in inventory of $183,125. Current liabilities decreased by $137,700 to $4,634,580, mainly due to the decrease in trade payables and other liabilities of $103,735 and deferred revenue of $101,012, offset by the increase in current tax liabilities of $29,311 and current portion of long-term debt of $22,226.

Working capital decreased by $1,362,573 to $2,445,931 at November 30, 2021, compared to $3,808,504 at May 31, 2021. The decrease in working capital was mainly due to the decrease in cash and cash equivalents of $1,692,974, offset by the increase in inventory of $183,125, the decrease in deferred revenue of $101,012, and the decrease in trade payables and other liabilities of $103,735.

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

	Feb 29, 2020 $	May 31, 2020 $	Aug 31, 2020 $	Nov 30, 2020 $	Feb 28, 2021 $	May 31, 2021 $	Aug 31, 2021 $	Nov 30, 2021 $
Current Assets	8,646,798	8,063,550	7,938,009	8,984,102	8,606,829	8,580,784	8,441,508	7,080,511
Current Liabilities	5,859,669	5,192,014	4,198,761	4,756,957	4,404,265	4,772,280	5,186,143	4,634,580
Working Capital	2,787,129	2,871,536	3,739,248	4,227,145	4,202,564	3,808,504	3,255,365	2,445,931

The Company’s cash position was $2,547,881 as at November 30, 2021, compared to $4,240,855 at May 31, 2021, representing a decrease of $1,692,974. The decrease was due to cash used in operating activities of $854,913, investing activities of $331,961 and financing activities of $536,616 offset by the exchange gains on cash and cash equivalents of $30,516.

The net cash used in the operating activities included the net loss of $794,208, the negative change in working capital of $420,775, the interest paid on long-term debt of $153,742, income taxes paid of $685, offset by the addbacks of non-cash items of $514,497.

The net cash used in investing activities was $331,961 during the six months ended November 30, 2021, including the purchase of intangible assets of $283,421 relating to the technology acquired from Sofame Technologies Inc. on June 11, 2021, and the purchase of property, plant and equipment of $49,785, offset by proceeds from disposal of property, plant and equipment of $1,245.

During the six months ended November 30, 2021, the Company used net cash in financing activities of $536,615 which included repayment of long-term debt of $433,430, repayment of lease obligations of $106,517, and dividends paid in the amount of $25,419, offset by $28,750 proceeds received from stock options exercised.

At November 30, 2021, $145,253 (7.2%) of the Company’s trade receivables balance was over 90 days past due. $27,540 of the past due balance was impaired at November 30, 2021. $11,344 of trade receivables that was not over 90 days past due was also impaired.

At May 31, 2021, $402,848 (18.8%) of the Company’s trade receivables balance was over 90 days past due. $28,837 of the past due balance was impaired at May 31, 2021. $11,471 of trade receivables that was not over 90 days past due was also impaired.

The Company's trade and other receivables have been reviewed for indicators of impairment. For the six months ended November 30, 2021, additional provisions of $31,611 were made as expected credit losses and recorded under administrative expense on the condensed consolidated interim statements of comprehensive income ($17,384 – November 30, 2020). $32,719 ($15,583 – November 30, 2020) of the previously provided credit losses was released due to the collection on doubtful accounts.

The following table presents the contractual undiscounted cash flows for lease obligations as of November 30, 2021 and May 31, 2021:

	November 30, 2021	May 31, 2021
Less than one year	**$ 329,993**	$ 326,987
One to five years	**877,987**	904,426
Six to ten years	**841,127**	905,054
Total undiscounted lease obligations	**2,049,107**	2,136,467
Less: impact of present value	**(549,174)**	(583,403)
Less: current portion	**(221,798)**	(215,923)
Long term portion	**$ 1,278,135**	$ 1,337,141

During the six months ended November 30, 2021, the interest expense on lease obligations was $58,568 and total cash outflow for leases was $172,030, including $6,945 for short-term leases.

During the six months ended November 30, 2020, the interest expense on lease obligations was $18,678 and total cash outflow for leases was $135,119, including $53,406 for short-term leases.

For the six months ended November 30, 2021 and 2020, expenses for leases of low-dollar value items are not material. Extension options are included in the measurement of lease obligations when the Company is reasonably certain to exercise that option.

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.

The Company has been actively applying for COVID-related government salary subsidy programs provide by the Canadian, the U.S. and the UK government since March 2020. The Company recognized salary subsidies of $187,846 during the six months ended November 30, 2021, which was recorded as a reduction to the operating expenses.

Management is of the opinion that there is sufficient cash to support the Company's operations for the next 6 months.

3.5 Segmentation Information

In the six months ended November 30, 2021 and November 30, 2020, the Company operated in the energy efficiency industry in North America, Europe, 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 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 the other in Bristol, UK, 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 quarter ended November 30, 2021 and the comparative period are detailed in the table below:

	Thermal Energy Ottawa		Thermal Energy Bristol		Reconciling Items		Total	
	2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
	$	$	**$**	$	**$**	$	**$**	$
Total revenue	**2,645,776**	3,334,287	**1,431,032**	1,685,395	**-**	-	**4,076,808**	5,019,682
Cost of sales	**(1,586,423)**	(1,775,974)	**(778,155)**	(813,466)	**-**	-	**(2,364,578)**	(2,589,440)
Gross profit	**1,059,353**	1,558,313	**652,877**	871,929	**-**	-	**1,712,230**	2,430,242
Other expenses	**(851,973)**	(637,986)	**(1,015,245)**	(785,498)	**(403,217)**	(367,116)	**(2,270,435)**	(1,790,600)
Net finance costs	**(26,461)**	(7,468)	**(2,471)**	(1,563)	**(54,269)**	(62,473)	**(83,201)**	(71,504)
Income (loss) before taxation	**180,919**	912,859	**(364,839)**	84,868	**(457,486)**	(429,589)	**(641,406)**	568,138
Tax recovery (expense)	**684**	1,212	**(17,354)**	(7,538)	**17,748**	18,613	**1,078**	12,287
Net income (loss)	**181,603**	914,071	**(382,193)**	77,330	**(439,738)**	(410,976)	**(640,328)**	580,425
Attributable to:								
Owners of the parent	**181,683**	914,036	**(399,255)**	66,279	**(439,738)**	(410,976)	**(657,310)**	569,339
Non-controlling interest	**(80)**	35	**17,062**	11,051	**-**	-	**16,982**	11,086

Segment information for the six months ended November 30, 2021 and the comparative period are detailed in the table below:

	Thermal Energy Ottawa		Thermal Energy Bristol		Reconciling Items		Total	
	2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
	$	$	**$**	$	**$**	$	**$**	$
Total revenue	**4,725,277**	4,885,024	**3,230,787**	2,962,520	**-**	-	**7,956,064**	7,847,544
Cost of sales	**(2,956,155)**	(2,612,304)	**(1,643,962)**	(1,480,795)	**-**	-	**(4,600,117)**	(4,093,099)
Gross profit	**1,769,122**	2,272,720	**1,586,825**	1,481,725	**-**	-	**3,355,947**	3,754,445
Other expenses	**(1,520,415)**	(975,801)	**(1,830,010)**	(1,353,020)	**(642,866)**	(921,088)	**(3,993,291)**	(3,249,909)
Net finance costs	**(53,215)**	(15,238)	**(5,310)**	(3,443)	**(104,608)**	(152,068)	**(163,133)**	(170,749)
Income (loss) before taxation	**195,492**	1,281,681	**(248,495)**	125,262	**(747,474)**	(1,073,156)	**(800,477)**	333,787
Tax recovery (expense)	**2,752**	3,443	**(31,819)**	(12,496)	**35,336**	37,591	**6,269**	28,538
Net income (loss)	**198,244**	1,285,124	**(280,314)**	112,766	**(712,138)**	(1,035,565)	**(794,208)**	362,325
Attributable to:								
Owners of the parent	**198,573**	1,285,089	**(325,128)**	94,741	**(712,138)**	(1,035,565)	**(838,693)**	344,265
Non-controlling interest	**(329)**	35	**44,814**	18,025	**-**	-	**44,485**	18,060

Reconciling items comprise the following:

	Three months ended November 30		Six months ended November 30	
	2021	2020	**2021**	2020
	$	$	**$**	$
Corporate admin costs	**169,812**	145,736	**335,874**	269,716
Stock-based compensation	**53,843**	50,230	**107,685**	100,460
Professional fees	**53,277**	75,954	**139,006**	169,646
Depreciation of property, plant and equipment	**32,581**	29,662	**64,414**	59,248
Amortization of intangible assets	**76,691**	68,937	**150,911**	139,225
Acquisition costs	**85,683**	3,361	**106,782**	13,461
Foreign exchange (gain) loss	**(68,670)**	(6,764)	**(261,806)**	169,332
Total	**403,217**	367,116	**642,866**	921,088

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.

Material Segmentation Variances

Thermal Energy Ottawa:

Revenue for the quarter ended November 30, 2021 of $2,645,776, represented a decrease of $688,511, or 20.6%, from $3,334,287 in the same quarter of previous year. The decrease was mainly due to the reduced revenues in heat recovery systems by $752,011 and condensate return systems by $653,800, offset by the increase in revenue of $717,300 from indirect contact heat recovery units delivered by Boilerroom Equipment Inc., the Company's US subsidiary.

Revenue for the six months ended November 30, 2021 of $4,725,277, represented a decrease of $159,747, or 3.3%, from the $4,885,024 achieved in the first half of the previous year. The decrease was mainly due to the reduced revenues in heat recovery systems by $279,400 and condensate return systems by $412,047, offset by the increase in revenue of $531,700 from indirect contact heat recovery units delivered by Boilerroom Equipment Inc. During the six months ended November 30, 2021, the amount of orders received by Boilerroom Equipment Inc. was more than doubled the amount received in the same period of the previous year. The decrease in revenues from direct contact heat recovery projects and condensate return systems was mainly due to less orders received in the North America markets for these two product lines.

Gross profit for the quarter ended November 30, 2021 decreased by $498,960, or 32.0%, compared to the same period from the previous year. The decrease in gross profit was mainly due to the decreased revenue from the heat recovery projects and condensate return systems, which was offset by the increased revenue from indirect heat recovery units. As a percentage of revenue, gross profit was 40.0% for the quarter ended November 30, 2021, compared to 46.7% achieved in the same period of last year. The decrease in gross margin was mainly due to declined gross margin on heat recovery projects in Q2 FY 2022. The shortage of labour caused by the pandemic has resulted in higher cost in both internal labour and the subcontractors' fees to provide installation service on site. Hence, the gross margin on heat recovery projects declined.

Gross profit for the six months ended November 30, 2021 decreased by $503,598, or 22.2%, over the same period of last year, while the revenue decreased by only 3.3%. The decrease in gross profit was mainly due to the declined gross margin. The gross profit as a percentage of revenue for the first half of FY 2022 was 37.4% as compared to 46.5% achieved in the first half of FY 2021. The decrease in gross margin was mainly due to the decreased margin on heat recovery projects as mentioned earlier, together with the decreased margin on indirect contact heat recovery units from Boilerroom Equipment Inc. due to increased material prices and labour costs.

Other expenses in this segment increased by $213,987 or 33.5% for the quarter ended November 30, 2021 compared to same quarter last year. Whereas other expenses for the six months ended November 30, 2021 increased by $544,614, or 55.8%, compared to the same period last year. During the first six months of FY 2022, Thermal Energy Ottawa recognized government wage subsidies in the amount of $187,846, compared to $511,678 recognized in the same period of the previous year, representing a decrease of $323,832. This segment's other operating expenses increased by $220,782, compared to the same period of prior year. During the first six months of prior year, the Company implemented some temporary cost control measures in order to prepare for the potential adverse financial impact from COVID-19, including reducing non-essential and discretionary expenditures. Some of these measures were no longer in place in the current year. The staff's salary expense also increased in the current year in order to catch up with the significantly increased annual inflation rate.

For the quarter ended November 30, 2021, income before tax of $180,919 was achieved, represented a decrease of $731,940, or 80.2%, from the same quarter of last year. The decrease was mainly due to the decrease in gross profit of $498,960 and the increase in other expenses of $213,987.

Income before tax for the six months period was $195,492, a decrease of $1,086,189, compared to $1,281,681 achieved in the same period of prior year. The decrease was mainly due to the decrease in gross profit of $503,598, which was caused by the declined gross margin on heat recovery projects and indirect heat recovery units resulting from increased material prices and labour costs, the decrease of $323,832 on government wage subsidies received, and the increase of $220,782 in other operating expenses.

Thermal Energy Bristol:

Revenue for the quarter ended November 30, 2021 of $1,431,032, represented a decrease of $254,363, or 15.1%, from the $1,685,395 achieved in the same period of the previous year. The decrease in revenue was mainly due to decreased revenue in heat recovery systems. The heat recovery projects were delayed due to restricted access to customers' site and the delays caused by subcontractors' installation work because of the shortage of labours during the second quarter of the current year. Revenue for the six months ended November 30, 2021 was $3,230,787, an increase of $268,267, or 9.1%, from the $2,962,520 achieved in the first half of the previous year. The increase was mainly due to increased revenue in both heat recovery systems and condensate return systems for this segment.

Gross profit decreased in the second quarter of FY 2022 by $219,052, or 25.1%, compared to the same quarter last year. The decrease in gross profit was due to the decreased revenue in heat recovery projects and the decreased gross profit as a percentage of revenue for both heat recovery projects and condensate return systems. Gross profit as a percentage of revenue in the second quarter of FY 2022 was 45.6%, compared to 51.7% in same quarter of prior year. The margin on heat recovery projects decreased due to increased subcontractor costs and internal labour costs. The decrease in the gross margin of condensate return systems was due to the fact the Company offered discounted prices to a customer in this segment in order to win the large order. Gross profit for the six months ended November 30, 2021 increased by $105,100 over the same period of last year mainly due to the increased revenue from both heat recovery projects and condensate return systems delivered in Europe. For the six months ended November 30, 2021, the gross profit as a percentage of revenue was similar to that of the same period of the prior year despite the increase in material and labour costs. This is because the Company incurred less commission expense in the first half of the current year. The decreased commission expense offset the increase in cost of sales caused by increased material and labour costs for the six months ended November 30, 2021.

Other expenses increased by $229,747 or 29.2% for the quarter ended November 30, 2021, compared to the quarter ended November 30, 2020. Other expenses for the six months ended November 30, 2021 was $1,830,010, an increase of $476,990 or 35.3%, compared to the same period of prior year. During the first six months of FY 2022, Thermal Energy Bristol did not receive any government wage subsidies, but it received $108,994 in the same period of the previous year. The wage subsidies were recorded as a reduction to other operating expenses. Other operating expenses also increased by $367,996, compared to the same period of prior year. During the first six months of prior year, the Company implemented some temporary cost control measures in order to prepare for the potential adverse financial impact from COVID-19, including reducing non-essential and discretionary expenditures. Some of these measures were no longer in place in the current year. The staff's salary expense also increased in the current year in order to catch up with the significantly increased annual inflation rate.

The resulting pre-tax loss was $364,839 for the quarter ended November 30, 2021, compared to an income of $84,868 for the quarter ended November 30, 2020. The pre-tax income decreased by $449,707 mainly due to the decrease in gross profit of $219,052 and the increase in other expenses of $229,747. The pre-tax loss for the six months ended November 30, 2021 was $248,495, compared to an income of $125,262 achieved in the same period of the previous year, a decrease of $373,757. The decrease in pre-tax income was mainly due to the increase in other operating expenses of $367,996, the $108,994 decrease in wage subsidies received, offset by the increase in gross profit of $105,100 as a result of increased revenue as compared to the same period of the previous year.

Reconciling Items:

Other expenses within Reconciling items, which incorporates all costs not specifically attributable to either regional operational center. For the six months ended November 30, 2021, the other expenses within reconciling items decreased from $921,088 to $642,866, a decrease of $278,222, compared to the same period ended November 30, 2020. The decrease was mainly due to the increase in foreign exchange gain of $431,138, offset by the increase in acquisition costs of $93,321 relating to the acquisition of the technology from Sofame Technologies Inc., and the increase in corporate admin costs of $66,158.

4. Related Party Transactions

Directors and Senior Management Compensation

During the quarter ended November 30, 2021 compensation arrangements for Directors were 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 November 30, 2021, total Directors' fees were $16,875. In addition, fees paid to the Chairman of the Board were $2,025; fees to the Chairperson of the Audit Committee were $1,350; and fees to the Chairperson of the Ethics, Governance and Compliance Committee were $1,350.

For the period April 16, 2020 to September 15, 2020, the Directors elected to reduce their compensation by 15% in support of the Company's cost control initiatives.

Compensation paid to Directors and Officers during the quarter ended November 30, 2021 (inclusive of the amounts described above but excluding share-based compensation) was as follows:

	Salaries and fees		Incentives		Other short-term benefits		Total	
	2021 $	2020 $	**2021 $**	2020 $	**2021 $**	2020 $	**2021 $**	2020 $
Directors								
M. Williams	**3,375**	3,291	**-**	-	**-**	-	**3,375**	3,291
J. Kelly(1)	**5,243**	5,264	**-**	-	**-**	-	**5,243**	5,264
W. Ollerhead	**4,725**	4,607	**-**	-	**-**	-	**4,725**	4,607
D. Spagnolo	**4,725**	4,607	**-**	-	**-**	-	**4,725**	4,607
W. White(1)	**3,532**	3,291	**-**	-	**-**	-	**3,532**	3,291
Total	**21,600**	21,060	**-**	-	**-**	-	**21,600**	21,060
Senior Management								
W. Crossland	**60,000**	58,500	**-**	-	**-**	-	**60,000**	58,500
R. Triebe	**45,251**	44,120	**-**	-	**826**	826	**46,077**	44,946
S. Mawby(2) (3)	**38,496**	20,136	**-**	-	**6,238**	6,178	**44,734**	26,314
J. Zhang	**31,250**	30,469	**-**	-	**826**	826	**32,076**	31,295
Total	**174,997**	153,225	**-**	-	**7,890**	7,830	**182,887**	161,055
Total Related Party Transactions	**196,597**	174,285	**-**	-	**7,890**	7,830	**204,487**	182,115

(1) Mr. Kelly stepped down as Chairman of the Board effective November 23, 2021 and Mr. White was appointed Chairman of the Board effective the same date. Mr. Kelly remains as a member of the Board.
(2) Mr. Mawby is compensated in UK Pound Sterling. Average exchange rate to Canadian dollar was 1.7117 and 1.7178 in Q2 2022 and Q2 2021, respectively.
(3) Mr. Mawby was on paternity leave for the period October 19, 2020 to November 30, 2020.

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.

Options outstanding for Directors (excluding the CEO) as at November 30, 2021 were 1,250,000, of which 833,332 were exercisable. There were no warrants outstanding for Directors.

Options outstanding for Senior Management (including the CEO) as at November 30, 2021 were 6,500,000, of which 3,749,994 were exercisable. There were no warrants outstanding for Senior Management.

5. COVID-19 Update

On March 11, 2020, COVID-19 was declared a global pandemic by the World Health Organization. The Company has been closely monitoring the impact of COVID-19 on all aspects of its business. COVID-19 has had disruptive effects in countries in which the Company operates including Canada, the US and the UK.

We are conducting business with substantial modifications to employee travel and employee work locations. The travel restrictions had decreased business development and sales activities. As travel restrictions and quarantine requirements are slowly easing, the Company starts resuming some of its regular sales and business development activities. While most of our customers are essential businesses and continue to operate, the pandemic also has impacts on many of them, including adapting their operation to include physical distancing, limiting site visits, delays in making purchasing decisions and the temporary suspension of on-going projects. The continued global supply chain issues caused by shortages of labour and materials have also affected the Company's operations.

The Company has taken proactive measures to cope with the impact from COVID-19 including the deployment of video conferencing tools, the development of remote working and file-sharing capabilities, a temporary reduction in non-essential expenditures, the implementation of temporary control measures, and the application of government sponsored emergency loans and salary subsidy programs. Despite the COVID-19 slowdown, the Company has maintained its pre-pandemic staff levels and has maintained its full production and project development capabilities.

Currently, we are still unable to estimate the long-term impact of COVID-19 on our businesses, financial position, results of operations, and cash flows. Despite the ease of travel restrictions and lock-down orders, we still expect COVID-19 to have some impact on our sales and the results of operations in the next 6 to 12 months.

6. 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. Order backlog represents 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.

The Company's order backlog as at November 30, 2021 was approximately \$7.0 million. As at January 20, 2022, the Company had an order backlog of approximately \$7.5 million.

	2019 $ million	2020 $ million	2021 $ million
Order backlog as at November 30	8.2	5.5	7.0
Order backlog as at January reporting date	9.1	7.2	7.5

- On September 14, 2021, the Company announced that it had received its third heat recovery order from a multinational food products corporation. The order includes major equipment, engineering, and commissioning and is valued at over \$900,000. The heat recovery system is expected to deliver an annual carbon reduction of 1,426 tonnes and energy savings of \$300,000 per year. The project was about 29% complete at the quarter-end.

- On March 17, 2021, the Company announced that it had been commissioned to design and implement an extensive \$1,180,000 heat recovery project with a major US dairy group. By implementing the Company's ultra-efficient solution, this repeat customer expects to reduce this site's natural gas usage by 13% as well cut its annual CO_2 emissions by over 730 tonnes. The project was about 32% complete at the quarter-end.

- On January 19, 2021, the Company announced that it had been commissioned by a Canadian hospital to supply heat recovery equipment to reduce fuel use and carbon emissions. The systems, valued at \$770,000, are expected to deliver an annual fuel saving of \$198,000 and reduce carbon emissions by 1,115 metric tonnes per year. The project was about 84% complete at the quarter-end.

- On October 27, 2020, the Company announced that it had been commissioned by a leading hospital group to supply two heat recovery systems to reduce fuel use and carbon emissions. The systems, valued at \$1,530,000, will be installed at two facilities. The systems are expected to deliver an annual fuel saving of \$410,600 and reduce carbon emissions by over 2,300 tonnes per year. The project was about 82% complete at the quarter-end.

7. Summary of Outstanding Shares and Dilutive Instruments

The Company has the following shares and dilutive instruments outstanding as at November 30, 2021:

Shares:
164,137,606 class A common shares.

Options:

	Options outstanding			Options exercisable	
Range of exercise prices	Number outstanding November 30, 2021	Weighted average remaining contractual life	Weighted average exercise price	Number exercisable at November 30, 2021	Weighted average exercise price
0.08-0.10	14,116,339	2.86	0.08	10,002,651	0.08
0.11-0.14	4,328,000	4.99	0.14	-	-
	18,444,339	3.36	0.10	10,002,651	0.08

8. Critical Accounting Estimates and Changes in Accounting Standards

Critical Accounting Estimates

The preparation of financial statements requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities, income and expenses. The judgements, estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of the valuation of assets and liabilities that are not readily apparent from other sources. The judgements, estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates and assumptions are recognized in the year in which they are revised and in any future periods affected. Actual results may differ from these estimates, judgements and assumptions.

The COVID-19 outbreak began to impact the Company's operations in the latter half of March 2020. Management believes the extent of the COVID-19 pandemic's adverse impact on the Company's operating results and financial condition will be driven by many factors, most of which are beyond management's control and ability to forecast. Such factors include, but are not limited to, the scope and duration of past and potential future stay-at-home policies and business closures, travel restrictions, and the willingness of customers to allow outside contractors onsite. Because of these and other uncertainties, management cannot estimate the length or severity of the impact of the pandemic on the business. Decreases in cash flows and results of operations may have an impact on the inputs and assumptions used in significant accounting estimates, including management's assessment of future compliance with financial covenants and potential impairments of intangible and long-lived assets.

The following components of the financial statements depend most heavily on such management estimates, assumptions and judgment, and 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 intangible assets and asset impairment

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 and determines a suitable discount 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 expected cash flows, and 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 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.

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

There has been no change in accounting standards since we issued our last consolidated annual financial statements for the year ended May 31, 2021.

9. 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 impact of major global pandemics;
- 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 past litigation with a 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. 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 departure from the European Union by the U.K.; and
- The impact of inflation.

Management's addressing of the risks:

FY 2016 and FY 2017 saw a return to profitability and an increase in cash balances of $427,805 and $1,806,992, respectively. 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 increased revenue in heat recovery systems and the acquisition of Boilerroom Equipment Inc. In FY 2020, despite of the COVID-19 pandemic, the Company maintained the same sales level as FY 2019 with higher gross margins and recorded operating income before impairment of $1,275,708. In FY 2021, the Company's revenue decreased due to the delays in heat recovery project delivery caused by COVID-19. However, the Company implemented cost control measures to decrease the operating expenses and the Company applied for wage subsidies from the U.K., the U.S. and Canadian government. The Company also applied and received $1,000,000 COVID-19 loan from a Canadian financial institution to support the Company's global operations during the unprecedented time. With all these efforts, the Company was able to finish FY 2021 under COVID-19 with a net income of $222,965.

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 marketplace 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 ("EU"). The withdrawal of the UK from the EU is also called "Brexit". On December 24, 2020, a post-Brexit trade deal was reached between the EU and the UK. At this moment, the most prominent post-Brexit concern for our business is related to potential shipping delays on product sales to EU countries. The Company has implemented new processes to adapt to the changes, including changing shipping terms to cover additional costs arising post-Brexit (i.e. taxes, custom clearing fees, etc.) to avoid shipping delays, and registering sales taxes in EU countries to be in compliance with local sales tax rules.

Inflation rates have been rising during the global pandemic, and the current wave of inflation is driven by a range of factors including rising raw material prices, logistics and transportation bottlenecks and shortages of intermediate goods and labour. The surge in inflation has resulted in higher costs of sales for the Company's product lines. The Company is coping with the inflation impact by implementing new measures, including implementing price increases where warranted, making bulk purchases to increase its purchasing power and to lock in on purchase prices for raw materials, securing supplies by increasing inventory level to avoid ordering sporadically, and negotiating with customers to cover additional costs caused by inflation on long-term projects.

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.

10. 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.

11. 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, 2021 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.