

# Smartcool Systems Inc. (TSX-V: SSC) Management's Discussion and Analysis

## 2017 Annual Report

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**Smartcool Systems Inc.**  
7155 Kingsway  
PO Box 54523 Highgate PO  
Burnaby, BC  
V5E 4J6 Canada

**TEL** +1 604 669 1388  
**TOLL-FREE** +1 888 669 1388  
**FAX** +1 604 602 0674  
**EMAIL** officeCanada@smartcool.net

**Management’s Discussion and Analysis**

The following is management’s discussion and analysis (“MD&A”) of the operating and financial results of Smartcool Systems Inc. for the year ended December 31, 2017. This information is provided as of April 30<sup>th</sup>, 2018.

This MD&A should be read in conjunction with the Company’s audited consolidated financial statements for the years ended December 31, 2017 and 2016 together with accompanying notes. These documents and additional information about Smartcool can be located on the SEDAR website at [www.sedar.com](http://www.sedar.com) or the Company’s website at [www.smartcool.net](http://www.smartcool.net).

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## **Business Overview**

Smartcool Systems Inc. is a clean technology company specializing in the development and distribution of energy efficiency solutions for air conditioning, refrigeration and heat pump systems (HVACR).

Smartcool was established in 2004, beginning as the North American distributor for the Energy Saving Module (ESM)™, a unique energy efficiency retrofit developed by Abbotly Technologies Pty Ltd of Australia. In 2006, Smartcool purchased the assets of Abbotly, including the intellectual property of the ESM™, and became the sole manufacturer and master distributor. In 2009, Smartcool's research and development culminated in the delivery of the ECO<sup>3</sup>™ to market, a new product specifically designed to bring unprecedented energy efficiency to small scale HVACR systems. Product development is underway to add communications as part of an overall upgrade to the existing line of products.

2017 has been an exciting year for Smartcool as many new initiatives were commenced and their impact are starting to be felt. In the second quarter, a strategic partnership was formed between Smartcool and Wates Group, one of the UK's largest family owned construction, property services and development companies. Smartcool's technology was judged to be one of the highest rated solutions technologies Wates Group had reviewed. The direct partnership between Smartcool and the Wates Group allows for an efficient delivery of our technology as well as resulting in cost saving to existing Wates Group clients.

In the third quarter, Smartcool Systems introduced a funded sales initiative program. The program has provided funding to those customers that want to install Smartcool technology but have limited capital budgets. This initiative has been successful to date and it is anticipated to continue to improve sales revenues for the company. A number of customers have come onboard because of this initiative including Loscoe Chilled Foods Ltd and three Leaderboard Golf Facilities. In addition, another strategic partnership was formed between Cleantech 100 giant, Anesco Ltd and Smartcool. Anesco has been on the Sunday Times Fast Track 100 for 5 consecutive years. This partnership would allow both companies to deliver significant much needed energy saving solutions to their significant multi-site client base and it is starting to demonstrate success for both parties.

During the second half of the year, Smartcool started developing a program to launch its technology into the US residential market. Don Iannucci has joined the team to head this initiative. Don completed the initial analysis of the market and developed a business plan with the intention of launching a digital marketing campaign in the late spring 2018 in certain select markets in the US. The US has over 100 million homes with air conditioners that are generally viewed as one of the largest consumers of energy in the household. Smartcool is establishing an installation and servicing network for this initiative. Smartcool has also entered into an agreement both in US (Evolution Mechanical) and in Canada (Sandcastle Energy Systems Alliance and CCS Climate Control Systems Inc.) to assist the company with installations.

Generally, the company has a greater chance of success where efficiency economics are the best. Primarily this means where utility rates are highest and the climate is warmest. With the ongoing worldwide switch away from coal fired power generation and the retraction of nuclear power in some countries such as Japan and Germany, utility rates have been rising steadily. Adoption of heat pumps in many areas of the world have also started to provide new opportunities for sales. Heat pumps utilize the

refrigeration cycle to provide both cooling in the summer and heating in the winter months. These systems, both commercial and residential, which are being deployed for cooling and heating interior spaces are also being used to heat hot water in many applications. Although it might seem counterintuitive that these systems, which have more efficiency than the traditional HVAC systems, might not be candidates for the Company’s technology, the opposite has been observed. On heat pump installations performed in 2017 for both air and water heating, Smartcool technology generated above normal energy savings with one case yielding a reduction of 60%. Management believes that this will continue to generate greater opportunities for the company.

Management has also sought to add complimentary technologies to the product mix providing a more wholistic approach to energy efficiency solutions. To this end, the company’s distributor relationship with ATI Airtest Technologies Inc., has generated some sales of its CO2 sensors for the Demand Control Ventilation (DCV) protocol. Initial customer feedback has been very positive and Management believes this will generate additional follow on opportunities to grow this product revenue.

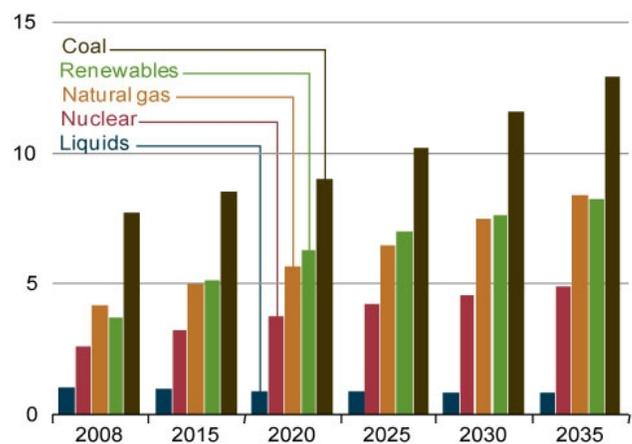
During the 2<sup>nd</sup> Quarter, the Company entered into a VAR (Value Added Reseller) Agreement with Panoramic Power Ltd. (“Panoramic”). Panoramic designs and manufactures wireless sensors and complimenting software to provide customers visibility to device level consumption of electricity. This system provides the Company with the ability to very specifically prove the efficacy of its proprietary algorithm. In addition, the Company sees additional opportunities to sell Panoramic systems to customers outside of the Smartcool application.

Other complimentary products and services are currently under review with some very promising possibilities. Management is continuing to evaluate some of these that could generate add on revenues and profitability from the existing client base.

**Energy Issues**

Smartcool has focused on developing energy efficiency solutions to address the critical energy issues facing the world today and in the future. Electricity is a crucial part of the global economy and our communities. In the International Energy Outlook 2017 (IEO2017) Reference case, it is projected that the total world energy consumption would rise from 575 quadrillion British thermal units (Btu) in 2015 to 736 quadrillion Btu in 2040, an increase of 28%. The strongest demand for energy lies in those countries where there is strong and long-term economic growth. Economic growth is the key factor in the growth of energy demand. The worldwide demand for electricity, in the IEO2017 Reference case, increases by 45% fro 2015 to 2040. Electricity remains the world’s fastest growing form of end-use energy consumption. Renewable energy sources are the fastest-growing source of energy for electricity generation. Electricity generated by these fossil fuels releases vast amounts of greenhouse gases into the atmosphere, contributing to climate change and general air pollution.

**EIA World Net Electricity Generation by Fuel  
2008-2035  
(in trillion kWh)**



Coal remains as the #1 fuel for electrical generation globally. In the US, the EIA expects the share of U.S. total utility-scale electricity generation from natural gas-fired power plants to rise from 32% in 2017 to 34% in 2018 and to remain at 34% in 2019. The forecast electricity generation share from coal averages 29% in both 2018 and 2019, down from 30% in 2017. The nuclear share of generation was 20% in 2017 and is forecast to average 20% in 2018 and 19% in 2019. Nonhydropower renewables provided slightly less than 10% of electricity generation in 2017 and are expected to provide 10% in 2018 and nearly 11% in 2019. The generation share of hydropower was about 7% in 2017 and is forecast to fall to less than 7% in both 2018 and 2019. These shifts in power generation continue to put upward pressure on electricity prices. Ultimately this improves the economics for Smartcool's technology.

## Smartcool's Energy Efficiency Solutions

Smartcool focuses on reducing the electricity used by refrigeration, air conditioning and heat pumps (HVAC). For target customer industries, such as supermarkets, these systems consume well over 50% of their total energy usage. Even for customers less dependent on HVAC, the systems still account for roughly 20% of their energy bill. The ability to save energy with Smartcool's energy efficiency technology represents a major opportunity to cut operating expenses for any customer, typically giving them a return on their investment averaging 18 to 36 months. Electricity generated for buildings produces more greenhouse gases than any other source, so cutting HVAC energy consumption can also have a significant impact on the environment.

Smartcool's ECO<sup>3</sup>™ and ESM™ are retrofit products, meaning that they are installed by wiring in between the existing thermostat and the compressor in the HVAC system, rather than replacing any expensive equipment. Once installed, the products immediately begin monitoring the cooling cycle of the compressor to identify inefficiencies and opportunities for saving energy. Even the most modern systems have pre-existing inefficiencies that can only be resolved by the intellectual property provided in Smartcool's products. The ECO<sup>3</sup>™ and ESM™ dynamically adjust the cooling cycle to save customers energy without any impact to the temperature performance of the HVAC system.

*The ECO<sup>3</sup>™*



*The ESM™*



With the ECO<sup>3</sup>™ and ESM™, customers see all the benefits of energy efficiency, without any risks. The technology has undergone extensive independent third party testing by highly reputable organizations such as Oak Ridge National Laboratories, the University of Miami for Florida Power & Light, and the Los Angeles Department of Power & Water. These tests have proven unequivocally that the technology provides energy savings with no risks, as do over 30,000 installations worldwide.

For more information on Smartcool's technology, visit [www.smartcool.net](http://www.smartcool.net) or for information specific to the ECO<sup>3</sup>™, visit [www.smartcooleco3.com](http://www.smartcooleco3.com)

**The Market Strategy**

Smartcool’s ECO<sup>3</sup>™ and ESM™ are cost effective energy efficiency solutions for any air conditioning, refrigeration or heat pump system. The few other energy efficiency products geared towards the HVAC market, do not offer the full package of benefits that the ECO<sup>3</sup>™ and ESM™ provide. Other products on the market do not provide the same degree of safety, and can cause temperature and humidity performance to be affected. They all lack the wide range of compatibility held by the ECO<sup>3</sup>™ and ESM™, which can be installed on any HVAC system. Perhaps most significantly, other products cannot easily prove consistent energy savings. Smartcool’s energy savings can be instantly verified on the product display screens, letting customers monitor energy savings as they happen. This is a critical feature for utility rebate qualification, which Smartcool has already received from major utilities like Florida Power & Light, Southern California Edison and Con Edison. These factors give Smartcool exclusive access to an immense market.

**Direct Sales**

The company distributes its products directly to major clients, providing them with superior project management and service as they roll out Smartcool products to their facilities. For direct sales, Smartcool targets specific industries such as food retailers, telecommunications, commercial real estate and hospitality, where HVAC energy usage tends to represent a very high percentage of a client’s operating budget. In Europe, Smartcool has built a strong portfolio of direct sales through major electrical wholesalers like Rexel, utilities like EON and facilities management companies like Matrix and EMCOR. They have introduced Smartcool to their customers for energy efficiency solutions such as Scottish and Southern Energy and Transport for London.

With the success in the UK of developing sales directly to end users, often through intermediaries such as Facilities Managers and Utility Companies, it became clear to management that this model should be deployed in the North American market place. These initiatives commenced late in 2016 and Management expects this strategy to begin impacting both revenues and profits starting in the 2<sup>nd</sup> Quarter of fiscal 2017. With the addition of Haiwen (Helen) Qian and Frank Lawrence in sales and marketing roles, early indications from the new team suggest that this will be a successful strategy. The Company has continued to add additional sales agents that are focused on a direct to customer selling approach. There are several initial installations currently underway with prospective customers reviewing results to determine savings. These provide the Company with further opportunities to expand sales.



**Distribution Sales**

Smartcool has developed an intricate network of distributors to target regional markets. Distributors are provided both technical and sales training by Smartcool and receive ongoing support. Distributors have the advantage of detailed regional knowledge, allowing them to build strong client portfolios across the residential sector as well as in industries like food retail, climate controlled storage, hospitality and commercial real estate. Smartcool's distributors have continued to expand their businesses in Australia, India, UAE, Saudi Arabia, Eastern Europe, France, South Africa, and the US (particularly Florida, California and the Mid-West). Distributors have also proven instrumental in launching key accounts for Smartcool, like Telefonica, GE Healthcare, Dell, Saudi Aramco, 7-Eleven, JW Marriott and more.

**Corporate Structure**

Smartcool has gone through several phases of growth to reach its current structure. Smartcool Systems Inc. is the publicly traded parent company, with three wholly owned subsidiaries: Smartcool International Inc., Smartcool Systems USA Inc. and Lenten Street Ltd. DBA Smartcool. Smartcool International holds the intellectual property and is the master distributor of Smartcool's product line. Smartcool Systems USA distributes the technology within the United States, using a network of local distributors to deliver the products to market. Lenten Street distributes the technology in Europe, the Middle East, Africa and the Indian Sub-Continent with a focus on direct sales.

**Financial Overview**

As a result of concerted marketing effort, 2017 marked a very successful year. The strongest sales revenue was in third quarter (\$307,538) followed by the second quarter (\$261,784).

Revenue increased to \$774,279 from \$325,976 for the previous year, an increase of \$448,303 or 138%. Operating expenses increased to \$2,594,741 from \$1,887,132 for the 2016, an increase of \$707,609 or 37%.

Total assets increased to \$1,878,180 from \$1,561,024 at the end of 2016. The Company had \$477,000 in cash and cash equivalents at the end of the year, compared to \$3,317 at the end of 2016.

Current liabilities at the end of the year were \$1,483,118 (2016 - \$1,966,938) which includes current portion of acquisition obligations and debentures totaling \$508,736 (2016 - \$572,866). Long-term liabilities were \$584,641 (2016 - \$219,282), consisting of debentures of \$484,000 and deferred tax liability of \$100,641.

All the fiscal quarters below have been prepared using IFRS.

	Mar 2017 (\$)	Jun 2017 (\$)	Sep 2017 (\$)	Dec 2017 (\$)
Total revenues	85,957	261,784	307,538	119,000
Net income (loss)	(360,949)	(259,510)	(454,148)	(907,860)
Income (loss) per share – basic & diluted	(0.00)	(0.00)	(0.00)	(0.00)

	Mar 2016 (\$)	Jun 2016 (\$)	Sep 2016 (\$)	Dec 2016 (\$)
Total revenues	142,497	26,854	81,547	75,078
Net income (loss)	(312,449)	(403,029)	(373,180)	(578,100)
Income (loss) per share – basic & diluted	(0.00)	(0.00)	(0.00)	(0.00)

### Selected Annual Information

The following is selected information on Smartcool's financial performance for the past three years. This financial information is derived from the audited financial statements of the Company and has been prepared using IFRS.

	Dec. 31, 2015* (\$)	Dec. 31, 2016* (\$)	Dec 31, 2017* (\$)
Revenue	785,498	325,976	774,279
Selling, General & Administrative	1,449,091	1,277,676	1,747,057
Net Income (Loss)	(1,676,473)	(1,666,758)	(1,982,467)
Net income (loss) – per share (basic and diluted)	(0.01)	(0.00)	(0.00)
Total assets	2,437,023	1,561,024	1,878,180
Total long term liabilities	358,176	219,282	584,641
Cash dividends	-	-	-

\* Continuing operations only

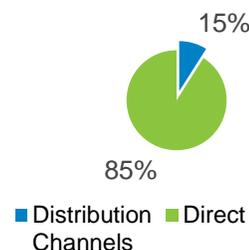
**Summary of Operating Results**

**Revenue**

Smartcool sells its products both directly to major customers and through a network of independent distributors.

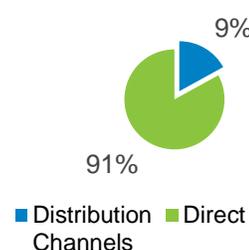
Distribution sales for the year \$115,291 or 15% of total revenue, compared to \$93,362 or 29% of total revenue for 2016. Direct sales for the year were \$658,988 or 85% of total revenue compared to \$232,614 or 71% of total revenue for 2016.

**Revenue by Channel**

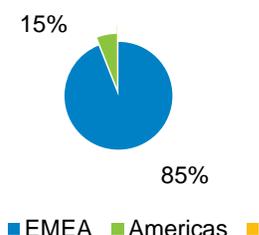


Distribution sales for the fourth quarter were \$10,213 or 9% of total revenue, compared to \$26,883 or 36% of total revenue for the same period of 2016. Direct sales for the fourth quarter were \$ 108,787 or 91% of total revenue compared to \$48,195 or 64% of total revenue for the same period of 2016.

**Revenue by Channel**

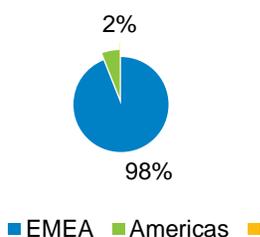


**Revenue by Region**



Revenue from the Americas for the year were \$113,863 or 15% of total revenue, compared to \$76,735 or 24% of total revenue for the year of 2016. Revenue from the Europe, Middle East, and Africa for the year were \$660,416 or 85% of total revenue compared to \$249,241 or 76% of total revenue for the year of 2016.

**Revenue by Region**



Revenue from the Americas for the fourth quarter was \$2,835 or 2% of total revenue, compared to \$6,962 or 9% of total revenue for the same period of 2016. Revenue from the Europe, Middle East, and Africa for the fourth quarter was \$116,165 or 98% of total revenue compared to \$68,116 or 91% of total revenue for the same period of 2016.

***Gross profit***

Gross profit for the year was \$652,007 compared to \$239,736 for 2016, an increase of \$412,271 or 172%. Profit margin for the year was 84%, compared to 74% for 2016; slightly higher than previous year.

Gross profit for the fourth quarter was \$ 80,097 compared to \$52,889 for the same period of 2016, an increase of \$27,208 or 51%. Profit margin for the fourth quarter was 67% compared to 70% for the same period of 2016.

***General and administrative expenses***

General and administrative (“G & A”) expenses for the year were \$1,747,057, compared to \$1,277,676 for 2016, an increase of \$469,381. Consulting and management fees increased to \$669,231 from \$336,777 as a result of the engagement of a number of consultants to assist the Company with marketing initiatives and operating effectiveness. Professional fees increased to \$124,945 from \$68,070, due to the extensive legal work related to the preparation of debenture offering documents, warrant term modification and capital financing. Travel expenses increased to \$160,413 from \$73,127. These increases were partially offset by a sizable decrease in bad debts (a decrease of \$60,094) and rent ( a decrease of \$16,619).

General and administrative (“G & A”) expenses for the fourth quarter was \$734,325, compared to \$465,997 for the same period of 2016. Consulting and management fees increased to \$294,164 from \$93,452. Professional fees increased to \$53,111 from \$49,085 and travel expenses increased to \$70,121 from \$26,396.

	Twelve months ended December 31, 2017	Twelve months ended December 31, 2016
Advertising and promotion	\$26,694	\$2,185
Bad debts (recoveries)	102,256	162,350
Commissions	-	6,467
Consulting and management fees	669,231	336,777
Filing and transfer fees	13,898	28,515
Insurance	11,667	14,216
Interest	7,238	4,333
Investor relations	28,452	12,113
Product certification	8,510	4,869
Professional fees	124,945	68,070
Office and supplies	51,254	28,009
Rent	8,754	25,373
Salaries and benefits	521,949	493,055
Telephone	11,797	18,217
Travelling	160,413	73,127
<b>Total general and administrative expenses</b>	<b>\$1,747,057</b>	<b>\$1,277,676</b>

	Three months ended December 31 2017	Three months ended December 31, 2016
Advertising and promotion	\$11,713	\$943
Bad debts	102,256	162,350
Commissions	-	161
Consulting & management fees	294,164	93,452
Filing and transfer fees	2,060	2,760
Insurance	2,904	3,521
Interest	2,544	19
Investor relations	7,689	4,788
Product certification	1,597	1,638
Professional fees	53,111	49,085
Office and supplies	16,790	6,381
Rent	1,464	3,908
Salaries and benefits	163,893	105,887
Telephone	4,018	5,030
Travelling	70,121	26,396
<b>Total general &amp; administrative expenses</b>	<b>\$734,325</b>	<b>\$465,996</b>

Total operating expenses for the year increased to \$2,594,741 from \$1,887,132 for the 2016; a reflection of increase business activities and higher share-based compensation costs.

**Net loss**

Net loss for the year was \$1,982,467 compared to net loss of \$1,666,758 for year of 2016. The loss per share (basic and diluted) for the year was \$0.01, no change from the loss per share for the year of 2016.

Net loss for the fourth quarter was \$907,860 compared to net loss of \$578,099 for the same period of 2016. The loss per share (basic and diluted) for the fourth quarter was \$0.00, no change from the loss per share for the same period of 2016.

Loss per share is calculated based on the weighted average number of common shares outstanding throughout the year.

***Comprehensive loss***

Comprehensive loss for the year was \$1,998,532 (Dec 31, 2016 - \$1,607,823) consisting of net operating loss of \$1,982,467 (Dec 31, 2016 - \$1,666,758) and negative foreign currency translation adjustment of \$16,065. (Dec 31, 2016 - \$58,935).

Comprehensive loss for the fourth quarter was \$909,177 (Dec 31, 2016 - \$548,330) consisting of net operating loss \$907,860 (Dec 31, 2016 - \$578,099) and negative foreign currency translation adjustment \$1,317. (Dec 31, 2016 - \$29,769).

As the functional currencies of Smartcool USA and Lenten Street are different from the reporting currency (Canadian dollar), their monetary assets and liabilities as well as non-monetary assets and liabilities in the consolidated financial statements must be translated into the reporting currency based on Dec 31, 2017 exchange rate under IFRS. This method of foreign currency translation resulted in the above adjustment which is classified as a component of equity.

***Amortization and depreciation***

Amortization and depreciation expenses for the year were \$552,576 compared to \$568,429 for the previous year. Amortization on property and equipment was \$2,128 (Dec 31, 2016 - \$13,417) and amortization of intangible assets was \$550,448 (Dec 31, 2016 - \$ 412,836).

Amortization and depreciation expenses for the fourth quarter were \$138,194 compared to \$142,176 for the same quarter of 2016. Amortization on property and equipment was \$582 (Dec 31, 2016 - \$4,448) and amortization of intangible assets was \$137,612 (Dec 31, 2016 - \$ 137,612).

***Share-based compensation***

Share-based compensation costs for the year was \$295,108, compared to \$39,051 for 2016, an increase of \$256,057. 12,575,000 options were granted during the year compared to 75,000 stock options granted in 2016.

Share-based compensation costs for the fourth quarter was \$98,023, compared to \$2,068 for the same period last year.

***Capital expenditures***

During the year, the Company purchased office computer equipment of \$1,420 , compare to \$2,943 purchases were made in 2016.

**Liquidity and Capital Resources**

As at December 31, 2017, the Company had \$477,000 in cash and cash equivalents (December 31, 2016 - \$3,317). Negative working capital at December 31, 2017 was \$334,495 compared to \$1,549,161 at December 31, 2016.

The Company used net cash flow of \$1,518,725 to during the year and used \$661,546 in 2016. The increase in cash used for operations was attributable mainly to the increased amounts of trade, consulting fees, and professional fees relating to debt and shares financing.

The Company was unable to make acquisition obligations payments as scheduled. These payments include £26,000 scheduled for December 15, 2014, £25,000 December 31, 2014, £26,000 June 15, 2015, £19,000 December 15, 2015, £26,000 June 15, 2016, £19,000 December 15, 2016, £26,000 June 15, 2017, £19,000 December 15, 2017, a total of \$351,475 (£186,000).

Given the current business activity, management believes steady growth in revenue will provide the Company with greater liquidity and capital resources. The October debenture offering allows the Company continues to be a going concern over the next twelve month.

The timing of future payments related to financial liabilities is outlined in the table below:

	<b>Total</b>	<b>1 year</b>	<b>1-2 years</b>
Trade payables and accruals	\$867,900	\$867,900	\$-
Loans and advances	82,569	82,569	-
Obligations under acquisition contracts	384,958	384,958	-
Debentures	607,778	123,778	484,000
<b>Total</b>	<b>\$1,943,205</b>	<b>\$1,483,118</b>	<b>\$484,000</b>

### **Outstanding Share Data**

The authorized share capital of the Company is an unlimited number of common shares without par value. As at December 31, 2017 the Company had 195,923,377 (December 31, 2016 – 140,842,737) common shares outstanding. The weighted average number of common shares outstanding for the year was 169,747,864 (December 31 2016- 131,864,244) and the weighted average number of common shares outstanding for the fourth quarter was 193,722,884 (December 31 2016- 140,842,737)

As at the date of this report, the outstanding shares are 200,693,377, diluted are 299,363,153

### **Warrants and Stock Options**

As at December 31, 2017, there were 83,969,776 ( December 31, 2016 – 43,175,000) share purchase warrants (including 1,082,909 agent warrants) and 22,470,000 (December 31, 2016 – 11,945,000) stock options outstanding which collectively could result in the issuance of 106,439,776 common shares if these warrants and stock options are exercised. The outstanding options have a weighted average exercise price of \$0.05. The outstanding warrants have weighted average exercise price of \$0.06.

During the year, 12,575,000 stock options were issued at an exercise price of \$0.05 for 5 years.

As at the date of this report, there are 79,199,776 outstanding warrants and 34,470,000 outstanding options. The outstanding options have weighted average exercise price of \$0.05.

### **Intangible Assets**

#### ***ESM™ Intellectual Property and worldwide distribution rights***

The Company acquired intangible assets in relation to the acquisition of Abbotly Technologies Inc. in March 2006.

During the year ended December 31, 2014, management performed a review of the carrying value of these assets. As discrepancies between revenue projections and actual operating results in 2014 resulted in significant uncertainty in future cash generation of these assets, an impairment loss of \$175,313 was recorded based on cash flow projections as at December 31, 2014.

**a. *Distribution Rights from TECC Services***

In July 2008, the Company acquired the exclusive rights to distribute the ESM™ in the United Kingdom, Spain, Portugal, and the Middle East from T.E.C.C. Services Ltd. (“TECC”) (note 7).

**b. *Intangible Assets from Smartcool UK***

In February 2011, the Company acquired intangible assets in relation to the acquisition of Smartcool UK. These intangible assets include the distribution rights of the ESM™ in the United Kingdom, the distribution right related to sales to a major customer and a customer relationship.

During the year ended December 31, 2014, management performed a review of the carrying value of these assets. As discrepancies between revenue projections and actual operating results in 2014 resulted in significant uncertainty in future cash generation of these assets, an impairment loss of \$528,716 (\$344,251 for distribution rights and \$184,465 for a customer relationship) was recorded based on cash flow projections as at December 31, 2014.

**c. *SmartACR Intellectual Property and Customer Relationship***

In February 2015, the Company acquired \$25,000 of intangible assets in relation to the termination of a license agreement (note 12). These intangible assets include intellectual property (\$25,000) and a customer relationship (\$Nil).

## **Critical Accounting Policies & Estimates**

### ***Revenue Recognition***

Revenue from the sale and installation of the ESMTM and ECO3TM is recognized when the ESMTM and ECO3TM have been installed, significant risks and rewards of ownership of the equipment have been transferred to the customer, the Company does not retain continuing managerial involvement or effective control over the equipment, the sales price can be determined and collection is probable, and the cost of the transaction can be measured reliably.

Revenue from the international distribution of the ESMTM and ECO3TM is recognized when the equipment has been shipped, title has been transferred, the sales price has been determined and the cost of the equipment can be measured reliably. Revenue is also recognized when equipment has been ordered and laid away as instructed by the customer, the sales price has been determined and a significant portion of it has been paid. Provisions are established for estimated warranty costs at the time revenue is recognized. The Company records deferred revenue when cash is received in advance of the above revenue recognition criteria being met.

### ***Share-based Payments***

The fair value of all stock options granted to employees is determined using the Black-Scholes Option Pricing Model, and the resulting value is charged to operations over the vesting period. Volatility rate is

determined based on the trading history of the Company’s shares for the relevant period and interest rate is based on Canadian bond rates.

The fair value of options granted to non-employees is determined using the fair value of the goods or services received. The resulting value is charged to operations when a performance commitment is made or the options are fully vested and non-forfeitable, whichever is earliest, and the expense is recognized over the period in which the goods or services from the non-employees are received. To estimate the fair value of options granted to non-employees, management considers primarily the fees management would be willing to pay in cash for the service if no options were granted.

A corresponding increase in equity, the reserve for equity settled share-based transactions, is recorded when stock options are expensed. When stock options are exercised, share capital is credited by the sum of the consideration paid and the related portion previously recorded in the reserve is reversed. At the time of grant, the expense is determined based on estimated forfeiture rate. The expense will be adjusted to recognize the effect of actual forfeitures as they occur. The fair value of warrants issued to agents for their finder’s fee is based on the fair value of the services provided and charged to share issuance costs.

When the terms of an equity-settled award are modified, the minimum expense recognized is the expense as if the terms had not been modified. An additional expense is recognized for any modification which increases the total fair value of the share-based payment arrangement or is otherwise beneficial to the employee as measured at the date of modification.

***Intangible assets***

Intangible assets are recorded at cost and include the ESM™ brand, ESM™ intellectual property, distribution rights, distribution agreements, supplier agreements and customer relationships. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. The ESM™ brand has been determined to have an indefinite life and is not amortized. The remaining intangible assets with finite lives are amortized on a straight-line basis. The useful lives of the intangible assets have been assessed as follows:

Intellectual property - ESM™	13.5 years
Intellectual property - SmartACR	10 years
Distribution rights - North American	10 years
Distribution rights-TECC and United Kingdom	9.5-12 years
Distribution agreements	13.5 - 15 years
Supplier agreements	13.5 years
Customer relationship	12 years

Residual value and estimated useful lives are reviewed annually. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by

changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates.

### ***Use of estimates and judgments***

The preparation of these consolidated financial statements in accordance with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from these estimates. It also requires management to exercise judgement in applying the Company's accounting policies. These consolidated financial statements include estimates which, by their nature, are uncertain. The impacts of such estimates are pervasive throughout these consolidated financial statements, and may require accounting adjustments based on future occurrences. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, or in the period of the revision and further periods if the revision affects both current and future periods.

Significant assumptions about the future and other sources of estimation uncertainty that management has made at the consolidated statement of financial position date, that could result in a material adjustment to the carrying amounts of assets and liabilities, in the event that actual results differ from assumptions made, relate to, but are not limited to, the following:

- Allowance for doubtful accounts – as at December 31 2017, approximately \$482,927 in trade receivables was outstanding for more than 90 days.

Critical judgments in applying the Company's accounting policies relate to, but are not limited to, the following:

- Useful lives of intangible assets with finite lives – the determination that there are no indicators suggesting that the useful lives and/or that the method of calculating amortization require revision;
- Unlimited life of the ESM brand – the determination that useful life of the ESM brand remains unlimited;
- Impairment of intangible assets – the determination that there are no indicators of impairment indicating that the carrying amount exceeds the recoverable amount;
- Analysis of the functional currency for each entity of the Company; and
- Ability to continue as a going concern – the determination that the Company will continue as a going concern for the next year.

### **Off-balance sheet arrangements**

The Company has no off-balance sheet arrangements that would require disclosure.

### **Forward-looking statements**

This MD&A contains forward-looking information and statements regarding the future results of operations and marketing activities. Forward-looking statements generally can be identified by the use of forward-looking terminology such as “may”, “will”, “expect”, “intend”, “anticipate”, “plan”, “foresee”, “believe” or similar terminology. Although these forward-looking statements are based on what management believes to be current and reasonable assumptions, they involve known and unknown risks, uncertainties and other factors that may cause the actual results and performance to differ materially from

those stated, anticipated, or implied in these forward-looking statements. Readers are cautioned not to place undue reliance on forward-looking information as no assurances can be given to future results, performances, or achievements.

The forward-looking statements included in this MD&A speak only as of the date of this document. The Company does not undertake any obligation to publicly update or revise any of these forward-looking statements to reflect events or circumstances after this date except when required by applicable legislation.

**Additional Information**

Additional information relating to the Company, including the Company's latest Annual Financial Statements and news releases can be located on the Company's website at [www.smartcool.net](http://www.smartcool.net) or on the SEDAR website at [www.sedar.com](http://www.sedar.com).