



## MANAGEMENT DISCUSSION AND ANALYSIS

For the year ended December 31, 2023

April 29, 2024

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The following management's discussion and analysis ("**MD&A**") of the financial condition and results of the operations of SHARC International Systems Inc. (the "**Company**" or "**SHARC Energy**") constitutes management's review of the factors that affected the Company's financial and operating performance for the year ended December 31, 2023. This MD&A has been prepared in compliance with the requirements of National Instrument 51-102 – Continuous Disclosure Obligations. The discussion should be read in conjunction with the audited financial statements of the Company for the years ended December 31, 2023, and 2022, together with the notes thereto. Results are reported in Canadian dollars, unless otherwise noted. In the opinion of management, all adjustments (which consist only of normal recurring adjustments) considered necessary for a fair presentation have been included. The result for the year ended December 31, 2023, are not necessarily indicative of the results that may be expected for any future period. Information contained herein is presented as of April 29, 2024 unless otherwise indicated.

The consolidated financial statements for the year ended December 31, 2023, have been prepared using accounting policies consistent with International Financial Reporting Standards ("**IFRS**") as issued by the International Accounting Standards Board ("**IASB**") and interpretations issued by the International Financial Reporting Interpretations Committee ("**IFRIC**").

For the purposes of preparing this MD&A, management, in conjunction with the Board of Directors, considers the materiality of information. Information is considered material if: (i) such information results in, or would reasonably be expected to result in, a significant change in the market price or value of SHARC Energy's common shares; or (ii) there is a substantial likelihood that a reasonable investor would consider it important in making an investment decision; or (iii) it would significantly alter the total mix of information available to investors. Management, in conjunction with the Board of Directors, evaluates materiality with reference to all relevant circumstances, including potential market sensitivity.

Further information about the Company and its operations is available on SEDAR at [www.sedar.com](http://www.sedar.com).

### **Caution Regarding Forward-Looking Statements**

This MD&A contains certain forward-looking information and forward-looking statements, as defined in applicable securities laws (collectively referred to herein as "forward-looking statements"). These statements relate to future events or the Company's future performance. All statements other than statements of historical fact are forward-looking statements. Often, but not always, forward-looking statements can be identified by the use of words such as "plans", "expects", "is expected", "budget", "scheduled", "estimates", "continues", "forecasts", "projects", "predicts", "intends", "anticipates" or "believes", or variations of, or the negatives of, such words and phrases, or state that certain actions, events or results "may", "could", "would", "should", "might" or "will" be taken, occur or be achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those anticipated in such forward-looking statements. The forward-looking statements in this MD&A speak only as of the date of this MD&A or as of the date specified in such statement.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause SHARC Energy's actual results, performance, or achievements to be materially different from any of its future results, performance or achievements expressed or implied by forward-looking statements. All forward-looking statements herein are qualified by this cautionary statement. Accordingly, readers should not place undue reliance on forward-looking statements. The Company undertakes no obligation to update publicly or otherwise revise any forward-looking statements, whether because of new information or future events or otherwise, except as may be required by law. If the Company does update one or more forward-

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looking statements, no inference should be drawn that it will make additional updates with respect to those or other forward-looking statements, unless required by law.

## Corporate Information

The Company was incorporated under the Business Corporations Act (British Columbia) on February 4th, 2011. SHARC Energy is publicly traded in Canada ([CSE:SHRC](#)), the United States ([OTCQB:INTWF](#)) and Germany ([Frankfurt:IWIA](#)). The head office of the Company is located at 1443 Spitfire Place, Port Coquitlam, British Columbia, V3C 6L4 and the registered and records office of the Company is located at 1443 Spitfire Place, Port Coquitlam, British Columbia, Canada, V3C 6L4.

The Company's wholly owned subsidiary, SHARC Energy Systems Inc. ("**SES**") was incorporated under the Business Corporations Act (British Columbia) on May 30, 2011. On October 27, 2015, the Company completed the acquisition (the "**Acquisition**") of SES pursuant to a share exchange agreement dated September 4, 2015. The Acquisition constituted a reverse takeover ("**RTO**").

During 2022, the Company created a wholly owned U.S. subsidiary, SHARC Energy (US) Systems Inc. ("**SHARC US**"). This subsidiary was incorporated in the State of Delaware on January 5, 2022

The Company either wholly owns the following subsidiaries located in Canada and the United States:

Company	Location	Ownership as of December 31,	
		2023 %	2022 %
SHARC Energy Systems Inc. (" <b>SES</b> ")	Canada	100	100
SHARC Energy (US) Systems Inc. (" <b>SHARC US</b> ") <sup>(1)</sup>	United States	100	100

<sup>(1)</sup> The subsidiary was created and incorporated in the State of Delaware on January 5, 2022.

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## Highlights

- i. **Sales Order Backlog and Sales Pipeline.** As of April 29, 2024, the Company is reporting a Sales Order Backlog of \$3.1M and a Sales Pipeline of \$16.9M. This is an increase of 288% on Sales Order Backlog and decrease of 5% on Sales Pipeline, from the previous disclosure on November 28, 2023, of \$0.8M and \$17.7M, respectively. Please refer to Alternative Performance Measurements below for more information on Sales Order Backlog and Sales Order Pipeline.
- ii. **Appointment of Michael Albertson as SHARC US President.** The Company announced the strategic addition of 40+ year industry veteran Michael Albertson to its executive team as the President of SHARC US. Albertson, with his extensive experience and proven track record as a renewable thermal energy expert with a focus on Thermal Energy Networks (“TENS”) and district energy networks, is set to play a pivotal role in driving the Company’s growth and revenue generation.
- iii. **Appointment of Peter Busby to the Board of Directors.** The Company announced the addition of renowned sustainable architect, Peter Busby to the Board of Directors. Mr. Busby is a principal at Perkins & Will, a global design practice founded in 1935, with over 28 offices and over 2,500 employees. The Company will leverage Mr. Busby’s expertise to better engage with architects worldwide and grow awareness of SHARC Energy within the industry and drive lead generation for its products.
- iv. **Appointment of Dermot Sweeny to the Board of Directors.** Mr. Sweeny was appointed to the Board of Directors on October 17, 2023. Mr. Sweeny’s firm, Sweeny & Co, has achieved numerous awards from reputable institutions, like the Canadian Green Building Council and the Urban Land Institute, for their sustainable building designs. This strategic appointment highlights SHARC Energy’s ongoing commitment to creating significant value for our shareholders by bringing together industry experts who passionately embrace our vision of advancing sustainability.
- v. **False Creek Neighbourhood Energy Utility (“NEU”) Expansion.** During the year ended December 31, 2022, the Company commenced work on the supply and maintenance agreement with the City of Vancouver for the provision and maintenance of five SHARC systems for the False Creek NEU Expansion. This project is expected to increase the capacity of the current 3.2MW Wastewater Energy Transfer (“WET”) system to 9.8MW, making it the largest operating WET project in North America upon completion, with an additional carbon emission reduction of an estimated 4,400 tonnes per year. The major components of the SHARC WET systems have been delivered to site. The final milestones for the system, including commissioning and field testing of the SHARC WET systems, are anticipated to complete before the end of 2024.

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- vi. **SHARC sales gain traction in New York State.** Further to the Governor of New York Kathy Hochul's signing of the Utility Thermal Network and Jobs Act in July 2022 and the All-Electric Building Act in February 2023, as disclosed in the Industry Developments section, SHARC WET systems are being showcased in two key projects in New York:
- o **Purchase Orders Received for Phase 1 of transformative \$1.2B development to create 2,400 affordable homes, a medical clinic, and retail in Brooklyn, New York.** The Company has completed the final submittal process with its New York State representative HIGHMARK and has received a purchase order for a SHARC 660 WET system to be included in the first phase of a transformative \$1.2 billion redevelopment in Brooklyn's East New York neighborhood led by Apex Building Company, L+M Development Partners, RiseBoro Community Partnership, and Services for the Underserved. The system shipped in Q1 2024.
  - o **SHARC Energy featured in Empire building challenge project.** The Company has received a purchase order for a SHARC 660 WET system for the Whitney Young Manor recapitalization project in Yonkers, New York. The Whitney Young Manor will undergo a \$22 million renovation, with nearly \$12 million allocated to the project's decarbonization effort, inclusive of all energy efficiency measures. The retrofit project will showcase how to leverage a recapitalization opportunity to comprehensively retrofit energy systems and modernize an affordable housing complex. The system shipped in Q1 2024.
- vii. **PIRAHNA's reach expands into California.** The Company received a purchase order for four (4) PIRANHA T15 WET systems for a 26-storey mixed-use development in Berkeley, California. This project marks the largest individual PIRANHA project in the Company's history and the continued expansion into California. These systems are expected to ship in Q3/Q4 2024.
- viii. **Partnership with Subterra Renewables.** The Company and Subterra Capital Partners Inc. ("**Subterra Renewables**"), a leading full-service geothermal drilling provider with a proprietary Energy-as-a-Service ("**EaaS**") model known as Aura™, announced on April 27, 2023, a strategic partnership to revolutionize the renewable thermal energy transfer landscape across North America. By combining SHARC Energy's innovative WET technology with Subterra's geothermal exchange systems ("**Systems**"), the partnership aims to bring unparalleled solutions to the market, capturing a greater share for both companies.
- vii. **Gross Proceeds of \$3.98 Million (M) raised through security exercises.** In 2023, the Company raised \$3.77M through the exercise of warrants and \$0.21M through the exercise of debenture warrants.
- viii. **Conversion of Convertible Debt Face Value of \$3.95M.** In 2023, the Company has converted \$3.95M of convertible debt. As of December 31, 2023, the Company no longer carries convertible debt on its balance sheet.
- ix. **Quarter over Quarter Results.** During the three months ended December 31, 2023, the Company reported revenues of \$(0.14M), a loss of \$0.6M and an adjusted EBITDA loss of \$0.85M. Revenue decreased 117% from revenue comparative in 2022 of \$0.8M, the loss decreased 53% over comparative in 2022 of \$1.28M. Adjusted EBITDA loss decreased by 27% over the 2022 comparative of an Adjusted EBITDA earnings of \$0.67M.

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- x. **Year to date (“YTD”) over YTD Results.** During the year ended December 31, 2023, the Company received revenues of \$1.60M, a loss of \$3.9M and an adjusted EBITDA loss of \$2.45M. Revenue decreased 18% over revenue comparative in 2022 of \$1.94M, the loss for the period improved by 19% over comparative in 2022 of \$4.82M and adjusted EBITDA loss decreased by 7% over 2022 comparative of \$2.6M.

## Core Business

SHARC Energy is changing the way we think about wastewater. One of the biggest challenges facing climate action is how the world will reduce carbon pollution associated with heating and hot water production in an economic and efficient way. SHARC Energy’s systems can help with that. The Company provides users of its solutions the opportunity to use wastewater for the purposes of creating low carbon and energy efficient heating and cooling. In using wastewater for thermal energy transfer, SHARC Energy’s systems provides the following opportunities:

- Significantly reducing the carbon emissions from current hot water production or space heating process.
- Operational and upfront capital cost savings through decreased utility bills, carbon tax, maintenance costs paid, and upfront capital costs associated with alternative solutions.
- Freshwater savings in cooling towers and improved efficiency of cooling processes

SHARC Energy is considered a pioneer in wastewater energy transfer, an industry very much in its infancy. To the Company’s knowledge, SHARC Energy is the only wastewater energy transfer company with solutions that can address the thermal energy transfer needs of commercial, industrial, and multi-family residential buildings, as well as district energy systems. The solutions are scalable in size depending on access to wastewater flow and output requirements. The Company’s business has been built through advocating and promoting the industry for over 10 years, patented and proprietary technology and the delivery and installation of over 30 installations in 4 countries including the current largest wastewater district energy system in North America.

## Overview of the Wastewater Energy Transfer Business

SHARC Energy supplies and services WET systems that provide the opportunity for recovering thermal energy from wastewater or rejecting thermal energy into wastewater for the purpose of creating low carbon and electrically efficient heating and cooling systems. These systems can be used by industrial, commercial, or multi-family residential buildings to offset and significantly reduce the energy requirements and carbon emissions associated with heating and cooling.

SHARC WET systems, which are patented in Canada and worldwide patent pending for 30 months, can filter high volumes of wastewater flow for the purposes of extracting or rejecting thermal energy from or into wastewater. These systems are customer specific and typically paired with a heating or cooling process enabler such as a heat pump, air handler, chiller, etc. that are sold separately. A single SHARC system sale can vary depending on the size and scope of the project, with larger systems for larger capacities of wastewater and output achieved by supplying additional systems which in parallel drive multiples in sales value accordingly. The mix of models, scope and geography of each project impacts the overall sales revenue and margin.

Examples of SHARC WET system projects are, but not limited too, WET district energy or TENs, micro-grids, large commercial and mix-use building developments and industrial applications like commercial laundry, food processing, pulp and paper and textiles manufacturing. These projects typically require detailed design support from third-party engineering firms and are developed and installed by mechanical

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contractors. SHARC systems can be involved in a request for proposal (“RFP”) process or bid process and can be the specified system in the RFP process. SHARC Energy’s ability to supply equipment is subject to the progress of the bid, specification, design and build phases and therefore, these projects tend to have a longer sales cycle of 24 months or longer.

A PIRANHA WET system, which is a self-contained WET heat pump, can offset electric or natural gas boilers used in hot water production up to 100% while providing some air conditioning as a by-product of hot water production. These systems come in three sizes and two models and are sized accordingly based on the hot water demand for the implementation. A PIRANHA system requires a wastewater storage tank and solids pump that flows wastewater systematically through the PIRANHA to produce hot water. These systems are applicable for new build or retrofit implementations. A single PIRANHA system ranges in price depending on the size and model, with larger hot water demand achieved by supplying additional PIRANHA systems which in parallel drive multiples in sales value accordingly. The implementation and related costs of the PIRANHA system is site specific and subject to considerations such as available access to exiting wastewater pipes, space for installation and access or proximity to the mechanical or boiler room.

Examples of PIRANHA WET system projects are, but not limited too, an apartment building, hospitals, hotel, commercial laundry, breweries, distilleries, recreation facilities such as ice rinks, gyms and pools, senior care facilities and some industrial applications.

The Company currently sells its systems through a mix of direct and indirect sales channels. Direct sales team members are employed or contracted by SHARC Energy and help generate leads and manage the indirect sales network. The indirect sales network consists of representatives and independent sales representatives (“ISR”) that operate on a resale or commission only basis. This provides SHARC Energy with a lower upfront cost model and provides extended market coverage across North America and some foreign regions while SHARC Energy continues to build awareness of the opportunity of wastewater.

SHARC Energy maintains a pipeline of prospective projects that it updates regularly to ensure that it is reflective of the sales opportunities that can convert into orders within approximately a rolling 24-month time horizon (“Sales Pipeline”). Not all these potential projects will proceed or proceed within the expected timeframe and not all the projects that do proceed will be awarded to SHARC Energy. Additions and reductions are discussed in greater detail below in Alternative Performance Measures.

The market for SHARC Energy’s products is expected to grow as an increasing number of organizations and individuals seek out solutions to meet their sustainability goals and governments around the world enact and strengthen environmental policies designed to combat climate change by promoting the adoption of low carbon and electrically efficient heating and cooling solutions.

## Overview For the year ended December 31, 2023, and Subsequent Events

### Financial Developments

#### i. **Exercise of Warrants for Gross Proceeds of \$3.77M**

During the year ended December 31, 2023, the Company issued 16,598,428 common shares pursuant to the exercise of warrants for aggregate gross proceeds of \$3,767,357.

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ii. **Conversion of Convertible Debt Face Value of \$3.95M and Exercise of Debenture Warrants for Gross Proceeds of \$0.21M**

During the year ended December 31, 2023, the Company issued 31,201,666 common shares pursuant to the conversion of \$3,945,000 of convertible debt. This represents full extinguishment of 100% of the 2% February 13 & 24, May 29, and June 12, 2023, maturing convertible debt. In relation to the conversion of the convertible debt, share issue costs of \$203,960 were incurred.

Furthermore, 208 debenture warrants were exercised for total proceeds of \$208,000. Upon issuance, the debentures were immediately converted into 1,650,000 common shares.

**Operational Developments**

i. **Sales Order Backlog and Sales Pipeline Disclosure.**

As of April 29, 2024, the Company reported a Sales Order Backlog of \$3.1M and a Sales Pipeline of \$16.9M. The Sales Order Backlog figure is a 288% increase from the previous report in November 2023, indicating the start of a strong 2024 financial year. Please refer to Alternative Performance Measurements below for more information on Sales Order Backlog and Sales Order Pipeline.

ii. **Appointment of Michael Albertson as SHARC US President**

The Company announced the strategic addition of industry veteran Michael Albertson to its executive team as the President of SHARC US. Albertson, with his extensive experience and proven track record as a renewable thermal energy expert with a focus on Thermal Energy Networks (“TENS”) and district energy networks, is set to play a pivotal role in driving the Company's growth and revenue generation.

Albertson's appointment comes at a critical time as SHARC Energy continues to expand its reach and enhance its services. His expertise in sales and marketing, product planning, tech service, customer service, training, OEM/branding management, market/business development, and utility engagement will be instrumental in propelling SHARC Energy to new heights.

Albertson's career spans over four decades, during which he has demonstrated a unique ability to drive growth and innovation. His most recent role as Senior Vice President for Sales & Marketing at WaterFurnace International, Inc. saw him overseeing a wide range of responsibilities, contributing significantly to the company's success. His experience in selling, designing, and installing thousands of geothermal systems both nationally and globally is a testament to his capabilities and dedication to the industry.

Prior to his tenure at WaterFurnace, Albertson served as Director of Commercial Geothermal Sales and National Accounts Manager for a major manufacturer of water source and geothermal heat pumps. He also successfully owned and operated a commercial HVAC, controls, and mechanical equipment/contracting company for over a decade.

Beyond his professional accomplishments, Albertson has been an active participant in various industry organizations. His past roles include serving as Chairman of the Board of the International Ground Source Heat Pump Association (IGSHPA) and as a board member of the GeoExchange Organization (GEO). His involvement in these organizations underscores his commitment to the industry and his drive to stay at the forefront of technological advancements.

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Finally, Mr. Albertson has been instrumental in government lobbying activities related to the stability of the Federal Tax incentives for geothermal HVAC, including the latest 10-year extension in the Inflation Reduction Act.

iii. **Addition of Peter Busby to the Board of Directors**

Peter Busby was voted to the Board of Directors by shareholders at the Annual General Meeting held on September 12, 2023.

Mr. Busby is a principal at Perkins & Will, a global design practice founded in 1935, with over 28 offices and over 2,500 employees. Mr. Busby has been an Architect based in Vancouver for 40 years. He has built approximately 150 buildings across Canada including 3 at Simon Fraser University and 4 at the University of British Columbia, and many other residential and mixed-use commercial projects across Vancouver.

He is best known for his development of sustainable design in Canada, founding the Canada Green Building Council in 2002 that brought LEED to Canada. He has won many design awards, including 6 Governor Generals Awards, 11 Lieutenant Governor Awards, and the RAIC Gold medal. He was awarded the Order of Canada in 2015 for creating and pushing the green building movement in Canada. He also has many built buildings outside Canada, including South Korea, Italy, the USA, Saudi Arabia, and Hong Kong. Peter is still active in the industry, currently designing projects in Ottawa, Toronto, Vancouver, Seattle, and Texas.

Architects play a pivotal role in the conceptualization, design, and supervision of building projects which makes them instrumental in integrating WET Systems for enhanced sustainability. The Company will leverage Mr. Busby's expertise to better engage with architects worldwide and grow awareness of SHARC Energy within the industry and drive lead generation for its products.

iv. **Dermot Sweeny appointed to the Board of Directors**

On October 18, 2023, the Company announced the appointment of Dermot Sweeny, President, and Founder of Sweeny & Co Architects Inc. ("**Sweeny & Co**"), to its Board of Directors. Mr. Sweeny's extensive experience and dedication to sustainable architectural design directly aligns with SHARC Energy's mission of advancing environmentally responsible energy solutions.

Mr. Sweeny has an impressive track record of advocating for sustainable building practices, emphasizing the reduction of carbon footprints, and promoting health and wellness within architectural spaces. His firm, Sweeny & Co, has achieved numerous awards from reputable institutions, like the Canadian Green Building Council and the Urban Land Institute, for their sustainable building designs.

Mr. Sweeny's extensive expertise and industry knowledge make him a valuable addition to our team, propelling the Company towards becoming the premier solution in the sustainable energy sector. His contribution will play a pivotal role in advancing our mission and establishing SHARC Energy as the leading choice for sustainable energy solutions, delivering unparalleled ROI within the industry.

With a strong background in mixed-use, residential, commercial, and institutional architecture, Mr. Sweeny brings a wealth of knowledge that will be instrumental in guiding the Company's strategic

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direction. His understanding of real estate development, sustainability, and development consulting will be invaluable as the Company continues to grow and seeks to enhance shareholder value through sustainable initiatives.

Some of Mr. Sweeny's notable projects include Queen Richmond Centre West, Waterfront Innovation Centre, and One York-Sunlife's HQ in Toronto, showcasing his ability to blend innovative systems with high-performance, sustainable designs. Many of the Class AAA office buildings designed by Sweeny & Co are LEED Platinum or Gold and have won numerous sustainability awards. These projects reflect a synergy with SHARC Energy's goals of optimizing value while adhering to a responsible environmental ethos.

Currently, Sweeny & Co has designed Wastewater Energy Transfer ("WET") equipment, for the purposes of sustainable heating, cooling, and hot water, into as many as ten upcoming projects. Architectural designs represent the earliest opportunity to introduce SHARC Energy equipment to a project and fostering the adoption of SHARC Energy products by Architects is crucial to the Company's success.

v. **Purchase Order Received for Phase 1 of transformative \$1.2B development to create 2,400 affordable homes, medical clinic, and retail in Brooklyn, New York**

The Company has completed the final submittal process with its New York State representative HIGHMARK and has received a purchase order for a SHARC 660 Wastewater Energy Transfer ("WET") system to be included in the first phase of a transformative \$1.2 billion redevelopment in Brooklyn's East New York neighborhood led by Apex Building Company, L+M Development Partners, RiseBoro Community Partnership, and Services for the Underserved.

In December 2022, New York State Governor Kathy Hochul announced that construction had begun for the redevelopment of the former 27-acre Brooklyn Developmental Center property in Brooklyn's East New York neighborhood. The initial \$373 million phase will create 576 affordable homes, a new 15,000-square-foot outpatient medical clinic, and 7,000 square feet of ground floor retail space. The initial phase of the development is comprised of two buildings featuring a SHARC system and a PIRANHA system. The Company is working with HIGHMARK on the final submittal for the PIRANHA system and expects that purchase order soon.

As stated in the announcement by Governor Hochul, "Both buildings in the initial phase are designed to meet Passive House design standards and will utilize a closed loop geothermal heat pump system for energy efficient heating and cooling. There will also be a roof-mounted solar array that will convert solar energy into electricity and a SHARC wastewater heat recovery system that uses energy from wastewater for heating, cooling, and hot water."

Once completed, the entire development, known as Alafia, will ultimately create more than 2,400 affordable homes in a walkable neighborhood with recreational spaces and access to community resources that promote health and wellness. Alafia is part of the State's Vital Brooklyn Initiative that is addressing chronic social, economic, and health disparities in Brooklyn's high-need communities.

The system shipped during Q1 2024.

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vi. **Purchase order received for Whitney Young Manor project in New York State**

On September 12, 2023, the Company announced it has received a purchase order for a SHARC Wastewater Energy Transfer (“WET”) system for the Whitney Young Manor recapitalization project in Yonkers, New York. This project, spearheaded by Nuveen, is a successful project moving forward under the New York State Energy Research & Development Authority’s (“NYSERDA”) Empire Building Challenge.

As part of a major property recapitalization, the Whitney Young Manor will undergo a \$22 million renovation, with nearly \$12 million allocated to the project’s decarbonization effort, inclusive of all energy efficiency measures. The retrofit project will showcase how to leverage a recapitalization opportunity to comprehensively retrofit energy systems and modernize an affordable housing complex. SHARC Energy and its New York representative HIGHMARK are proud to be supporting this project, as it serves as an example of Energy and Climate Equity investment into historically underserved and marginalized communities.

In addition to major building envelope and ventilation upgrades, Nuveen will install a SHARC 660 WET system at Whitney Young Manor that will support a centralized heat pump system providing all heating, cooling and domestic hot water needs for the two twelve-story, affordable, 195-unit multi-family buildings.

Whitney Young Manor is a significant project in New York’s sustainable urban development landscape and is supported by NYSERDA’s Empire Building Challenge. The Empire Building Challenge is built on successful public-private partnerships between NYSERDA and leading real estate owners, their engineering experts and solution providers, which are crucial to advancing New York’s goals of a carbon-neutral building stock as the State grows its green economy. Under this program, NYSERDA has partnered with 16 real estate portfolio owners that collectively control over 220 million square feet of commercial and multifamily real estate in New York, including 70,000 housing units. Decarbonization actions taken by Empire Building Challenge partners, such as this project by Nuveen, will help to set a precedent for replicable low-carbon solutions that will inform the next decade of real estate investment in energy efficiency, sustainability, and healthy indoor environments.

SHARC Energy’s inclusion in this project underscores its growing prominence in the greater New York market. As New York State intensifies its focus on electrification, reducing carbon emissions, conserving fresh water, and improving climate resiliency, SHARC Energy is strategically positioned to cater to these concerns. For stakeholders, the message is clear: New York is leading the nation’s green energy boom, and SHARC Energy is at the heart of it.

The system shipped during Q1 2024.

vii. **False Creek NEU Expansion**

The Company has entered into a Supply and Maintenance Agreement with the City of Vancouver (the “City”), for the provision and maintenance of five SHARC Systems for the False Creek NEU Expansion. The expansion is expected to increase the capacity of the current 3.2MW of WET system to 9.8MW—**making it the largest WET project in North America, with an additional carbon emission reduction of an estimated 4,400 tonnes a year, upon completion in 2023.**

Under the agreement, SHARC Energy will supply and commission five SHARC systems to perform sewage screening for the False Creek NEU and, subsequently, maintain these systems for five

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years with a City option for an additional five years. These systems will be paired with the current 3.2MW sewage-to-water heat pump in operation plus two new 3.3MW heat pumps.

The False Creek NEU began operation in 2010 and has rapidly expanded to serve over 600,000 square metres of residential, commercial, and institutional space including Science World and Emily Carr University. In accordance with the 2018 NEU expansion plan, the False Creek NEU will continue to expand to serve over 1,900,000 square metres of new development in Southeast False Creek, Mount Pleasant, the False Creek Flats and Northeast False Creek. The NEU targets 70% of its energy supply to come from renewable energy sources with a goal of 100% renewable energy by 2030 as a part of the Climate Emergency Action Plan. The utility is self-funded, simultaneously providing affordable rates to customers and a return on investment to City taxpayers.

SHARC Energy began working with the City in 2017 when it retrofitted two SHARC systems for sewage screening into the False Creek NEU as a pilot. Upon successful demonstration, the Company entered a lease on these units with the City of Vancouver which is now being replaced with the expansion of the system—demonstrating the important role that wastewater energy transfer plays in renewable energy and reducing carbon emissions.

“This project is a crucial step forward to ensure the NEU can continue to provide reliable, cost effective, low carbon energy to the growing network of connected buildings. We are excited to be able to leverage the local innovation and expertise offered by SHARC for screening in-coming sewage, a crucial step in the sewage heat recovery process.” says City of Vancouver NEU Manager Derek Pope.

“We have seen firsthand through a successful pilot demonstration the high performance of the SHARC system and look forward to continued collaboration through this agreement as we work to transition away from fossil fuels to a more sustainable future.”

The major components of the SHARC WET systems have been delivered to site. The final milestones for the supply contract, including commissioning and field testing of the SHARC WET systems, are anticipated to complete by the end of 2024.

viii. **PIRANHA receives North American Certification**

The PIRANHA WET system has successfully completed testing in compliance with CSA/UL Standards 60335-2-40, and NSF 5. The PIRANHA series will now bear the Electrical Testing Laboratories (“ETL”) listed mark indicating to distributors and customers that the product is compliant to North American standards and provides a pathway for the PIRANHA series to gain compliance in key North American markets requiring state approval.

The award of the ETL listed mark to the PIRANHA series is more than a symbol of compliance; it is a testament to SHARC Energy's commitment to delivering quality and safety in its innovative products. This mark is widely recognized across the United States and Canada, not only by authorities and code officials as evidence of adherence to industry standards, but also by customers and consumers as an assurance of safety and reliability. The attainment of this certification opens doors for SHARC Energy, facilitating market penetration in North America and serving as a valuable credential in expanding to other global markets with stringent product compliance requirements.

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Furthermore, the ETL listed mark equips SHARC Energy with a trusted mark, enhancing the marketability of the PIRANHA series. This certification is expected to boost customer confidence, leading to increased demand. It also positions SHARC Energy as a leader in the WET industry, reflecting the company's dedication to innovation, safety, and environmental stewardship.

With the receipt of this mark, the Company is now eligible to file for approval in other key markets with their own product compliance regulations such as Massachusetts and California. The Company is shifting its focus to receiving these approvals.

ix. **PIRANHAs in Canada's Capital**

HTS Ontario, a representative of SHARC Energy products, were selected to supply two PIRANHA T15 WET systems to be installed in Ottawa. These units will help a new housing complex recover the thermal energy from wastewater. This project represents the second PIRANHA site in Ottawa, Ontario. The units were shipped to site in Q1 2023.

This deal is a key milestone as it marks the beginning of HTS's growing SHARC Energy pipeline turning over and it validates the Company's strategy to support and leverage its representative network to help grow awareness and sales for its products in key markets.

x. **Snowmass Base Village, Colorado installs PIRANHA**

A PIRANHA T15 WET system will be installed in Aura's 21 slope-side residences, powered 100% by renewable energy resources within the residential building. Aura's team is led by East West Partners, a developer of high-end mountain resort communities, and supported by SHARC Energy's Colorado distributor, LONG Building Technologies. This unit shipped in Q2 2023.

Once completed, Aura will be the fourth installation of a SHARC system in Colorado, supporting the state's goal of reducing carbon emissions by 90% from the building sector by 2050. SHARC Energy's PIRANHA systems are installed in the Boulder Commons Phase II project, a 98,000-square-foot development consisting of offices and multi-family residential buildings and 30PRL Apartments, a 120-unit affordable housing project in Boulder. The SHARC series, an industrial-sized WET system is installed in National Western Center.

xi. **Partnership with Subterra Renewables**

The Company and Subterra Renewables, a leading full-service geothermal drilling provider with a proprietary EaaS model known as **Aura**<sup>™</sup>, announced on April 27, 2023, a strategic partnership to revolutionize the renewable thermal energy transfer landscape across North America. By combining Systems, the partnership aims to bring unparalleled solutions to the market, capturing a greater share for both companies.

Aura's proprietary EaaS model offers clients sustainable heating, cooling, and domestic hot water solutions, without the upfront capital investment. The model includes a pricing guarantee, ensuring that clients will experience cost savings in comparison to conventional systems while enjoying the benefits of renewable thermal energy over the 25-to-50-year term of their fixed price service contract. At the end of the term of the contract, ownership of the Systems will revert to the customer.

Under the five-year term of the agreement, SHARC Energy and Subterra Renewables will co-develop up to \$100 Million of qualified projects that consist of either the acquisition of existing Systems active in the field today or the development of Systems requiring capital to design, build,

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own, operate and maintain (“**Projects**”), with an option to renew the commitment for an additional \$100 Million if the initial \$100 Million of qualified projects is identified within the initial five-year term. SHARC Energy will be responsible for business development, client engagement and securing letters of intent on a first right of refusal basis while Subterra, with over 25 years of experience and 60+ drills in its fleet, will provide support in project management, engineering, finance, accounting, legal, and asset management, leveraging their expertise in delivering turnkey solutions for heating, cooling, and domestic hot water. Upon completion of the deployment of \$200 Million or expiration of the term, Subterra will receive a first right of refusal on any similar relationship for one year.

This collaboration will strengthen SHARC Energy's and Subterra Renewables' market position, making it a viable solution for developers, investors, and governments seeking to invest in sustainable energy infrastructure. The integration of wastewater and geothermal technologies will create a competitive advantage for both companies, driving market share growth and diversifying revenues for SHARC Energy and its shareholders.

xii. **SHARC International Patent Application Filed**

The Company has filed an international patent application under the Patent Cooperation Treaty (PCT) for its latest design of the SHARC system. This filing allows the latest SHARC design to become patent pending globally for 30 months from the date of filing the PCT application. The Company can now decide what countries it would like to file patent applications in and has already filed in the United States and EU.

The Company leveraged funding made available by Global Affairs and the Trade Commissioners Service through the CanExport SME program to file.

xiii. **Sales reach expanding in the United States with large PIRANHA installation in California**

On January 17, 2024, the Company announced it has received a purchase order from its representative CHC Hydro, for four (4) PIRANHA T15 Wastewater Energy Transfer (WET) systems to be installed in a 26-story mixed-use development in downtown Berkeley, California. This installation not only represents the largest individual PIRANHA project in the Company's history, but it also marks the expansion of SHARC Energy into the state of California— adding to SHARC Energy's growing global portfolio, with over 30 projects in various stages of operation or installation in the United States, Canada, the UK, and Australia.

## **Industry Developments**

i. **New York City and New York State Going All-Electric Building Code**

In December 2021, the New York City Council approved Local Law 154 which aims to phase out fossil fuels out of new construction starting in 2024. This law means new buildings, with few exceptions, will be all-electric and emit less carbon, all while improving local air quality and making occupants more comfortable.

Beginning January 1, 2024, the requirements will be phase in with lower-rise buildings in 2024 and taller buildings in mid-2027.

In February 2023, Governor Kathy Hochul announced the All-Electric Building Act (Senate Bill S562A) prohibits the use of fossil fuels being used for power, heating and cooking in new buildings constructed in the state.

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It is anticipated these changes to the building codes will result in growing demand for WET products.

ii. **New York Governor Hochul Signs Utility Thermal Network and Jobs Act**

On July 5, 2022, Governor Kathy Hochul signed three bills including legislation A.10493/S.9422, which allows utilities to own, operate, and manage thermal energy networks, as well as supply distributed thermal energy, with Public Service Commission (PSC) oversight. Heating and cooling networks – also referred to as community thermal or district energy systems – are a resilient, energy efficient, and clean solution that can also help New York State meet its ambitious climate goals. By leveraging multiple sources of existing waste heat (such as water, **wastewater**, and geothermal, among others) and connecting a diverse set of building types on a shared loop, thermal energy networks can provide significant operating and energy cost savings when compared to more traditional heating and cooling methods, while also reducing demand on the electric grid.

The Company anticipates this bill will spur SHARC WET district energy, or TENs, projects in New York State.

iii. **Mechanical Contractors Association of America (“MCAA”) Student Chapter Competition Showcasing National Western Center**

Twenty-two MCAA student chapters recently submitted a mock proposal for the installation of the National Western Center Campus Energy project as part of MCAA Annual Student Chapter Competition.

The Final Four for the competition included California Polytechnic State University, Farleigh Dickinson University, McMaster University and Pittsburg State University. The Merit Award winning teams for the competition include Ball State University, Kent State University, Purdue University, University of Maryland College Park, University of Washington, and Wentworth Institute of Technology.

The teams presented their proposals on the afternoon of March 28<sup>th</sup> at MCAA23 in Phoenix, Arizona, where the next generation of mechanical contractors competed for the first prize of \$10,000. The contest required students to submit proposals for the installation of three 1000-ton cooling towers, six 6000-mbh boilers, a SHARC WET system, plate and frame heat exchanger, pumps, piping and supporting infrastructure. In the end, Pittsburg State University came away from the competition as the National Champion.

The contest highlights the increasing popularity of wastewater energy transfer among young Science, Technical, Engineering and Mathematics (“**STEM**”) enthusiasts, who are actively engaging with SHARC Energy’s proprietary technology to develop more sustainable solutions for heating and cooling buildings today and into the future.

iv. **Washington State Governor Jay Inslee Briefed on SHARC Energy WET Systems**

SHARC Energy was presented during the recent visit of Governor Jay Inslee to Coastline Equipment, Inc., a key partner and supporter of SHARC Energy, at Coastline’s Bellingham, Washington operation. The visit underscores SHARC Energy’s growing market presence and the growing recognition of its pioneering work in Wastewater Energy Transfer (“WET”).

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Governor Inslee, accompanied by a distinguished group of attendees including Bellingham Mayor Seth Fleetwood, State Senator Sharon Shewmake, representatives from United States Senator Maria Cantwell's Office, and Clean Tech Alliance President and CEO Mel Clark, toured Coastline Equipment's facilities. The tour highlighted the production of the PIRANHA WET system, a groundbreaking product developed by SHARC Energy and being produced by Coastline in Washington State.

During the visit, Governor Inslee gained insights into the potential of Wastewater Energy Transfer and SHARC Energy's unique ability to create low-carbon, energy efficient & energy resilient Thermal Energy Networks ("TENS") and Thermal Energy Storage ("TES") Systems from a previously unrecognized renewable energy resource—Wastewater.

Governor Inslee was also briefed on the King County Wastewater Heat Recovery Pilot Project, a pioneering initiative that allows private parties to utilize the thermal energy in publicly-owned wastewater infrastructure. This project, in conjunction with SHARC Energy's technology, could potentially support the decarbonization of all of Seattle's hot water and heating needs, while also providing freshwater saving and electrically efficient cooling.

SHARC Energy extends its gratitude to Governor Inslee and all attendees for their interest and engagement. This visit marks a significant step in acknowledging wastewater as a renewable resource, a critical component of climate action policy that can help unlock key governmental goals.

v. **Washington State First State to Mandate Newly Constructed Buildings be Outfitted with All-Electric and Space Heating and Hot Water Systems**

Washington State will require all-electric space and water heating in new commercial and multi-family construction, making it the first state to incorporate building electrification mandates into statewide energy codes.

On April 2022 the Washington State Building Code Council, or SBCC, voted to adopt a revised energy code that requires most new commercial and large multi-family buildings to install electric heat pumps for space and water heating. In November 2022, the SBCC approved similar regulations for single-family and smaller multi-family buildings. These mandates, which were to go into effect July 1, 2023, will require many new homes in the state of Washington to utilize heat pumps for both space and water heating. However, the SBCC voted to delay the effective date which is now March 15, 2024.

The Company and its Representative **CHC** remain optimistic that this code change will lead to growth of SHARC Energy's product market in Washington State in the coming years.

## Selected Annual Financial Information

	Year ended December 31,		
	2023	2022	2021
Revenue	1,592,062	1,941,737	2,696,772
Adjusted EBITDA loss ( <i>non-GAAP Measure</i> )	(2,445,496)	(2,620,125)	(1,408,424)
Loss from continuing operations	(3,903,490)	(4,817,966)	(3,044,988)
Loss from for the year	(3,903,490)	(4,817,966)	(3,044,988)
Continuing operations basic and diluted loss per share	(0.03)	(0.05)	(0.03)
Total Basic and Diluted Loss per share	(0.03)	(0.05)	(0.03)
	As at December 31,		
	2023	2022	2021
Total Assets	3,462,059	3,153,969	5,970,385
Long-Term Liabilities	109,833	226,869	3,329,160
Working Capital	2,526,859	(2,229,492)	3,345,436

For 2023, SHARC continued to build its Sales Pipeline and Sales Order Backlog. The aggregate pipeline grew to \$18.5M as of November 28, 2023, in comparison to \$11.1M as reported November 29, 2022, representing a 67% increase. The Company added a new President for SHARC US, resulting in increased wages and benefits expense during the year. Furthermore, the Company was able to extinguish \$3.95M face value of convertible debt and raised \$3.98M through the proceeds from the exercise of warrants.

For 2022, the Company increased spending into Sales Pipeline & Sales Order Backlog growth through increased headcount which resulted in higher wages & benefits and share-based payments paid. Although Revenue decreased by 28% in 2022 in comparison to 2021, Sales Pipeline & Sales Order Backlog increased by nearly 70% in 2022 from an aggregate of \$6.58M as reported November 15, 2021, in comparison to 11.1M reported November 29, 2022. Also, the Company was able to extinguish \$1.67M face value of convertible debt while \$3.95M face value of convertible debt became current liability during 2022.

2021 saw the Company achieve significant revenue growth as it reached \$2.7M which represented a 328% increase from 2020. The significant increase in sales along with the conversion of convertible debt and exercise of warrants, options and brokers compensation warrants during 2021 helped the company continue to maintain its working capital level during the year which resulted in an ending balance of \$3.3M.

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## Summary of Quarterly Results

A summary of selected information for each of the eight most recent quarters is as follows:

Three months ended,	Total Revenue	Loss for the period		Adjusted EBITDA \$ (non-GAAP Measure)	Total Assets at each Report date \$
		Total \$	\$ Per Share		
31-Dec-2023	(141,428)	(605,987)	(0.00)	(852,270)	3,462,059
30-Sep-2023	545,350	(905,122)	(0.01)	(632,130)	4,464,977
30-Jun-2023	454,454	(1,637,808)	(0.01)	(523,469)	5,274,647
31-Mar-2023	733,686	(754,573)	(0.01)	(437,627)	3,651,547
31-Dec-2022	809,149	(1,278,733)	(0.01)	(672,206)	3,153,969
30-Sep-2022	81,799	(1,463,003)	(0.01)	(675,009)	3,877,489
30-Jun-2022	166,768	(1,239,659)	(0.01)	(758,505)	4,135,883
31-Mar-2022	884,021	(836,571)	(0.01)	(514,840)	5,509,795

In the first half of 2022, the Company completed the remaining 50% of the installation for the Lelørn project and shipped two PIRANHA T10s.

For the second half of 2022, SHARC Energy shipped a SHARC 880 System, a PIRANHA T5 HC and began the fulfilment of the False Creek NEU expansion.

For the first half of 2023, the Company shipped multiple PIRANHA T15 units to jobs in Ontario and Colorado. Furthermore, the Company continued to fulfil the False Creek NEU expansion project.

For the second half of 2023 through to December 31, 2023, the major components of the 5 SHARC WET systems have been delivered to the False Creek NEU. Also, the Company received purchase orders and began production for SHARC WET Systems for two New York based projects, Vital Brooklyn, and Whitney Young.

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## Overall Financial Performance

The consolidated statements of financial position as of December 31, 2023, show a cash position of \$1,242,268 (December 31, 2022- \$1,069,813) and total current assets of \$3,171,675 (December 31, 2022 - \$2,643,593). Current liabilities at December 31, 2023 total \$644,816 (December 31, 2022 - \$4,873,085).

As at December 31, 2023, the Company had positive working capital of \$2,526,859 (December 31, 2022 – working capital deficit of \$2,229,492).

During the three months ended December 31, 2023, the Company reported a loss of \$605,987 (\$0.01 basic and diluted loss per share) on negative revenue of \$(141,428) and a gross margin loss of \$66,911 (47% margin loss). This compared to a loss of \$1,278,735 (\$0.01 basic and diluted loss per share) on revenue of \$809,149 and a gross margin of \$190,163 (23%) for the same period in the prior year.

During the year ended December 31, 2023, the Company reported a loss of \$3,903,490 (\$0.03 basic and diluted loss per share) on revenue of \$1,592,062 and a gross margin of \$677,837 (43% margin). This compared to a loss of \$4,817,966 (\$0.05 basic and diluted loss per share) on revenue of \$1,941,737 and a gross margin of \$560,463 (29%) for the same period in the prior year.

## Discussion of Operations

### **Three months ended December 31, 2023 compared with three months ended December 31, 2022**

SHARC Energy's loss for the current three month period totaled \$605,987, or a basic and diluted loss per share of \$0.00. This compares with a loss of \$1,278,735 with basic and diluted loss per share of \$0.01 for the same period in the prior year. The improvement of \$914,476 in loss for the current period was principally because:

- For the three months ended December 31, 2023, revenue decreased by \$950,577, cost of sales decreased \$693,503 and the gross margin decreased by \$257,074.
  - For the three months ended December 31, 2023, revenue consisted of \$3,600 from equipment leases, \$18,340 from service and service agreement revenue from Vancouver, B.C. and Greater Vancouver Region installations, and \$(163,368) from the sale and continued progress of SHARC and PIRANHA systems sales, where transactions recorded earlier in the year were classified to deferred revenue upon completion of the financial audit. This compared to the three months ended December 31, 2022, where revenue consisted of \$30,600 from equipment leases, \$27,246 from service and service agreement revenue from Vancouver regional installations and \$751,303 from the sale of a PIRANHA system.
  - Cost of goods sold in the three months ended December 31, 2023, and 2022 consisted of costs associated with SHARC and PIRANHA system sales, service, and rental expense.
  - Gross margin percentage (%) decreased from 23% during the three months ended December 31, 2022 to a (47%) gross margin loss during the three months ended December 31, 2023. In addition to the year end audit adjustment, volume of progress billings and shipment of SHARC and PIRANHA system sales slowed during the holiday period.

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- For expenses during the three months ended December 31, 2023, when compared to the comparative three months ended December 31, 2022:
    - During the prior year 3 months ended December 31, 2022 bad debt expense totaled \$141,099 resulting from the write-off of one customer's invoice. This is compared to \$38,625 in bad debt allowance recorded during the current period in 2023.
    - Interest and financing expense decreased by \$188,113. During the first half of 2022, the Company extinguished a total of \$1,580,000 face value of 8% convertible debt and during the first half of 2023, extinguished \$3,945,000 of 2% convertible debt resulting in decreased accretion expense. As of December 31, 2023, all convertible debt held was converted in full.
    - Litigation settlement expense of \$156,083 was recorded during the current period (December 31, 2022 - \$Nil). A former customer raised a dispute with the Company for certain losses and damages related to a previous project. Subsequent to year end, the Company entered into a settlement agreement with this customer for the amount of £90,000 (\$156,083), the settlement amount was paid in Q1 of 2024.
    - Share-based payments decreased by \$602,728. The decrease is primarily due to the reversal of stock option expense in the current period that was booked earlier in the year, compared to the comparative period.

#### **Year ended December 31, 2023 compared with year ended December 31, 2022**

SHARC Energy's loss for the current period totaled \$3,903,490, or a basic and diluted loss per share of \$0.03. This compares with a loss of \$4,816,239 with basic and diluted loss per share of \$0.05 for the same period in the prior year. The improvement of \$914,477 in loss for the current period was principally because:

- For the year ended December 31, 2023, revenue decreased by \$349,675, cost of sales decreased \$467,049 and the gross margin decreased by \$117,374.
  - For the year ended December 31, 2023, revenue consisted of \$68,400 from equipment leases, \$57,788 from service and service agreement revenue from Vancouver, B.C. and Greater Vancouver Region installations and \$1,465,874 from the sale and continued progress of SHARC and PIRANHA systems sales and projects. This compared to the year ended December 31, 2022, where revenue consisted of \$122,400 from equipment leases, \$63,654 from service and service agreement revenue from Vancouver regional installations and \$1,755,682 from sales and installation of PIRANHA systems and a SHARC system, respectively.
  - Cost of goods sold in the years ended December 31, 2023 and 2022 consisted of costs associated with SHARC and PIRANHA system sales, service and rental expense.
  - Gross margin percentage (%) increased from 29% during the prior year ended December 31, 2022 to 43% during the current year ended December 31, 2023. The comparative period included a sale where the Company acted as a general contractor and managed the installation of a SHARC system. General contracting revenue earns a lower margin than a supply-only sale. In the current period, SHARC Energy only supplied, serviced, and leased WET equipment improving margins to levels consistent with management expectations.

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- Expenses during the year ended December 31, 2023 totaled \$4,607,526, compared to the prior year ended December 31, 2022 of \$5,420,974:
    - Accounting and legal expenses decreased by \$57,988 as the company brought its accounting and administrative expenses fully inhouse part way through 2022, with a full year of reduced costs experienced in the current year.
    - Bad debt expense in the prior year ended December 31, 2022 totaled \$141,099 resulting from the write-off of one customer's invoice. For December 31, 2023 bad debt expense consisted of \$38,625 recorded for allowance for doubtful accounts, offsetting total receivables.
    - Consulting expenses decreased by \$55,992 and consists of fees paid to a Company controlled by the Chief Financial Officer, sales, IT, marketing, and investor relations consultants. The decrease is attributed to a decrease in use of consultants overall.
    - Interest and financing expense decreased by \$615,043. During the first half of 2022, the Company extinguished a total of \$1,580,000 face value of 8% convertible debt and during the first half of 2023, extinguished \$3,945,000 of 2% convertible debt resulting in decreased accretion expense. As of December 31, 2023, all convertible debt held was fully converted.
    - Litigation settlement expense of \$156,083 was recorded during the current period (2022 - \$Nil). A former customer raised a dispute with the Company for certain losses and damages related to a previous project. Subsequent to year end, the Company entered into a settlement agreement with this customer for £90,000 (\$156,083), the settlement amount was subsequently paid in Q1 of 2024.
    - Research and development costs decreased by \$107,786 as the company focused on building its sales channels and pipeline opportunities of its existing products during the current year.
    - Share-based payments decreased by \$42,925. The decrease is primarily due to the slowing of vesting of stock options and RSUs issued on May 30, 2022, April 27, 2023, and June 29, 2023, and the cancellation of some RSUs and stock options due to staff turnover.
    - Wages and benefits increased by \$160,528. The Company averaged an employee headcount of 15.75 during the year ended December 31, 2023, compared to 16 during the comparative prior quarter. However, the roles included in the current period are more senior in nature compared to the roles in the comparative period. For example, the Company hired a President of SHARC US.

## Alternative Performance Measures

Management evaluates the Company's performance using a variety of measures, including "Adjusted EBITDA", "Sales Pipeline" and "Sales Order Backlog". The non-IFRS measures should not be considered as an alternative to or more meaningful than revenue or net loss. These measures do not have a standardized meaning prescribed by IFRS and therefore they may not be comparable to similarly titled measures presented by other publicly traded companies and should not be construed as an alternative to other financial measures determined in accordance with IFRS. The Company believes these non-GAAP financial measures provide useful information to both management and investors in measuring the financial performance and financial condition of the Company. Management uses these and other non-IFRS financial measures to exclude the impact of certain expenses and income that must be recognized under IFRS when analyzing consolidated underlying operating performance, as the excluded items are not necessarily reflective of the Company's underlying operating performance and make comparisons of underlying

financial performance between periods difficult. From time to time, the Company may exclude additional items if it believes doing so would result in a more effective analysis of underlying operating performance. The exclusion of certain items does not imply that they are non-recurring.

<b>Adjusted EBITDA</b>	<b>Three months ended December 31,</b>		<b>Year ended December 31,</b>	
	<b>2023</b>	<b>2022</b>	<b>2023</b>	<b>2022</b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
Loss before Income Taxes	(605,986)	(1,278,735)	(3,903,535)	(4,819,113)
<i>Adjustments:</i>				
Interest and financing expense	4,500	192,600	244,568	859,598
Interest income	(220)	(4,424)	(15,934)	(15,646)
Obsolete Inventory	37,811	-	37,811	-
Depreciation	41,927	52,941	160,580	161,997
Bad debt expense (recovery)	38,624	141,099	38,624	141,099
Litigation settlement	156,083	-	156,083	-
Share-based payments	(490,282)	112,446	853,986	896,911
Severance	-	-	-	62,104
Research & development	13,395	102,885	28,059	135,845
Foreign exchange	(8,015)	10,822	6,707	(25,752)
Government Funding & other subsidies	-	(1,840)	(12,338)	(37,946)
Warranty expense	(23,134)	-	(23,134)	20,778
Gain on sale of fixed asset	(16,973)	-	(16,973)	-
<b>Adjusted EBITDA Loss</b>	<b>(852,270)</b>	<b>(672,206)</b>	<b>(2,445,496)</b>	<b>(2,620,125)</b>

Adjusted EBITDA is a non-IFRS financial measure and does not have any standardized meaning prescribed by IFRS and is therefore unlikely to be comparable to similar measures presented by other issuers. See “Non-IFRS Measure” below for additional information.

For the three months ended December 31, 2023, the adjusted EBITDA loss increased by \$180,064 from the same period in the previous year. The increase in adjusted EBITDA loss is due to a decrease in gross margin.

For the year ended December 31, 2023, adjusted EBITDA loss decreased by \$174,629 compared with the same period in the previous year. The decrease in Adjusted EBITDA loss is largely due to an increase in gross margin earned offset by a decrease in cash operating expenses.

#### *Sales Pipeline*

Sales Pipeline is defined as qualified prospective projects and installations that could convert into orders within approximately 24 months. Not all these potential projects and installations will proceed or proceed within the expected timeframe and not all the projects that do proceed will be awarded to SHARC Energy. Nevertheless, over time, this number gives a reasonable metric of changes in market activity and anticipated growth of the industry.

Additions to the amount in the Sales Pipeline come from situations where the Company's equipment has been specified on a request for proposal (“RFP”), has been specified on a winning bid in an RFP process, or the project has been included in a stage of design for a project.

Reductions to the amount in the Sales Pipeline arise when the Company's equipment quoted or bid loses, the project owner decides not to proceed with the project, the final design changes the equipment selection

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originally quoted, the equipment is value engineered out of the design or, where a quote in the pipeline is converted to the order book and therefore, converted into Sales Order Backlog.

As of April 29, 2024, the Company has \$16.9M (November 28, 2023 - \$17.7M) in Sales Pipeline.

#### *Sales Order Backlog*

Sales Order Backlog refers to the balance of unrecognized revenue from sales orders received with a deposit and/or shipment date and contracted projects, where such revenue is recognized over the period of the contract by reference to the stage of completion of each contract.

Additions to Sales Order Backlog will be when a purchase order, deposit and/or shipment date is received from a customer or manufacturer representative, or a contract is signed for the supply or service of a system. Reductions to the amount in sales order backlog arise when units are shipped, and revenue is recognized or when a contract has been recognized by the stage of completion or completed and fulfilled.

As of April 29, 2024, the Company has \$3.1M (November 28, 2023 - \$0.8M) in Sales Order Backlog.

#### **Non-IFRS Measure**

Adjusted EBITDA is a supplemental, non-GAAP financial measure. EBITDA is defined by the Company as earnings before interest, income taxes, depreciation, and amortization. Adjusted EBITDA, as presented, additionally excludes impairment charges, all other non-cash items, and one-time transaction fees. Management evaluates the Company's performance using a variety of measures, including providing Adjusted EBITDA, sales pipeline and sales order backlog which is useful to investors' understanding and assessment of the Company's ongoing continuing operations and prospects for the future and it is used by the financial community to evaluate the market value of companies considered to be in similar businesses. Since Adjusted EBITDA is not a measure of performance calculated in accordance with IFRS, it should not be considered in isolation of, or as a substitute for, measures of performance prepared in accordance with IFRS. Adjusted EBITDA, as calculated and reconciled in the table above, may not be comparable to similarly titled measures employed by other companies. In addition, Adjusted EBITDA is not necessarily a measure of our ability to fund our cash needs.

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## Liquidity and Financial Position

As of December 31, 2023:

- the Company has an accumulated deficit of \$37,300,637 and has working capital of \$2,526,859. The Company will continue to pursue opportunities to raise additional capital through equity markets and/or debt to fund its operating activities. Management anticipates it has sufficient working capital to maintain its activities for the next 12 months.
- the Company's cash balance was \$1,242,268 (December 31, 2022 - \$1,069,813) and the Company had working capital of \$2,526,859 (December 31, 2022 – working capital deficit of \$2,229,492).
- the Company had 156,949,660 common shares issued and outstanding, 8,773,585 warrants outstanding, and 7,880,543 options outstanding. If all warrants and options were exercised, \$4,622,583 in cash would be raised.
- Cash used in continuing operating activities was \$3,460,065 for the year ended December 31, 2023 (December 31, 2022 - \$1,558,907). Operating activities were affected by the loss for the period of \$3,903,490 partially offset by non-cash expenses of \$1,318,359 and a negative change in non-cash working capital balances of \$874,934 due to a decrease in accounts payable and inventory.

The Company has the following undiscounted lease payments:

Not later than one year	109,642
Later than one year and not later than 5 years	49,091
<b>December 31, 2023</b>	<b>158,743</b>

## Related Party Transactions

Key management personnel are those persons having authority and responsibility for planning, directing, and controlling the activities of the Company, directly or indirectly. Key management personnel include officers and directors.

The Company incurred the following charges with key management personnel:

	Year ended December 31,	
	2023	2022
	\$	\$
Consulting Fees <sup>(i)</sup>	156,000	156,000
Wages and Benefits <sup>(ii)</sup>	405,189	377,309
Share-based payments <sup>(iii)</sup>	542,438	300,432
	<b>1,103,627</b>	<b>833,741</b>

- (i) The Company paid consulting fees to a company controlled by the Chief Financial Officer & Chief Operating Officer.
- (ii) The Company paid wages and benefits to the Chief Executive Officer and Director, the President of SHARC US, and the former Chief Operating Officer.
- (iii) Share-based payments was recognized in connection with the vesting of options granted to directors and officers of the Company.

The following table summarizes the cash compensation paid to each related party.

	Year ended December 31,	
	2023	2022
	\$	\$
Lynn Mueller	210,399	228,329
Hanspaul Pannu <sup>1</sup>	156,000	156,000
Michael Albertson	194,790	-
Matt Engelhardt	-	148,980
	<b>561,189</b>	<b>533,309</b>

1. Payments are made to a company controlled by Mr. Pannu

Included in accounts payable is \$19,839 (December 31, 2022 - \$Nil) due to related parties.

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## Share Capital

As of the date of this MD&A, the Company had 156,949,660 (December 31, 2023 – 156,949,660) issued and outstanding common shares.

Warrants outstanding for the Company at the date of this MD&A were as follows:

Number of Warrants	Expiry Date	Exercise Price
5,000,000	August 17, 2024	\$0.400
3,773,585	August 16, 2028	\$0.265
<b>8,773,585</b>	<b>Total Outstanding</b>	

Stock options outstanding for the Company at the date of this MD&A were as follows:

Options	Expiry Date	Exercise Price
333,000	October 29, 2024	\$0.090
2,485,000	January 19, 2025	\$0.075
700,000	February 26, 2025	\$0.125
200,000	March 16, 2025	\$0.105
1,186,875	December 20, 2025	\$0.345
909,622	May 30, 2027	\$0.335
1,930,000	April 27, 2028	\$0.270
136,046	June 29, 2028	\$0.280
100,000	October 17, 2028	\$0.245
<b>7,980,543</b>	<b>Total Outstanding</b>	

Restricted Share units (“RSUs”) outstanding for the Company at the date of this MD&A were as follows:

Options	Expiry Date	Share price on date of grant
1,635,332	December 31, 2024	\$0.335
2,734,000	December 31, 2025	\$0.270
385,402	December 31, 2025	\$0.280
<b>4,754,734</b>	<b>Total Outstanding</b>	

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## Estimates, Judgments and Assumptions

The preparation of the Company's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates and assumptions are continually evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. Actual results could differ from these estimates.

The areas which require management to make significant judgments, estimates and assumptions in determining carrying values include, but are not limited to:

### ***Critical Judgments***

The following are critical judgments that management has made in the process of applying accounting policies and that have the most significant effect on the amounts recognized in the Financial Statements:

- I. Research costs are recognized as an expense when incurred but development costs may be capitalized as intangible assets if certain conditions are met as described in IAS 38, Intangible Assets. Management has determined that development costs do not meet the conditions for capitalization under IAS 38 and all research and development costs have been expensed.
- II. The Company recognizes the deferred tax benefit related to deferred income and resource tax assets to the extent recovery is probable. Assessing the recoverability of deferred tax assets requires management to make significant estimates of future taxable profit. In addition, future changes in tax laws could limit the ability of the Company to obtain tax deductions from deferred income and resource tax assets.

### ***Estimation Uncertainty***

The following are key assumptions concerning the future and other key sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to the carrying amount of assets and liabilities within the next financial year:

- i. Provisions for income taxes are made using the best estimate of the amount expected to be paid based on a qualitative assessment of all relevant factors. The Company reviews the adequacy of these provisions at the end of the reporting period. However, it is possible that at some future date an additional liability could result from audits by taxation authorities. Where the outcome of these tax-related matters is different from the amounts that were originally recorded, such differences will affect the tax provisions in the period in which such determination is made.
- ii. Warranty provisions are recognized for the future obligations to provide services for the repairs and maintenance of products sold to its customers. The Company assesses its warranty provision based on experience. Actual costs incurred may differ from those amounts estimated.
- iii. The Company estimates the net realizable values of inventories, considering the most reliable evidence available at each reporting date. The future realization of these inventories may be affected by future technology or other market drive changes that may reduce future selling prices.

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- iv. The Company has service agreements with regards to some of its product sales which requires management to make judgments regarding the timing and allocation of revenue. Specifically, installation is generally not assumed to have stand-alone value and is often recognized on the same basis as the remainder of the services fees. However, the Company defers the recognition of revenue associated with fees for services agreements or warranty costs that are built into the original sales price and recognizes the associated revenue evenly over the term of the service.
  - v. The equity component of the convertible debenture is calculated using a discounted cash flow method which requires management to make an estimate on an appropriate discount rate.
  - vi. The fair value of share purchase warrants with non-market vesting conditions requires the Company to estimate probability of vesting conditions occurring which may be effected by several factors that may be highly speculative. Changes in these assumptions can materially affect the fair value estimate. Management is required to reassess the probability assigned at each period end.

## Capital Management

The Company's objective when managing capital is to safeguard the Company's ability to continue as a going concern to support the development of its business and maintain the necessary corporate and administration functions to facilitate these activities. The capital of the Company consists of items included in shareholders' deficiency.

The Company manages and adjusts its capital structure when changes to the risk characteristics of the underlying assets or changes in economic conditions occur. To maintain or adjust the capital structure, the Company may attempt to raise new funds.

There were no changes to the Company's approach to capital management during the period. The Company is not subject to externally imposed capital requirements.

## Financial Instruments

### Fair value

IFRS 13 establishes a fair value hierarchy for financial instruments measured at fair value that reflects the significance of inputs used in making fair value measurements as follows:

Level 1 – quoted prices in active markets for identical assets or liabilities;

Level 2 – inputs other than quoted prices included in Level 1 that are observable for the asset or liabilities, either directly (i.e., as prices) or indirectly (i.e. from derived prices); and

Level 3 – inputs for the asset or liability that are not based upon observable market data.

The fair value of cash and restricted cash is based on Level 1 inputs. The fair value of the Company's cash, restricted cash, receivables and accounts payable and accrued liabilities and convertible debentures approximate their carrying values due to the short-term to maturity. The fair value of lease liabilities is initially recorded at fair value and subsequently carried at amortized cost using rates comparable to market interest rates.

### [a] Credit risk

Credit risk is the risk that one party to a financial instrument will cause a financial loss for the other party by failing to discharge an obligation. The Company's cash and receivables are exposed to credit risk. The

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Company reduces its credit risk on cash by placing these instruments with institutions of high credit worthiness. Receivables are primarily from sales. As of December 31, 2023 the Company is exposed to credit risk arising from receivables and recorded a loss allowance of \$38,624 (December 31, 2022 - \$nil).

#### **[b] Liquidity risk**

Liquidity risk is the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities. The Company manages liquidity risk by maintaining sufficient cash balances to enable settlement of transactions on the due date. The Company addresses its liquidity through debt financing. While the Company has been successful in securing financings in the past, there is no assurance that it will be able to do so in the future.

#### **[c] Market risk**

##### **[i] Interest rate risk**

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. As of December 31, 2023, the Company is not exposed to any significant interest rate risk.

### **Risks and Uncertainties**

#### **Manufacturing Risks**

For the successful development of the Company's manufacturing operations, the Company will require maintenance of production equipment, hiring and retaining of managerial personnel and skilled labour and maintaining of desirable levels of production. There can be no assurance that the Company will be able to achieve and sustain these goals. The Company's future success also depends on its ability to successfully achieve the expected manufacturing capacity in a cost-effective and efficient manner. If the Company cannot do so, it may be unable to achieve and sustain profitability. The Company's ability to achieve expected production capacity is subject to significant risks and uncertainties, including the following: (a) delays and unexpected costs as a result of a number of factors, many of which may be beyond the Company's control, such as its ability to secure successful contracts with equipment vendors, (b) failure to effectively break in new equipment, (c) delays or denial of required approvals by relevant government authorities, (d) unavailability of manufacturing inputs; and (e) failure to execute its expansion plans effectively.

#### **Regulatory Risks**

The activities of the Company will be subject to intense regulation by governmental authorities. Achievement of the Company's business objectives is contingent, in part, upon compliance with regulatory requirements enacted by these governmental authorities and obtaining all regulatory approvals, where necessary, for the sale of its products. The Company cannot predict the time required to secure all appropriate regulatory approvals for its products, or the extent of testing and documentation that may be required by governmental authorities. Any delays in obtaining, or failure to obtain regulatory approvals would significantly delay the development of markets and products and could have a material adverse effect on the business, results of operations and financial condition of the Company.

#### **Change in Laws, Regulations and Guidelines**

The Company's operations will be subject to a variety of laws, regulations and guidelines relating to the manufacture, management, transportation, storage, and disposal of untreated wastewater but also

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including laws and regulations relating to health and safety, the conduct of operations and the protection of the environment. Changes to such laws, regulations, and guidelines due to matters beyond the control of the Company may cause adverse effects to the Company's operations.

### **Lack of Operating History**

The Company has only recently started to carry on its business. The Company is therefore subject to many of the risks common to early-stage enterprises, including under-capitalization, cash shortages, limitations with respect to personnel, financial, and other resources, and lack of revenues. The failure by the Company to meet any of these conditions could have a materially adverse effect on the Company and may force it to reduce, curtail, or discontinue operations. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of success must be considered considering the early stage of operations. The Company may not successfully address all the risks and uncertainties or successfully implement its existing and new products and services. If the Company fails to do so, it could materially harm its business and impair the value of its common stock, resulting in a loss to shareholders. Even if the Company accomplishes these objectives, the Company may not generate the anticipated positive cash flows or profits. No assurance can be given that the Company can or will ever be successful in its operations and operate profitably.

### **Reliance on Management and Key Personnel**

The success of the Company is dependent upon the ability, expertise, judgment, discretion, and good faith of its senior management. While employment agreements are customarily used as a primary method of retaining the services of key employees, these agreements cannot assure the continued services of such employees. The Company attempts to enhance its management and technical expertise by recruiting qualified individuals who possess desired skills and experience in certain targeted areas. The Company's inability to retain employees and attract and retain sufficient additional employees as well as information technology, engineering, and technical support resources could have a material adverse impact on the Company's financial condition and results of operation. Any loss of the services of such individuals could have a material adverse effect on the Company's business, operating results, or financial condition.

### **Additional Financing**

The Company's future capital requirements depend on many factors, including its ability to market products successfully, cash flows from operations, locating and retaining talent, and competing market developments. The Company's business model requires spending money to generate revenue. Based on the Company's current financial situation, the Company may have difficulty continuing operations at the current level, or at all, if it does not raise additional financing soon.

To execute the Company's business plan, the Company will require some additional equity and/or debt financing to undertake capital expenditures. There can be no assurance that additional financing will be available to the Company when needed or on terms which are acceptable. The Company's inability to raise financing to support on-going operations or to fund capital expenditures could limit the Company's operations and may have a material adverse effect upon future profitability.

The Company may require additional financing to fund its operations to the point where it is generating positive cash flow.

If additional funds are raised through further issuances of equity or convertible debt securities, existing shareholders could suffer significant dilution, and any new equity securities issued could have rights, preferences, and privileges superior to those of holders of Company Shares. Any debt financing secured

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in the future could involve restrictive covenants relating to capital raising activities and other financial and operational matters, which may make it more difficult for the Company to obtain additional capital or to pursue business opportunities, including potential acquisitions. If adequate funds are not obtained, the Company may be required to reduce, curtail, or discontinue operations. There is no assurance that the Company's existing cash flow will be adequate to satisfy its existing operating expenses and capital requirements.

### **Competition**

There is potential that the Company will face intense competition from numerous other companies, some of which can be expected to have longer operating histories and more financial resources and manufacturing and marketing experience than the Company. Increased competition by larger and better financed competitors could materially and adversely affect the business, financial conditions, and results of operations of the Company.

Because of the early stage of the industry in which the Company operates, the Company expects to face additional competition from new entrants. To remain competitive, the Company will require a continued high level of investment in research and development, marketing, sales, and client support. The Company may not have sufficient resources to maintain research and development, marketing, sales, and client support efforts on a competitive basis which could materially and adversely affect the business, financial condition, and results of operations of the Company.

### **Intellectual Property Risks**

The Company's ability to compete largely depends on the superiority, uniqueness, and value of its intellectual property and technology, including both internally developed technology and the ability to acquire patent protection and/or trademark protection. To protect its proprietary rights, the Company will rely on a combination of trademark, copyright, and trade secret laws, trademark and patent applications, confidentiality agreements with its employees and third parties, and protective contractual provisions. Despite these efforts, certain risks may reduce the value of the Company's intellectual property. The Company's applications for trademarks and copyrights relating to its business may not be granted, and if granted, may be challenged or invalidated. There is no guarantee that issued trademarks and registered copyrights will provide the Company with any competitive advantages. The Company's efforts to protect its intellectual property rights may not be effective in preventing misappropriation of its technology and may not prevent the development and design by others of products or technology like, competitive with, or superior to those the Company develops. There is a risk that another party may obtain a blocking patent and the Company would need to either obtain a license or design around the patent to continue to offer the contested feature or service in its products.

### **New Market Risks**

Extracting heat from raw sewage flows is a relatively new market and its long-term growth prospects are uncertain. Should the raw sewage heat market fail to expand, it would have a materially adverse effect on our business and financial position.

### **Product Development Risks**

The development of additional products is subject to the risks of failure inherent in the development of new, state-of-the-art products, laboratory devices and products based on new technologies. These risks include: (i) delays in product development or manufacturing; (ii) unplanned expenditures for product development or manufacturing; (iii) failure of new products to have the desired effect or an acceptable accuracy profile; (iv) emergence of superior or equivalent products; (v) failure by any potential

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collaborative partners to successfully develop products; and (vi) the dependence on third parties for the manufacture, development, and sale of the Company's products. Because of these risks, our research and development efforts or those of potential collaborative partners may not result in any commercially viable products. If a significant portion of these development efforts is not successfully completed, or any products are not commercially successful, we are less likely to generate significant revenues, or become profitable. The failure to perform such activities could have a material adverse effect on the Company's business, financial condition, and results of its operations.

The areas in which we plan to commercialize, distribute, and/or sell products involve rapidly developing technology. There can be no assurance that we will be able to establish ourselves in such fields, or, if established, that we will be able to maintain our market position, if any. There can be no assurance that the development by others of new or improved products will not make our present and future products, if any, superfluous or obsolete.

### **Product Liability**

The devices and products that we intend to develop may expose us to potential liability from personal injury claims by end-users of the product. We intend to carry product liability insurance to protect us against the risk that in the future a product liability claim, or product recall could materially and adversely affect our business. Inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or inhibit the commercialization of our intended products. We cannot assure you that if and when we commence distribution of our product that we will be able to obtain or maintain adequate coverage on acceptable terms, or that such insurance will provide adequate coverage against all potential claims. Moreover, even if we maintain adequate insurance, any successful claim could materially and adversely affect our reputation and prospects and divert management's time and attention. If we are sued for any injury allegedly caused by our future products our liability could exceed our total assets and our ability to pay the liability.

### **Product Defects**

The Company's products are complex and, accordingly, they may contain defects or errors, particularly when first introduced or as new versions are released. We may not discover such defects or errors until after a product has been released and used by end-customers. Defects and errors could materially and adversely affect our reputation, result in significant costs to us or the termination of an agreement, delay planned release dates and impair our ability to sell our products in the future. The costs incurred in correcting any product defects or errors may be substantial and could adversely affect our operating margins. Furthermore, there can be no assurance that our efforts to monitor, develop, modify and implement appropriate test and manufacturing processes for our products will be sufficient to permit us to avoid a rate of failure in our products that results in substantial delays, significant repair or replacement costs or potential damage to our reputation, any of which could have a material adverse effect on our business, results of operations and financial condition.

We may also be subject to claims that our products are defective or that some function or malfunction of our products caused or contributed to damages. While we attempt to minimize this risk by incorporating provisions into our standard agreements that are designed to limit our exposure to potential claims of liability, we are not always able to negotiate such protections. In addition, no assurance can be given that all claims will be barred by the contractual provisions limiting liability or that the provisions will be enforceable. We may be liable for failure regarding the use of our products or services. A significant liability claim against us could have a material adverse effect on our operating results and financial position.

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### **Reliance on Key Inputs**

The Company's business will be dependent on several key inputs and their related costs including raw materials and supplies related to its growing operations, as well as electricity, water, and other local utilities. Any significant interruption or negative change in the availability or economics of the supply chain for key inputs could materially impact the business, financial condition, and operating results of the Company. Some of these inputs may only be available from a single supplier or a limited group of suppliers. If a sole source supplier was to go out of business, the Company might be unable to find a replacement for such a source in a timely manner or at all. If sole source supplier were to be acquired by a competitor, that competitor may elect not to sell to the Company in the future. Any inability to secure required supplies and services or to do so on appropriate terms could have a materially adverse impact on the business, financial condition, and operating results of the Company.

### **Dependence on Suppliers and Skilled Labour**

The ability of the Company to compete and grow will be dependent on it having access, at a reasonable cost and in a timely manner, to skilled labour, equipment, parts, and components. No assurances can be given that the Company will be successful in maintaining its required supply of skilled labour, equipment, parts, and components.

### **Management of Growth**

The Company has, and may in the future, experience rapid growth and development in a relatively short period of time by aggressively marketing its products and services. The Company may be subject to growth-related risks including capacity constraints and pressure on its internal systems and controls. The ability of the Company to manage growth effectively will require it to continue to implement and improve its operational and financial systems and to expand, train and manage its employee base. The inability of the Company to deal with this growth may have a material adverse effect on the Company's business, financial condition, results of operations and prospects.

### **Conflicts of Interest**

Certain of the directors and officers of the Company are also directors and officers of other companies, and conflicts of interest may arise between their duties as officers and directors of the Company and as officers and directors of such other companies.

### **Litigation**

The Company may be forced to litigate, enforce, or defend its intellectual property rights, protect its trade secrets, or determine the validity and scope of other parties' proprietary rights. Such litigation would be a drain on the financial and management resources of the Company which may affect the operations and business of the Company.

The Company may become party to litigation from time to time in the ordinary course of business, which could adversely affect its business. Should any litigation in which the Company becomes involved be determined against the Company such a decision could adversely affect the Company's ability to continue operating and the market price for Company Shares and could use significant resources. Even if the Company is involved in litigation and wins, litigation can redirect significant company resources.

### **The Market Price of Company Shares May Be Subject to Wide Price Fluctuations**

The market price of Company Shares may be subject to wide fluctuations in response to many factors, including variations in the operating results of the Company, divergence in financial results from analysts' expectations, changes in earnings estimates by stock market analysts, changes in the

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business prospects for the Company, general economic conditions, legislative changes, and other events and factors outside of the Company's control. In addition, stock markets have from time-to-time experienced extreme price and volume fluctuations, which, as well as general economic and political conditions, could adversely affect the market price for Company Shares.

### **Environmental and Employee Health and Safety Regulations**

The Company's operations will be subject to environmental and safety laws and regulations concerning, among other things, emissions and discharges to water, air and land, the handling and disposal of hazardous and non-hazardous materials and wastes, and employee health and safety. The Company will incur ongoing costs and obligations related to compliance with environmental and employee health and safety matters. Failure to comply with environmental and safety laws and regulations may result in additional costs for corrective measures, penalties or in restrictions on our manufacturing operations. In addition, changes in environmental, employee health and safety or other laws, more vigorous enforcement thereof or other unanticipated events could require extensive changes to the Company's operations or give rise to material liabilities, which could have a material adverse effect on the business, results of operations and financial condition of the Company.

### **Disclosure of Internal Controls**

Management has established processes to provide them sufficient knowledge to support representations that they have exercised reasonable diligence that (i) the consolidated financial statements do not contain any untrue statement of material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it is made, as of the date of and for the periods presented by the consolidated financial statements; and (ii) the consolidated financial statements fairly present in all material respects the financial condition, results of operations and cash flows of the Company, as of the date of and for the periods presented.

In contrast to the certificate required for non-venture issuers under National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings ("NI 52-109"), this Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR"), as defined in NI 52-109. In particular, the certifying officers filing this certificate are not making any representations relating to the establishment and maintenance of:

- i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized, and reported within the time periods specified in securities legislation; and
- ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's GAAP (IFRS).

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in this certificate. Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement on a cost-effective basis DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.