## **DISCLAIMER FOR FORWARD-LOOKING INFORMATION**

Certain statements in this report are forward-looking statements, which reflect our management's expectations regarding our future growth, results of operations, performance and business prospects and opportunities. Forward-looking statements consist of statements that are not purely historical, including any statements regarding beliefs, plans, expectations or intentions regarding the future. Such statements are subject to risks and uncertainties that may cause actual results, performance or developments to differ materially from those contained in the statements. No assurance can be given that any of the events anticipated by the forward-looking statements will occur or, if they do occur, what benefits we will obtain from them. These forward-looking statements reflect management's current views and are based on certain assumptions and speak only as of March 31, 2023. These assumptions, which include, management's current expectations, estimates and assumptions about the global economic environment may prove to be incorrect. A number of risks and uncertainties could cause our actual results to differ materially from those expressed or implied by the forward-looking statements, including: (1) a downturn in general economic conditions, (2) inability to locate and identify potential business acquisitions, (3) potential negative financial impact from regulatory investigations, claims, lawsuits and other legal proceedings and challenges, and (4) other factors beyond our control. There is a significant risk that such forward-looking statements will not prove to be accurate. Investors are cautioned not to place undue reliance on these forward-looking statements. Unless otherwise required by applicable securities laws, the Issuer disclaims any obligation to update any forward-looking statements, whether as a result of new events, circumstances and information, future events or results or otherwise. Additional information about these and other assumptions, risks and uncertainties are set out in the section entitled "Risk Factors" below.

References to EBITDA in this MD&A refer to net earnings from continuing operations before interest, taxes and tax recoveries, amortization, deferred income tax recovery, unrealized foreign exchange losses, non-cash share-based expenses (Black-Scholes option pricing model) and write-off of assets. EBITDA is not an earnings measure recognized by IFRS and does not have a standardized meaning prescribed by IFRS. Management believes that EBITDA is an alternative measure in evaluating the Company's business performance. Readers are cautioned that EBITDA should not be construed as an alternative to net income as determined under IFRS; nor as an indicator of financial performance as determined by IFRS; nor a calculation of cash flow from operating activities as determined under IFRS; nor as a measure of liquidity and cash flow under IFRS. The Company's method of calculating EBITDA may differ from methods used by other Companies and, accordingly, the Company's EBITDA may not be comparable to similar measures used by any other Company.

## DATE AND BASIS OF DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") of HydroGraph Clean Power Inc. (the "Company" or "HydroGraph") should be read in conjunction with the condensed consolidated interim financial statements and notes thereto for the six months ended March 31, 2023. Such financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS").

All dollar amounts are expressed in US dollars unless otherwise indicated.

## **OVERALL PERFORMANCE**

## **Nature of Business**

HydroGraph was incorporated under the Laws of the Province of British Columbia on September 26, 2017 as Carbon-2D graphene Enterprises Inc. The address of the Company's corporate office, principal place of business is 1 King Street West, Suite 4800-118, Toronto, ON, Canada, and Company's registered and records office address is 704-595 Howe Street, Vancouver, British Columbia, Canada. As of March 31,

2023, the Company's principal business activity was the research, development, marketing and commercialization of patented technology to produce high purity graphene, and other nano-materials and business opportunities.

The Company has never generated profit or positive cash flows from operations. For the period ended March 31, 2023, the Company reported a net loss of \$2,495,019 (March 31, 2022 – \$1,408,163) negative cash flow from operating activities of \$1,880,473 (March 31, 2022 – \$1,129,033), and an accumulated deficit of \$7,382,956 (2022 – \$4,887,937). These conditions indicate that a material uncertainty exists that may cast significant doubt about the Company's ability to continue as a going concern. The Company's ability to continue its operations as intended are dependent on its ability to obtain necessary financing and raise capital sufficient to cover its development and operating costs.

## **Description of Business**

The Company is engaged in developing and commercializing processes of high-quality graphene to create customized graphene solutions for specific applications using detonation of hydrocarbon gases. The Hyperion System, a proprietary detonation method used by the Company to produce graphene was discovered by Kansas State University ("KSU") and patented in 2016. Acetylene and oxygen in specific ratios are pumped into a chamber and detonated with a spark from electrodes to create consistent high quality graphene. The detonated graphene is considered synthetic graphene versus using conventional exfoliation of naturally occurring graphite to produce graphene.

It was subsequently discovered that syngas could be produced from the same detonation process. Methane and oxygen are mixed in specific ratios in a pre-mix device, pumped into a natural gas internal combustion engine and detonated by sparks from a sparkplug-like device to produce syngas. Through a secondary process called membrane separation, pure hydrogen is extracted with carbon monoxide as a by-product. This process is still in the R&D phase.

The Company has received an exclusive multi-country license from KSU to commercialize its patented detonation process to produce graphene and hydrogen gas. (See the "License Agreement"). Using KSU intellectual property and associated licensing agreement, the Company has completed commercial scale production (May 2023) that can produce 10 tons of graphene per year.

## **Business Development**

Over the past three years, the Company's activities have focused on funding, work to develop processes to manufacture quality graphene, and to create customized graphene solutions for specific applications and customers. In December 2021, the Company began trading on the Canadian Stock Exchange.

For 2022, the Company was focused on transforming the Company from an R&D oriented company to one concentrating on commercialization and product placement in the market. The Company went through an extensive product quality audit and earned the certification of Verified Graphene Producer by the independent industry organization, Graphene Council. The rigorous review scope included the production quality management system and the testing of the quality and consistency of HydroGraph's graphene product. The Company is the only graphene company in the Americas to achieve this certification. The Company believes that this certification further differentiates it from other graphene producers. As a result of the certification, the company is seeing a significant increase in customer inquiries.

In Q1 2023 the Company built up its business development team by adding two business development professionals from the Company's target customer industries. The new business development directors are working closely with customers and the HydroGraph R&D team to develop applications. As of the date of this MD&A the Company was engaged with over 40 customers, looking at over 20 applications and had over 17 NDA/testing agreements in place. The Company will continue to grow the customer pipeline.

The Company signed a letter of intent (LOI) to form a partnership with Ceylon Graphene Technologies (PT) Ltd ("CGT") via LOLC Advanced Technologies ("LOLC AT"), which owns a majority share of CGT through a joint venture with the Sri Lanka Institute of Nanotechnology ("SLINTEC"). The partnership will center around a novel composite graphene blend that improves the charge acceptance of lead acid batteries by up to 47%. With these positive results, the Company and LOLC AT have agreed to commercialize this product and pursue the lead acid battery market, projected to be worth more than \$47 billion by 2030, driven in part by electric vehicle still having some dependency on lead-acid batteries.

The company made significant progress completing the build out of its commercial scale production facility in Manhattan, Kansas. The facility can house a series of modular production units with a total capacity of 60 metric tons per year. The Company moved all production from KSU to this new company facility for producing multiple grades of graphene including various types of both fractal graphene and reactive graphene. This site will also be home to the Company's continuing R&D efforts related to other advance materials based on core detonation technology.

The Company's Hyperion System ("Hyperion"), designed for scaled-up production of the Company's highpurity graphene, achieved a key milestone in April 2023 whereby the Hyperion System was able to produce commercial scale quantities at a rate of 10 metric tons per year using readily available commodity acetylene and oxygen. Management has confirmed the capex cost per metric ton of graphene produced will be one of the lowest in the industry.

The Company successfully listed on the OTC under the ticker symbol HGCPF in December 2022.

Robert Wowk was appointed CFO in November 2022 with Mathew Lee remaining with the organization as Chief Accounting Officer.

On April 14, 2023, the Company completed a non-brokered private placement (the "Offering"). Pursuant to the Offering, the Company issued an aggregate of 20,087,666 units of the Company (the "Units") at an issue price of \$0.12 per Unit for aggregate gross proceeds of CA\$2,410,520.

Each Unit consists of one common share in the capital of the Company (each, a "Common Share") and one-half of one Common Share purchase warrant of the Company (each whole warrant, a "Warrant"). Each Warrant entitles the holder thereof to purchase one Common Share (each a "Warrant Share") at a price of \$0..20 per Warrant Share for a period of 24 months after the closing date of the Offering, subject to an acceleration right (the "Warrant Acceleration Right") exercisable by the Company, if on any ten consecutive trading days the daily volume weighted average trading price of the Common Shares on the Canadian Securities Exchange is \$0.30 or greater per Common Share. If the Company exercises its Warrant Acceleration Right, the new expiry date of the Warrants will be the 30th day following the notice of such exercise.

The Company paid cash finders' fees to certain finders (the "Finders") equal to 7% of the gross proceeds raised by each Finder, and issued broker warrants (each, a "Broker Warrant") equal to 7% of the aggregate number of Units sold to purchasers introduced to the Company by each Finder. Each Broker Warrant entitles the holder thereof to acquire one broker unit (the "Broker Units") at a price of \$0.20 for a period of two years from the Closing Date, subject to acceleration in accordance with the Warrant Acceleration Right. Each Broker Unit will consist of one Common Share and one half of one common share purchase warrant (each whole warrant, a "Broker Unit Warrant"). Each Broker Unit Warrant will be exercisable to purchase an additional Common Share at a price of \$0.20 per Common Share for a period of two years from the closing date of the Offering.

As of March 31, 2023, the Company had expended a total of \$3,178,078 to develop its technology and \$769,001 to develop its production facility.

## **SELECTED ANNUAL INFORMATION**

	Year ended September 30, 2022	Year ended September 30, 2021
	\$	\$
Sales	5,099	-
Gross profit	1,668	-
Expenses including non-cash items	(2,916,794)	(1,576,835)
Net loss	(2,982,512)	(1,508,991)
Weight average number of common shares outstanding	117,227,253	73,255,641
Loss per share	(0.03)	(0.02)
Cash	2,801,029	276,809
Working capital (deficiency)	3,262,869	(242,029)
Total assets	7,938,735	8,273,944
Shareholders' equity	7,486,387	2,252,840
Long-term financial liabilities	243,337	318,245
Dividends paid per share	-	-

#### **RESULTS OF OPERATIONS**

## Overall

Operations during the period ended March 31, 2023, were primarily related to building out the production facility and production team, research, development, marketing and commercialization of patented technology to produce graphene, hydrogen, syngas, and other products and business opportunities as described above. There were no legal proceedings, contingent liabilities, and defaults under debt or other contractual obligations, breach of any laws or special resolutions during the period ended March 31, 2023.

## Three months ended March 31, 2023

#### Sales

The Company had sales of \$2,697 (March 31, 2022 - \$Nil). Gross profit was negative \$592 in the current period compared to \$Nil during the period ended March 31, 2022.

## **Operating Expenses**

The Company had a net loss of \$1,052,339 (March 31, 2022 – \$926,089), comprised mostly of operating expenses. Operating expenses primarily consisted of professional fees of \$152,176 (March 31, 2022 - \$78,798), non-cash stock-based compensation of \$109,371 (March 31, 2022 - \$366,000), salaries of \$474,781 (March 31, 2022 - \$253,307), and license and maintenance fees of \$120,067 (March 31, 2022 - \$46,491).

Professional fees were higher in the current period related to the preparation of prospectus documents and the Company's annual audit. Stock-based compensation decreased due to fewer stock option grants during the period. Salaries were higher in the current period due to increased activities and the hiring of additional personnel. License and maintenance fees increased because of contractual payments made to

Kansas State University for patent maintenance. Travel and promotion were higher due to increased customer engagement, website development and branding exercises.

## **EBITDA**

	Three months ended March 31, 2023	Three months ended March 31, 2022	
	\$	\$	
Net loss	(1,052,399)	(926,089)	
Depreciation	69,604	36,301	
Lease accretion	5,634	6,593	
Share-based payments	109,371	366,000	
Foreign exchange	(137,184)	(57,440)	
EBITDA (Loss)	(1,004,974)	(574,635)	

## Six months ended March 31, 2023

#### Sales

The Company had sales of \$6,136 (March 31, 2022 - \$Nil). Gross profit was negative \$5,140 in the current period compared to \$Nil during the period ended March 31, 2022.

## Operating Expenses

The Company had a net loss of \$2,495,019 (March 31, 2022 – \$1,408,163), comprised mostly of operating expenses. Operating expenses primarily consisted of professional fees of \$379,180 (March 31, 2022 - \$159,856), non-cash stock-based compensation of \$214,219 (March 31, 2022 - \$366,000), salaries of \$756,205 (March 31, 2022 - \$413,904), and travel and promotion of \$389,955 (March 31, 2022 - \$115,908).

Professional fees were higher in the current period related to the preparation of prospectus documents and the Company's annual audit. Stock-based compensation decreased due to fewer stock option grants during the period. Salaries were higher in the current period due to increased activities and the hiring of additional personnel. Travel and promotion were higher due to increased customer engagement, website development and branding exercises.

#### **EBITDA**

	Six months ended March 31, 2023	Six months ended March 31, 2022	
	\$		
Net loss	(2,495,019)	(1,408,163)	
Depreciation	136,388	65,695	
Lease accretion	11,526	13,590	
Stock-based compensation	214,219	366,000	
Foreign exchange	192,546	(9,697)	
EBITDA (Loss)	(1,940,340)	(972,575)	

## **SUMMARY OF QUARTERLY RESULTS**

	31-Mar-23 31-Dec-22 30-Sep-22 30-Jun-22 31-Mar-22		31-Dec-21	30-Sep-21	30-Jun-21			
				\$	\$	\$	\$	\$
Current Assets	1,173,380	2,250,136	3,471,880	2,263,139	3,192,246	4,002,671	5,460,831	5,553,927
Right-of use Asset	256,501	271,299	286,097	300,895	315,693	330,491	345,289	-
Fixed Assets, net	1,406,605	1,217,185	1,002,680	958,206	554,680	291,008	123,124	-
Technology and development costs	3,178,078	3,178,078	3,178,078	3,178,078	3,172,285	2,608,493	2,344,701	2,192,670
Total Assets	6,014,564	6,916,698	7,938,735	6,700,318	7,234,904	7,232,663	8,273,945	7,746,597
Current Liabilities	472,204	251,276	209,011	1,064,606	948,694	363,589	5,702,859	5,384,200
CEBA Loan	-	-	19,264	21,241	20,617	20,011	19,423	18,852
Lease Liability	198,223	211,277	224,073	259,658	272,973	304,715	298,823	-
Shareholders' Equity	12,727,057	12,784,702	12,374,324	9,333,372	9,306,208	8,940,208	4,158,265	3,453,265
Deficit	(7,382,956)	(6,330,557)	(4,887,937)	(3,984,352)	(3,313,588)	(2,395,860)	(1,905,425)	(1,109,720)
Total Liabilities and Shareholders' Equity	6,014,564	6,916,698	7,938,735	6,694,525	7,234,904	7,232,663	8,273,945	7,746,597
Revenue	2,697	3,439	5,099	-	-	-	-	7,980
Operating Expenses	1,198,398	1,108,342	900,922	599,348	926,089	490,435	765,704	480,875
Loss and Comprehensive Loss for Period	1,052,399	1,442,620	1,336,271	651,371	926,089	490,435	765,704	472,895
Basic and diluted loss per share	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.02)	(0.01)
Weighted average number of common shares outstanding	154,687,558	154,687,558	117,227,253	109,127,892	102,640,714	95,583,234	83,687,513	83,687,513

As described in the description of business above, the Company entered into a technology license letter of intent with Kansas State University in 2017. During the quarters ended September 30, 2021, the Company continued to invest the majority of capital raised into development of the KSU technology license. During the quarter ended December 31, 2021, the Company began development of a production facility in Kansas, that facility was completed in June 2022. The Company raised equity in the quarters ended June 30, 2021, and September 30, 2022 as detailed above, resulting in an increase in the cash balance.

During the quarter ended June 30, 2021, the Company received \$5,250,386 subscription receipts to acquire units at a price of \$0.20 per unit.

The right-of-use asset relates to the leased production facilities and office premises. The lease began on August 1, 2021.

Current liabilities are comprised primarily of trade payables accrued liabilities. Liabilities have increased steadily as the Company continues to execute on its business plan.

Operating expenses have increased since September 30, 2021 primarily related to an increase in operational activity since going public.

## LIQUIDITY AND CAPITAL RESOURCES

The Company is developing its licensed technology and new business opportunities and therefore has incurred losses and negative cash flows from operations. The Company's sole source of funding has been the issuance of common shares for cash, through private placement. The Company's ability to raise cash depends on various capital market conditions. There is no assurance that the Company will be able to obtain any additional financing on terms acceptable to the Company. The quantity of funds to be raised and the terms of any equity financing that may be undertaken will be negotiated by management as opportunities to raise funds arise. Actual funding requirements may vary from those planned due to a number of factors, including timing on securing customer contracts.

There can be no certainty that the Company's existing cash balances or that the proceeds from the issuance of its common shares will provide sufficient funds for all of the Company's cash requirements. Should the need arise, the Company may pursue other financing options or rely on joint venture partners to supply some of funds required to develop any opportunities. There is no assurance that the Company will be successful in obtaining the funds it may require to sustain operations or that the terms of any financing obtained will be acceptable.

As at March 31, 2023, the Company had cash on hand of \$429,485 (2022 - \$2,801,029).

During the period ended March 31, 2023, cash used in operating activities was \$1,880,473 (March 31, 2022 – \$1,129,033), cash used in investing activities was \$510,717 (March 31, 2022 – \$1,259,140), cash provided by financing activities was \$19,646 (March 31, 2022 – used in of \$445,113). The increase in cash used in operating activities is primarily related to the increase in operating loss and deposits, less increased accounts payable. The increase in operating loss is described in *Results of Operations* above. The cash used in investing activities is primarily related to development costs and KSU success fees, as well as completing the production facility and hiring the production team in Kansas. The cash provided by financing activities is primarily related to shares issued for cash and subscriptions for private placements to fund operations and development of the licensed technology.

## **OFF BALANCE SHEET ARRANGEMENTS**

There were no off-balance sheet arrangements to which the Company was committed.

## TRANSACTIONS WITH RELATED PARTIES

Key management are those personnel having the authority and responsibility for planning, directing and controlling the Company and include the board of directors, the Chief Executive Officer, President, Chief Financial Officer, and Chief Accounting Officer. Key management compensation included the following:

	March 31, 2023	March 31, 2022
	\$	\$
Management and director compensation		
Stuart Jara, CEO and director	93,462	45,000
Kjirstin Breure, President and director	78,188	48,734
Robert Wowk, CFO	75,088	-
Mathew Lee, CAO, previous CFO	46,469	-
David Williams, Director	12,500	-
Harold Davidson, previous CEO	-	27,608
Logan Anderson, previous CFO	-	12,590
Sub-total Sub-total	305,707	133,932
Share-based payments		
Stuart Jara, CEO and director	110,959	171,500
Kjirstin Breure, President and director	69,484	197,500
Robert Wowk, CFO	64,764	-
Mathew Lee, CAO, previous CFO	6,873	-
Sub-total Sub-total	252,080	369,000
Total	557,787	502,932

As at March 31, 2023, \$15,096 (2022 – \$12,443) was due to related parties of the Company and has been included in accounts payable and accrued liabilities on the condensed consolidated interim statement of financial position.

## PROPOSED TRANSACTIONS

There are no proposed transactions at this time.

## **CRITICAL ACCOUNTING ESTIMATES**

The Company has outlined the basis of its critical accounting estimates in Note 3 of its annual audited consolidated financial statements for the year ended September 30, 2022.

## **CHANGES IN ACCOUNTING POLICIES**

There were no new accounting policies adopted during the period.

#### FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

#### Fair values

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value hierarchy establishes three levels to classify the inputs to valuation techniques used to measure fair value, by reference to the reliability of the inputs used to estimate the fair values:

The Company classifies its fair value measurements in accordance with the three-level fair value hierarchy as follows:

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

Level 2 – Inputs other than quoted prices that are observable for the asset or liability either directly (i.e. as prices) or indirectly (i.e. derived from prices), and

Level 3 – Inputs that are not based on observable market data.

As at March 31, 2023, the Company's financial instruments consisted of cash, tax receivable, accounts payable and accrued liabilities, and lease liabilities. Cash is measured at fair value in accordance with Level 1. The fair value of tax receivable, accounts payable and accrued liabilities, and lease liabilities approximate their carrying values because of the short-term nature of these instruments.

Financial risk management objectives and policies

The risks associated with financial instruments and the policies on how to mitigate these risks are set out below. Management manages and monitors these exposures to ensure appropriate measures are implemented on a timely and effective manner.

#### (i) Currency risk

The Company's expenses are denominated in United States Dollars. The Company's corporate office is based in Canada. At March 31, 2023, with other variables unchanged, a 1% movement in the US dollar against the Canadian dollar would not have a material impact on the net loss and comprehensive loss.

## (ii) Interest rate risk

The Company is exposed to interest rate risk on the variable rate of interest earned on bank deposits. The fair value interest rate risk on bank deposits is insignificant as the deposits are short-term. The Company has not entered into any derivative instruments to manage interest rate fluctuations.

## (iii) Credit risk

Financial instruments that potentially subject the Company to concentrations of credit risks consist principally of cash and tax receivable. To minimize the credit risk on cash, the Company places the instrument with a chartered financial institution.

## (iv) Liquidity risk

In the management of liquidity risk, the Company maintains a balance between continuity of funding and development activity. Management closely monitors the liquidity position and expects to have adequate sources of funding to finance the Company's projects and operations.

At March 31, 2023, the contractual maturities of the Company's obligations are as follows:

	Carrying	Contractual	Less than 1	1-2 Years
	Amount	Cash Flows	Year	
	\$	\$	\$	\$
Accounts payable and accrued liabilities	393,018	393,018	393,018	-

## OTHER MD&A REQUIREMENTS

## **Share Capital**

The authorized share capital consists of an unlimited number of common shares without par value.

The total number of common shares issued and outstanding as of the date of this MD&A is 174,775,224. The number of options and warrants outstanding as of the date of this MD&A is 16,090,000 and 61,620,302, respectively.

#### **RISK FACTORS AND UNCERTAINTIES**

The Company is pursuing the opportunity to exploit patented technology to produce graphene, hydrogen, syngas, and other products and business opportunities. Due to the nature of the Company's business and the present stage of its activities, many risk factors will apply. The risks described below are not the only ones facing the Company. Additional risks not presently known to the Company may also impair the business operations.

An investment in the Company is speculative and involves a high degree of risk. Accordingly, prospective investors should carefully consider the specific risk factors set out below, in addition to the other information contained in this document, before making any decision to invest in the Company. The Directors consider the following risks and other factors to be the most significant for potential investors in the Company, but the risks listed do not necessarily comprise all those associated with an investment in the Company and are not set out in any particular order of priority. Additional risks and uncertainties not currently known to the Directors may also have an adverse effect on the Company's business.

If any of the following risks actually occur, the Company's business, financial condition, capital resources, results or future operations could be materially adversely affected. In such a case, the price of the Common Shares could decline, and investors may lose all or part of their investment.

#### How risk is related to return

Generally, there is a strong relationship between the amount of risk associated with a particular investment, and that investment's long-term potential to increase in value.

Investments that have a lower risk also tend to have lower returns because factors that can affect the value of the investment, the risks, are well known or are well controlled and have already been worked into the price of the investment. On the other hand, investments that could have potentially higher returns if conditions for success are favorable also risk generating equally higher losses if conditions become unfavorable. This is because the factors affecting the value of such investments are unknown or difficult to control.

#### **Dilution**

The financial risk of the Company's future activities will be borne to a significant degree by purchasers of the Common Shares. If the Company issues Common Shares from its treasury for financing purposes, control of the Company may change, and purchasers may suffer additional dilution.

#### No Market for Securities

There is currently no market through which any of the Common Shares, may be sold and there is no assurance that such securities of the Company will be listed for trading on a stock exchange, or if listed, will provide a liquid market for such securities. Until the Common Shares are listed on a stock exchange, holders of the Common Shares may not be able to sell their Common Shares. Even if a listing is obtained, there can be no assurance that an active public market for the Common Shares will develop or be sustained after Listing. The offering price determined by the Company was based upon several factors and may bear no relationship to the price that will prevail in the public market. The holding of Common Shares involves a high degree of risk and should be undertaken only by investors whose financial resources are sufficient to enable them to assume such risks and who have no need for immediate liquidity in their investment. Common Shares should not be purchased by persons who cannot afford the possibility of the loss of their entire investment.

## **Negative Cash Flow from Operating Activities**

The Company's activities have been focused on developing its technology and accordingly cash flow is negative, and the Company has been required to raise funds through equity financings.

## **Current Market Volatility**

The securities markets in the United States and Canada have recently experienced a high level of price and volume volatility, and the market prices of securities of many companies have experienced wide fluctuations in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that continual fluctuations in price will not occur. It may be anticipated that any market for the Common Shares will be subject to market trends generally, notwithstanding any potential success of the Company. The value of the Common Shares distributed hereunder will be affected by such volatility.

## Personnel

The Company has a small management team and the loss of any key individual could affect the Company's business. Additionally, the Company will be required to secure other personnel to facilitate its development plans. Any inability to secure and/or retain appropriate personnel may have a materially adverse impact on the business and operations of the Company.

#### Tax Issues

Income tax consequences in relation to the securities offered will vary according to the circumstances of each purchaser. Prospective purchasers should seek independent advice from their own tax and legal advisers prior to purchasing the securities.

## **Smaller Companies**

The share price of publicly traded smaller companies can be highly volatile. The value of the Common Shares may go down as well as up and, in particular, the share price may be subject to sudden and large falls in value given the restricted marketability of the Common Shares.

#### Competition

Graphene manufacturers include some larger companies with more financial resources than the Company. There is no assurance that the Company will be able to effectively compete in that environment.

## **Going Concern and Financing Risks**

The Company has limited financial resources, has no source of operating cash flow and has no assurance that additional funding will be available to it to sustain operations. Although the Company has been successful in the past in obtaining financing through the issuance of common shares, there can be no assurance that it will be able to obtain the necessary financing and raise capital sufficient to cover its operating costs.

## **Licensed Technology**

The Company believes the licensed technology will be commercially scalable and the products can be profitably marketed. There can be no assurance that the Company will be able to develop the technology to the point that may be required to carry out its business plans, on reasonable terms, or at all. Delays, or a failure to develop such economically viable products or a failure to comply with the terms of the license could have a material adverse effect on the Company.

#### **General Economic Conditions**

The recent events in global financial markets have had a profound impact on the global economy. A continued or worsened slowdown in the financial markets or other economic conditions, including but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates, and tax rates may adversely affect the Company's growth and profitability. These factors could have a material adverse effect on the Company's financial condition and results of operations.

## **Graphene Production Risk Factors**

#### **Limited Production**

The Company's production plan calls for being able to produce 10 MT/year from the facility in Manhattan, KS by the end of calendar year 2023. To achieve that level of production, the Company needs to ensure values, pumps and electrodes are sufficiently robust to produce product on a continuous basis. The Company is commissioning the system to allow for continuous operations but the Company cannot guarantee this will be successfully achieved.

## **EPA Review**

The US Environmental Protection Agency (EPA) requires most nano materials to be reviewed to ensure no impact to people and the environment. This is a requirement for all producers in the USA and for all graphene products used in the USA regardless of where the product was produced. The Company is working closely with the EPA to ensure risks are mitigated and expect EPA clearance in calendar year 2023

or early 2024 but cannot guarantee timing or quantify any potential financial impact of any EPA or other regulatory requirements.

## **Graphene Market Acceptance**

While the Company believes the addressable market for various forms of graphene product could grow to \$2.5 billion by 2028, the market for today graphene is less than \$100 million due to lack of high-quality product and high costs. Additionally, some customization of graphene will be required depending on application and customer. As such it may take considerable time for customers to adopt graphene which could delay potential future revenue and/or profitability for the Company.

## Future Product Development

The Company continues to invest resources in the next generation of products using core detonation technology. Development in some cases is very early stage and there is no certainty on successful commercialization.

#### General

Although management believes that the above risks fairly and comprehensibly illustrate all material risks facing the Company, the risks noted above do not necessarily comprise all those potentially faced by the Company as it is impossible to foresee all possible risks.

Although the Directors will seek to minimize the impact of the risk factors, an investment in the Company should only be made by investors able to sustain a total loss of their investment. Investors are strongly recommended to consult a person who specializes in investments of this nature before making any decision to invest.

## **APPROVAL**

The Board of Directors of the Company has approved the disclosure contained in this MD&A on May 26, 2023.