

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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**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, 2024. 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 three months ended December 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 December

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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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, 2024, the Company reported a net loss of \$2,418,087 (March 31, 2023 – \$2,495,019) negative cash flow from operating activities of \$1,686,226 (March 31, 2023 – \$1,880,473), and an accumulated deficit of \$12,265,855 (2023 – \$9,847,768). 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 the production and sale of high-quality consistent customized graphene 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 an electric spark 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 early 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 commissioned its first commercial scale production unit (May 2023) that can produce a minimum of 10 tonnes 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 and subsequently began trading on the OTCQB in December 2022 under ticker symbol HGCPF.

In Q1 FY2024, the Company partnered with the Graphene Engineering Innovation Center (GEIC) affiliated with the University of Manchester US\$200 million investment zone and the home of graphene. As one of the primary entry points for customers globally to integrate graphene into their products, this new location is expected to expedite HydroGraph's entry into the market. HydroGraph employs three PhD scientists in a laboratory at the GEIC where application development data is generated. This data is used by HydroGraph's business development team to engage new customers and serve as a stronger value proposition to use the Company's graphene, and secondly, to reach customers through the GEIC network. Since December 2024, this model has successfully engaged 12 potential new customers, a majority of which are associated with high volume requirements of graphene. As HydroGraph's FGA-1 has industry leading purity and performance the Company expects this structure to significantly decrease the time to market as the GEIC staff (separate from HG staff) must select the best material for each application in an unbiased approach.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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Over the last 12 months, the Company made significant progress in further customer application development including comprehensive testing that confirmed the benefits of the use of the Company's graphene in Electronic Magnetic Interference (EMI) shielding, lubricants, cement/concrete, conductive resins, and bio sensors.

*Key events and developments during the period up to the date of this management discussion and analysis included the following:*

The Company announced that Stuart Jara, the Chief Executive Officer of the Company, left the Company to pursue another opportunity. Kjirstin Breure, the President of HydroGraph, was appointed interim Chief Executive Officer. In support of the ongoing growth of the Company, Mr. Jara will be a consultant to the Company for 18 months.

In addition, HydroGraph announced the appointment of a new Chairman of its Board of Directors, David Williams, who was appointed to the Board in 2021 bringing with him more than 20 years of global capital markets experience.

The Company announced an MOU with Khalifa University's RIC2D to collaborate on research projects and expedite commercialization.

The Company announced that positive test results from its research in combining its proprietary graphene with polyethylene terephthalate ("PET") improves plastic's performance and could reduce material in plastic bottles by 10% to 15%.

The Company announced the successful trial of the Company's graphene in Hawkeye Biomedical, LLC's medical sensor aimed at the early detection of lung cancer.

The Company announced successful testing of its flagship product, FGA-1, fractal graphene, in electromagnetic interference ("EMI") shielding as it relates to consumer, electronics, automotive and aerospace applications.

The Company announced strong testing results in the use of its graphene in conductive resins with an 8-fold increase in electrical conductivity and 14% increase in thermal conductivity.

The Company made significant progress completing the build out of its commercial scale production facility in Manhattan, Kansas. The Company's Hyperion System ("Hyperion"), designed for scaled-up production of the Company's high-purity graphene, achieved a key milestone whereby the Hyperion System was able to produce commercial scale quantities at an annualized rate of 10 metric tonnes 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.

On December 1, 2023, the Company closed the first tranche of a private placement through the issuance of 10,260,856 units for gross proceeds of CA\$1,031,194. The units were offered in US dollars and Canadian dollars at the respective prices of US\$0.074 and CA\$0.10. Each unit consists of one common share and one-half of one common share warrant of the Company. Each whole warrant is exercisable at CA\$0.18 per warrant for a period of 24 months.

On February 26, 2024, the Company closed the second tranche of a private placement through the issuance of 9,626,000 units for gross proceeds of CA\$962,600. The units were offered in US dollars and Canadian dollars at the respective prices of US\$0.074 and CA\$0.10. Each unit consists of one common

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

share and one-half of one common share warrant of the Company. Each whole warrant is exercisable at CA\$0.18 per warrant for a period of 24 months.

The US Environmental Protection Agency (the "EPA") requires all new chemicals to be reviewed and registered. There is special attention on chemicals that are nano size. The EPA reviews new chemicals and nano size chemicals to ensure there is 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 2024 but cannot guarantee timing or quantify any potential financial impact of any EPA or other regulatory requirements. In September 2023, the National Institute for Occupational Safety and Health (NIOSH) conducted an audit of operating facilities. Their final report indicated that HydroGraph's production is well within safe operating parameters.

**SELECTED ANNUAL INFORMATION**

|                                                    | Year ended<br>September<br>30, 2023 | Year ended<br>September<br>30, 2022 | Year ended<br>September<br>30, 2021 |
|----------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
|                                                    | \$                                  | \$                                  | \$                                  |
| Sales                                              | 7,397                               | 5,099                               | -                                   |
| Gross profit                                       | (19,081)                            | 1,668                               | -                                   |
| Expenses including non-cash items                  | (4,824,224)                         | (2,916,794)                         | (1,576,835)                         |
| Net loss                                           | (4,959,830)                         | (2,982,512)                         | (1,508,991)                         |
| Weight average number of common shares outstanding | 163,988,423                         | 117,227,253                         | 73,255,641                          |
| Loss per share                                     | (0.03)                              | (0.03)                              | (0.02)                              |
| Cash                                               | 452,469                             | 2,801,029                           | 276,809                             |
| Working capital (deficiency)                       | (105,951)                           | 3,262,869                           | (242,029)                           |
| Total assets                                       | 5,882,357                           | 7,938,735                           | 8,273,944                           |
| Shareholders' equity                               | 4,869,723                           | 7,486,387                           | 2,252,840                           |
| Long-term financial liabilities                    | 188,942                             | 243,337                             | 318,245                             |
| Dividends paid per share                           | -                                   | -                                   | -                                   |

**RESULTS OF OPERATIONS**

Overall

Operations during the period were primarily related to closing on multiple financings in order to continue building out the production facility and production team, research and development, application development, marketing and commercialization of patented technology to produce graphene and other related graphene products and business opportunities as described above. The Company also focused on developing its operations in the United Kingdom. There were no legal proceedings, contingent liabilities, and defaults under debt or other contractual obligations, breach of any laws or special resolutions during the six months ended March 31, 2024.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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Three months ended March 31, 2024

Sales

The Company had sales of \$3,335 (March 31, 2023 - \$2,697). Gross profit was \$796 in the current period compared to negative \$592 during the comparative period.

Operating Expenses

The Company had a net loss of \$1,186,352 (March 31, 2023 – \$1,052,399), comprised mostly of operating expenses totaling \$1,207,743 (March 31, 2023 - \$1,198,398). Operating expenses primarily consisted of professional fees of \$253,873 (March 31, 2023 - \$152,176), non-cash stock-based compensation of \$72,716 (March 31, 2023 - \$109,371), salaries of \$562,768 (March 31, 2023 - \$474,781), and travel and promotion of \$85,033 (March 31, 2023 - \$141,179).

Professional fees were higher during the period as compared to 2023 due to the closing of multiple financings as well as additional audit fees. Stock-based compensation decreased from the comparative period. Salaries were higher in the current period due to increased activities and the hiring of additional personnel. Travel and promotion increased as a result of setting up the Company's UK operations and promotional travel in relation to the financings that closed.

EBITDA

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|                      | <b>Three months ended<br/>March 31, 2024</b> | <b>Three months ended<br/>March 31, 2023</b> |
|----------------------|----------------------------------------------|----------------------------------------------|
|                      | <b>\$</b>                                    | <b>\$</b>                                    |
| Net loss             | (1,186,352)                                  | (1,052,399)                                  |
| Depreciation         | 71,450                                       | 69,604                                       |
| Lease accretion      | 4,550                                        | 5,634                                        |
| Share-based payments | 72,716                                       | 109,371                                      |
| Foreign exchange     | 29,966                                       | 137,184                                      |
| EBITDA (Loss)        | (1,007,670)                                  | (730,606)                                    |

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Six months ended March 31, 2024

Sales

The Company had sales of \$6,605 (March 31, 2023 - \$6,136). Gross profit was \$261 in the current period compared to negative \$5,140 during the comparative period.

Operating Expenses

The Company had a net loss of \$2,418,087 (March 31, 2023 – \$2,495,019), comprised mostly of operating expenses totaling \$2,187,486 (March 31, 2023 - \$2,306,656). Operating expenses primarily consisted of professional fees of \$438,721 (March 31, 2023 - \$379,180), non-cash stock-based compensation of \$149,218 (March 31, 2023 - \$214,219), salaries of \$980,569 (March 31, 2023 - \$756,205), and travel and promotion of \$137,441 (March 31, 2023 - \$389,955).

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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Professional fees were higher during the period as compared to 2023 due to the closing of multiple financings as well as additional audit fees. Stock-based compensation decreased from the comparative period due to fewer stock options vesting. Salaries were higher in the current period due to increased activities and the hiring of additional personnel. Travel and promotion increased as a result of setting up the Company's UK operations and promotional travel in relation to the financings that closed.

EBITDA

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|                          | <b>Six months ended March<br/>31, 2024</b> | <b>Six months ended March<br/>31, 2023</b> |
|--------------------------|--------------------------------------------|--------------------------------------------|
|                          | <b>\$</b>                                  | <b>\$</b>                                  |
| Net loss                 | (2,418,087)                                | (2,495,019)                                |
| Depreciation             | 142,900                                    | 136,388                                    |
| Lease accretion          | 9,379                                      | 11,526                                     |
| Stock-based compensation | 149,218                                    | 214,219                                    |
| Foreign exchange         | (232,673)                                  | (192,546)                                  |
| <b>EBITDA (Loss)</b>     | <b>(2,349,263)</b>                         | <b>(2,325,432)</b>                         |

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**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

**SUMMARY OF QUARTERLY RESULTS**

|                                                      | 31-Mar-24        | 31-Dec-23        | 30-Sep-23        | 30-Jun-23        | 31-Mar-23        | 31-Dec-22        | 30-Sep-22        | 30-Jun-22        |
|------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                                                      | \$               | \$               | \$               | \$               | \$               | \$               | \$               | \$               |
| Current Assets                                       | 161,108          | 346,110          | 567,021          | 1,822,943        | 1,173,380        | 2,250,136        | 3,471,880        | 2,263,139        |
| Deposits                                             | 506,781          | 506,781          | 506,781          | -                | -                | -                | -                | -                |
| Right-of use Asset                                   | 197,309          | 212,107          | 226,905          | 241,703          | 256,501          | 271,299          | 286,097          | 300,895          |
| Fixed Assets, net                                    | 1,319,952        | 1,370,293        | 1,403,573        | 1,369,977        | 1,406,605        | 1,217,185        | 1,002,680        | 958,206          |
| Technology and development costs                     | 3,178,078        | 3,178,078        | 3,178,078        | 3,178,078        | 3,178,078        | 3,178,078        | 3,178,078        | 3,178,078        |
| <b>Total Assets</b>                                  | <b>5,363,228</b> | <b>5,613,369</b> | <b>5,882,358</b> | <b>6,612,701</b> | <b>6,014,564</b> | <b>6,916,698</b> | <b>7,938,735</b> | <b>6,700,318</b> |
| Current Liabilities                                  | 926,491          | 615,948          | 672,972          | 343,589          | 472,204          | 251,276          | 209,011          | 1,064,606        |
| Shares issuable                                      | -                | -                | 150,720          | -                | -                | -                | -                | -                |
| CEBA Loan                                            | -                | -                | -                | -                | -                | -                | 19,264           | 21,241           |
| Lease Liability                                      | 160,947          | 175,083          | 188,943          | 184,906          | 198,223          | 211,277          | 224,073          | 259,658          |
| Shareholders' Equity                                 | 16,541,645       | 15,901,841       | 14,717,490       | 14,805,418       | 12,727,057       | 12,784,702       | 12,374,324       | 9,333,372        |
| Deficit                                              | (12,265,855)     | (11,079,503)     | (9,847,767)      | (8,721,212)      | (7,382,956)      | (6,330,557)      | (4,887,937)      | (3,984,352)      |
| <b>Total Liabilities and Shareholders' Equity</b>    | <b>5,363,228</b> | <b>5,613,369</b> | <b>5,882,358</b> | <b>6,612,701</b> | <b>6,014,528</b> | <b>6,916,698</b> | <b>7,938,735</b> | <b>6,694,525</b> |
| Revenue                                              | 3,335            | 3,270            | 1,261            | 50               | 2,697            | 3,439            | 5,099            | -                |
| Operating Expenses                                   | 1,207,743        | 979,743          | 2,517,568        | 1,130,547        | 1,198,398        | 1,108,342        | 900,922          | 599,348          |
| Loss and Comprehensive Loss for Period               | 1,218,430        | 1,231,735        | 2,458,592        | 1,180,281        | 1,219,379        | 1,442,620        | 1,336,271        | 651,371          |
| Basic and diluted loss per share                     | (0.01)           | (0.01)           | (0.01)           | (0.01)           | (0.01)           | (0.01)           | (0.00)           | (0.00)           |
| Weighted average number of common shares outstanding | 187,504,616      | 175,661,212      | 174,775,224      | 169,712,031      | 154,687,558      | 154,687,558      | 117,227,253      | 109,127,892      |

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 each quarter, the Company continued to invest the majority of capital raised into development of the KSU technology license and its fixed assets. 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 during the quarters ended September 30, 2022, and June 30, 2023, as detailed above, resulting in an increase in the cash balance.

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

Operating expenses have increased during the quarter ended September 30, 2023, primarily related to executing on its business plan and an increase in operational activity since going public.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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**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 several 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 the 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, 2024, the Company had cash on hand of \$46,239 (September 30, 2023 – \$452,469).

During the period ended March 31, 2024, cash used in operating activities was \$1,686,226 (March 31, 2023 – \$1,880,473), cash used in investing activities was \$29,683 (March 31, 2023 – \$510,717), cash provided by financing activities was \$1,309,679 (March 31, 2023 – \$19,646). Cash used in operating activities stayed relatively consistent with the period. The cash used in investing activities is primarily related to development costs and KSU success fees, as well as completing the production facility, developing the commercial scale production unit (the Hyperion System) 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.



**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

**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, 2024 | March 31, 2023 |
|-------------------------------------------------------|----------------|----------------|
|                                                       | \$             | \$             |
| Management and director compensation                  |                |                |
| Stuart Jara, Former CEO and director                  | 173,076        | 45,000         |
| Kjirstin Breure, President, Interim CEO, and director | 58,134         | 45,000         |
| Robert Wowk, CFO                                      | 83,076         | 33,550         |
| Mathew Lee, CAO, previous CFO                         | 48,444         | 22,500         |
| David Williams, Director                              | 12,500         | 6,250          |
| Paul Cox, Directo                                     | 6,500          | -              |
| Sub-total                                             | 381,730        | 152,300        |
| Share-based payments                                  | 141,106        | 504,160        |
| Total                                                 | 522,836        | 656,460        |

As at March 31, 2024, \$109,000 (2023 – \$15,091) 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 AND SUBSEQUENT EVENTS**

On April 5, 2024, the Company completed the final tranche of a non-brokered private placement (the “Offering”). Pursuant to the Offering, the Company issued an aggregate of 11,825,000 units of the Company (the “Units”) at an issue price of \$0.10 per Unit for aggregate gross proceeds of CAD\$1,182,500.

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 CAD\$0.18 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 CAD\$0.28 or greater per Common Share. If the Company exercises its Warrant Acceleration Right, the new expiry date of the Warrants will be the 30<sup>th</sup> day following the notice of such exercise.

In connection with the financing, the Company incurred cash finders’ fees.

On May 13, 2024, the Company amended the terms of 17,575,830 common share purchase warrants of the Company, previously issued pursuant to a private placement on September 14, 2022, with an original expiry date of September 14, 2024 (the “Warrants”). Effective as of May 15, 2024, the expiry date of the Warrants will be extended to September 14, 2025. All other terms of the Warrants remain unchanged.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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**CRITICAL ACCOUNTING ESTIMATES**

The Company has outlined the basis of its critical accounting estimates in Note 2 of its condensed consolidated interim financial statements for the six months ended March 31, 2024.

**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, 2024, the Company's financial instruments consisted of cash, term deposit, tax receivable, accounts payable and accrued liabilities, and promissory note. Cash is measured at fair value in accordance with Level 1. The fair value of tax receivable, accounts payable and accrued liabilities, and the promissory note 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, 2024, 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.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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(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, 2024, the contractual maturities of the Company's obligations are as follows:

|                                          | Carrying<br>Amount | Contractual<br>Cash Flows | Less than 1<br>Year | 1-2 Years |
|------------------------------------------|--------------------|---------------------------|---------------------|-----------|
|                                          | \$                 | \$                        | \$                  | \$        |
| Accounts payable and accrued liabilities | 794,942            | 794,942                   | 794,942             | -         |

**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 207,979,830. The number of options and warrants outstanding as of the date of this MD&A is 47,872,831 and 16,260,000, 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.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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**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.

**Negative Cash Flow from Operating Activities**

The Company's activities have been focused on developing its technology and applications that will be show how its products can enhance customers' product, 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.

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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**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**

**New Commercial Scale Production Technology**

The Company's production plan calls for being able to produce 10 MT/year from its production unit, the Hyperion System. The first Hyperion system is located in Manhattan, KS, which is also where the Hyperion System was developed. In May the company announced a major technical milestone of 10 MT/year annualized production from the Hyperion System. While reaching this milestone was a major success, the Company continues to optimize for reliability, availability and productivity. Further improvement of the Hyperion System will require the Company to key components and the unit as a whole are sufficiently robust for continuous operations. The Company cannot guarantee that it will be able to successfully achieve improved reliability, availability and productivity.

**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**

**HYDROGRAPH CLEAN POWER INC.**  
**Management Discussion and Analysis**  
**For the six months ended March 31, 2024**

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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 22, 2024.