# HYDROGRAPH CLEAN POWER INC.

# MANAGEMENT DISCUSSION AND ANALYSIS

For the years ended September 30, 2024 and 2023

(Expressed in United States Dollars)

### DATE AND BASIS OF DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") of HydroGraph Clean Power Inc. (the "Company" or "HydroGraph") is intended to help the reader understand the significant factors that have affected HydroGraph and its subsidiaries' performance, as well as factors that may affect its future performance.

The information in this MD&A should be read in conjunction with the consolidated financial statements and notes thereto for the years ended September 30, 2024 and 2023. The referenced financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standard Board ("IFRS"). All dollar amounts are expressed in US dollars ("US\$") unless otherwise indicated. Certain amounts are expressed in Canadian dollars ("C\$").

The MD&A is dated January 27, 2025.

#### 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 January 27, 2025. 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) potential negative financial impact from regulatory investigations, claims, lawsuits and other legal proceedings and challenges, and (3) 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.

#### **OVERALL PERFORMANCE**

#### **Nature of Business**

HydroGraph was incorporated under the Laws of the Province of British Columbia on June 26, 2017. The address of the Company's corporate office and principal place of business is 1100 - 1199 West Hastings Street, Vancouver, BC, Canada, and the Company's registered and records office address is 2700 - 1133 Melville Street, Vancouver, BC, Canada.

The Company's principal business activity is the research, development, marketing and commercialization of patented technology to produce pristine graphene, graphene derivatives and services. The Company is listed on the Canadian Stock Exchange (the "CSE") under the ticker symbol "HGRAF".

The Company has never generated profit or positive cash flows from operations. For the year ended September 30, 2024, the Company reported a net loss of \$5,331,986 (2023 – \$4,959,831) negative cash flow from operating activities of \$4,074,997 (2023 – \$3,546,787), and an accumulated deficit of \$15,179,754 (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

# HYDROGRAPH CLEAN POWER INC. Management Discussion and Analysis For the year ended September 30, 2024

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 pristine graphene for commercial applications using the detonation of hydrocarbon gases. The Hyperion System, a proprietary detonation method used by the Company to produce graphene has tonnage annual capacity and is a scalable process. The detonated graphene is considered synthetic graphene versus using conventional exfoliation of naturally occurring graphite to produce graphene.

The Company has received an exclusive global license from Kansas State University where the invention was discovered to commercialize its patented detonation process to produce graphene. 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**

The Company's activities have focused on work to develop processes to manufacture pristine graphene, and in creating a robust application development data set for target customers.

For 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 were working closely with customers and the HydroGraph R&D team to develop applications.

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. On January 3, 2024, the Company announced the successful trial of Company's graphene in Hawkeye Bio's medical sensor aimed at the early detection of lung cancer.

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 tonnes per year.

The Company's Hyperion System ("Hyperion"), designed for scaled-up production of the Company's highpurity graphene, achieved a key milestone in 2023 whereby Hyperion was able to produce commercial scale quantities at an annualized rate of 10 metric tonnes per year using the readily available commodities, 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 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 on 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 expects EPA clearance in calendar year 2025 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 (the "NIOSH") conducted an audit of operating facilities. Their final report indicated that HydroGraph's production is well within safe operating parameters.

In March of 2024 the Company underwent a change in management by moving Stuart Jara, former CEO, to an advisory role and Kjirstin Breure to President and interim CEO. This coincided with David Williams taking over as Chairman of the Board. During 2024, HydroGraph made changes to its commercial strategy by moving towards a business development team with advanced materials expertise as well as changes to its business model by moving away from an onsite production plan. These changes garnered significant

interest from customers and investors and have resulted in a centralized production scale up plan targeting access to the Company's primary feedstock at a location within the US, and significant advancement with customers. Through the Company's work at the Graphene Engineering and Innovation Center ("GEIC"), where the Company has an applications lab, HydroGraph has been involved with numerous customer projects and has moved into discussion with multiple customers through that process which they expect will generate both larger purchase orders and a long-term supply agreement within calendar 2025. The Company completed its EPA submission during 2024 and expects to complete the process within 2025, allowing the Company to sell high volumes of their fractal graphene within the US. Kjirstin Breure's role as CEO was then formalized in November of 2024.

Highlights and key developments include:

- On December 1, 2023, the Company announced it had closed a financing raising gross proceeds of C\$1,026,086 (\$755,475).
- On December 6, 2023, the Company announced successful testing of its certified pure graphene's electrical and thermal conductivity in epoxy resins.
- On December 15, 2023, the Company announced its EMI Shielding Results Surpass Thresholds for Consumer, Automotive and Aerospace Applications. 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.
- On January 3, 2024, the Company announced its graphene was selected by Hawkeye Bio for use in its early-stage lung cancer detection biosensor.
- On February 12, 2024, the Company announced that PET test results show improved plastic performance.
- On February 26, 2024, the Company announced it had closed a financing raising gross proceeds of C\$962,600 (\$713,354).
- On March 18, 2024, the Company announced that Stuart Jara, former CEO, left the Company and Kjirstin Breure, the President of HydroGraph, was appointed as interim CEO. David Williams was appointed as the new Chairman of the Board of Directors. The current directors are David Williams, Kjirstin Breure, David Morris and Paul Cox.
- On April 8, 2024, the Company announced it had closed a financing raising gross proceeds of C\$1,182,500 (\$869,613).
- On April 15, 2024, the Company announced that Khalifa University's RIC2D and HydroGraph signed a Memorandum of Understanding ("MOU") to collaborate on research projects and expedite commercialization.
- On April 30, 2024, the Company announced it would supply pristine graphene Volfpack Energy for solar power battery storage. The Company announced that its flagship graphene product, FGA-1, had been chosen by Volfpack Energy Ltd., a hardware company focused on using supercapacitor technology to increase the adoption of renewable energy across Asia.
- On May 21, 2024, the Company announced that Gulf Cryo LLC ("Gulf Cryo") began initial steps to bring pristine graphene to the Middle East. The Company entered into a MOU with Gulf Cryo, a leading provider of industrial, medical and specialty end-to-end gas solutions in the Middle East and Africa region, to collaborate in the production, distribution and selling of HydroGraph's pristine graphene.
- On June 11, 2024, the Company announced it had closed a financing raising gross proceeds of C\$3,652,887 (\$2,653,365).
- On June 17, 2024, the Company announced that the ACS Journal validated HydroGraph cement performance. Successful testing was conducted by Arizona State's School of Sustainable Engineering and the Built Environment.
- On August 7, 2024, the Company welcomed United States Senator for Kansas, Jerry Moran, to its Graphene Production Facility.
- On August 22, 2024, the Company announced that Robert Wowk, former CFO, would be transitioning to a board advisory role and Matthew Anderson was appointed as CFO effective September 3, 2024.
- On September 4, 2024, the Company announced the filing of two new US patent applications for graphene-coated hollow glass microsphere technology ("HGMS").

Subsequent to September 30, 2024:

- On October 2, 2024, the Company announced the appointment of Tom Eldridge to the role of Director of Business Development.
- On October 10, 2024, the Company announced that it was awarded the Business Innovation Award at the 2024 "To the Stars: Kansas Business Awards", hosted by the Kansas Department of Commerce.
- On October 30, 2024, the Company announced that the GEIC will be extending their research partnership with Hydrograph. This collaboration will continue to focus on a range of projects and novel research focused on nanomaterials. The partnership was first announced on September 19, 2023.
- On November 7, 2024, the Company announced that the global polyethylene terephthalate ("PET")
  packaging industry faces unprecedented regulatory pressure to reduce virgin plastic consumption,
  and HydroGraph discovered that its FGA-1 dramatically improves the performance and sustainability
  of PET bottles.
- On November 14, 2024, the Company announced the appointment of Kjirstin Breure as CEO. Breure
  has been an integral part of the Company's leadership, serving a s aboard director and president of
  the Company since January 2022, and as interim CEO since March 2024.
- On November 20, 2024, the Company announced that it had received a purchase order from a major global automotive company for research quantities of four additional graphene products.
- On November 21, 2024, the Company announced two new collaborations in battery materials with Volfpack Energy and NEI Corporation.
- On December 13, 2024, the Company announced it had closed a financing raising gross proceeds
  of C\$3,833,600 (\$2,693,871). Net proceeds of the financing will be used to further commercial
  activity for the Company's differentiated graphene products via application development at the GEIC
  and other direct customer relationships, production upscaling, business development and general
  working capital purposes.
- On January 7, 2024, the Company issued a letter to shareholders from the President & CEO, Kjirstin Breure.

## **SELECTED ANNUAL INFORMATION**

The Company's fiscal year ends on September 30<sup>th</sup>. The following is a summary of certain selected audited consolidated financial information for the last three completed fiscal years:

	Year ended	Year ended	Year ended
	September	September	September
	30, 2024	30, 2023	30, 2022
	\$	\$	\$
Sales	6,172	7,397	5,099
Gross profit	(51,691)	(19,081)	1,668
Operating expenses including non-cash items	(5,175,721)	(4,824,225)	(2,916,794)
Net loss	(5,331,986)	(4,959,831)	(2,982,512)
Weight average number of common shares outstanding	202,919,033	163,988,423	117,227,253
Loss per share	(0.03)	(0.03)	(0.03)
Cash	780,966	452,469	2,801,029
Working capital (deficiency)	405,630	(256,671)	3,262,869
Total assets	5,403,708	5,882,358	7,938,735
Shareholders' equity	4,672,635	4,869,723	7,486,387
Long-term financial liabilities	229,073	188,943	243,337
Dividends paid per share	-	-	

#### **RESULTS OF OPERATIONS**

The discussion of operations relates to the Company's three and twelve months ended September 30, 2024 and 2023.

#### Overall

Operations during the year ended September 30, 2024 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.

#### Sales

The Company had nominal sales of samples of \$6,172 (2023 - \$7,397).

### **Operating Expenses**

The Company had a net loss of \$5,331,986 (2023 – \$4,959,831), comprised mostly of operating expenses totaling \$5,175,721 (2023 - \$4,824,225). Operating expenses primarily consisted of salaries of \$1,945,066 (2023 - \$1,809,810), professional fees of \$757,510 (2023 - \$628,975), non-cash stock-based compensation of \$396,788 (2023 - \$507,737), research costs of \$362,513 (2023 - \$135,542), travel and promotion of \$726,035 (2023 - \$765,656), and non-cash depreciation of \$291,047 (2023 - \$279,288).

Main changes in expenses are the following:

- Increase in license and maintenance fees to \$248,878 in 2024 from \$145,530 in 2023 is due to higher fees that required to be paid in 2024 compared to 2023.
- Decrease in office and miscellaneous to \$227,831 in 2024 compared to \$315,902 in 2023 is due the Company conserving cash
- Increase in research costs to \$362,513 in 2024 from \$135,542 due to the Company expanding its research programs.
- Increase in salaries to \$1,945,066 in 2024 compared to \$1,809,810 in 2023 due to termination payments made to former management.
- Write-down of equipment of \$102,857 in 2024 due to discontinuing the use of this equipment.

### Overall Performance

The table below details certain non-cash or unusual transactions that for the purposes of this discussion have been adjusted out of the reported loss to produce an adjusted loss that forms a better basis for comparing the period over period operating results of the Company.

	Year ended September 30, 2024 \$	Year ended September 30, 2023 \$
Net loss as reported	(5,331,986)	(4,959,831)
Add (deduct):		
Depreciation	291,047	279,288
Lease accretion	17,621	21,999
Stock-based compensation	396,788	507,737
Write-down of equipment	102,857	-
Adjusted loss for the year <sup>(1)</sup>	(4,523,673)	(4,150,807)

### **SUMMARY OF QUARTERLY RESULTS**

	30-Sep-24 \$	30-Jun-24 \$	31-Mar-24 \$	31-Dec-23 \$
Revenue	(2,293)	1,860	3,335	3,270
Net loss	(1,636,135)	(1,277,764)	(1,186,352)	(1,231,735)
Loss and comprehensive loss for period	(2,044,633)	(1,086,875)	(1,218,430)	(948,078)
Basic and diluted loss per share Weighted average number of common shares	(0.01)	(0.01)	(0.01)	(0.01)
outstanding	230,810,374	200,129,434	187,504,616	175,661,212
	30-Sep-23 \$	30-Jun-23 \$	31-Mar-23 \$	31-Dec-22 \$
	30-Sep-23 \$	30-Jun-23 \$	31-Mar-23 \$	31-Dec-22 \$
Revenue	<b>30-Sep-23</b> \$ 1,261	30-Jun-23 \$ -	31-Mar-23 \$ 2,697	<b>31-Dec-22</b> \$ 3,439
Revenue Net loss	\$	<b>30-Jun-23</b> \$ - (1,338,256)	\$	\$
	1,261	-	2,697	<b>\$</b> 3,439
Net loss	1,261 (1,126,556)	(1,338,256)	2,697 (1,052,399)	3,439 (1,442,620)

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. During the quarters ended December 31, 2022 to September 30, 2024, the Company continued its research and development activities. Revenues and loss and comprehensive loss for those periods remained consistent.

#### FINANCING ACTIVITIES

Subsequent to September 30, 2024:

• On December 12, 2024, the Company completed a non-brokered private placement of 23,960,003 units at a price of C\$0.16 per unit for gross proceeds of \$2,693,871 (C\$3,833,600). Each unit consists of one common share and one-half of one common share purchase warrant. Each whole warrant entitles the holder thereof to purchase one common share at a price of C\$0.24 up to December 12, 2027.

During the year ended September 30, 2024:

- On June 11, 2024, the Company completed a non-brokered private placement of 22,830,544 units
  at a price of \$0.116 (C\$0.16) per unit for gross proceeds of \$2,653,365 (C\$3,652,887). Each unit
  consists of one common share and one-half of one share purchase warrant. Each whole warrant
  entitles the holder thereof to purchase one common share at a price of C\$0.27 up to June 11, 2027.
- On April 5, 2024, the Company completed a non-brokered private placement of 11,825,000 units at a price of \$0.074 (C\$0.10) per unit for gross proceeds of \$869,613 (C\$1,182,500). Each unit consists of one common share and one-half of one share purchase warrant. Each whole warrant entitles the holder thereof to purchase one common share at a price of C\$0.18 per share up to April 5, 2026,

<sup>(1)</sup> Adjusted loss for the year is not a term recognized under IFRS.

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 C\$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 30th day following the notice of such exercise.

- On February 23, 2024, the Company completed a non-brokered private placement of 9,626,000 units at a price of \$0.074 (C\$0.10) per unit for gross proceeds of \$713,354 (C\$962,600). Each unit consists of one common share and one-half of one share purchase warrant. Each whole warrant entitles the holder thereof to purchase one common share at a price of C\$0.18 up to February 23, 2026, 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 C\$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 30th day following the notice of such exercise.
- On December 1, 2023, the Company completed a non-brokered private placement of 10,260,856 units at a price of \$0.074 (C\$0.10) per unit for gross proceeds of \$755,475 (C\$1,026,086). Each unit consists of one common share and one-half of one share purchase warrant. Each whole warrant entitles the holder thereof to purchase one common share at a price of C\$0.18 up to December 1, 2025, 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 C\$0.18 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.

During the year ended September 30, 2023:

• On April 14, 2023, the Company completed a non-brokered private placement of 20,087,666 units of at a price of C\$0.12 per unit for aggregate gross proceeds of C\$2,410,520.

#### 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 September 30, 2024, the Company had cash on hand of \$780,966 (2023 – \$452,469).

During the year ended September 30, 2024, cash used in operating activities was 4,074,997 (2023 – 3,546,787), cash used in investing activities was 81,426 (2023 – 620,989), cash provided by financing activities was 4,478,670 (2023 – 1,819,216). Cash used in operating activities increased due to additional operating expenses. 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.

### TRANSACTIONS WITH RELATED PARTIES

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

	September 30, 2024 \$	September 30, 2023 \$
Short-term benefits - management and director		
compensation		
Kjirstin Breure, President, CEO and Director	155,185	156,000
Stuart Jara, former CEO and Director	91,229	180,000
Matthew Anderson, CFO	5,512	-
Robert Wowk, former CFO	169,789	180,123
Mathew Lee, former CAO	95,534	89,129
David Williams, Director and Chairman	60,500	25,000
Paul Cox, Director	33,375	2,813
David Morris, Director	1,470	-
Termination benefits		
Stuart Jara, former CEO and Director	90,000	-
Robert Wowk, former CFO	244,000	-
Share-based payments	214,530	507,737
Total	1,161,124	1,140,802

As at September 30, 2024, \$76,208 (2023 – \$15,091) was due to related parties of the Company and has been included in accounts payable and accrued liabilities on the consolidated statement of financial position. As at September 30, 2024, \$102,000 (2023 - \$nil) was due to related parties of the Company and has been included in other liabilities.

## **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, 2024.

#### **CHANGES IN ACCOUNTING POLICIES**

There were no new accounting policies adopted during the year.

### 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 September 30, 2024, the Company's financial instruments consisted of cash, term deposit, 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 September 30, 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.

### (iii) Credit risk

Financial instruments that potentially subject the Company to concentrations of credit risks consist principally of cash, term deposit, and tax receivable. To minimize the credit risk on cash and its term deposit, 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 September 30, 2024, the contractual maturities of the Company's obligations are as follows:

	Within one year	Between one and five years	More than five years
	\$	\$	\$
Accounts payable and accrued liabilities	440,130	-	-
Other liabilities	-	102,000	-
Lease obligation	61,870	127,073	-

#### **OUTSTANDING SHARE DATA**

Authorized: Unlimited number of common shares

Issued and outstanding: 254,923,814 common shares as at January 27, 2025.

Options and warrants outstanding as at January 27, 2025:

Security	Number	Exercise Price (\$ CAD)	Expiry Date
Stock Options	1,250,233	0.25	16-Jan-26
Stock Options	1,000,000	0.25	14-Jun-26
Stock Options	2,000,000	0.25	30-Jun-26
Stock Options	7,600,000	0.19	21-Jun-29
Stock Options	500,000	0.19	18-Dec-29
Stock Options	1,000,000	0.25	4-Jan-32
Stock Options	1,500,000	0.25	28-Feb-32
Stock Options	1,300,000	0.25	20-Apr-32
Stock Options	3,897,500	0.25	01-Nov-32
Stock Options	700,000	0.25	12-Jan-33
Stock Options	750,000	0.25	06-Apr-33
TOTAL	21,497,733		

Security	Number	Exercise Price (\$ CAD)	Expiry Date
Share Purchase Warrants	17,575,833	0.20	15-Sep-25
Share Purchase Warrants	10,013,833	0.20	13-Apr-25
Share Purchase Warrants	1,020,133	0.12	<sup>(1)</sup> 13-Apr-25
Share Purchase Warrants	5,130,428	0.18	1-Dec-25
Share Purchase Warrants	4,813,000	0.18	23-Feb-26
Share Purchase Warrants	607,320	0.10	<sup>(2)</sup> 23-Feb-26
Share Purchase Warrants	5,912,500	0.18	5-Apr-26
Share Purchase Warrants	827,750	0.10	<sup>(3)</sup> 5-Apr-26
Share Purchase Warrants	11,420,740	0.27	11-Jun-27
Share Purchase Warrants	939,742	0.16	<sup>(4)</sup> 11-Jun-27
Share Purchase Warrants	11,980,001	0.16	11-Jun-27
Share Purchase Warrants	1,113,350	0.16	<sup>(5)</sup> 11-Jun-27
TOTAL	71,354,630		

<sup>(1)</sup> Exercisable into one finder unit, consisting of one common share and one-half of one common share purchase warrant, at a price of \$0.12 up to April 13, 2025, subject to acceleration in accordance with the Warrant Acceleration Right. Each warrant within the unit is exercisable into one common share at a price of \$0.20 per common share until April 13, 2025.

Exercisable into a finders' unit, consisting of one common share and one-half of one common share purchase warrant at a price of \$0.10 CAD up to February 26, 2024. Each warrant within the unit is exercisable into one common share at a price of \$0.18 CAD per common share up to February 23, 2026.

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- (3) Exercisable into a finders' unit, consisting of one common share and one-half of one common share purchase warrant, at a price of \$0.10 CAD up to April 5, 2026. Each warrant within the unit is exercisable into one common share at a price of \$0.18 CAD per common share up to April 5, 2026.
- (4) Exercisable into a finders' unit, consisting of one common share and one-half of one common share purchase warrant, at a price of \$0.16 CAD up to June 11, 2027. Each warrant within the unit is exercisable into one common share at a price of \$0.27 CAD per common share up to June 11, 2027.
- (5) Exercisable into a finders' unit, consisting of one common share and one-half of one common share purchase warrant, at a price of \$0.16 CAD up to December 12, 2027. Each warrant within the unit is exercisable into one common share at a price of \$0.24 CAD per common share up to December 12, 2027.

#### **DISCLOSURE CONTROLS AND PROCEDURES**

In connection with National Instrument 52-109 (Certificate of Disclosure in Issuer's Annual and Interim Filings) ("NI 52-109"), the Chief Executive Officer and Chief Financial Officer of the Company have filed a Venture Issuer Basic Certificate with respect to the financial information contained in the consolidated financial statements for the year ended September 30, 2024 and this accompanying MD&A (together, the "Annual Filings").

In contrast to the full certificate under NI 52-109, the Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures and internal control over financial reporting, as defined in NI 52-109. For further information the reader should refer to the Venture Issuer Basic Certificates filed by the Company with the Annual Filings on SEDAR at <a href="https://www.sedarplus.ca">www.sedarplus.ca</a>.

#### **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.

## **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**

## **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 2023, 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 ensure values, igniters and electrodes 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 today for 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. The Company has fully commercialized two of it's main graphene products and will look to commercialize additional derivatives according to customer interest.

#### 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.

# HYDROGRAPH CLEAN POWER INC. Management Discussion and Analysis For the year ended September 30, 2024

# **OTHER INFORMATION**

Additional information related to the Company is available for viewing on SEDAR+ at www.sedarplus.com and at the Company's website at https://hydrograph.com.