# Aether Catalyst Solutions, Inc.

# MANAGEMENT'S DISCUSSION AND ANALYSIS Year ended December 31, 2024

#### **GENERAL**

This management's discussion and analysis ("MD&A") of financial position and the results of operations is prepared as at April 28, 2025 and should be read in conjunction with the audited financial statements of Aether Catalyst Solutions, Inc. ("Aether" or the "Company") for the years ended December 31, 2024 and 2023 and related notes thereto.

The audited financial statements were prepared in accordance with IFRS Accounting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). All dollar amounts included therein and in the following MD&A are in Canadian dollars except where noted. These documents and other information relevant to the Company's activities are available for viewing on SEDAR+ at <a href="https://www.sedarplus.ca">www.sedarplus.ca</a>.

#### FORWARD-LOOKING STATEMENTS

Certain statements contained in this MD&A may constitute "forward-looking statements". Such term is defined in applicable securities laws. The forward-looking information includes, without limitation, the success of research and development activities and other similar statements concerning anticipated future events, conditions or results that are not historical facts. These statements reflect management's current estimates, beliefs, intentions and expectations; they are not guarantees of future performance. The Company cautions that all forward-looking information is inherently uncertain and that actual performance may be affected by a number of material factors, many of which are beyond the Company's control. Such factors include, among others, risks relating to research and development; the Company's intellectual property applications being approved, the Company's ability to protect its proprietary rights from unauthorized use or disclosure, the ability of the Company to obtain additional financing; the Company's limited operating history; the need to comply with environmental and governmental regulations; fluctuations in currency exchange rates; operating hazards and risks; competition; and other risks and uncertainties. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Accordingly, actual future events, conditions and results may differ materially from the estimates, beliefs, intentions and expectations expressed or implied in the forward-looking information. All statements are made as of the report date and, except as required by law, the Company is under no obligation to update or alter any forward-looking information.

The Company's business may be affected by changes in political and market conditions, such as interest rates, tariffs, availability of credit, inflation rates, changes in laws, and national and international circumstances. Recent geopolitical events and potential economic global challenges such as the risk of higher inflation and energy crises, may create further uncertainty and risk with respect to the prospects of the Company's business.

#### **DESCRIPTION OF BUSINESS**

The Company was incorporated under the British Columbia Business Corporations Act ("BCBCA") on July 8, 2011.

The Company is a research and development company that is engaged in the development and potential subsequent commercialization of catalytic materials, initially for use in gasoline engine emissions abatement (currently in both the automotive and small engines market), but with other possible applications (including, for instance, diesel, stationary power and volatile organic compounds).

The catalytic converter can be effective at reducing automotive emissions, but that performance comes at a cost. Generally, catalytic converters that have been developed to date utilize expensive materials, including precious metals and rare earth metals. In order to continue to meet escalating emissions standards, absent further and more cost-effective technologies, the only route is to increase the loading of these materials. These expensive materials increase the cost of catalytic converters to the extent that they have become a significant cost component of vehicles.

The Company has developed a low-cost, high-performance three-way catalyst to replace the more costly precious metal-based catalysts used in today's automotive catalytic converters. The Company's patent-pending technology does not contain any platinum, palladium, or rhodium. Further, the Company has third party testing to validate internal performance tests of its catalysts.

The Company's technology makes use of inexpensive base metals. Base metal catalysts typically have a lower activity than precious metals and are more susceptible to hydrothermal instability when exposed to the severe environment of the automobile's exhaust. Atypically, the Company's catalysts are active and stable at high temperatures.

The Company's technology has been developed to overcome the aging robustness issues that are typically seen in other low-cost catalyst technology. Specifically, the Company has tested hundreds of sub-scale catalyzed plugs, and has developed a unique formulation that allows for aging temperatures of up to 900 C in a range of environments.

The Company is currently engaged in three areas of activity: development of a commercial small motors catalyst; commercialization of our technology in the automotive industry; and ongoing R&D with respect to emissions catalysis.

## **SMALL MOTORS**

In February of 2021, the Company announced the Urban Small Motors Emissions Abatement Project ("USMEAP"), and in March of 2021, the City of Burnaby signed on as a test partner, allowing Aether to equip several of its riding mowers with Aether catalysts. USMEAP has finished its fourth year and has proven very successful – during the 2024 growing season, the mowers equipped with Aether catalysts have continued to reduce 100% of NOx with between 232 and 475 hours (three of the six are over 400 hours) of use at the time of testing. Discussions under a Non-Disclosure Agreement ("NDA") with one of the world's largest small motors Original Equipment Manufacturer ("OEM") have confirmed that there will be a market for these catalysts, and what the performance requirements will be; additionally, they've told us that currently their only options will be PGM catalysts. Aether is testing with potential partners to produce a PGM-free solution for this market. Our goal over the next 12 – 18 months will be to certify, with a partner, or alone, our catalyst on a mass market engine, meeting the lower bounds of what is expected from CARB (the California Air Resource Board); if we are successful, our catalysts will have a significant price advantage over PGM catalysts with the required performance.

#### **AUTOMOTIVE**

In October 2021, the Company was approached by and entered into an NDA with a large US fleet operator ("Fleetco") to begin the evaluation and development of the Company's catalyst for use in their fleet of over 150,000 vehicles. Subsequent to the first quarter of 2024, Aether executed an NDA and a Material Transfser Agreement ("MTA") with a large North American after-market catalytic converter manufacturer upon an introduction from Fleetco and Aether's catalysts have undergone initial testing.

In 2022, Aether was approached by a special materials company (the "Company") that operates multiple manufacturing facilities globally, and after initial discussions, in April 2023, Aether announced that it had entered into a Joint Development Agreement (the "JDA") with the Company. The aim of the JDA is to integrate one of Aether's catalysts into the Company's existing novel catalyst substrate to produce a catalytic device for the automotive and commercial vehicle market. The Company will be responsible for all costs and expenses associated with marketing, validation, and commercialization of the final product. Upon completion of the JDA and the determination that there is a final product, the parties will negotiate a technology license agreement. During the first quarter of 2024, the Company shipped its second iteration of catalyst for integration with our partner's substrate. Unfortunately, testing delays may have affected the viability of the shipped materials, and the subsequent catalyst/substrate had incorrect ratios. Aether expects the third attempt sometime in the first half of 2025.

During the third quarter of 2023, Aether was approached by an Asian based global tier-1 automotive components company to investigate the use of Aether catalysts in an underserved Asian market. During the fourth quarter of 2023, Aether and the Company entered into an NDA & MTA. Aether catalysts are to be applied to metallic substrates, so some degree of iteration is required. As of the fourth quarter of 2024, three samples have been processed and tested and the parties have agreed to extend the terms of the NDA and MTA for a further 2 years. This is a very active program with quick turnarounds.

During the third quarter of 2024, Aether has also had initial discussions with an Asian/European automotive company, highlighting the fact that the three of our active automotive programs have resulted from inbound inquiries.

#### RESEARCH AND DEVELOPMENT

Despite having active commercialization programs on the go, Aether has actively continued to aggressively investigate improvements to our catalysts.

During the fourth quarter of 2024, Aether was approached by, and has entered into an NDA & MTA with, one of the US National Laboratories to investigate the utility of one of their inventions – a novel electrospinning device, that may have significant applications to the R&D work that we do, as well as its subsequent commercialization.

## **OVERALL PERFORMANCE**

The Company has no revenues, so its ability to ensure continued operations is its ability to obtain the necessary funding to complete development of its base metal catalytic material.

## Q1 Highlights

- •Aether, under NDA, met with one of the world's largest small motors manufacturers and learned that they are expecting to have to equip their engines with catalytic converters and that their only alternatives are expensive incumbent technologies containing PGMs.
- •The Company released results of USMEAP for the 2023 growing season, and all catalysts continue to perform at 100% NO<sub>x</sub> reduction. The program was renewed for the 2024 growing season.
- •The Company began discussions with one of North America's largest aftermarket catalytic converter manufacturers and entered into an NDA and MTA in advance of testing.
- •The Company entered into an MTA with the Asian Tier 1 automotive parts supplier in advance of shipping catalysts.
- •The Company shipped its second batch of catalysts to its JDA partner.

## **Q2** Highlights

- •The Company shipped its first catalyst to the Asian Tier 1 automotive parts supplier.
- •The Company shipped catalysts to the North American aftermarket catalytic converter manufacturer.
- •Aether received and tested the first coated metallic substrates from the Asian Tier 1 automotive parts supplier.

#### Q3 Highlights

•The Company received and tested the second batch of coated substrates from the Asian Tier 1 automotive parts supplier.

## **Q4** Highlights

- •The Company received and tested the second batch of coated substrates from the Asian Tier 1 automotive parts supplier, and extended the terms of their NDA and MTA for another two years.
- •The Company was approached by a US National Laboratory to investigate the compatibility of its catalyst with a novel electrospinning device developed by the Lab. An NDA and MTA were executed and the catalyst was shipped for compatibility testing.

The head and registered offices of the Company are located at Unit 104, 8337 Eastlake Drive, Burnaby, British Columbia, V5A 4W2.

## **SUMMARY OF ANNUAL RESULTS**

2024			2023		2022	
\$	-	\$	-	\$	-	
\$	(572,611)	\$	(614,695)	\$	(536,527)	
\$	(0.01)	\$	(0.01)	\$	(0.01)	
	N/A		N/A	\$	0.00	
\$	200,325	\$	96,687	\$	221,003	
\$	614,160	\$	264,559	\$	148,065	
	\$ \$	\$ - \$ (572,611) \$ (0.01) N/A \$ 200,325	\$ - \$ \$ (572,611) \$ \$ (0.01) \$ N/A \$ 200,325 \$	\$ - \$ - \$ (572,611) \$ (614,695) \$ (0.01) \$ (0.01) N/A N/A \$ 200,325 \$ 96,687	\$ - \$ - \$ \$ (572,611) \$ (614,695) \$ \$ (0.01) \$ (0.01) \$ N/A N/A \$ \$ 200,325 \$ 96,687 \$	

#### **QUARTERLY INFORMATION**

	2024		2024		2024		2024	
Quarters Ended		ecember 31	S	eptember 30		June 30		March 31
Total assets	\$	200,325	\$	290,253	\$	304,600	\$	296,369
Working capital deficit	\$	(550,784)	\$	(431,493)	\$	(433,493)	\$	(328,696)
Loss for the quarter	\$	(189,416)	\$	(141,832)	\$	(115,310)	\$	(126,053)
Loss per share (basic and diluted)	\$	(0.00)	\$	(0.00)	\$	(0.00)	\$	(0.00)

	2023 2023		2023	2023		2023		
Quarter Ended	December 31		September 30			June 30	March 31	
Total assets	\$	96,687	\$	83,818	\$	164,543	\$	135,869
Working capital deficit	\$	(197,863)	\$	(162,737)	\$	(58,283)	\$	(134,283)
Loss for the quarter	\$	(141,308)	\$	(177,766)	\$	(163,425)	\$	(132,196)
Loss per share (basic and diluted)	\$	(0.00)	\$	(0.00)	\$	(0.00)	\$	(0.00)

During the quarter ended December 31, 2024, the net loss increased to \$189,416 compared to net loss of \$141,832 for the quarter ended September 30, 2024. The increase in loss is primarily due to professional fees of \$15,740 (September 30, 2024 - \$9,000), and interest and accretion of \$43,731 (September 30, 2024 - \$19,808).

During the quarter ended September 30, 2024, the net loss increased to \$141,832 compared to net loss of \$115,310 for the quarter ended June 30, 2024. The increase in loss is primarily due to office, supplies and miscellaneous expenses of \$14,674 (June 30, 2024 - \$8,756), and wage and benefits of \$68,865 (June 30, 2024 - \$47,497).

During the quarter ended June 30, 2024, the net loss decreased to \$115,310 compared to net loss of \$126,053 for the quarter ended March 31, 2024. The decrease in loss is primarily due to office, supplies and miscellaneous expenses of \$8,756 (March 31, 2024 - \$15,895), and wages and benefits of \$47,497 (March 31, 2024 - \$54,743).

During the quarter ended March 31, 2024, the net loss decreased to \$126,053 compared to net loss of \$141,308 for the quarter ended December 31, 2023. The decrease in loss is primarily lower professional

fees of \$11,750 (December 31, 2023 - \$18,428), wages and benefits of \$54,743 (December 31, 2023 - \$57,908), and receipt of rental income of \$4,286 (December 31, 2023 - \$Nil).

During the quarter ended December 31, 2023, the net loss decreased to \$141,308 compared to net loss of \$177,766 for the quarter ended September 30, 2023. The decrease in loss is primarily due to no share based compensation recorded in the fourth quarter.

During the quarter ended September 30, 2023, the net loss increased to \$177,766 compared to net loss of \$163,425 for the quarter ended June 30, 2023. The increase in loss is primarily due to an increase in share-based compensation of \$70,762 (June 30, 2023 - \$1,065).

During the quarter ended June 30, 2023, the net loss increased to \$163,425 compared to net loss of \$132,196 for the quarter ended March 31, 2023. The increase in loss is primarily due to an increase in professional fees of \$33,112 (March 31, 2023 - \$11,350), and office, supplies and miscellaneous expenses of \$19,467 (March 31, 2023 - \$10,084).

# **RESULTS OF OPERATIONS**

#### Year ended December 31, 2024

During the year ended December 31, 2024, the Company recorded a net loss of \$572,611 (2023 – \$614,695). Significant fluctuations include the following:

- i) Office, supplies and miscellaneous expenses decreased to \$42,592 (2023 \$45,444) due to lower expenditures on supplies used in business operations during the current year.
- ii) Consulting fees decreased to \$60,000 (2023 \$82,050) due to fewer consultants being engaged during the current year.
- iii) Interest and accretion increased to \$95,752 (2023 \$9,427) as a result of the accretion of existing loans during the current year.
- iv) Professional fees decreased to \$46,956 (2023 \$71,890) due to lower legal fees during the current year.
- v) Share-based compensation decreased to \$Nil (2023 \$74,293) as a result of no options granted in the current year.

# Three months ended December 31, 2024

During the three months ended December 31, 2024, the Company recorded a net loss of \$189,416 (2023 – \$141,308). Significant fluctuations include the following:

- i) Amortization decreased to \$11,643 (2023 \$20,661) as a result of the new office lease during the current period.
- ii) Interest and accretion increased to \$43,731 (2023 \$4,470) as a result of the accretion of additional loans during the current period.
- iii) Wages and benefits increased to \$71,044 (2023 \$57,908) as the result of payroll employees during the period.

## LIQUIDITY AND CAPITAL RESOURCES AND GOING CONCERN

Working capital deficiency at December 31, 2024 was \$550,784 (2023 – \$197,863). This was primarily a result of increased accounts payables and accrued liabilities, and loans payable during the current year.

During the year ended December 31, 2024, the Company had the following cash flows:

- i) cash used in operating activities was \$240,709 (2023 \$335,947) relating to the statement of loss and comprehensive loss adjusted for non-cash items.
- ii) cash used in investing activities was \$Nil (2023 –\$5,729) relating to proceeds used to purchase property, plant and equipment.
- iii) cash provided by financing activities was \$235,073 (2023 \$295,020) primarily related to amounts received from loans and private placements, and lease payments for right of use asset.

The audited financial statements were prepared using accounting policies consistent with IFRS as issued by IASB, with the assumption that the Company will be able to realize its assets and discharge its liabilities in the normal course of business rather than through a process of forced liquidation for the foreseeable future. The operations of the Company were primarily funded by the issuance of share capital and loans. The continued operations of the Company are dependent on its ability to develop a sufficient financing plan, receive continued financial support from related parties and lenders, complete sufficient public equity financing, or generate profitable operations in the future. The audited financial statements do not include any adjustments to the amounts and classification of assets and liabilities that might be necessary should the Company be unable to continue in business.

The Company is in the business of research and development that by its nature involves a high degree of risk. There can be no assurance that the Company's business and strategy will enable it to become profitable or sustain profitability in future periods. The Company's information technology systems are subject to disruption, damage or failure from a number of sources. This may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects. Additionally, the Company estimates that it will need additional capital to operate for the upcoming year. These material uncertainties may cast significant doubt on the Company's ability to continue as a going concern.

# **OFF-BALANCE SHEET ARRANGEMENTS**

There are no off-balance sheet arrangements or obligations that are not disclosed in the audited financial statements.

## RELATED PARTY TRANSACTIONS

	Year ended December 31, 2024			Year ended December 31, 2023
Transactions with Key Management Personnel				
Consulting fees paid to a company owned by a director and				
officer, namely Paul Woodward	\$	60,000	\$	60,000
Wages paid to an officer, namely Taylor a Procyk		110,389		99,424
Wages paid to a spouse of a director, namely Jane				
Woodward		25,777		25,767
Share-based compensation		-		65,463
•	\$	196,166	\$	250,654

As at December 31, 2024, receivables include \$33,400 (2023 – \$33,400) owing from companies with common directors.

As at December 31, 2024, accounts payable and accrued liabilities included \$94,325 (2023 – \$2,425) owing to officers and a company controlled by a director of the Company.

As at December 31, 2024, loans payable included \$173,725 (2023 – \$2,180) owing to a director of the Company and a company he controls, a spouse of a director of the Company, and a company with a common director of the Company.

The amounts due to and from related parties are unsecured, non-interest bearing and have no specific terms of repayment unless stated otherwise.

#### CHANGES IN ACCOUNTING STANDARDS

Please refer to the December 31, 2024 audited financial statements on <a href="www.sedarplus.ca">www.sedarplus.ca</a> for accounting policy pronouncements.

# FINANCIAL INSTRUMENTS

Please refer to the December 31, 2024 audited financial statements on <a href="www.sedarplus.ca">www.sedarplus.ca</a> for risks and financial instruments.

**OUTSTANDING SHARE DATA**As at April 28, 2025, the Company had the following securities issued and outstanding:

			Exercise	Expiry
	Number	Exercisable	Price	Date
Common shares	59,270,612			
Options				
1	350,000	350,000	\$0.10	November 4, 2025
	1,400,000	1,350,000	\$0.10	July 14, 2026
	1,750,000	1,700,000		
Warrants	1,181,409	1,181,409	\$0.10	July 12, 2025
	100,000	100,000	\$0.055	July 12, 2025
	300,000	300,000	\$0.10	July 22, 2025
	60,000	60,000	\$0.055	July 22, 2025
	937,500	937,500	\$0.10	March 19, 2026
	2,578,909	2,578,909		