Nano One Materials Corp.

Management's Discussion & Analysis

For the nine months ended

September 30, 2023

PREPARATION OF MANAGEMENT'S DISCUSSION & ANALYSIS

The following Management's Discussion & Analysis ("MD&A") of Nano One® Materials Corp. ("Nano One" or the "Company") for the nine months ended September 30, 2023, should be read in conjunction with the Company's condensed interim consolidated financial statements for the nine months ended September 30, 2023 and the audited annual financial statements for the year ended December 31, 2022, and related notes thereto. The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). All monetary amounts in this MD&A are expressed in Canadian dollars, unless otherwise indicated.

The information contained herein is presented as at **November 8, 2023** (the "MD&A Date"), unless otherwise indicated.

Additional information relating to the Company, including the Annual Information Form ("AIF") dated March 29, 2023, is filed with Canadian securities regulatory authorities on SEDAR (www.sedar.com) and on the Company's website at www.nanoone.ca.

The Company's head office is located at Unit 101B, 8575 Government Street, Burnaby, British Columbia V3N 4V1 and its registered and records office is located at 2900 - 550 Burrard Street, Vancouver, British Columbia V6C 0A3.

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

DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

The Company's disclosure controls, and procedures ("DC&P") are designed to provide reasonable assurance that relevant information is gathered and reported to senior management, including the Chief Executive Officer and the Chief Financial Officer, on a timely basis so that appropriate decisions can be made regarding public disclosures. We have also designed internal controls over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. During the nine months ended September 30, 2023 and year ended December 31, 2022, there were no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

FORWARD-LOOKING STATEMENTS

This MD&A contains certain "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements"), within the meaning of applicable Canadian securities laws, which are based upon the Company's current internal expectations, estimates, projections, assumptions, and beliefs. All information, other than statements of historical facts, included in this MD&A that addresses activities, events or developments that the Company expects or anticipates will or may occur in the future is forward-looking information. Such statements can be identified by the use of forward-looking terminology such as "believe", "expect", "plan", "likely", "may", "will", "should", "intend", or "anticipate", "potential", "proposed", "estimate" and other similar words, including negative and grammatical variations thereof, or statements that certain events or conditions "may", "should" or "will" happen, or by discussions of strategy. Forward-looking statements include estimates, plans, expectations, opinions, forecasts, projections, targets, guidance, goals, or other statements that are not statements of fact. Such forward-looking statements are made as of the date of this MD&A and, except as required by law, the Company is under no obligation to update or alter any forward-looking information.

Forward-looking statements in this MD&A may include, but are not limited to, statements with respect to: the Company's ability to access capital and grants; access to skilled labour, permits, and provincial and municipal utilities; operating and capital costs; the Company's future business and strategies; requirements for additional capital and future financing; estimated future working capital, funds available, and uses of funds, and future capital expenditures and other expenses for specific operations, intellectual property protection; industry demand; ability to obtain employees, consultants or advisors with specialized skills and knowledge; anticipated joint development programs; incurrence of costs; competitive conditions; general economic conditions; the intention to grow the business, operations, revenues and potential activities of the Company; the functions and intended benefits of Nano One's technology and products; the development of the Company's technology, supply chain and products; the commencement of a commercialization phase; current and future collaboration, engineering, and optimization projects; plans for construction; scale-up and operation of a multi-cathode piloting hub; the Company's research and development programs; collaboration with materials producers; the Company's business plans and strategies; the Company's short- and long-term business objectives and milestones and the events that must occur to accomplish them; prospective strategic partnerships and the anticipated benefits of those partnerships; the Company's licensing, supply chain, and potential royalty arrangements; the purpose for expanding the Company's facilities; and scalability of developed technology. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. The Company cannot guarantee future results, levels of activity, performance, or achievements. There are risks, uncertainties, and other factors, some of which are beyond the Company's control, which could cause actual results, performance, or achievements of the Company, as applicable, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements contained in this MD&A.

RISKS AND UNCERTAINTIES

Risk is inherent in all business activities and cannot be entirely eliminated. An investment in Nano One's common shares involves risk. Investors should carefully consider the risks and uncertainties described below and, in the AIF, filed with Canadian securities regulators (www.sedar.com) which may not be a comprehensive list of risks and uncertainties. Additional risks and uncertainties, including those unknown by the Company at this time, or are currently considered immaterial, may exist, and other risks may apply.

External Global Factors

There are many external factors that can adversely affect general workforces, economies, and financial markets globally. Examples include, but are not limited to, the COVID-19 global pandemic and political conflict in other regions. It is not possible for the Company to predict the duration or magnitude of adverse results of such external factors and their effect on the Company's business or ability to raise funds.

DESCRIPTION OF THE BUSINESS AND TECHNOLOGY

The Company is a clean technology company with a patented, scalable and low carbon intensity industrial process for the low-cost production of high-performance lithium-ion battery cathode materials, with strategic collaborations and partnerships, including automotive OEMs and strategic industry supply chain companies like BASF, Umicore, Rio Tinto, and Sumitomo Metal Mining. Nano One's technology is applicable to electric vehicles, energy storage, and consumer electronics, reducing costs and carbon intensity while improving environmental impact. The Company aims to pilot and demonstrate its technology as turn-key production solutions for license, joint venture, and independent production opportunities, leveraging Canadian talent and critical minerals for emerging markets in North America, Europe, and the Indo-Pacific region. Nano One has received funding from Sustainable Development Technology Canada ("SDTC") and the Governments of Canada and British Columbia.

One-Pot Process Technology

Nano One's One-Pot Process is engineered to use non-sulfate forms of metal feedstock, such as metal powders, hydroxides, or carbonates, with the intention of reducing total cost and carbon footprint per kilogram of cathode active material (CAM). The process eliminates the cost, energy and logistics of converting metals to sulfates, it eliminates large volumes of wastewater and sodium sulfate byproduct that is generated during subsequent steps to make precursor cathode active material (PCAM), and it also reduces water consumption, greenhouse gas (GHG) emissions and process costs. This flexibility in feedstock provides sourcing optionality and extends to lithium which can be used in the form of carbonate or hydroxide, for all Nano One CAM formulations, with preference for lithium carbonate as it reduces cost, corrosion, shelf-life and handling issues.

The process also forms innovative coated nanocrystal cathode powders that are designed to be more durable than conventional cathode powders. The nanocrystal innovation addresses a fundamental battery trade-off between energy density and durability. Increased durability provides electric vehicle manufacturers greater flexibility in optimizing range, charging rates, safety, and cost. The One-Pot Process combines all input components: lithium, metals, additives/dopants, and coatings in a single reaction to produce a precursor that, when dried and fired, forms quickly into a single nanocrystal cathode material simultaneously with its protective coating.

The One-Pot Process is an aqueous process, using carbon neutral chemistry, that operates at room-temperature and atmospheric pressures, and it combines all cathode and coating feedstocks in one reaction to form an intermediate powder that is easily processed in kilns to form a finished and coated cathode powder. This creates added value for metals and aligns Nano One with the environmental, sustainability and cost objectives of automotive companies, miners, investment communities and governmental infrastructure initiatives.

Further details about the Company's process developments and product developments can be found in the AIF.

M2CAM® Technology

Nano One’s Metal to Cathode Active Material (“M2CAM”) technology reduces cost, reduces waste, and reduces the carbon footprint in the lithium-ion battery supply chain. Nano One's collaborators include automotive OEMs with similar motivations to meet environmental targets by reducing waste, carbon emissions, logistics and costs. Patents are pending for M2CAM.

Nano One’s patented One-Pot Process forms durable single crystal cathode powders and protective coatings simultaneously and the process has been adapted for M2CAM, enabling these cathode materials to be made directly from metal powders. Metal powders are one-fifth of the weight of metal sulfates, avoiding the added costs, energy, and environmental impact of converting to sulfate and shipping and handling of waste.

Intellectual Property

The Company continues to expand patent coverage of proprietary technology as further detailed in a July 20, 2023 press release. As of the MD&A Date, Nano One now has thirty-four (34) patents which have been granted or approved across the globe. The Company also has many pending patent applications throughout the world.

The intellectual property was developed and is wholly owned by the Company. The Company has filed other patent applications and may file additional patents at a later date to further strengthen its intellectual property and technology going forward, although no assurances can be given that it will be successful in such endeavours. Additional information on the Company's intellectual property can be found in the Company’s AIF.

CHANGE IN EXECUTIVE OFFICERS AND BOARD OF DIRECTORS

Effective April 3, 2023, Adam Johnson was appointed Senior Vice-President of External Affairs.

RECENT CORPORATE MILESTONES

Collaboration Agreement with Sumitomo Metal Mining

On October 5, 2023 (further to the announcement on September 25, 2023), Nano One and Sumitomo Metal Mining Co., Ltd. (“SMM”, together with Nano One, the “Companies”) closed a transaction whereby the Companies agreed to a strategic equity investment in Nano One by SMM of approximately $17,000,000 and entered into a collaboration agreement (a “Collaboration Agreement”) under which the Companies will work together to accelerate the commercial production of lithium iron phosphate (“LFP”), CAM and nickel-rich CAM chemistries, such as lithium nickel manganese cobalt oxide (“NMC”). SMM is a leading vertically integrated miner, refiner and producer of CAM.

On October 5, 2023, Nano One issued a total of 5,498,355 common shares (the “Shares”), representing approximately 5% of the current issued and outstanding Shares of Nano One, at $3.07 per Share ($16,879,950) in a non-brokered private placement. Nano One intends to use the proceeds principally towards the conversion of its existing Candiac LFP manufacturing facility to a One-Pot production scale pilot plant, nickel and manganese-rich engineering, and piloting activities, and for working capital purposes.

Nano One and SMM also entered into an Investor Rights Agreement, providing SMM with participation rights in any future equity financings to maintain pro rata ownership interest for a period of up to three years from October 5, 2023. Under the agreement, SMM will agree to a standstill provision that, among other things, restricts SMM’s ability to purchase additional shares without Nano One consent for a period of 24 months and restricts SMM’s ability to sell the Shares for 12 months, subject to certain exemptions.

SMM and Nano One also entered into a Collaboration Agreement that encompasses various aspects primarily centered on supporting the development of battery ecosystems, with a particular focus on LFP and NMC production using the One-Pot process. The collaboration will support technical product optimization for both LFP and NMC, as well as efforts to mitigate supply chain risks. These joint efforts are intended to strengthen and progress the development, design, construction, and operation of Nano One’s proposed LFP production scale pilot plant, the piloting of nickel- and manganese-rich CAMs, and Nano One’s first LFP commercial plant.

Further, the Companies will jointly explore business development opportunities, including future sales and technology licensing. The Companies intend to exchange relevant market information and technical expertise to improve the quality and cost of CAM produced by the One-Pot process at the Company’s facilities to meet SMM customer requirement. SMM is the first CAM producing investor in Nano One. SMM’s investment builds on past investments in Nano One from mining companies and governments and could accelerate LFP adoption, demand, and business opportunities for the Companies.

Joint Development Agreement with Our Next Energy (ONE)

On June 14, 2023, the Company announced signing a Joint Development Agreement (JDA) with ONE to collaborate on the validation, qualification, and production of a North American supply of lithium iron phosphate (LFP) cathode active materials (CAM).

The LFP CAM will be produced at Nano One's 200 tonnes per annum ("tpa") pilot facility in Candiac, Québec, for validation in ONE's production LFP cells used in its Aries and Gemini batteries, with the goal of a binding offtake agreement and expansion into future production facilities.

Successful Completion of Phase Two of Co-Development Agreement with CBMM

On May 17, 2023, the Company announced the successful completion of phase two of the co-development work with CBMM, the world's leading supplier of Niobium products and technology. Phase two successfully utilized CBMM's Niobium product to make coated nanocrystal high nickel (Ni>90%) NMC cathode active material. Enhanced durability was displayed using Nano One's proprietary One-Pot process and Metal to Cathode Active Material (M2CAM®) technology.

This achievement opens new doors of opportunity for the two companies to market and cross-collaborate with their existing customer bases and also adds a secure and resilient supply chain partner to Nano One's list of qualified automotive supply chain collaborators, and validates strategic planning and business development efforts.

Phase three will focus on scaling of the One-Pot and M2CAM technology using CBMM's product, and it includes electrochemical evaluation in full pouch cells to demonstrate commercial viability.

Completion of Cathode Evaluation Project & Expansion of Collaboration with Automotive OEM

On February 21, 2023, the Company announced that it achieved an important milestone by successfully completing the evaluation and benchmarking of its process, cathode materials and techno-economic modelling, under a Cathode Evaluation Agreement with a global automotive manufacturer. Success has led the parties to a new Cathode Evaluation Agreement that adds LFP to the program and expands their collaboration to target performance, cost, and environmental specifications of cathode materials to meet the needs of the OEM.

The parties jointly evaluated Nano One's NMC cathode materials for use in automotive lithium-ion batteries and demonstrated significant potential to reduce environmental footprint, capital costs and operating costs while meeting performance criteria.

As part of the initial evaluation project, a third-party study, outlined that Nano One's patented One-Pot and M2CAM (metal to cathode active material) processes offer significant environmental benefits and cost advantages when compared to conventional cathode processes. The report also identified opportunities for further optimization and cost savings during scale-up and commercialization.

The successful outcome of this initial evaluation project has led to Nano One and its automotive partner entering a new phase of collaboration and a second Cathode Evaluation Agreement, during which the parties will expand their evaluation and focus on specific performance, cost, and environmental parameters for NMC and LFP materials. In addition, Nano One and its automotive partner are developing a roadmap to execute on a joint vision to promote waste-free high-performing cathodes in world class cells.

New program funding from SDTC and completion of previous SDTC project

On February 13, 2023, the Company announced an award of up to $10,000,000 in non-dilutive, non-repayable contributions from SDTC. These funds will support the conversion of Nano One's recently acquired Candiac facility to the patented One-Pot Process for industrial-scale pilot production of LFP and includes financial support for the design, construction, and operation of a multi-cathode piloting hub (MCPH) to help customize and advance Nano One's One-Pot and metal-direct-to-CAM (M2CAM) processes for the industrial scale pilot production of next-gen LFP, NMC and LNM cathode active materials (CAM).

This project named, "*Pre-Commercial Trial and Multi Cathode Piloting Hub*", will be multi-phase, multi-year, and milestone driven. This follows two other successful Nano One SDTC projects which assisted in demonstrating the One-Pot Process at small pilot scale production volumes and advanced the technology to this point of pre-commercial trials. This project also amplifies the opportunity for global LFP business expansion and is further validated by the support of the federal government and the project's industrial consortium partners (Rio Tinto, Lithion Battery Inc., and undisclosed automotive OEM).

On August 21, 2023, the Company announced receipt of the final contribution of $803,300 from SDTC and BC ICE in respect of the Company's second (pervious) SDTC project which was awarded in May 2019 and completed in January 2023 with total SDTC and BC ICE contributions of approximately $8,250,000. The success of this second project led to the third ongoing SDTC funded project as described above.

The project enabled 10 kg batches of One-Pot LFP and greater for third party evaluation that have since led to trials in the Company's Candiac facility that are exceeding 1,000 kg (1 tonne). Through the course of the project, the team was able to reduce reaction times resulting in cost reduction and improved yield. The team also reduced CAPEX and OPEX associated with the One-Pot process for LFP as compared to existing LFP methods and they developed a comprehensive techno-economic model for LFP, providing confidence for large scale piloting and production activities at its Candiac facility.

The project also supported the development of Nano One's innovative M2CAM technology, that simplifies the supply chain and enables the use of metal powders instead of environmentally problematic metal sulphates.

CORPORATE DEVELOPMENTS – YEAR TO DATE

In addition to the recent corporate milestones discussed above and other information discussed throughout this MD&A, the Company announced the following developments during the nine months ended September 30, 2023, and through to the MD&A Date (from newest to oldest):

Pre-Feasibility Study of One-Pot LFP Production Lines Completed

On October 23, 2023, the Company announced the completion of its Front-End Loading (FEL) 2 pre-feasibility study with Hatch Ltd., which estimates that the optimal capacity for a One-Pot LFP production line is 12,500 tonnes per annum ("tpa") and that two such lines (25,000 tpa) could be built on 167,000 sq. ft. of land, making it significantly more efficient in size, footprint, and capital cost than other commercial methods of making LFP.

As of the date of this announcement, the FEL 2 study is at the prefeasibility stage and defines (a) the potential production line size, (b) the optimal plant size for Nano One's site in Candiac, Québec, and provides (c) operating cost estimates and (d) Association for the Advancement of Cost Engineering (AACE) class 4 estimates of the capital cost. LFP sample evaluation with customers is underway, with the goal of securing offtake commitments and building out production capacity to suit.

Nano One is actively exploring site locations for its expansion plans, including but not limited to its existing site in Candiac, Québec, and is engaged with governments in various jurisdictions where access to financial incentives and technology attraction programs could further increase shareholder value and stakeholder interests.

The FEL 2 study relies on a process design basis from January 2023. Subsequent to this, Nano One has identified further potential cost reductions from its full-scale trials and fast-tracking results, as disclosed on September 14, 2023 (below). These anticipated improvements will be factored into an FEL 3 feasibility study, improving project capital and operating costs and energy usage. The FEL 3 study is out for tender and anticipated to kick off in November 2023 and conclude Q3 2024.

LFP from Commercial Size Reactors and Customer Samples Delivered

On September 14, 2023, the Company announced that recent One-Pot trials in the existing reactors at the Candiac plant have produced LFP at commercial scale with performance results consistent to lab scale. Nano One has leapfrogged to full commercial size reactors and its LFP can be shipped to select customers for evaluation.

With Nano One's existing commercial reactors, it has continued to optimize trials in the existing commercial scale reactors, reproducing lab and development results. This demonstrates the One-Pot process can scale to commercial volumes and advances the de-risking of the technology at commercial scale. This rapid advancement allows commercial scale LFP samples to be sent to qualified customers, for thorough evaluation and validation for the purposes of entering binding offtake agreements. Optimization will continue and the results have helped identify key processing parameters and will expedite the commercial scale-up process.

In parallel, Nano One's new 200 tpa One-Pot pilot reactors have been commissioned. These reactors will provide important information to improve the processes and support validation in a cost-effective manner as the Company continues to innovate. They also allow Nano One to have a baseline automated production capacity of 200 tpa, ready to deliver to customers once they have validated the product.

Advancement of Commercial Plans for LFP and Other Cathode Materials

On July 20, 2023, further to an update provided on April 24, 2023, the Company provided an update regarding its commercial plans which are aimed at jumpstarting the commercialization of its One-Pot process starting at 200 tpa (new and initial One-Pot pilot line), expanding in steps up to 2,000 tpa in 2024 (existing commercial reactors), and creation of a full scale commercial plant thereafter (refer to October 23, 2023 announcement above for capacity details).

Nano One will launch LFP in North America, followed by Europe and the Indo-Pacific region, giving it access to hundreds of thousands of tons of demand to power hundreds of gigawatt hours of battery storage and millions of EVs. It begins with a first-of-a-kind commercial-scale LFP production facility, using Nano One's proprietary One-Pot process that leverages its know-how, equipment, land, people, and shareholder support.

Nickel and manganese-based cathode materials play an equally important role in Nano One's growth strategy, and the Company is applying its technologies and collaborating with multiple strategic partners to address the need for greater supply chain security, cost reductions, and environmental protection. To this end, Nano One also has engineering work underway for a separate 100 tpa NMC and LNMO pilot facility. Having piloting capabilities for LFP, NMC and LNMO will enable Nano One to prototype, validate, design, and pilot a new generation of CAM and accelerate the commercial adoption of its One-Pot and sulfate-free M2CAM processes in pursuit of production, joint venture and licensing opportunities.

OVERALL PERFORMANCE

Further to the "*Corporate Developments – Year to Date*" and *"Recent Corporate Developments"* as discussed above, the Company's change in cash flows is summarized below.

The key sources and uses of cash and cash equivalents (cash) during the three and nine months ended September 30, 2023, were as follows:

	Three months ended September 30, 2023 $	Nine months ended September 30, 2023 $
Sources of cash and cash equivalents:		
Government programs	884,000	4,280,000
Interest income	322,000	1,142,000
Cost recoveries from strategic partners	162,000	162,000
Exercises of stock options and warrants	351,000	7,128,000
Uses of cash and cash equivalents:		
Operating expenses, net of working capital fluctuations (1)	(6,823,000)	(21,320,000)
Capital expenditures and facility lease payments (1)	(3,297,000)	(4,835,000)
Net change in cash and cash equivalents during the period	**(8,401,000)**	**(13,443,000)**
Average monthly use of cash for operating expenses, net of working capital	**(2,300,000)**	**(2,400,000)**
Average quarterly use of cash for operating expenses, net of working capital	**(6,800,000)**	**(7,100,000)**

(1) Capital expenditures and operating expenses are shown on a gross basis before allocations of proceeds from Government programs.

The proceeds from exercises of stock options and warrants comprises proceeds of approximately $3,651,000 from the exercise of 2,281,939 warrants at $1.60 each in January and February 2023, and the exercise of stock options generating proceeds of approximately $3,447,000 primarily inclusive of options exercisable at $2.52 each which were exercised in June 2023.

Proceeds from Government programs during the three months ended September 30, 2023 were from the release of the SDTC holdback on the previous project, NRC-IRAP and other grants. The amount received for the nine months ended September 30, 2023, was inclusive of the SDTC Milestone 1 grant and the release of the holdback from the previous completed program.

DISCUSSION OF OPERATIONS

The Company reports operating results in a single operating segment being the research and scale-up of a patented process for future commercial production of cathode active materials (CAM) for lithium-ion battery applications.

For the three and nine months ended September 30, 2023 and September 30, 2022

The following tables summarize the Company's results of operations and cash flows for the three and nine months ended September 30, 2023 and September 30, 2022 (rounded):

	Three months ended		
	September 30, 2023 $	September 30, 2022 $	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(7,582,000)**	(2,408,000)	**(5,174,000)**
Loss and comprehensive loss	**(7,303,000)**	(2,003,000)	**(5,300,000)**
Cash used in operating activities	**(7,492,000)**	(2,145,000)	**(5,347,000)**
Cash used in investing activities	**(1,150,000)**	(31,000)	**(1,119,000)**
Cash provided by financing activities	**241,000**	184,000	**57,000**

	Nine months ended		
	September 30, 2023	September 30, 2022	**Change $**
Revenue	**-**	-	**-**
Loss from operating expenses	**(24,154,000)**	(11,310,000)	**(12,844,000)**
Loss and comprehensive loss	**(23,066,000)**	(10,731,000)	**(12,335,000)**
Cash used in operating activities	**(18,593,000)**	(8,785,000)	**(9,808,000)**
Cash used in investing activities	**(1,677,000)**	(10,619,000)	**8,942,000**
Cash provided by financing activities	**6,827,000**	12,689,000	**(5,862,000)**

See above for details on key sources and uses of cash and cash equivalents during the three and nine months ended September 30, 2023. In the comparative period during the nine months ended September 30, 2022, the Company had invested $10,250,000 in the acquisition of Johnson Matthey Battery Materials Ltd., and had received approximately $12,500,000 from Rio Tinto in the form of a strategic equity investment.

Research and operational expenses

Amounts for the three and nine months September 30, 2023 and September 30, 2022 were as follows (rounded):

	Three months ended			Nine months ended		
	September 30, 2023 $	September 30, 2022 $	**Change $**	**September 30, 2023 $**	September 30, 2022 $	**Change $**
Research and operational expenses (cash-based)	**2,264,000**	1,662,000	**602,000**	**6,197,000**	2,740,000	**3,457,000**
Contractors - warrants issued	**-**	-	**-**	**-**	595,000	**(595,000)**
Inventory adjustments	**271,000**	-	**271,000**	**592,000**	-	**592,000**
Depreciation	**318,000**	213,000	**105,000**	**879,000**	607,000	**272,000**
Cost recoveries	**-**	(1,000)	**1,000**	**(162,000)**	(330,000)	**168,000**
Government assistance accrued, received, or amortized	**(897,000)**	(1,208,000)	**311,000**	**(1,551,000)**	(1,316,000)	**(235,000)**
Research and operational expenses, net	**1,956,000**	666,000	**1,290,000**	**5,955,000**	2,296,000	**3,659,000**

In addition to the research and operational expenses, net amount presented above, the Company incurred approximately $91,000 and $403,000 during the three and nine months ended September 30, 2023, respectively, within professional and consulting, for charges relating to patent filings and applications.

Certain components of operating expenses for the three and nine months ended September 30, 2023 and September 30, 2022, were as follows (rounded):

	Three months ended		
	September 30, 2023 $	September 30, 2022 $	**Increase (decrease) $**
Business development and investor relations	**159,000**	155,000	**4,000**
General and administrative expenses	**513,000**	331,000	**182,000**
Professional and consulting, net	**664,000**	269,000	**395,000**
Wages, benefits and fees, net	**3,772,000**	575,000	**3,197,000**

	Nine months ended		
	September 30, 2023 $	September 30, 2022 $	**Increase (decrease) $**
Business development and investor relations	**512,000**	558,000	**(46,000)**
General and administrative expenses	**1,800,000**	881,000	**919,000**
Professional and consulting, net	**1,914,000**	1,239,000	**675,000**
Wages, benefits and fees, net	**12,616,000**	4,849,000	**7,767,000**

A notable contribution to the increased operating expenses for the nine months ended September 30, 2023 is the inclusion of operating expenses from the Company's Candiac operations for the entire nine months ended September 30, 2023, whereas Candiac operations were not consolidated during the nine months ended September 30, 2022, as the comparative period was prior to ownership of its subsidiary, Nano One Materials Candiac Inc. ("Nano Candiac") (formerly Johnson Matthey Battery Materials Ltd.).

- General and administrative expenses:

  The primary cause of the increase is higher insurance premiums, rent, and increased travel and related expenses. Insurance amounts expensed during the nine months ended September 30, 2023, totalled approximately $242,000. Another key component of general and administrative expenses for the nine months then ended includes informational technology costs.

- Professional and consulting:

  Legal fees totalled approximately $240,000 (decrease of approximately $220,000); patent filing fees increased to approximately $403,000 (increase of approximately $201,000) as a result of greater operational activity. People & Culture expenses, advisory and capital markets services and consultancy, and other consulting increased in aggregate to approximately $1,110,000.

- Wages, benefits and fees, net:

  Personnel levels continue to increase and the primary driver of the change over the comparative period is the inclusion of the Nano Candiac team since November 1, 2022. Wages, benefits and fees is presented net of allocations of SDTC funding.

Government Assistance

The Company receives funding from various Canadian federal and provincial government programs. During the nine months ended September 30, 2023 and September 30, 2022 the following amounts were received:

Amounts received:	**September 30, 2023** **$**	September 30, 2022 $
Sustainable Development Technology Canada (SDTC)	4,087,807	1,797,824
Industrial Research Assistance Program (NRC-IRAP)	131,407	251,999
Other Grants	60,865	-
	4,280,079	2,049,823

SDTC Pre-Commercial Trial and Multi Cathode Piloting Hub Project (active):

On February 13, 2023, the Company executed an agreement with SDTC in respect of a new government program (Pre-Commercial Trial and Multi Cathode Piloting Hub) (the "SDTC Pre-Commercial Project") which will provide the Company with $10,000,000 ($3,284,507 received as at September 30, 2023) in funding from SDTC in stages. The funds are non-dilutive, and non-repayable and are intended to support the Company's design, construction, and operation of a multi-cathode piloting hub in Candiac. The initial project timeline is from January 1, 2023 to December 31, 2025.

The funds from the SDTC Pre-Commercial Project will be paid to the Company in four (4) instalments plus the remaining unpaid release of a final 10% hold-back upon satisfactory review and approval of the project by SDTC. The instalments from SDTC will be paid to the Company at the beginning of each of the four (4) Milestones.

During the nine months ended September 30, 2023, the Company received Milestone 1 funds of $3,284,507.

SDTC Scaling Project (completed):

In 2019, the Company executed a contribution agreement with SDTC for a non-repayable grant in respect of the Company's "Scaling Advanced Battery Materials" project (the "SDTC Scaling Project"). As at September 30, 2023 the Company had received the entirety of the funds ($8,545,500) related to this project and the project was considered completed.

The cumulative amount of program funding received since 2014 from the Government of Canada are as follows:

	September 30, 2023 **$**	December 31, 2022 $
Sustainable Development Technology Canada (SDTC) and BC-ICE	13,911,314	9,823,507
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)[(1)]	1,555,331	1,423,924
Other Grants	239,585	178,720
	17,657,182	13,377,103

[(1)] Includes amounts from the Innovation Assistance Program (IAP) from NRC-IRAP.

SUMMARY OF QUARTERLY RESULTS

The following table shows the results for the last eight fiscal quarters as prepared in accordance with IFRS and presented in Canadian dollars, the Company's functional currency:

Period Ending	Revenue $	Loss and comprehensive loss $	Basic and Diluted Loss Per Share $
September 30, 2023	-	(7,302,645)	(0.07)
June 30, 2023	-	(7,687,742)	(0.07)
March 31, 2023	-	(8,076,104)	(0.08)
December 31, 2022	-	(5,090,271)	(0.02)
September 30, 2022	-	(2,002,962)	(0.05)
June 30, 2022	-	(4,415,217)	(0.05)
March 31, 2022	-	(4,312,314)	(0.03)
December 31, 2021	-	(2,462,276)	(0.02)

There are no significant seasonal variations in quarterly results as the Company is not subject to significant seasonality in its research and corporate activities.

Financial instrument risk exposures:

The Company is exposed to currency risk as it incurs certain transactions in United States dollar, and occasional transactions in the Euro, and the British Pound. However, the Company has assessed that the impact of a 10% fluctuation in foreign exchange rates relative to the Canadian dollar would have impacted the Company's results of operations by approximately $10,000. Additionally, the Company is exposed to commodity price risk including exposure to the fluctuating market prices of lithium as it relates to lithium raw materials within inventory. Any adjustments to the Company's lithium inventory in respect of market fluctuations are included within research and operational expenses.

Variations in loss and comprehensive loss for certain of the above periods were affected primarily by the following factors:

- The three fiscal quarters in 2023, were the first full quarters inclusive of the results of operations from Nano Candiac (since November 1, 2022) including general and administrative expenses, research and operational expenses, and wages, benefits, and fees.
- The quarter ended December 31, 2022, was the first quarter which partially included the acquisition of Nano Candiac. This acquisition resulted in an increase in overall operating costs as costs associated with the subsidiary's operations were included from November 1, 2022. A primary component is wages and benefits.
- The quarter ended September 30, 2022 had a relatively reduced loss as a result of government program proceeds and amortization of deferred government assistance allocated within operating expenses.
- The quarter ended March 31, 2022, was characterized by a significant increase in the volume and cost of research activities as well as increases in substantially all other cash-based components of operating expenses.

Use of Proceeds from Financings

The Company raised approximately $50,000,000 ($50,411,757) in aggregate, net of costs within the following three equity financings between February 2020 and April 2021:

- On February 21, 2020 (the "First Financing"), the Company completed a non-brokered private placement for gross proceeds of approximately $11,000,000. The net proceeds of the placement after deducting finders' fees, legal, filing, and other fees were $10,381,392;
- On October 29, 2020, the Company completed a short form prospectus financing for gross proceeds of approximately $14,000,000. The net proceeds of the financing after deducting finders' fees, legal, filing and other fees were $13,118,991; and
- On April 1, 2021, the Company completed a short form Prospectus financing for gross proceeds of approximately $29,000,000. The net proceeds of the financing after deducting the cash underwriters' commission and expenses, legal, filing and other fees were $26,911,374.

For the period from closing of the First Financing (February 21, 2020) to December 31, 2022 the period in which the net proceeds had been fully utilized, the Company had fully utilized the net proceeds of the financings as presented in the MD&A for the year ended December 31, 2022.

TRANSACTIONS BETWEEN RELATED PARTIES

Key management personnel are the persons responsible for the planning, directing, and controlling the activities of the Company and includes both executive and non-executive directors, and entities controlled by such persons. The Company considers all directors and officers of the Company to be key management personnel.

The following transactions were carried out with key management (gross amounts):

	Transactions nine months ended September 30, 2023	Transactions nine months ended September 30, 2022	**Balances outstanding September 30, 2023**	Balances outstanding December 31, 2022
	$	$	**$**	$
Bedrock Capital	112,500	112,500	-	-
DBM CPA	164,500	126,165	18,375	11,844
Directors' fees	241,509	176,660	-	-
Management and directors' fees (within wages, benefits and fees)	518,509	415,325	18,375	11,844
Wages, benefits and fees (officers)	1,985,547	992,340	-	-
Share-based payments (directors and officers)	654,580	891,149	-	-
Patent Filing Specialists (professional and consulting; and intangible assets)	351,029	170,452	32,347	11,795
	3,509,665	2,469,266	**50,722**	23,639

(a) Professional and consulting, net:

- Includes the services of Patent Filing Specialists Inc. ("Patent Filing Specialists"), a company controlled by Joseph Guy, a Company Director. Transactions are included within both intangible assets (for capitalized patent issue costs) and professional and consulting, net for patent filings, maintenance and related.

(b) Wages, benefits and fees, net (including allocations to research and operational expenses, net):

- Includes salaries and short-term variable cash-based compensation incentives paid to Dan Blondal, CEO; Stephen Campbell, CTO; Alex Holmes, COO; Pamela Kinsman, Corporate Secretary/Director of Sustainability; Denis Geoffroy, Chief Commercialization Officer (CCO); Adam Johnson, Senior Vice-President of External Affairs; and Kelli Forster, Senior Vice-President of People & Culture.

  In accordance with an executive employment agreement the Company has in place with Dan Blondal, in case of termination by the Company without cause, he is entitled to six (6) weeks' base pay (or notice) for every year of service to a maximum of twenty-four (24) months. He would not be entitled to further bonus payments after termination. In the case of resignation after a Change of Control and for 'Good Reason', Dan Blondal is entitled to twenty-four (24) months' base salary.

- Includes the services of Bedrock Capital Corp. ("Bedrock Capital") a company controlled by Paul Matysek the Executive Chairman and a Company Director.

- Includes the services of Donaldson Brohman Martin, CPA Inc. ("DBM CPA"), a firm in which Dan Martino, CFO is a principal.

- Includes compensation to non-executive directors of the Company and committee chairpersons.

(c) Share-based payments:

- Includes amounts recognized on vesting of stock options and Equity Incentives granted to directors and officers.

- During the nine months ended September 30, 2023, the Company granted 311,784 RSUs and DSUs to various directors and officers (2022 – 189,424 RSUs granted). In October 2023, the Company granted 96,574 DSUs and 11,301 RSUs (107,875 total DSUs and RSUs), to directors of the Company.

LIQUIDITY AND CAPITAL RESOURCES

As at September 30, 2023, the Company had working capital of approximately $22,000,000.

The Company considers its capital structure to consist of its components of shareholders' equity. When managing capital, the Company's objective is to ensure that it continues as a going concern, to ensure it has sufficient capital to deploy on new and existing projects (including the requirement for matching funds relating to SDTC projects), as well as generating returns on excess funds while maintaining liquidity/accessibility to such funds. In order to facilitate the management of its capital requirements, the Company prepares annual expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment, growth of its workforce, and general capital market or industry conditions. The Board of Directors relies on the expertise of the Company's management to sustain future development of the business. Management reviews and adjusts its capital structure on an ongoing basis.

The Company is not subject to any externally imposed capital requirements. There were no changes to the Company's approach to capital management during the nine months ended September 30, 2023.

The Company currently has no source of revenues, though it receives funding from government programs (Note 8) and has historically relied upon equity financing (strategic partners and capital markets) to fund its activities. In order to fund ongoing capital and operating expenditures, the Company will spend its existing working capital and seek additional capital sources to facilitate commercialization plans.

The Company currently invests excess capital in high-interest savings accounts ("HISAs") and/or HISA funds which bear interest at variable rates (cash equivalents), as well as in guaranteed investment certificates ("GICs") bearing fixed rates of interest that are liquid and redeemable on demand (cash equivalents) and have original terms not exceeding 12 months.

As at September 30, 2023 and December 31, 2022, the Company had excess capital invested in a HISA, a HISA fund, and GICs, which facilitates the diversification of treasury amongst high-credit quality Canadian chartered banks. These holdings are accessible on demand or cashable. During the nine months ended September 30, 2023, the Company earned interest income of $1,141,600 from its treasury investments.

The Company's primary source of capital and liquidity from 2020 onwards has been from three financings over the course of fourteen months from February 2020 to April 2021, which generated gross proceeds of approximately $54,000,000 (approximately $50,000,000, net of costs), proceeds received from exercises of stock options and warrants (approximately $5,384,000 during 2021 and 2022, and approximately $7,128,000 in 2023 to September 30, 2023), government assistance programs, and strategic investments in the Company by Rio Tinto in June 2022 and Sumitomo Metal Mining Co., Ltd., in October 2023, of approximately $29,500,000 in aggregate.

The three financings completed from 2020 are detailed above within *"Use of Proceeds from Financings"*.

Contractual obligations

The following table summarizes the Company's contractual maturities for its financial liabilities:

As at September 30, 2023	Carrying amount $	Contractual cash flows $	Under 1 year $	1-5 years $	More than 5 years $
Accounts payable and accrued liabilities	4,821,305	4,821,305	4,821,305	-	-
Accounts payable to related parties	50,722	50,722	50,722	-	-
Lease liabilities	1,820,743	2,330,857	539,577	1,192,322	598,958
Total	**6,692,770**	**7,202,884**	**5,411,604**	**1,192,322**	**598,958**

OUTSTANDING SHARE AND EQUITY DATA

The authorized share capital of the Company consists of unlimited common shares without par value. All issued common shares are fully paid. All stock options, warrants, and RSUs/DSUs outstanding are each convertible into one common share of the Company. As at the MD&A Date, the Company's common share data was as follows:

	As at the MD&A Date	
	#	Weighted average exercise price $
Common shares issued and outstanding	110,676,777	n/a
Stock options outstanding	3,935,347	3.47
Warrants outstanding	-	-
RSUs/DSUs outstanding	667,774	n/a
Fully diluted	**115,279,898**	

ACCOUNTING MATTERS

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of income and expenses during each reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates. The Company's significant accounting policies are detailed in Note 2 to the financial statements for the year ended December 31, 2022.

Key sources of estimation uncertainty

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities as at the date of the financial statements and reported amounts of income (loss) and expenses during each reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

Fair value of equity incentives (stock options, restricted share units, deferred share units, performance share units) and compensatory warrants

Determining the fair value of stock options, and compensatory warrants for services or in relation to financings, requires estimates related to the choice of a pricing model, the estimation of stock price volatility, the fair value of the Company's common shares, the expected forfeiture rate, and the expected term of the underlying instruments. Any changes in the estimates or inputs utilized to determine fair value could have a significant impact on the Company's future operating results or on other components of shareholders' equity.

Property, plant and equipment

The estimated useful lives of property, plant and equipment are reviewed by management and adjusted if necessary. To estimate property, plant and equipment's useful life, management may use its past experience, review engineering estimates and industry practices for similar items of property, plant and equipment to assist in its determination of useful life.

There have been no changes to the depreciation methods used by the Company during the nine months ended September 30, 2023.

Critical judgments in applying accounting policies

Research and operational expenses

The determination of whether expenditures on research and development activities meet the criteria for capitalization as internally generated intangible assets is subject to estimation and uncertainty. The Company has determined that until such time that it has a commercial-scale plant in the condition and location necessary to commence commercial production, that it will remain in the research phase (pre-commercial phase) and accordingly expenditures will be expensed within the Company's results of operations.

The Company has determined that its activities continue to be classified as research in nature, as opposed to development. This results in research costs being expensed to profit or loss within the financial statements.

Standards issued but not yet effective

Certain pronouncements have been issued by the IASB or IFRIC that are effective for accounting periods beginning on or after January 1, 2024. The Company has reviewed these updates and determined that none are applicable or consequential to the Company and have been excluded from discussion within these significant accounting policies.

In June 2023, the International Sustainability Standards Board ("ISSB") issued the following IFRS Sustainability Disclosure Standards: *General Requirements for Disclosure of Sustainability-related Information* (IFRS S1); and *Climate-related Disclosure* (IFRS S2), which are effective for accounting periods beginning on or after January 1, 2024, but are not currently mandated in Canada. The Company will monitor the continued development of mandating these standards and the requisite disclosure requirements.

IFRS S1 sets out general reporting requirements for disclosing sustainability-related financial information. IFRS S2 requires an entity to disclose information about climate-related risks and opportunities and the impact on an entity's financial position, performance, cash flows, strategy, and business model.

Financial instruments – classification and fair value

Classification of financial instruments

Financial assets:	Classification:
Cash and cash equivalents	FVTPL
Receivables	Amortized cost
Deposits	Amortized cost

Financial liabilities:	Classification:
Accounts payable and accrued liabilities	Amortized cost
Accounts payable to related parties	Amortized cost
Lease liabilities	Amortized cost

The Company's financial instruments can be exposed to certain financial risks including liquidity risk, credit risk, interest rate risk, price risk, and currency risk. Details of these risks and related assessments as well as the fair value measurements of the Company's financial instruments are included in the Company's financial statements for the nine months ended September 30, 2023, within Note 13.

OFF-BALANCE SHEET ARRANGEMENTS

Nano One does not utilize off-balance sheet arrangements.

PROPOSED TRANSACTIONS

There are no proposed transactions as the MD&A Date.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Information provided in this MD&A and the financial statements is the responsibility of management. In the preparation of the financial statements, estimates are sometimes necessary to make a determination of the carrying value for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the financial statements. Management maintains a system of internal controls to provide reasonable assurances that the Company's assets are safeguarded and to facilitate the preparation of relevant and timely information.

APPROVAL

The Board of Directors of the Company has approved the disclosure contained in this MD&A.