

# NANO ONE MATERIALS CORP.

Unit 101B, 8575 Government Street Burnaby, BC V3N 4V1

> Telephone: 604-420-2041 Facsimile: 604-608-9009 Website: www.nanoone.ca

**Annual Information Form** 

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2020

**DATED MARCH 15, 2021** 

# NANO ONE MATERIALS CORP.

# ANNUAL INFORMATION FORM

# FOR THE FISCAL YEAR ENDED DECEMBER 31, 2020

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#### **INTRODUCTORY NOTES**

#### **Date of Information**

In this Annual Information Form (the "AIF"), unless the content otherwise requires, references to the "Company" or "Nano One" mean Nano One Materials Corp. All information in this AIF is as at December 31, 2020, with subsequent events disclosed to March 15, 2021.

#### **Currency**

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

## **Cautionary Note Regarding Forward-Looking Information**

Except for statements of historical fact, this AIF contains certain forward-looking statements and forward-looking information within the meaning of applicable securities law. Such forward-looking statements and information include, but are not limited to, statements or information with respect to: 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; and scalability of developed technology.

Forward-looking information is frequently characterized by words such as "plan", "project", "intend", "believe", "anticipate", "estimate" and other similar words, or statements that certain events or conditions "may" or "will" occur. Although the Company's management believes that the assumptions made and the expectations represented by such statement or information are reasonable, there can be no assurance that a forward-looking statement or information referenced herein will prove to be accurate. Forward-looking statements are based on the opinions and estimates of management at the date the statements are made, and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those anticipated in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include risks relating to: the duration, extent and other implications of the coronavirus ("COVID 19") and any restrictions or suspensions with respect to our operations; 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 and secure government assistance; the Company's limited operating history; the Company's ability to attract employees, consultants, or advisors with the necessary skills and knowledge; the need to comply with environmental and governmental regulations; fluctuations in currency exchange rates; operating hazards and risks; competition; the possibility of adverse developments in the financial markets generally; and other risks and uncertainties. The Company undertakes no obligation to update forward-looking statements and information if circumstances or management's estimates should change except as required by law. The reader is cautioned not to place undue reliance on forward-looking statements and information. More detailed information about potential factors that could affect results is included in the documents that may be filed from time to time with the Canadian securities regulatory authorities by the Company.

For a more detailed discussion of certain of these risk factors, see "Risk Factors". The list of "Risk Factors" set out in this AIF is not exhaustive of the factors that may affect any of our forward-looking information.

#### GLOSSARY OF DEFINED TERMS

Unless otherwise defined herein, the following terms used in this AIF have the meanings set forth below:

**"Board"** means the board of directors of Nano One.

"BCBCA" means the British Columbia Business Corporations Act.

"Common Shares" means the common shares in the capital of Nano One

"NI 51-102" means National Instrument 51-102, Continuous Disclosure Obligations

"TSX-V" means the TSX Venture Exchange Inc.

"SEDAR" means the System for Electronic Document Analysis and Retrieval, the

electronic filing system for the disclosure documents of public companies

and investments funds across Canada, available at www.sedar.com.

# **CORPORATE STRUCTURE**

#### Name, Address, and Incorporation

The Company was incorporated under the laws of the Province of Alberta on November 5, 1987 and continued under the laws of the Province of British Columbia on September 8, 2004. On March 5, 2015, the Company completed a combination with Perfect Lithium Corp. ("PLC"), a private company incorporated in February 2011 under the laws of the Province of British Columbia, whereby it acquired all the issued and outstanding common shares of PLC in exchange for issuing Common Shares to the former shareholders of PLC. On July 1, 2015, the Company amalgamated with PLC and continued as one company under the name, Nano One Materials Corp. Nano One trades on the TSX-V under the symbol "NNO".

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

#### **Intercorporate Relationships**

Nano One does not have any subsidiaries.

#### GENERAL DEVELOPMENT OF THE BUSINESS

## **Three Year History**

#### Fiscal 2018

In November 2018, the Company entered into a Joint Development Agreement with Saint-Gobain, a French multinational corporation that produces a wide variety of construction and high-performance materials for applications in automotive, aerospace, health, and energy. Under the Joint Development Agreement, the two companies are working in collaboration to enhance the thermal processing and performance of their respective materials. Saint-Gobain also joined the Company's Sustainable Development Technology Canada ("SDTC") funded pilot plant project as a consortium member contributing work-in-kind.

In 2018, the Company also completed preliminary engineering plans for a modular 3,300 tonnes/year NMC622 cathode production unit designed to supply sufficient cathode materials for approximately 37,000 60kWh lithium-ion electric vehicle batteries, equivalent to 2.2 GWh.

The Company also began efforts to synthesize lithium nickel manganese cobalt ("NMC") NMC811 with 80% nickel content, which provides relatively high energy density and has applications in longer range electric vehicles. However, NMC811 has well known instabilities that can lead to costly issues with safety, longevity, and handling. The Company is developing an NMC811 material with proprietary coatings and additives to address the inherent shortcomings of NMC811. The Company also successfully synthesized lithium nickel manganese oxide ("LNMO", or High Voltage Spinel, "HVS"), in the Company's pilot plant with protective coatings that reduce side reactions and improve stability at higher operating temperatures.

The Company also developed a low-cost process for the production of high-performance Lithium Iron Phosphate ("LFP"). This process uses lower cost sources of lithium, iron and phosphorus than incumbent processes, and this process has been successfully demonstrated in preliminary pilot volumes. The process also generates a carbon coating simultaneously with the formation of the LFP particles thereby eliminating additional process steps. Further, the process generates material with a small particle size which is desirable, and with an initial energy capacity in excess of 160mAhg<sup>-1</sup> which is equivalent to or better than the highest performing LFP material available.

During 2018, the Company received aggregate payments from government grant funding programs of approximately \$1,428,000. Additionally, the Company executed an agreement with NRC-IRAP (August 2018) for the development of coatings for high durability lithium-ion battery cathodes.

#### Fiscal 2019

In January 2019, the Company entered into a Joint Development Agreement with Pulead Technology Industry ("**Pulead**"). Pulead is a highly respected Chinese cathode producer with a track record of partnering with international providers of intellectual property. Under the agreement, Nano One's initial focus is on manufacturing innovations and plant design to improve the cost, margins and competitiveness of LFP.

LFP is the safest, longest lasting and cheapest cathode material for use in lithium-ion batteries, used in electric buses, fleet vehicles, and renewable energy storage. As the cost of lithium-ion batteries decreases, they anticipated to replace lead acid batteries and potentially fuel a new generation of long range, long lasting electric vehicles.

During 2019 Nano One undertook further research and development to reduce the production cost of LFP, so as to be competitive and well positioned as the LFP market continues to expand. If Nano One is successful in producing LFP at competitive prices and volumes, the Company expects to enter into royalty bearing license agreements and/or enter into joint ventures for the rights to use Nano One's intellectual property for the production of LFP.

In July 2019, the Company executed, a previously announced, contribution agreement with SDTC, for non-dilutive and non-repayable funding of up to \$5,000,000 in respect of the Company's "Scaling Advanced Battery Materials" project. The proceeds are to be distributed over three years in five payments, of which the first instalment of approximately \$974,000 was received during 2019 and will be directed at the expansion of Nano One's business and technical activities with its partners. The goals are to expand the laboratory, pilot plant, and staffing to support the advancement of next generation lithium-ion battery cathode materials used in electric vehicles, and renewable energy storage.

In June 2019 Volkswagen Group Research joined Nano One's consortium as an SDTC project contributor, along with previously announced consortium members Pulead, and Saint-Gobain.

In June 2019, the Company received a purchase order in the amount of \$550,000 from a global Original Equipment Manufacturer ("**OEM**") to jointly evaluate processes and innovative cathode materials for high energy density lithium-ion batteries in automotive applications. The project concluded successfully in May 2020.

During 2019, the Company received aggregate payments from government funding programs of approximately \$1,456,000.

#### Fiscal 2020

#### Financings and Government Funding

In February 2020, the Company completed a non-brokered private placement consisting of the issue of 9,565,000 units at a price of \$1.15 per unit for gross proceeds of approximately \$11,000,000. Each unit consisted of one common share and one-half of a common share purchase warrant with each whole warrant exercisable into one common share at an exercise price of \$1.60 until February 21, 2023.

In May 2020, the Company announced that the Innovative Clean Energy (ICE) Fund of the Province of British Columbia's Ministry of Energy, Mines and Petroleum Resources will be contributing \$3,033,000 to the "Scaling Advanced Battery Material" project in conjunction with, and over and above, the SDTC's \$5,000,000 funding. In 2020, the Company received approximately \$1,500,000 of this contribution.

On October 29, 2020, the Company completed a short-form prospectus financing consisting of the issue of 5,282,900 units at a price of \$2.72 per unit for gross proceeds of approximately \$14,400,000. Each unit consisted of one common share and one-half of a common share purchase warrant with each whole warrant exercisable into one common share at an exercise price of \$3.55 each until October 29, 2022.

# Engineering and Economic Modelling

In June 2020, an engineering report prepared by Noram Engineering and Constructors of Vancouver, British Columbia was completed, detailing enhanced design specifications and improved economics for the commercial scale production of lithium-ion battery cathode materials using Nano One's proprietary One-Pot Process for the production of cathode active materials. 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. patented and scaled-up an innovative one-pot process (the "One-Pot Process") for the production of cathode active materials.

The economics and design specifications in the report relate to the potential for a 4,800 tonne/year manufacturing line for the production of LFP and reveal a reduction in equipment and operating expenses from previous estimates and improved raw material costs (see LFP related activities within "Three Year History - Fiscal 2019" above and within "Strategic Partnerships" below). Further, the report forms an engineering basis for Nano One's other cathode materials, namely NMC and lithium manganese nickel ("LMN").

Ongoing engineering work is underway to assess the processing and feedstock cost reductions and the waste and greenhouse gas emissions ("GHG") reduction benefits of metal to cathode active material ("M2CAM") and the One-Pot Process.

## Partnership and Technological Breakthroughs

In June 2020, the Company announced the development of a coated, single crystal cathode material for lithium-ion batteries that is provides up to four (4)-times improvement in battery longevity. This technology is applicable to all of Nano One's cathode materials but is especially relevant to NMC811.

In August 2020, Nano One signed a Joint Development Agreement with a large multinational materials producer that supplies the Asian automotive industry. Work under this agreement is focused on jointly developing the combined technologies of both companies to pursue a manufacturing opportunity, through licensing or joint venture, to supply materials for a new generation of lithium-ion batteries. The agreement also provides a framework to develop a business plan for the commercialization of these jointly developed materials. The potential outcomes of the agreement include formation of a joint venture, licensing of Nano One's technology, and/or further joint development work.

In October 2020, the Company announced a further breakthrough in battery longevity with its cobalt-free high voltage cathode materials which were successfully demonstrated at automotive rates of charge and discharge for over 900 cycles. The demonstration battery uses a low cost, cobalt-free LNMO cathode active material made with Nano One's proprietary One-Pot Process. The breakthrough facilitates the avoidance of rapid capacity fade and premature failure and successfully demonstrates a high voltage lithium-ion battery cell with significant cycle life. The enabling technology is Nano One's patented LNMO cathode material operating up to 4.7 volts, 25% higher than commercial lithium-ion batteries, improving efficiency, thermal management, and power.

In December 2020, Nano One entered into a Cathode Evaluation Agreement with an American based multinational automobile manufacturer to jointly evaluate Nano One's cathode materials for use in automotive lithium-ion batteries. The goal of this project is to evaluate the performance and commercial benefit of Nano One's patented One-Pot Process for nickel-rich and cobalt-free cathode materials in electric vehicle applications.

#### Facilities Expansion

In 2020, the Company began the expansion of facilities at its head office location in Burnaby, British Columbia. Two new units were leased to grow its facilities from 5,000 sq. ft. to 15,000 sq. ft. The facilities expansion is for the purpose of facilitating infrastructure growth by adding a new dry room (in construction), laboratory space (completed), expanding the battery test room (completed), adding new furnaces and facilitating the increase in staffing to support these efforts.

## Subsequent Events

#### *M2CAM Technology*

In February 2021, Nano One announced the launch of its M2CAM technology which reduces cost, reduces waste, and reduces the carbon footprint in the lithium-ion battery supply chain. The Company commenced or continued discussions with large integrated miners to reduce environmental footprints and maximize upstream value in the global battery supply chain. Nano One's other collaborators include automotive OEMs with similar motivations to meet environmental targets by reducing waste, carbon emissions, logistics and costs. Patents are pending for M2CAM and preliminary test results are showing battery capacity up to 5% higher than cathode materials currently made from metal salts.

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 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. The One-Pot Process is an aqueous process, using carbon neutral chemistry, that operates at room-temperature and atmospheric pressures, and it combines feedstock conversion, precursor formation, lithiation and coating steps into one reaction. 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.

#### Other Events

In January 2021, the Company announced that it had submitted a proposal to demonstrate its M2CAM and One-Pot Process technologies in the Chilean Clean Technology Institute, Instituto Chileno de Tecnologías Limpias (ICTL), as part of a joint project proposal with Associated Universities, Inc. (AUI). AUI were awarded the winning bid by the Corporación de Fomento de la Producción de Chile (CORFO) Council on January 4, 2021 to build, manage and operate the Institute.

In February 2021, Nano One announced that its proprietary coated single crystal HVS cathode material was performing well in University of Michigan test programs through Nano One's collaboration with the University of Michigan on the development of innovative solid-state battery technology.

## **Significant Acquisitions**

The Company has not completed any acquisition during its most recently completed fiscal year for which disclosure is required under part 8 of NI 51-102.

#### DESCRIPTION OF THE BUSINESS

## **Corporate Summary**

The Company has developed, patented and scaled-up an innovative One-Pot Process for the production of cathode active materials ("CAM") for lithium-ion battery applications in electric vehicles, energy storage systems, and consumer electronics. Nano One has proven its technology in the laboratory, built a demonstration pilot plant, and is partnering with key automotive OEMs and cathode manufacturers.

Nano One's technology is intended to improve the performance and cost of cathode materials, reduce complexity and excess waste in the supply chain, minimize carbon footprint and simplify production using environmentally sustainable processes. It is a manufacturing platform suited to many types of lithium-ion cathode materials, which may be used in automotive, grid storage and consumer electronic batteries, including standard, advanced, and next generation solid state batteries.

The Company holds several patents, with others pending.

Nano One's One-Pot Process is engineered to use non-sulfate forms of metal feedstock, with the intention of reducing total cost and carbon footprint of feedstock needs per kilogram of CAM, eliminating the need to convert metal to sulphate, lithium to hydroxide, sulphate waste, water consumption, excess GHG and added process costs. Furthermore, the process uses lithium feedstock in the form of carbonate rather than hydroxide which is costly, corrosive and harder-to-handle. The process is feedstock flexible which enables improved optionality of sourcing of raw materials. 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, and coatings in a single reaction to produce a precursor that, when dried and fired, forms quickly into a single crystal cathode material simultaneously with its protective coating.

#### Addressable Markets

The Company's first addressable market is cathode materials for lithium-ion rechargeable batteries for electric vehicles, energy storage systems, and consumer electronics. There is growing demand in the lithium-ion battery market for more cost effective, higher performance, and environmentally sustainable energy storage solutions. Nano One anticipates growth potential for the technology in many other materials markets including dental, catalysts, specialty ceramics, pharmaceutical, semiconductors, agriculture, aerospace, and communications.

## **Process Developments**

Nano One's One-Pot Process forms durable single crystal cathode powders and protective coatings simultaneously, directly from sulphate-free metal salts and lithium carbonate. It is an environmentally inspired process that uses limited water and produces no waste stream. The process eliminates intermediate products, additional coating steps and the costly requirements for metal-sulphates and lithium hydroxide feedstocks. The One-Pot Process enables CAM to be made direct from metal using nickel, manganese and cobalt metal powder feedstocks rather than metal sulfates or other salts. Metal powders are one-fifth of the weight of metal sulfates, avoiding the added costs, energy and environmental impact of converting metals to sulfate and shipping and handling of waste. 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.

Nano One's technology offers the flexibility to use either lithium carbonate or hydroxide. This is enabled by mixing lithium with all other metal inputs in Nano One's patented One-Pot Process reaction to produce a fully-lithiated mixed-metal intermediate powder that is neither carbonate nor hydroxide, allowing it to form finished cathode powder when thermally processed in a furnace. In contrast to this, conventional methods form mixed-metal intermediate powders ("**PCAM**") that must then be milled and thermally processed with lithium hydroxide powders because the required furnace temperatures are not compatible with lithium carbonate.

Nano One's process consists of three stages, and the major innovations lie in the first stage where a special mode of combining reactants controls crystal nucleation and growth of particles, while converting the input materials into a composite powder that readily fires in a downstream kiln to form coated nanocrystal cathode powders. Nucleation is the self-assembly of molecules into an organized structure. The desired nano-scale or superfine structure is formed in the first stage of the production cycle and eliminates many steps common to the incumbent industrial processes.

The desired crystal structure, morphology and performance enhancing coatings of the materials are formed readily and simultaneously in the final thermal processing steps, eliminating extra coating steps and the need for long and repeated kiln firings. The process produces materials with stable phase composition (crystal structure) and high porosity, but which is configurable to meet a variety of energy density requirements.

Nano-crystalline structures are formed early in the process and before calcination (i.e. heating to high temperature) which simplifies processing and is advantageous for material performance, process throughput, and scale-up. Characterization of the materials by electron microscope and x-ray provides evidence of the size, composition, and kind of crystal structure needed to withstand thousands of charge cycles.

Typically, synthesis of nanomaterials at the bench scale is performed in small quantities anywhere from 10g to 100g of material. Subsequent scale-up from these small quantities often leads to detrimental changes in thermodynamics (heat, temperature, energy, work) and reaction kinetics (reaction rates and chemical change). Consequently, the Company has designed, constructed and commissioned bench scale and pilot scale reactors that emulate the thermodynamic and reaction kinetics expected in full-scale production of cathode materials.

The Company continues to develop coating and doping (chemical additives) technologies for LFP, NMC, and LNMO materials (see details of these specific formulations below) with the objective of improving both the durability, stability, and performance characteristics of these materials for use in lithium-ion batteries, solid state batteries and other advanced battery systems. The Company's process is suitable for component gradients within crystals and surface coatings without the need for additional process steps.

#### **Product Developments**

The Company's primary cathode formulations under development include:

- Lithium Nickel Manganese Cobaltate (NMC622, NMC811);
- Lithium Nickel Manganese Oxide (LNMO, or High Voltage Spinel HVS); and
- Lithium Iron Phosphate (LFP).

# NMC622 and NMC811

In 2017, the Company successfully piloted NMC622 with 60% nickel content and in 2018, completed a preliminary engineering study to determine capital and operating expenses for a 3,300 tonne/year production unit (See "*Three Year History – Fiscal 2018*").

In 2018, the Company began efforts on NMC811 with 80% nickel content, which provides relatively high energy density and has applications in longer range electric vehicles.

In June 2020, the Company announced a breakthrough development of a coated, single crystal cathode material for lithium-ion batteries that is providing up to four (4)-times improvement in longevity compared to uncoated materials. This technology is applicable to all of Nano One's cathode materials but is especially relevant to NMC811.

NMC materials are further improved by the Nano One's M2CAM technology which reduces complexity, cost, waste, and carbon footprint in the lithium-ion battery supply chain.

The Company is now working with various automotive manufacturers, cathode producers and academic institutions to evaluate its patented One-Pot Process and coated NMC based materials. See "*Three Year History – Fiscal 2018 - 2020*"

#### LNMO or HVS

The largest single challenge in solid state batteries is to design a stable and commercially viable interface between the solid electrolyte, of polymer, ceramic or glass composition, and the solid cathode and anode materials on either side of the electrolyte. The coated LNMO (or HVS) stabilizes the interface between cathode and electrolyte because: (i) it does not expand and stress the cathode-electrolyte interface like other cathode materials, and (ii) the coating protects the cathode from side-reactions with the electrolyte while allowing the rapid transfer of lithium-ions between the electrolyte and the cathode. In comparison to other cathode materials, HVS is faster charging and operates at higher voltage enabling increased power and energy densities. HVS is also free of cobalt and the associated supply chain risk.

In 2018, the Company successfully synthesized LNMO (or HVS) and is now working with various automotive manufacturers, cathode producers and academic institutions to evaluate its patented One-Pot Process and coated LNMO (HVS) cathode materials. See "*Three Year History*".

#### **LFP**

LFP is the safest, longest lasting and lowest cost cathode material for lithium-ion batteries due to the relative stability of olivine crystal structure, its high durability and its low-cost inputs. Further cost reductions could significantly increase the demand for LFP to make it a cathode material of choice for energy storage systems, for replacing lead-acid batteries, and for expanding applications entry level, heavy duty and long range electric vehicles.

In response to this opportunity, the Company has developed and successfully piloted a low-cost process and completed detailed engineering study that highlight improved economics for the production of LFP using lower cost sources of materials. See "Three Year Historical – Fiscal 2018".

# **Stage of Development**

The Company conducts its own research and development, and its technologies and materials are currently in a pre-commercial stage. Aggregate costs for the pre-commercial activities are estimated to be approximately \$5,000,000 per year,

- LFP is being optimized for advanced raw material inputs to address price pressures and prepared for third party demonstration pilot scale evaluation and detailed engineering of full scale production units.
- NMC811 (and equivalents) are in Feasibility and Validation phases (lab-scale and pre-pilot scale, third party materials testing and validation of commercial interest and engineering planning for pilot and full scale production units).
- HVS is in the Scale-up and Validation Phase (pre-pilot and pilot scale activities with third party evaluations and validation of commercial interest).

## **Business Objectives**

In the near term (one to three years), Nano One intends to focus on:

- Developing, advancing and promoting M2CAM technology through collaborative partnerships with OEMs, miners and cathode producers. The Company is aiming to disrupt the supply chain and make cathode materials direct from metal powders and lithium carbonate. This will eliminate: (i) the conversion of metals to sulfates and lithium to hydroxide, (ii) the associated energy, GHG emissions, cost, and waste and (c) the unnecessary transport of water and sulfate.
- Prototyping and scaling up by expanding its demonstration pilot plant and laboratory facilities to serve technology development, partnership and licensing objectives.
- Developing and building its first internationally located demonstration pilot plants and commercial plant(s) to advance existing partnerships to joint ventures, licensing agreements, and first production pilot, with the goal of generating initial revenues by the end of 2022.
- Identifying and validating additional joint development partners throughout the supply chain.

Nano One's long term opportunities (three to five years), include:

- Generating royalty and joint venture revenues from the production of NMC, LFP and HVS
  in collaboration and partnership with US, European and Asian companies. The Company
  anticipates license revenues from NMC will follow, as coated single crystal and the
  Company's M2CAM technology is advanced. Markets for HVS and other advanced CAM
  formulations will be nurtured through the development of advanced high voltage batteries
  and solid-state batteries with OEMs and anode/electrolyte developer consortiums.
- Commercial expansion via manufacturing adoption of the One-Pot Process, accelerated with differentiation and market growth. Revenue expansion is anticipated to flow from scale of clients.
- Access to potential U.S. \$25 billion global cathode materials market through ongoing innovation for high margin opportunities in licensing, joint ventures, mergers and acquisition, and supply chain integration. Continuous innovation in battery cathodes would add value and help preserve high margins.

# **Electric Vehicle Industry**

The electric vehicle industry is being driven, partly, by demands for longer range vehicles which require higher energy density lithium-ion batteries that are safe, reliable and cost-effective, which batteries are produced using environmentally sustainable raw materials, and production processes. These factors have increased the demand for cathode materials composed of higher nickel and lower cobalt content, and for reductions in the environmental and carbon footprint in the lithium-ion battery materials supply chain.

Nickel-rich cathode materials include nickel cobalt aluminum oxide ("NCA") and nickel-manganese cobalt oxide (NMC532, NMC622 and NMC811). These materials are expected to

converge into similar formulations and play an increasingly dominant role in the lithium-ion batteries used by major electric vehicle manufacturers.

Current industrial methods require metals to first be converted to metal sulphates and lithium to lithium hydroxide as feedstocks for these nickel-rich cathode materials. The flexibility of the Company's process enables the use of metal powders (and other sulfate free metal salts) and lithium carbonate (or lithium hydroxide) for the production of high-performance cathode materials which provides optionality in sourcing battery grade raw material inputs..

To date, the Company has demonstrated the synthesis of high energy cathode material for electric vehicles with energy densities on par with industry standards. This demonstration underlines the opportunity of Nano One's technology to reduce waste, cost and carbon footprint in the supply chain, and it enables a wider range of lithium and other metal sources for the rapidly growing electric vehicle market. This supplements other benefits of the Company's technologies including improved cathode material durability, power, energy, and processing costs.

# Specialized Skills and Knowledge

The Company requires the specialized skills and knowledge of public market specialists, operations managers, material scientists, electrochemists, thermal processing engineers, process engineers, hydro metallurgists, battery testers, technicians, business development, government liaison, and regional marketing expertise. Most of these skills are already in place and where gaps develop, the Company is readily able to identify individuals and companies in the Canadian talent pool as employees, consultants, and/or advisors.

# **Patents and Proprietary Technology**

The Company believes that monetization of its technology is best pursued by protecting its proprietary position with patents and by pursuing a licensing strategy. This is seen as a capitally efficient means to leverage the supply chain, manufacturing, distribution, and legal strengths of multinational materials producers, while allowing the Company and its collaborators to focus on core strengths in technology development.

Patent Family	Short Description	<u>Title</u>
US 9,136,534	Method of forming a powder by generation of	Complexometric Precursor Formulation
CA 2,906,009	a complexecelle	For Industrial Production Of High
		Performance Fine And Ultrafine
		Powders And Nanopowders For
		Specialized Applications
US 9,159,999	Method of forming a powder by formation of	Complexometric Precursor Formulation
US 10,446,835	a surface interface	Methodology For Industrial Production
CA 2,905,984		Of Fine and Ultrafine Powders and
		NanoPowders of Layered Lithium
		Mixed Oxides for Battery Applications
US 9,698,419	Battery having a defined discharge capacity,	Complexometric Precursor Formulation
TW I517487	defined porosity, low sodium content and low	Methodology for Industrial Production
US 10,283,763	sulfur content.	of Fine and Ultrafine Powders and
CN 105594023		Nanopowders of Layered Lithium
JP 6271599		Mixed Oxides for Battery Production
KR 10-1839000		
CA 2905525	Reactor	Reactor Vessel for Complexecelle
		Formation
US 10,374,232	NMC prepared by the Nano One Process	Complexometric Precursor Formulation
KR 10-1854708		Methodology for Industrial Production
		of Fine and Ultrafine Powders and
		Nanopowders for Lithium Metal Oxides
		for Battery Applications
TW I672852	Calcined powder comprising a surface	Phosphate Stabilized Lithium-ion
	stabilized with MnPO <sub>4</sub> . Method of forming	Battery Cathode
	the powder and battery comprising the	
	powder.	
US 10,189,719	Process for the formation of lithium metal	Improved Process for the Manufacture
	oxide including recycling of raw materials	of Lithium Metal Oxide Cathode
		Materials

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. The Company seeks to limit disclosure of its intellectual property by requiring employees, consultants, and partners with access to the technology to execute confidentiality agreements, non-competition agreements, and by restricting access to intellectual property and technology.

## **Competitive Conditions**

The lithium-ion battery market is competitive, with significant barriers to entry, long paths to commercialization, complex supply chains and many technical and market uncertainties.

In response to these challenges, the Company is developing industrial process technology and materials for license to established industrial participants in cathode materials manufacturing, and more broadly, the lithium-ion battery supply chain.

The lithium-ion battery market and the cathode production part of the supply chain are in a rapid multi-year growth phase that is expected to persist through this decade, driven largely by the global transition to electric mobility and industrial energy storage. The Company has developed a cathode production platform technology, capable of making a wide range of cathode materials and enabling the Company to shift, remain relevant, and compete with evolving technological and chemistry trends.

The Company has very few direct competitors as most cathode producers use in-house manufacturing methods based upon a conventional technology and are focused on manufacturing rather than disruptive process innovation.

The Company has been developing its cathode production technology, human resources, and know-how since February 2011 and has invested over \$11,500,000 in R&D through to December 2020. The Company has a growing portfolio of strategically relevant intellectual property to protect its IP from competitors, which includes 16 patents granted and 30+ patents pending in battery centric jurisdictions around the world, as well as trade secrets and engineering plans for full scale production facilities.

China, Korea, Japan, and Taiwan have dominated battery and cathode manufacturing over the last decade, but as jurisdictions such as the Americas, Europe and India ramp up the adoption of electric vehicles and grid storage for renewable energy, the Company expects to see opportunities to develop its business, license its technology and begin piloting activities in many diverse geographic areas. Post-COVID infrastructure spending, Environmental, Social, and Governance (ESG) investment strategy and re-patriation of critical supply chains are all expected to accelerate adoption of lithium-ion batteries and the required manufacturing base, to create a wider range of business opportunities for the Company. Further to this, the Company is positioning itself for opportunities in supply chain consolidation to further improve cost competitiveness and environmental sustainability.

The Company has developed significant interest from various industry segments looking for lower cost, lower supply chain risk, improved environmental sustainability, lower carbon footprint, and improved performance. The Company is working to create demand for its technologies through collaboration with OEMs (automotive, industrial, consumer electronic) on the design of next generation batteries and alternative supply chain strategies. The Company also aims to fulfill demand for its technology through licensing, partnership, and integration with cathode and raw materials producers. This leverages the Company's strengths in process innovation and partners it with the supply chain management, production and sales channels of established OEMs, materials producers and miners

#### **Economic Dependence**

Though the Company has various technology development agreements in effect (Volkswagen, an undisclosed US Automotive manufacturer, an undisclosed Asian cathode manufacturer, Pulead, and Saint-Gobain) and these development programs are integral to the Company's continued technological developments and process improvements, the Company's business is not substantially dependent on any single contract.

The adoption of the Company's technology for the commercial production of cathode materials depends on third party validation of its technology through materials testing, cost modelling, engineering planning, and joint development as precursors to commercial traction through licensing and/or joint venture. The Company has multiple Joint Development programs underway and is working to add more, and as such, is not dependant on the success of any single arrangement to further its business objectives in 2021 onwards. All such programs are advancing, and all parties are discussing next steps to further the relationships.

#### **Environmental Matters**

An obligation to incur environmental costs may arise from the future requirement to decommission its plant and dispose of related infrastructure and chemical materials. The Company has no known obligations of any significance to incur environmental costs, related to its research and development activities, as at December 31, 2020 and the date hereof.

# **Employees**

As at December 31, 2020, the Company had 38 employees, inclusive of members of key management personnel, of which 24 employees are either partially or fully dedicated to the Company's research activities. The Company considers its employee relations to be amicable. In addition, the Company engages contractors and consultants from time to time for administrative, legal and other services as required. As at the date hereof, the Company had 38 employees.

#### **Risk Factors**

An investment in the Company is speculative and involves a high degree of risk due to the nature of the Company's business. The following risk factors, as well as risks not currently known to the Company, could materially adversely affect the Company's future business, operations and financial condition and could cause them to differ materially from the estimates described in forward-looking statements contained herein. Prospective investors should carefully consider the following risk factors along with the other matters set out herein:

#### Global Pandemic (COVID-19)

In March 2020, the World Health Organization declared coronavirus COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and any related adverse public health developments, has adversely affected workforces, economies, and financial markets globally, potentially leading to an economic downturn. It is not possible for the Company to predict the duration or magnitude of the adverse results of the outbreak and its effects on the Company's business or results of operations or on the Company's industry partners who provide in-kind and/or financial contributions to the Company's government programs. There are travel restrictions and health and safety concerns that may delay the Company's research activities. Operations depend on safeguarding all personnel during the outbreak, which may be prohibitive in certain aspects. Nonetheless, the Company has implemented prevention measures at its office and laboratory facilities including the facilitation of remote work programs. Various Government wage and loan subsidies are available to qualified companies to assist them with operating costs during the pandemic, and the various programs are constantly being expanded and relaxed, which may qualify the Company for additional assistance. As at the date hereof, the Company had qualified for and received an additional \$250,000 from SDTC (April 2020), and approximately \$195,000 from the Innovative Assistance Program (under NRC-IRAP) (July to August 2020), both in relation to COVID-19 pandemic relief.

## **Intellectual Property Protection**

The Company cannot provide any assurance that any intellectual property applications will be approved. Even if they are approved, such patents, trademarks or other intellectual property registrations may be successfully challenged by others or invalidated. The success of the Company and its ability to compete are substantially dependent on its internally developed technologies and processes which the Company will need to protect through a combination of patent, copyright, trade secret and trademark law.

The trademark, copyright, and trade secret positions of the Company's business are uncertain and involve complex and evolving legal and factual questions. In addition, there can be no assurance that competitors will not seek to apply for and obtain trademarks and trade names that will prevent, limit or interfere with the Company's processes. There can be no assurance that the Company will have the financial resources to defend its patents, trademarks, and copyrights from infringement or claims of invalidity. Litigation may be necessary in the future to enforce the Company's intellectual property rights, to protect the Company's trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement. Any such litigation could result in substantial costs and diversion of resources, and could have a material

adverse effect on the Company's business, operating results, and financial condition. There can be no assurance that the Company's means of protecting its proprietary rights will be adequate or that competitors will not independently develop similar services or products. Any failure by the Company to adequately protect its intellectual property could have a material adverse effect on its business, operating results and financial condition.

The patent positions of emerging companies can be highly uncertain and involve complex legal and factual questions. Thus, there can be no assurance that any patent applications made by or on behalf of the Company will result in the issuance of patents, that the Company will develop additional proprietary products that are patentable, that any patents issued or licensed to the Company will provide the Company with any competitive advantages or will not be challenged by any third parties, that the patents of others will not impede the ability of the Company to do business or that third parties will not be able to circumvent the patents assigned or licensed to the Company. Furthermore, there can be no assurance that others will not independently develop similar products, duplicate any of the Company's products or, if patents are issued and licensed to the Company, design around the patented product developed for the benefit of the Company.

Since patent applications are maintained in secrecy for a period of time after filing, and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, the Company cannot be certain that the inventors of the patents were the first creators of inventions covered by pending applications, or that it was the first to file patent applications for such inventions. There can be no assurance that the Company's patents, if issued, would be valid or enforceable by a court or that a competitor's technology or product would be found to infringe such patents.

The Company is not currently aware of any claims asserted by third parties that the Company's intellectual property infringes on their intellectual property. However, in the future, a third party may assert a claim that the Company infringes on their intellectual property. If the Company is forced to defend against these claims, which may be with or without any merit or whether they are resolved in favour or against the Company, the Company may face costly litigation and diversion of management's attention and resources. As a result of such a dispute, the Company may have to develop costly non-infringement technology or enter into license agreements which may not be available at favourable terms.

#### Performance and Scalability

To be successful, Nano One will have to successfully scale its internally developed technology while maintaining high product quality and reliability. If Nano One cannot maintain high product quality on a large scale, the Company will be adversely affected. Nano One may encounter difficulties in scaling up cathode materials that are typically required to prototype full size battery cells. Even if Nano One is successful in developing its technologies, Nano One does not know whether the Company will do so in time to satisfy the requirements of the electric vehicle industry or other industries. The Company's current facility hosts a pilot plant and laboratory with limited production capacity.

Any interruption in operations at the current facility could result in the inability to successfully execute the business plan. A number of factors could cause interruptions, including, but not limited to, equipment malfunctions or failures, work stoppages or slow-downs, damage to or destruction of the facility, or regional power shortages. The success of the Company and its ability to compete are substantially dependent on its internally developed technologies.

## Management of Growth

The Company could experience growth that could put a significant strain on each of the Company's managerial, operational and financial resources. The Company must implement and constantly improve its operational and financial systems and expand, train, and manage its employee base to manage growth. In addition, the Company expects that its operational and management systems will face increased strain as a result of the expansion of the Company's technologies. The Company might not be able to effectively manage the expansion of its operations and systems, and its procedures and controls might not be adequate to support its operations. In addition, management might not be able to make and execute decisions rapidly enough to exploit market opportunities for the expansion of the Company's technologies. If the Company is unable to manage its growth effectively, its business, results of operations, and financial condition will suffer. Failure to effectively manage growth could also result in difficulty in launching new processing technology or enhancing existing processing technology, declines in quality or enduser satisfaction, increases in costs or other operational difficulties, and any of these difficulties could have a material adverse effect on its business, prospects, financial condition, results of operations, and cash flows.

## Competition

Despite efforts by the Company to protect its proprietary rights on which the Company's business is dependent, competitive products may be developed in the future. Competition could adversely affect the Company's ability to acquire market share.

#### Execution of Business Plan

The execution of the Company's business plan poses many challenges and is based on a number of assumptions. the Company may not be able to successfully execute its business plan. If the Company experiences significant cost overruns on its programs, or if its business plan is more costly than it anticipates, certain research and development activities may be delayed or eliminated, resulting in changes or delays to its commercialization plans, or the Company may be compelled to secure additional funding (which may or may not be available) to execute its business plan. The Company cannot predict with certainty its future revenues or results from its operations. If the assumptions on which its revenues or expenditures forecasts are based change, the benefits of the Company's business plan may change as well. In addition, the Company may consider expanding its business beyond what is currently contemplated in its business plan. Depending on the financing requirements of a potential acquisition or new product opportunity, the Company may be required to raise additional capital through the issuance of equity or debt. If the Company is unable to raise additional capital on acceptable terms, it may be unable to pursue a potential acquisition or new product opportunity.

Currently, the Company has no history of profitable operations or material revenue. As such, the Company is subject to many risks including under-capitalization, cash shortages, and limitations with respect to personnel, financial, and other resources.

#### Access to Proprietary Information

The Company generally controls access to and distribution of its technologies, documentation, and other proprietary information. Despite efforts by the Company to protect its proprietary rights from unauthorized use or disclosure, parties may attempt to disclose, obtain, or use its solutions or technologies. There can be no assurance that the steps the Company has taken or will be taking will prevent misappropriation of its solutions or technologies, particularly in foreign jurisdictions where laws or law enforcement practices may not protect proprietary rights as fully as in Canada or the United States.

## Information Technology Interruptions or Breaches

The Company's business operations are managed through a variety of information technology systems. These systems govern all aspects of its operations. While the Company has implemented a number of measures to keep its technology systems fully operational and to mitigate the risks associated with a failure of its systems, the Company's systems are subject to damage or interruption from power outages, computer and telecommunications failures, computer viruses, cyber-attacks, security breaches, catastrophic events such as fires, floods, earthquakes, tornadoes, hurricanes, acts of war or terrorism, and usage errors by its employees. If the Company's information technology systems are damaged or cease to function properly, the Company may have to make a significant investment to fix or replace them and the Company may suffer loss of critical data and interruptions or delays in its operations in the interim. Any material interruption in its information technology systems could have a material adverse effect on the Company's business, prospects, financial condition, results of operations, and cash flows.

## Environmental Regulation

The Company's business and operations are subject to environmental regulation in the areas in which it operates. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Company's business and operations. Additionally, applicable regulations may change, and additional government regulations may be enacted that could impact the Company. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action. If we are not able to maintain regulatory compliance, are slow or unable to adopt new requirements or policies, or effect changes to existing requirements, the Company may be adversely affected.

# Commodity Price, Raw Materials

Industrial chemicals used in Nano One's technologies are subject to market price fluctuations. Market price fluctuations could have a material adverse effect on Nano One's business plan execution. There can be no assurance that the price of the raw materials will not increase in the future.

# Dependence on Management and Key Personnel

The Company's success depends largely upon the continued services of its executive Officers and other key employees. From time to time, there may be changes in the Company's executive management team resulting from the hiring or departure of executives, which could disrupt its business. If the Company is unable to attract and retain top talents, its ability to compete may be harmed. The Company's success is also highly dependent on its continuing ability to identify, hire, train, retain and motivate highly qualified personnel. Competition for highly skilled technical, research and development, management, sales, and other employees is high in the Company's industry, and the Company may not be successful in attracting and retaining such personnel. Failure to attract and retain qualified executive Officers and other key employees could have a material adverse effect on its business, prospects, financial condition, results of operations, and cash flows.

#### **Economic Conditions**

Current and future unfavourable economic conditions could negatively impact the Company's financial viability. Unfavourable economic conditions could also increase the Company's financing costs, decrease net income or increase net loss, limit access to capital markets, and negatively impact any of the availability of credit facilities to the Company. See "Global Pandemic (COVID-19)" above.

# Additional Capital Requirements

The Company has incurred annual losses since inception and it plans on continuing to make significant expenditures to support its business growth and may require additional funds to respond to business challenges, including the need to expand sales and marketing activities, develop new processing technologies to enhance its existing technology, enhance its operating infrastructure, and acquire complementary businesses and technologies. Accordingly, the Company may need to engage in equity or debt financings to secure additional funds. If the Company raises additional funds through further issuances of equity or convertible debt securities, the Company's existing shareholders could suffer significant dilution, and any new equity securities the Company issues could have rights, preferences and privileges superior to those of holders of the Company's Common Shares. Any debt financing secured by the Company in the future could involve restrictive covenants relating to its capital raising activities and other financial and operational matters, which might make it more difficult for it to obtain additional capital and to pursue business opportunities.

The Company can provide no assurance that sufficient debt or equity financing will be available on reasonable terms or at all to support its business growth and to respond to business challenges and failure to obtain sufficient debt or equity financing when required could have a material adverse effect on its business, prospects, financial condition, results of operations, and cash flows.

#### **DIVIDENDS**

No dividends on the Common Shares have been paid by the Company to date and the Company has no plans at present to pay dividends.

## **DESCRIPTION OF CAPITAL STRUCTURE**

## **Authorized Capital**

The Company has an authorized share capital consisting of an unlimited number of common shares without par value (the "**Common Shares**"). As at the date hereof, the Company had outstanding (i) 89,825,524 fully paid and non-assessable Common Shares without par value (December 31, 2020 – 88,237,538).

#### **Common Shares**

The holders of the Common Shares are entitled to receive notice of and to attend all meetings of the shareholders of the Company and have one vote for each Common Share held at all meetings of the shareholders of the Company. All of the Common Shares rank equally within their class as to dividends, voting rights, participation in assets and in all other respects. None of the Common Shares are subject to any call or assessment nor pre-emptive or conversion rights. There are no provisions attached to the Common Shares for redemption, purchase for cancellation, surrender, or sinking or purchase funds.

As at the date hereof, 6,121,055 Common Shares are reserved for issuance under stock options granted, with a weighted average exercise price of \$2.71 per share..

As at the date hereof, 4,246,592 Common Shares are reserved for issuance under share purchase warrants issued, with a weighted average exercise price of \$2.34 per share.

## MARKET FOR SECURITIES

# **Trading Price and Volume**

The following table sets forth information relating to the trading of the Common Shares on the TSX-V under the symbol "NNO", for the Company's last completed fiscal year and up to March 15, 2021. This data assumes the entire volume under the TSX-V and includes all ATS (Alternative Trading Systems) data.

Month	High (\$)	Low (\$)	Close (\$)	Volume
January 2020	1.54	1.12	1.32	3,263,013
February 2020	1.69	1.23	1.27	5,488,128
March 2020	1.36	0.75	0.93	4,085,028
April 2020	1.34	0.85	1.28	2,347,120
May 2020	1.50	1.21	1.32	2,325,504
June 2020	1.58	1.21	1.34	3,830,140
July 2020	3.46	1.35	2.96	25,121,266
August 2020	3.77	2.45	3.15	12,042,584
September 2020	3.35	2.51	2.82	8,839,522
October 2020	3.18	2.40	2.42	5,593,241
November 2020	3.45	2.47	3.19	8,727,974
December 2020	6.50	3.02	6.09	24,662,584
January 2021	6.34	4.60	5.50	15,442,062
February 2021	6.22	4.85	5.99	8,706,737
March 1-15, 2021	6.20	5.25	5.93	4,447,919

# **Prior Sales**

During the fiscal year ended December 31, 2020, the following securities of the Company, which are not listed or quoted on a marketplace, were granted or issued:

Date Granted/Issued	Number of Securities	<u>Security</u>	Issue/Exercise Price
December 31, 2020 <sup>(3)</sup>	114,000	Common Shares	\$1.60
December 30, 2020 <sup>(3)</sup>	30,000	Common Shares	\$2.72
December 30, 2020 <sup>(3)</sup>	40,000	Common Shares	\$1.60
December 30, 2020 <sup>(3)</sup>	9,000	Common Shares	\$3.55
December 29, 2020 <sup>(3)</sup>	66,000	Common Shares	\$3.55
December 24, 2020 <sup>(3)</sup>	58,700	Common Shares	\$3.55
December 23, 2020 <sup>(3)</sup>	425,982	Common Shares	\$1.60
December 23, 2020 <sup>(3)</sup>	7,750	Common Shares	\$3.55
December 22, 2020 <sup>(3)</sup>	51,250	Common Shares	\$1.60

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December 22, 2020 <sup>(3)</sup>	36,800	Common Shares	\$3.55
December 21, 2020 <sup>(3)</sup>	252,500	Common Shares	\$1.60
December 21, 2020 <sup>(3)</sup>	4,500	Common Shares	\$3.55
December 18, 2020 <sup>(4)</sup>	60,000	Common Shares	\$1.37
December 17, 2020 <sup>(3)</sup>	37,500	Common Shares	\$1.60
December 17, 2020 <sup>(3)</sup>	20,000	Common Shares	\$3.55
December 16, 2020 <sup>(3)</sup>	20,000	Common Shares	\$1.60
December 15, 2020 <sup>(3)</sup>	45,000	Common Shares	\$1.60
December 15, 2020 <sup>(3)</sup>	8,200	Common Shares	\$3.55
December 10, 2020 <sup>(3)</sup>	100,000	Common Shares	\$1.60
December 10, 2020 <sup>(3)</sup>	19,450	Common Shares	\$3.55
December 9, 2020 <sup>(3)</sup>	22,500	Common Shares	\$1.60
December 8, 2020 <sup>(4)</sup>	3,202	Common Shares	\$1.57
December 8, 2020 <sup>(3)</sup>	52,500	Common Shares	\$1.60
December 4, 2020 <sup>(3)</sup>	20,000	Common Shares	\$1.60
December 4, 2020 <sup>(5)</sup>	15,000	Options	\$3.05
December 1, 2020 <sup>(3)</sup>	7,500	Common Shares	\$1.60
November 26, 2020 <sup>(4)</sup>	25,000	Common Shares	\$1.08
November 26, 2020 <sup>(4)</sup>	5,000	Common Shares	\$1.28
November 26, 2020 <sup>(4)</sup>	13,750	Common Shares	\$2.52
November 25, 2020 <sup>(3)</sup>	2,887	Common Shares	\$1.60
November 24, 2020 <sup>(4)</sup>	2,000	Common Shares	\$1.28
November 13, 2020 <sup>(3)</sup>	43,500	Common Shares	\$1.60
November 2, 2020	25,000	Common Shares	\$0.50
October 29, 2020 <sup>(7)</sup>	79,242	Common Shares	\$2.72
October 29, 2020 <sup>(7)</sup>	422,632	Warrants	\$2.72
October 29, 2020 <sup>(6)</sup>	2,641,450	Warrants	\$3.55
October 29, 2020 <sup>(6)</sup>	5,282,900	Common Shares	\$2.72
October 27, 2020 <sup>(4)</sup>	5,250	Common Shares	\$1.57
October 23, 2020 <sup>(3)</sup>	80,000	Common Shares	\$1.60
October 20, 2020 <sup>(3)</sup>	20,000	Common Shares	\$1.60
October 14, 2020 <sup>(3)</sup>	74,375	Common Shares	\$1.60
October 6, 2020 <sup>(3)</sup>	50,000	Common Shares	\$1.60
October 2, 2020 <sup>(3)</sup>	50,000	Common Shares	\$1.60
October 1, 2020 <sup>(3)</sup>	10,000	Common Shares	\$1.60
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September 30, 2020 <sup>(3)</sup>	5,250	Common Shares	\$1.60
September 24, 2020 <sup>(4)</sup>	3,000	Common Shares	\$1.28
September 24, 2020 <sup>(3)</sup>	20,000	Common Shares	\$1.60
September 22, 2020 <sup>(3)</sup>	14,271	Common Shares	\$1.60
September 15, 2020 <sup>(3)</sup>	3,166	Common Shares	\$1.60
September 14, 2020 <sup>(4)</sup>	15,000	Common Shares	\$1.28
September 14, 2020 <sup>(4)</sup>	7,850	Common Shares	\$1.57
September 11, 2020 <sup>(3)</sup>	25,000	Common Shares	\$1.60
September 10, 2020 <sup>(3)</sup>	12,500	Common Shares	\$1.60
September 8, 2020 <sup>(5)</sup>	50,000	Stock Options	\$2.81
September 8, 2020 <sup>(4)</sup>	5,000	Common Shares	\$1.28
September 4, 2020 <sup>(3)</sup>	355,160	Common Shares	\$1.60
September 2, 2020 <sup>(3)</sup>	12,500	Common Shares	\$1.60
September 2, 2020 <sup>(4)</sup>	50,000	Common Shares	\$1.19
August 31, 2020 <sup>(3)</sup>	17,500	Common Shares	\$1.60
August 28, 2020 <sup>(3)</sup>	9,234	Common Shares	\$1.60
August 27, 2020 <sup>(3)</sup>	5,000	Common Shares	\$1.60
August 21, 2020 <sup>(3)</sup>	25,000	Common Shares	\$1.60
August 20, 2020 <sup>(3)</sup>	10,000	Common Shares	\$1.60
August 19, 2020 <sup>(3)</sup>	5,000	Common Shares	\$1.60
August 17, 2020 <sup>(3)</sup>	50,000	Common Shares	\$1.60
August 17, 2020 <sup>(4)</sup>	10,000	Common Shares	\$1.57
August 17, 2020 <sup>(3)</sup>	8,393	Common Shares	\$1.60
August 14, 2020 <sup>(3)</sup>	2,775	Common Shares	\$1.60
August 13, 2020 <sup>(3)</sup>	10,000	Common Shares	\$1.60
August 12, 2020 <sup>(3)</sup>	81,000	Common Shares	\$1.60
August 12, 2020 <sup>(4)</sup>	15,000	Common Shares	\$1.28
August 12, 2020 <sup>(4)</sup>	11,500	Common Shares	\$1.57
August 12, 2020 <sup>(3)</sup>	17,000	Common Shares	\$1.60
August 11, 2020 <sup>(3)</sup>	24,835	Common Shares	\$1.60
August 11, 2020 <sup>(4)</sup>	80,000	Common Shares	\$0.25
August 11, 2020 <sup>(4)</sup>	2,548	Common Shares	\$1.57
August 11, 2020 <sup>(3)</sup>	20,000	Common Shares	\$1.60
August 6, 2020 <sup>(3)</sup>	2,000	Common Shares	\$1.60
August 5, 2020 <sup>(3)</sup>	4,000	Common Shares	\$1.60

August 4, 2020 <sup>(3)</sup>	42,500	Common Shares	\$1.60
July 31, 2020 <sup>(3)</sup>	2,000	Common Shares	\$1.60
July 30, 2020 <sup>(4)</sup>	120,000	Common Shares	\$0.25
July 29, 2020 <sup>(4)</sup>	50,000	Common Shares	\$0.70
July 29, 2020 <sup>(3)</sup>	163,228	Common Shares	\$1.60
July 28, 2020 <sup>(3)</sup>	44,660	Common Shares	\$1.60
July 27, 2020 <sup>(3)</sup>	71,127	Common Shares	\$1.60
July 24, 2020 <sup>(3)</sup>	13,501	Common Shares	\$1.60
July 23, 2020 <sup>(3)</sup>	168,500	Common Shares	\$1.60
July 22, 2020 <sup>(4)</sup>		Common Shares	\$1.15
	150,000		
July 22, 2020 <sup>(3)</sup>	137,500	Common Shares	\$1.60
July 21, 2020 <sup>(3)</sup>	54,000	Common Shares	\$1.60
July 20, 2020 <sup>(5)</sup>	1,437,250	Stock Options	\$2.52
July 20, 2020 <sup>(4)</sup>	25,000	Common Shares	\$0.74
July 16, 2020 <sup>(3)</sup>	55,000	Common Shares	\$1.60
July 9, 2020 <sup>(3)</sup>	100,000	Common Shares	\$1.60
July 8, 2020 <sup>(3)</sup>	25,000	Common Shares	\$1.60
July 7, 2020 <sup>(4)</sup>	20,000	Common Shares	\$1.28
July 7, 2020 <sup>(4)</sup>	10,000	Common Shares	\$1.57
June 11, 2020 <sup>(4)</sup>	25,000	Common Shares	\$0.25
March 2, 2020 <sup>(4)</sup>	100,000	Common Shares	\$0.25
February 24, 2020 <sup>(4)</sup>	700,000	Common Shares	\$0.25
February 21, 2020 <sup>(2)</sup>	467,740	Warrants	\$1.60
February 21, 2020 <sup>(1)</sup>	4,782,500	Warrants	\$1.60
February 21, 2020 <sup>(1)</sup>	9,565,000	Common Shares	\$1.15
February 19, 2020 <sup>(4)</sup>	100,000	Common Shares	\$0.25
February 7, 2020 <sup>(4)</sup>	2,500	Common Shares	\$0.70
January 16, 2020 <sup>(4)</sup>	32,500	Common Shares	\$0.25
January 14, 2020 <sup>(4)</sup>	1,050,000	Common Shares	\$0.25

#### **Notes:**

- (1) Issued to subscribers in connection with private placement.
- (2) Issued to finders in connection with private placement.
- (3) Exercise of warrants.
- (4) Exercise of stock options.
- (5) Grant of stock options.
- (6) Issued to subscribers in connection with short-form prospectus offering.
- (7) Issued to Agents in connection with short-form prospectus offering.

#### **ESCROWED SECURITIES**

To the knowledge of the Company, there are no securities of the Company that are in escrow or subject to contractual restriction.

#### **DIRECTORS AND OFFICERS**

The Company's directors are elected by the shareholders at each annual meeting and hold office until the next annual meeting at which time they may be re-elected or replaced. Casual vacancies on the Board are filled by the remaining directors, in accordance with the articles of the Company, and the persons filling those vacancies hold office until the next annual general meeting at which time they may be re-elected or replaced. The officers are appointed by the Board and hold office at the pleasure of the Board.

The following table sets forth the name of each of our directors and executive officers, their province or state and country of residence, their position(s) with the Company, their principal occupation during the preceding five years, and the date they first became a director or officer of the Company.

Name, Position(s) with the Company <sup>(1)</sup> and Place of Residence <sup>(3)</sup>	Principal Occupation (2)(3)	Date(s) Served as a Director or Officer Since	Ownership or Control Over Voting Shares Held
Paul Matysek Executive Chairman and Director British Columbia, Canada	The Company's Chairman since March 2015.  Director of Forsys Metals Corp. since October 2007, Chairman of Victory Metals Inc. since January 2019, CEO and Chairman of Gold X Mining Corp. since April 2020.  Past Chairman of First Cobalt Corp. and Lithium X Energy Corp. since October 2019. Past President and CEO of Goldrock Mines Corp., Lithium One Inc., Potash One Inc. and Energy Metals Corporation from 2004 to 2015.	January 29, 2012	2,359,083 <sup>(5)</sup>
Dan Blondal CEO and Director British Columbia, Canada	The Company's CEO since March 2015. CEO of Perfect Lithium Corp. since July 2014, co-CEO of Perfect Lithium Corp. since 2011.	March 5, 2015	1,300,000
John Lando <sup>(4)</sup> President and Director British Columbia, Canada	The Company's President since March 2015, and interim CFO from October 2018 to January 2020. President of Perfect Lithium Corp. since 2011.  President of Northern Lion Gold Corp., and New World Resource Corp.	March 5, 2015	1,663,500 <sup>(6)</sup>

Name, Position(s) with the Company <sup>(1)</sup> and Place of Residence <sup>(3)</sup>	Principal Occupation (2)(3)	Date(s) Served as a Director or Officer Since	Ownership or Control Over Voting Shares Held
Lyle Brown <sup>(4)(7)</sup> Director British Columbia, Canada	Partner of Culver & Co., an accounting firm.	March 5, 2015	215,333
<b>Dr. Joseph Guy</b> <sup>(4)(7)</sup> Director North Carolina, USA	Patent Agent since 1992. Patent Filing Specialists Inc. since 2018.  Perkins Law Firm, LLC from 2013-2018.  Nexsen Pruet, LLC from 2000 - 2013.	March 5, 2015	100,000
Stephen Campbell Chief Technology Officer British Columbia, Canada	The Company's CTO since October 2018. Principal Scientist of the Company from September 2015 to September 2018.	October 9, 2018	Nil
Dan Martino Chief Financial Officer and Corporate Secretary British Columbia, Canada	The Company's CFO and Corporate Secretary since January 2020. Chartered Professional Accountant at Donaldson Brohman Martin CPA, Inc. Former Principal at Davidson & Company LLP, in assurance and financial reporting.	January 20, 2020	4,000
Alex Holmes Chief Operating Officer British Columbia, Canada	The Company's COO since February 2021.  Former CEO and Director of Plateau Energy Minerals Corp. since 2018) Cofounder and Director at VRify Technology Inc. since 2017, co-founder of Oxygen Capital Corp. and VP, Business Development for Oxygen affiliated companies True Gold Mining Inc. and Pilot Gold Inc. from 2011 and 2016.	February 1, 2021	Nil

#### **Notes:**

- (1) For the purposes of disclosing positions held in the Company, "Company" includes the Company and any parent or subsidiary thereof.
- (2) Unless otherwise stated above, any nominees named above not elected at the last annual general meeting have held the principal occupation or employment indicated for at least five years.
- (3) The information as to province or state and country of residence, principal occupation, and number of shares beneficially owned by the nominees (directly or indirectly or over which control or direction is exercised) is not within the knowledge of the management of the Company and has been furnished by the respective nominees. The information is presented as of the date hereof.
- (4) Members of the Company's Audit Committee. Mr. Brown is Chair of the Audit Committee.

- (5) Mr. Matysek holds 1,654,583 Common Shares directly. 704,500 Common Shares are held indirectly by Mr. Matysek through Bedrock Capital Corporation, a company controlled by Mr. Matysek.
- (6) Mr. Lando holds 710,000 Common Shares directly. 953,500 Common Shares are held indirectly by Mr. Lando through Sterling Pacific Capital Inc., a company controlled by Mr. Lando.
- (7) Members of the Company's Compensation Committee, which was formed on July 17, 2020. Dr. Guy is Chair of the Compensation Committee.

As at the date hereof, the directors and executive officers of the Company, collectively, beneficially own, directly and indirectly, or exercise control or direction over 4,581,416 Common Shares, representing approximately 5.1% of the total number of Common Shares outstanding. The statement as to the number of Common Shares beneficially owned, directly or indirectly, or over which control or direction is exercised by the directors and executive officers of the Company as a group is based upon information furnished by the directors and executive officers.

# Cease Trade Orders, Bankruptcies, Penalties or Sanctions

No director or executive officer of the Company is, or within ten years prior to the date hereof has been, a director, chief executive officer or chief financial officer of any company (including the Company) that (i) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer; or (ii) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, that was in effect for a period of more than 30 consecutive days, that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company (i) is, or within ten years prior to the date hereof has been, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (ii) has, within ten years prior to the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer, or shareholder.

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company, has been subject to (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

#### **Conflicts of Interest**

Certain of the directors and/or executive officers of the Company serve (and may in the future serve) as directors and/or executive officers of other companies and therefore, it is possible that a conflict may arise between their duties as a director and/or executive officer or member of management of the Company and their duties as a director and/or executive officer of such other companies. The directors and executive officers of the Company are aware of the existence of laws governing accountability of directors and executive officers for corporate opportunity and requiring disclosures by directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and executive officers' conflicts of interest or in respect of any breaches of duty by any of its directors or executive officers. All such conflicts will be disclosed by such directors or executive officers in accordance with the BCBCA and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

#### LEGAL PROCEEDINGS AND REGULATORY ACTIONS

To the best of Company's knowledge, there are no material legal proceedings by or against the Company or affecting any of its interests as at December 31, 2020 or the date hereof nor are we aware that any such proceedings are contemplated.

Furthermore, there are no: (a) penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during its most recently completed fiscal year; (b) other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision in the Company; or (c) settlement agreements the Company entered into before a court relating to securities legislation or with a securities regulatory authority during its most recently completed fiscal year.

#### **AUDIT COMMITTEE**

#### The Audit Committee Charter

The Company's Audit Committee is governed by an Audit Committee Charter. A copy of the Company's Audit Committee Charter is attached hereto as Schedule "A".

## **Composition of the Audit Committee**

The Company's Audit Committee is comprised of three directors: John Lando, Dr. Joseph Guy, and Lyle Brown. As defined in NI 52-110, Dr. Joseph Guy and Lyle Brown are independent. John Lando is not independent as he is the President of the Company. As a venture issuer, the Company is not required to have an audit committee that is comprised entirely of independent directors but is required to have a majority of its members not be officers or employees.

All of the Audit Committee members are "financially literate", as defined in NI 52-110, as all have the industry experience necessary to understand and analyze financial statements of the Company, as well as the understanding of internal controls and procedures necessary for financial reporting.

The Audit Committee is responsible for the review of both interim and annual financial statements for the Company. For the purposes of performing their duties, the members of the Audit Committee have the right at all times, to inspect all the books and financial records of the Company and to discuss with management and the external auditors of the Company any accounts, records and matters relating to the financial statements of the Company. The audit committee members meet periodically with management and annually with the external auditors.

# **Relevant Education and Experience of Members of the Audit Committee**

Every member in the Audit Committee has sufficient education and experience to perform their responsibilities in relation to the Audit Committee, including:

- Understanding the accounting principles used by the Company to prepare its financial statements;
- Having the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals and provisions;
- Experience preparing, auditing, analyzing, or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company's financial statements, or experience actively supervising one or more individuals engaged in such activities; and
- An understanding of internal controls and procedures for financial reporting.

The relevant education and/or experience of each member of the Audit Committee is as follows:

- Mr. Brown, chair of the Audit Committee, is a Chartered Professional Accountant. He has a clear understanding of the accounting principles used by the Company to prepare its financial statements; has the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals and reserves; has experience actively supervising one or more individuals engaged in preparing, auditing, analyzing, or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company's financial statements, and has an understanding of internal controls and procedures for financial reporting.
- Mr. Lando's industry experience in the management and administration of publicly traded companies provides him with an understanding of the accounting principles used by the Company to prepare its financial statements, the ability to assess the general application of such accounting principles, and analyze or evaluate financial statements, and an understanding of internal controls and procedures for financial reporting.
- Dr. Guy's experience in corporate research, management, and intellectual property provides him with an understanding of the accounting principles used by the

Company to prepare its financial statements, the ability to assess the general application of such accounting principles, and analyze or evaluate financial statements, and an understanding of internal controls and procedures for financial reporting.

## **Audit Committee Oversight**

At no time since the commencement of the Company's most recently completed fiscal year was a recommendation of the Committee to nominate or compensate an external auditor (currently, Davidson & Company LLP) not adopted by the Board.

# **Pre-Approval Policies and Procedures**

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services as set out in the Audit Committee Charter of the Company. A copy of the Company's Audit Committee Charter is attached hereto as Schedule "A".

#### **External Auditor Service Fees**

In the following table, "audit fees" are fees billed by the Company's external auditor for services provided in auditing the Company's annual financial statements for the subject year. "Audit-related fees" are fees not included in audit fees that are billed by the auditor for assurance and related services that are reasonably related to the performance of the audit review of the Company's financial statements. "Tax fees" are fees billed by the auditor for professional services rendered for tax compliance, tax advice and tax planning. "All other fees" are fees billed by the auditor for products and services not included in the foregoing categories.

The aggregate fees billed by the Company's external auditor in the last two fiscal years, by category, are as follows:

Fiscal year Ending	Audit Fees	Audit-Related Fees <sup>(2)</sup>	Tax Fees <sup>(1)</sup>	All Other Fees <sup>(3)</sup>
December 31, 2020	\$40,000	\$10,000	\$ -	\$22,500
December 31, 2019	\$32,500	\$ -	\$950	\$ -

- (1) Tax Fees were for assistance provided to the Company in the preparation and filing of its annual tax
- (2) Audit-related fees were for the auditors' review of the financial statements and MD&A for the quarter ended June 30, 2020.
- (3) All Other Fees were for the auditors' involvement in the preliminary and final short-form prospectus offering in October 2020.

## **Exemptions**

The Company is relying on the exemption provided by section 6.1 of NI 52-110, which exempts venture issuers, such as the Company, from the requirement that all directors of the Audit Committee be independent as required by Part 3 (Composition of the Audit Committee).

#### INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than disclosed elsewhere in this AIF, no director, senior officer or principal shareholder of the Company and no associate or affiliate of the foregoing have had a material interest, direct or indirect, in any transaction in which the Company has participated within the three year period prior to the date of this AIF, or will have any material interest in any proposed transaction, which has materially affected or will materially affect the Company.

#### TRANSFER AGENT AND REGISTRAR

The Company's transfer agent and registrar is Computershare Investor Services Inc. located at 510 Burrard St, 3<sup>rd</sup> Floor, Vancouver, BC V6C 3B9.

#### MATERIAL CONTRACTS

The Company has not entered into any material contracts (i) since the beginning of its most recently completed fiscal year or (ii) before the beginning of its most recently completed fiscal year and that are still in effect, other than contracts entered into in the ordinary course of business.

#### NAMES AND INTERESTS OF EXPERTS

The Company's auditors are Davidson & Company LLP of 1200 - 609 Granville St, Vancouver, BC V7Y 1G6. Davidson & Company LLP is independent of the Company according to its rules of professional conduct.

#### ADDITIONAL INFORMATION

Additional information relating to Nano One may be obtained from SEDAR at <u>www.sedar.com</u> under the Company's profile.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, options to purchase securities, and interests of insiders in material transactions, where applicable, are contained in the Company's information circular as filed on SEDAR on June 25, 2020. Additional information can also be found in the Company's Short Form Prospectus dated October 26, 2020.

Additional financial information is provided in the Company's annual financial statements and Management's Discussion & Analysis for the fiscal year ended December 31, 2020.

#### **SCHEDULE "A"**

#### **Charter of the Audit Committee of the Board of Directors**

# of Nano One Materials Corp.

(the "Company")

#### **MANDATE**

The primary function of the audit committee (the "Committee") of Nano One Materials Corp. (the "Company") is to assist the Board of Directors in fulfilling its financial oversight responsibilities by reviewing the financial reports and other financial information provided by the Company to regulatory authorities and shareholders, the Company's systems of internal controls regarding finance and accounting and the Company's auditing, accounting and financial reporting processes. The Committee's primary duties and responsibilities are to:

- Serve as an independent and objective party to monitor the Company's financial reporting and internal control system and review the Company's financial statements.
- Review and appraise the performance of the Company's external auditors (the "Auditor").
- Provide an open avenue of communication among the Company's auditors, management and the Board of Directors.

## COMPOSITION, PROCEDURES AND ORGANIZATION

The Committee shall consist of at least three members. Each member must be a director of the Company. A majority of the members of the Committee shall not be executive officers or employees of the Company or of an affiliate of the Company. At least one (1) member of the Committee shall be financially literate. All members of the Committee who are not financially literate will work towards becoming financially literate to obtain working familiarity with basic finance and accounting practices. For the purposes of this Charter, the term "financially literate" means the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company's financial statements.

The members of the Committee shall be appointed by the Board of Directors at its first meeting following the annual shareholders' meeting. Unless a Chair is elected by the full Board of Directors, the members of the Committee may designate a Chair by a majority vote of the full Committee membership. The Chair shall be financially literate. The Board of Directors may at any time remove or replace any member of the Committee and may fill any vacancy in the Committee.

#### MEETINGS OF THE COMMITTEE

Meetings of the Committee shall be scheduled to take place at regular intervals and, in any event, not less frequently than quarterly. Unless all members are present and waive notice, or those absent waive notice before or after a meeting, the Chairman will give the Committee members 24 hours' advance notice of each meeting and the matters to be discussed at such meeting. Notice may be given personally, by telephone, by facsimile or e-mail.

The Auditor shall be given reasonable notice of, and be entitled to attend and speak at, each meeting of the Committee concerning the Company's annual financial statements and, if the Committee determines it to be necessary or appropriate, at any other meeting. On request by the Auditor, the Chair shall call a meeting of the Committee to consider any matter that the Auditor believes should be brought to the attention of the Committee, the Board of Directors or the shareholders of the Company.

At each meeting of the Committee, a quorum shall consist of a majority of members that are not officers or employees of the Company or of an affiliate of the Company. A member may participate in a meeting of the Committee in person or by telephone if all members participating in the meeting, whether in person or by telephone or other communications medium other than telephone are able to communicate with each other and if all members who wish to participate in the meeting agree to such participation.

The Committee may periodically meet separately with each of management and the Auditor to discuss any matters that the Committee or any of these groups believes would be appropriate to discuss privately. In addition, the Committee should meet with the Auditor and management annually to review the Company's financial statements.

The Committee may invite to its meetings any director, any manager of the Company, and any other person whom it deems appropriate to consult in order to carry out its responsibilities.

## RESPONSIBILITIES AND DUTIES

To fulfil its responsibilities and duties, the Committee shall:

- 1. Review the Company's financial statements, including any certification, report, opinion, or review rendered by the Auditor, MD&A and any annual and interim earnings press releases before the Company publicly discloses such information.
- 2. Review and satisfy itself that adequate procedures are in place and review the Company's public disclosure of financial information extracted or derived from its financial statements, other than disclosure described in the previous paragraph, and periodically assess the adequacy of those procedures.
- 3. Be directly responsible for overseeing the work by the Auditor (including resolution of disagreements between management and the Auditor regarding financial reporting) engaged for the purpose of preparing or issuing an audit report or performing other audit review services for the Company.

- 4. Require the Auditor to report directly to the Committee.
- 5. Review annually the performance of the Auditor who shall be ultimately accountable to the Board of Directors and the Committee as representatives of the shareholders of the Company.
- 6. Review and discuss with the Auditor any disclosed relationships or services that may impact the objectivity and independence of the Auditor.
- 7. Take, or recommend that the Board of Directors take, appropriate action to oversee the independence of the Auditor.
- 8. Recommend to the Board of Directors the external auditor to be nominated at the annual general meeting for appointment and the Auditor for the ensuing year and the compensation for the Auditors, or, if applicable, the replacement of the Auditor.
- 9. Review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the Auditor and former independent external auditors of the Company.
- 10. Review with management and the Auditor the audit plan for the annual financial statements.
- 11. Review and pre-approve all audit and audit-related services and the fees and other compensation related thereto, and any non-audit services provided by the Auditor. The pre-approval requirement is waived with respect to the provision of non-audit services if:
  - (a) the aggregate amount of all such non-audit services that were not pre-approved is reasonably expected to constitute not more than 5% of the total amount of fees paid by the Company and its subsidiary entities to the Auditor during the fiscal year in which the non-audit services are provided;
  - (b) such services were not recognized by the Company at the time of the engagement to be non-audit services; and
  - (c) such services are promptly brought to the attention of the Committee and approved, prior to the completion of the audit, by the Committee or by one or more members of the Committee to whom authority to grant such approvals has been delegated by the Committee.
- 12. The Committee may delegate to one or more independent members of the Committee the authority to pre-approve non-audit services in satisfaction of the pre-approval requirement set forth in this section provided the pre-approval of non-audit services by any member to whom authority has been delegated must be presented to the Committee at its first scheduled meeting following such pre-approval.
- 13. In consultation with the Auditor, review with management the integrity of the Company's financial reporting process, both internal and external.

- 14. Consider the Auditor's judgments about the quality and appropriateness of the Company's accounting principles as applied in its financial reporting.
- 15. Consider and approve, if appropriate, changes to the Company's auditing and accounting principles and practices as suggested by the Auditor and management.
- 16. Review significant judgments made by management in the preparation of the financial statements and the view of the Auditor as to the appropriateness of such judgments.
- 17. Following completion of the annual audit, review separately with management and the Auditor any significant difficulties encountered during the course of the audit, including any restrictions on the scope of the work or access to required information.
- 18. Review any significant disagreement among management and the Auditor in connection with the preparation of the financial statements.
- 19. Review with the Auditor and management the extent to which changes and improvements in financial or accounting practices have been implemented.
- 20. Discuss with the Auditor the Auditor's perception of the Company's financial and accounting personnel, any material recommendations which the Auditor may have, the level of co-operation which the Auditor received during the course of their review and the adequacy of their access to records, data or other requested information.
- 21. Maintain, review and update the procedures for (i) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and (ii) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters, as set forth in Annex A attached to this Charter.
- 22. Perform such other duties as may be assigned to it by the Board of Directors from time to time or as may be required by applicable regulatory authorities or legislation.
- 23. Report regularly and on a timely basis to the Board of Directors on the matters coming before the Committee.
- 24. Review and reassess the adequacy of this Charter annually and recommend any proposed changes to the Board of Directors for approval.

#### **AUTHORITY**

The Committee is authorized to:

• to seek any information it requires from any employee of the Company in order to perform its duties;

- to engage, at the Company's expense, independent legal counsel or other professional advisors in any matter within the scope of the role and duties of the Committee under this Charter;
- to set and pay compensation for any advisors engaged by the Committee; and
- to communicate directly with the internal and external auditors of the Company.

This Charter supersedes and replaces all prior charters and other terms of reference pertaining to the Committee.