NORTHSTAR
CLEAN TECHNOLOGIES

Management's Discussion and Analysis

For the year ended December 31, 2022

DESCRIPTION OF BUSINESS AND OVERVIEW OF OPERATIONS AND FINANCIAL CONDITION

The following is management's discussion and analysis ("MD&A"), prepared as of April 18 2023. This MD&A should be read in conjunction with the audited Annual Consolidated Financial Statements for the year ended December 31, 2022 and the accompanying notes, all as prepared in accordance with International Financial Reporting Standards ("IFRS"). All amounts are stated in Canadian dollars unless otherwise indicated.

Forward Looking Statements

This report includes certain statements that may be deemed "forward-looking statements" within the meaning of applicable securities legislation. All statements, other than statements of historical facts that address such matters as future events or developments that the Company expects, are forward-looking statements and, as such, are subject to risks, uncertainties, assumptions and other factors of which are beyond the reasonable control of the Company. You can identify these statements by forward-looking words such as "expects", "does not expect", "plans", "anticipates", "does not anticipate", "believes", "intends", "estimated", "projects", "potential", "scheduled", forecast", "budget", and similar expressions, or that events or conditions "will", "would", "may", "could", "should" or "might" occur and similar words. Such statements give the Company's current expectations or forecasts of future events and are not guarantees of future performance and actual results or developments may differ materially from those expressed in, or implied by, this forward-looking information. With respect to forward-looking statements and information contained herein, we have made numerous assumptions including among other things anticipated costs and expenditures and the Company's ability to achieve its goals. Although management believes that the assumptions made and the expectations represented by such statements or information are reasonable, there can be no assurance that a forward-looking statement or information herein will prove to be accurate. Forward-looking statements and information by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Factors that could cause actual results to differ materially from those in forward-looking statements include, for example, such matters as continued availability of capital and financing and general economic, market or business conditions. Although we have attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking statements or information, there may be other factors that cause actual results, performances, achievements or events not to be anticipated, estimated or intended. Accordingly, readers should not place undue reliance on forward-looking statements or information. Any forward-looking statements are expressly qualified in their entirety by this cautionary statement. The information contained herein is stated as of the current date and subject to change after that date and the Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws.

Description of Business

Northstar Clean Technologies Inc. ("Northstar" or the "Company") was incorporated on August 21, 2017 as Blocktech Ventures Inc. under the laws of the British Columbia Business Corporations Act. On August 4, 2020, the Company entered into an amalgamation agreement and on December 23, 2020, the Company completed an amalgamation with its subsidiary 1257848 BC Ltd. and Empower Environmental Solutions Ltd ("Empower") (the "Amalgamation"). Upon Amalgamation, the Company acquired all the shares of Empower (41,248,577 shares) by issuing 44,331,147 Company shares in exchange. Pursuant to the agreement, following completion of the transaction, Empower shareholders owned approximately 64.92% of the combined company resulting in the shareholders of Empower controlling the Company. Accordingly, the transaction was considered a reverse takeover transaction ("RTO").

Northstar has developed a proprietary design process known as the Bitumen Extraction & Separation Technology or "BEST" technology, to break down the components of single-use asphalt shingles that would otherwise be sent to a landfill, into market quality products. The component parts of a shingle are approximately 50% aggregate, 25% fiber and 25% liquid asphalt. Once reprocessed, these three products can be used in a variety of applications, including road asphalt, new asphalt shingles, construction products, and other industrial applications. The Company hopes to be able to sell these components to paving companies, cement companies, roofing companies, shingle manufacturers and other industrial and construction product manufacturers, who will benefit from a supply of low carbon, reprocessed products. The Company's proprietary process was developed over the last decade with technical and scientific assistance from the United Kingdom and Alberta. The Company will reprocess used and defective asphalt shingles into their component parts for reuse/resale and thereby seek to eliminate their disposal in a landfill.

The Company filed a preliminary prospectus dated April 15, 2021, an amended and restated preliminary prospectus dated May 7, 2021, and a final prospectus dated June 18, 2021. The Company raised $12,241,312.30 on the issue of 34,975,178 Units at a price of $0.35 per Unit. Each Unit is comprised of one common share in the capital of the Company (each, a "Share") and one-half of one transferable common share purchase warrant (each whole warrant, a "Warrant"). Each Warrant will entitle the holder thereof to acquire one Share (each, a "Warrant Share") at a price of $0.50 per Warrant Share for a period of two years. The Warrants are trade on the TSX Venture Exchange (the "TSX-V") under the symbol 'ROOF.WT'.

The Company listed its common shares on the TSX-V and began publicly trading on the TSX-V under the symbol 'ROOF' on July 13, 2021. On January 11, 2022, the Company's common shares commenced trading on the OTCQB Venture Market (the "OTCQB") under the ticker symbol 'ROOOF'. In addition, on January 11, 2022, the Company's common shares became eligible for book-entry and depository services at the Depository Trust Company ("DTC"), which facilitates electronic clearing and settlement of transfers in the United States. The head office and principal address of the Company is located at 1110-396 11th Ave SW, Calgary, Alberta, T2R 0C5 and its current facility is located at 7046 Brown Street, Delta, British Columbia, Canada, V4G 1G8 (the "Empower Pilot Facility"). The Company's registered and records office is also located at 7046 Brown Street, Delta, British Columbia, Canada, V4G 1G8.

On January 18, 2022, the Company incorporated Empower Environmental Solutions Calgary Ltd ("Calgary") under the laws of the Alberta Business Corporations Act, and on January 20, 2022, the Company incorporated Empower Environmental Solutions Toronto West Ltd. ("Toronto West") under the laws of the Ontario Business Corporations Act to facilitate possible expansion into those markets.

The Company, through its wholly-owned subsidiary Empower, has developed a proprietary design process technology, the Bitumen Extraction & Separation Technology ("BEST"), at its Empower Pilot Facility for taking discarded or defective single-use asphalt shingles, otherwise destined for already over-crowded landfills, and extracting the liquid asphalt, aggregate and fiber for use in new asphalt, shingles, construction products and other industrial applications. The Company's proprietary design process was developed over the last decade with technical and scientific assistance from the United Kingdom and Alberta. On November 8, 2022, the Company announced that it has been issued a patent for the Company's front-end technology for reprocessing asphalt shingles by the United States Patent and Trademark Office ("USPTO"). This patent is expected to remain in force until 2042. Further, Northstar has filed follow-on continuation patent applications with the USPTO. As well as an application for patent approval in Canada and plans to file a Patent Cooperation Treaty international application.

Outlook and growth strategy

As an emerging innovator in sustainable processing, Northstar's mission is to be the leader in the recovery and reprocessing of asphalt shingles in North America, extracting the recovered components from asphalt shingles that would otherwise be sent to landfill.

Empower Pilot Facility – Delta, BC

The Empower Pilot Facility is located at 7046 Brown Street, Delta British Columbia where the Company currently conducts its operations. The Empower Pilot Facility is located on a 4.23 acre property with a 20,000 square foot building. The site of the Empower Pilot Facility is ideal for the Company's operation, as it has a large yard which Northstar has designed for maximum throughput and is conveniently located for roofing companies, roofing contractors, and waste haulers throughout the Metro Vancouver area. The location of the Empower Pilot Facility has ample space with room for expansion as the business grows. The Company has leased the Empower Pilot Facility and surrounding lands pursuant to the Empower Lease for a period of five years from January 1, 2021 with an option to extend for an additional five years.

The Empower Pilot Facility represents the pilot phase of the proprietary BEST development process. Empower Delta (then Empower (Original)) began searching for an alternative to traditional RAS grinding and screening in 2010. Ground RAS can be used (on its own or in a blend with crushed concrete or asphalt) as a recycled granular base course or as a simple surface treatment for road construction. This recycling option is not only severely limited in terms of volume, it is not accepted for road use in several jurisdictions, and its value does not consider the value of the liquid asphalt in the RAS product. Empower (Original) and Lafarge, the largest user of RAS in hot mix asphalt in Western Canada, worked collaboratively to develop extraction technology until 2013. In 2013, Lafarge and Empower (Original) agreed that Empower (Original) would continue as the sole developer of the technology. In 2015, Empower (Original) built a test facility in Claresholm, Alberta to trial various separation methodologies. After establishing the framework of BEST, Empower (Original) moved to the current location at the Empower Pilot Facility in Delta, British Columbia to begin developing the Empower Pilot Facility technology in 2017.

Since October 2021, the Company has been implementing the changes identified through the unit-by-unit commissioning of the Company's proprietary Bitumen Extraction & Separation Technology ("BEST") process at the Empower Pilot Facility.

In 2022, the Company initiated production at the Empower Pilot Facility which delivered significant results in several key areas:

1. The production fully proved the Company's proprietary Bitumen Extraction & Separation Technology (BEST) with shingle feedstock processed into aggregate, fiber and asphalt ("Products").
2. The process enabled the supply of Products to potential customers for detailed testing, research & development. This testing helped to secure the long-term offtake agreement for the Calgary facility with McAsphalt and allowed subsequent successful testing with a number of shingle and flat roof manufacturers. Importantly, the testing results supported the Company's view that the asphalt produced by the BEST technology is suitable for all three target market sectors of paving, shingle and flat roof manufacturing.
3. The production of Products generated valuable feedback for the design of the Empower Calgary Facility from customers, vendors and from the production process itself. The feedback has been incorporated into the detailed design process for Calgary by the Company's vendors and as part of the integrated facility design led by BBA. In the Company's view, the feedback, derived from steady state operations at the Delta Pilot Facility, significantly de-risks the Empower Calgary Facility design.

Given the success of the detailed testing, research & development activities described above, the Company will now focus resources, including manpower, capital and G&A costs, on the Empower Calgary Facility. In order to conserve limited resources, the Company will not pursue additional investment in the Delta Pilot Facility and will now operate it as an "on demand" facility that is focused on providing partners and potential customers with product for R&D, manufacturing and product testing. The Company expects to operate the Delta Pilot Facility to supply major manufacturers (see press release dated 3/08/2023) with the Products necessary to complete manufacturing and testing during 1H 2023 and on an ad-hoc, on demand, basis thereafter.

Calgary Empower Facility – Calgary, AB

On March 17, 2022, the Company announced that the Board of Directors of the Company approved the selection of the City of Calgary, Alberta, Canada as the planned site location for the Company's first asphalt shingle reprocessing scale up facility ("Calgary Empower Facility"). On September 14, 2022, the Company announced that it signed a non-binding letter of intent for a long-term 15-year lease for an industrial zoned property of 3.98 acres located in Greater Calgary. On February 24, 2023 Northstar announced that it's wholly owned subsidiary Empower Environmental Solutions Calgary Ltd. signed a long-term 15-year lease agreement with Mook Group of Companies (the Landlord") for an industrial-zoned property of 3.98 acres located in Rocky View County, a municipal district adjacent to the City of Calgary, Alberta , as the site for the Company's planned scale-up facility in Calgary. The lease is for an initial term of 15 years, with two extension options of five years each. The Landlord has been issued a conditional development permit from Rocky View County. Based on management's knowledge at this point in time, the Company believes this is the only permit or approval required to collect asphalt shingles and commence construction and operation of the Empower Calgary Facility.

Based on the independent front-end engineering design ("FEED") study announced on March 31, 2022, the Calgary Empower Facility is expected to be the Company's first modular scale up facility and is expected to be designed and engineered with an estimated capacity of 150–200 tpd. The scale up facility's build and design are part of the Company's national roll out and expansion strategy to operate asphalt shingle reprocessing facilities across North America.

Expected Sequence of Events

- Enter into financing arrangements to fully fund the construction and commissioning of the Empower Calgary Facility – Expected in Q2/Q3 2023
- Complete detailed plant engineering and construction drawings – Expected to commence in H2 2023
- Commence procurement of long-lead item equipment in Q3 2023
- Complete site development work at the site for the Calgary Empower Facility – commenced in Q2 2023
- Commence securing supply of feedstock for Calgary Empower Facility – expected to commence in H2 2023
- Complete operational personnel and contractor hiring
- Commence Calgary Empower Facility pre-construction
- Commence Calgary Empower Facility construction
- Commence Calgary Empower Facility Commissioning and ramp up
- Commence commercial operations at the Calgary Empower Facility
- Commercial production at the Calgary Empower Facility

On October 6, 2022, Northstar announced the execution of the McAsphalt Offtake Term Sheet for a 5-year (with automatic 3-year renewal options) take-or-pay offtake agreement with McAsphalt, whereby McAsphalt will purchase, on an exclusive basis, 100% of the liquid asphalt production from the Calgary Empower Facility. Subsequently, on March 2, 2023, Northstar announced the execution of the McAsphalt Offtake Agreement with McAsphalt. The key commercial terms of the contract remain unchanged from the original McAsphalt Offtake Term Sheet, as previously disclosed by the Company on October 6, 2022.

The goal of the Calgary Empower Facility is to fully de-risk the Northstar BEST process to the point of full commercial production. The objective of BBA's engineering design is to fully optimize and re-engineer, where necessary, the Empower Pilot Facility processes to improve throughput, operability, controllability, and maintainability for a capacity with a range of 150-200 tpd of asphalt shingle feedstock. In addition, the steps of the process are being reviewed against industry standards to ensure it is competitive without compromising the BEST solution developed at the Empower Pilot Facility. It is expected that the Calgary Empower Facility, while a fully engineered and commercial facility, will likely still require further engineered modifications to get to a fully optimized facility with maximum potential. The potential for increased efficiencies and optimization modifications (agreed as part of the contractual relationship between Northstar and BBA) will be conducted on future facilities based on ongoing operational feedback.

Final site selection and other construction terms are subject to several factors, including local support and final approval by the Company's Board of Directors. Upon securing financing and receiving required environmental and operating permits, the Company plans to begin construction on the Calgary Empower Facility. The Calgary Empower Facility will operate under "Empower Environmental Solutions Calgary Ltd.", a wholly owned subsidiary of the Company.

KEY DEVELOPMENTS – 2022

Q1 2022

- On January 11, 2022, the Common Shares commenced trading on the OTCQB in the United States under the ticker symbol "ROOOF" and, in addition, the Common Shares became eligible for book-entry and depository services with DTC, a subsidiary of The Depository Trust & Clearing Corp.

- On February 7, 2022, the Company announced the appointment of Ms. Kellie Johnston as Chief Sustainability Officer and General Counsel.

- On February 17, 2022, the Company announced that it had initiated steady state production at the Empower Pilot Facility with the expectation that the facility will deliver throughput of asphalt shingles in the range of 10-20 tpd up to 4-5 days per week. It was also announced that the two primary output products (liquid asphalt and aggregate) were being produced exactly as designed, meeting the Company's end product specifications. The production of specification products enabled the Company to deliver samples of its reprocessed asphalt and aggregate to multiple road construction companies, shingle manufacturers, and other industry stakeholders. The samples enable detailed technical analysis to be carried out by a wide range of the Company's potential customers. Internal testing capability was also implemented at the Empower Pilot Facility, enabling the development of a quality assurance program for the Company's reprocessed products.

- On March 3, 2022, the Company announced that as part of its commitment to quality, it received positive testing results from an independent third-party testing facility for two of its outputs, liquid asphalt and aggregate. These independent third-party test results for liquid asphalt and aggregate confirmed that these products meet the Company's end product specification objectives.

- On March 17, 2022, the Company announced that the Board approved the selection of the City of Calgary, Alberta, Canada as the planned site location for the Calgary Empower Facility. The Calgary Empower Facility is intended to be the Company's first asphalt shingle reprocessing facility to be built based on the Company's FEED. Accordingly, it will be the Company's first modular facility designed and engineered with an estimated capacity of 150–200 tpd. The Calgary Empower Facility's build and design are part of the Company's national roll out and expansion strategy to operate asphalt shingle reprocessing facilities across North America. The FEED for the Calgary Empower Facility was completed in Q1 of 2022.

- On March 29, 2022, Northstar announced that it executed an investment agreement dated March 3, 2022, with Alberta Innovates, a provincial Crown corporation and Alberta's largest research and innovation corporation. Alberta Innovates reviewed Northstar's application and approved a total of $200,000 in funding towards the estimated $675,000 of direct engineering costs for its proposed Calgary Empower Facility.

- On March 31, 2022, Northstar announced that it had received a FEED from BBA for its proposed Calgary Empower Facility to be constructed in Calgary, Alberta. The FEED, which provided a pre-feasibility level capital estimate, outlined direct costs of $8.6 million, including equipment costs of $7.1 million and labour and materials of $1.5 million, and indirect costs of $1.2 million, totalling direct and indirect costs of $9.8 million. With a 20% contingency, the total capital cost estimate was approximately $11.75 million.

Q2 2022

- On April 1, 2022, Northstar announced the preliminary project economics results from its internal management-prepared economic analysis for its planned Calgary Empower Facility based on the FEED design.

- On May 26, 2022, Northstar announced the positive results of a second independent carbon dioxide equivalent ("CO2e") LCA completed by Burgess Environmental Ltd. ("Burgess") for selected performance indicators for Northstar's planned Calgary Empower Facility. The LCA is based on sophisticated modelling from the FEED. The LCA assessed the impacts and benefits of reprocessing asphalt shingles and compared them to the impacts and benefits related to the disposal of discarded or defective asphalt shingles in landfills and virgin production of asphalt shingles.

- On May 31, 2022, Northstar announced the details of its refocused expansion plans following the review of its Phase 1 Expansion Program. The Company recently completed a wide engagement of potential financing partners for its proposed Phase 1 Expansion Program in Calgary, Toronto, and the Pacific Northwest, anticipated to be strategically implemented over the next two years.

Q3 2022

- On July 4, 2022, Northstar announced the mailing of the management information circular which proposed the re-election of six directors for the ensuing year, the reappointment of the Company's auditors, and the approval of a 10% rolling plan for stock options and a fixed plan of 6,000,000 common shares for awards of restricted share units ("RSUs"), performance share units ("PSUs") and deferred share units ("DSUs"). It also announced that it issued an aggregate of 355,925 RSUs and 3,559,278 PSUs to officers and key employees of the Company.

- On July 29, 2022, Northstar announced the results of the annual general meeting and that all matters that were voted on were approved.

- On August 3, 2022, Northstar announced that is received its brokering license from Metro Vancouver for collection of asphalt shingles and associated tipping fees at the Empower Pilot Facility.

- On August 16, 2022, Northstar announced that it completed a non-brokered private placement for 1,250,000 common shares at $0.40 per share with Renewable U Energy Inc. ("Renewable U").

- On August 29, 2022, Northstar announced an operational update for the Empower Pilot Facility.

- On September 14, 2022, Northstar announced that it signed a non-binding letter of intent for a long-term 15-year lease for an industrial zoned property of 3.98 acres located in Greater Calgary.

- On September 29, 2022, Northstar announced that it has signed a purchase order agreement with a major international manufacturer engaged in the production of asphalt roofing systems. The Customer agreed to purchase 80 tonnes of liquid asphalt produced from the Empower Pilot Facility.

Q4 2022

- On October 4, 2022, Northstar announced a strategic partnership through the execution of a binding term sheet with Renewable U to fully fund Northstar's Phase 1 Expansion Program through financing of over $43.5 million, including the issuance of 4,875,000 Northstar common shares to Renewable U at $0.40 per share, secured three-year convertible debentures bearing interest at 6% annually convertible after year 2 at $0.50 per share, debt of $36 million for three facilities at $12 million per facility, and the issuance of 4,500,000 non-transferrable purchase warrants to acquire Northstar common shares at a price of $0.60 per share for a period of two years with an acceleration clause at $1.25 per common share. The net proceeds of the Security Financing will be used for funding development of Northstar's Calgary Empower Facility, further development of the Northstar's Empower Pilot Facility, and for general corporate purposes and working capital.

- On October 6, 2022, Northstar announced the execution of a binding term sheet for a 5-year (with automatic 3-year renewal options) offtake agreement with McAsphalt Industries Inc. ("McAsphalt"), a wholly owned subsidiary of the Colas Group ("Colas") (XPAR:RE), whereby McAsphalt will purchase, on an exclusive basis, 100% of the liquid asphalt production from the Calgary Empower Facility.
  - **About McAsphalt:** For over 50 years, McAsphalt has been the industry's top asphalt expert, offering asphalt products and services from over 27 strategically located terminals across Canada, coast to coast to coast. A world leader in the construction, recycling, and maintenance of transportation infrastructure**.**
  - **About Colas:** Colas Canada is a Canadian leader in transportation infrastructure - materials, construction, rehabilitation, preservation and maintenance of roads, highways, airport runways, port, industrial and logistics infrastructure, subdivisions, urban infrastructure, parking lots and more. Colas companies in Canada are part of the Colas Group (XPAR:RE) a world leader in the construction, recycling, and maintenance of transportation infrastructure.
  - **Status:** The precise terms of the five-year off-take agreement with McAsphalt will be incorporated into a definitive agreement (the "Definitive Agreement") to be negotiated between McAsphalt and Northstar, which is currently ongoing and expected to be signed in Q4 2022.
  - **Pricing:** The agreed terms of the sale price of the liquid asphalt are confidential due to commercial sensitivity reasons, but the pricing is market based and includes the market index, a quality and locational differential, and a sustainability premium.
  - **Risk Management:** Risk management pricing is also incorporated into the pricing mechanism.
  - **Third Party Sales:** Northstar and McAsphalt will have the ability to enter into third party sales agreements for the liquid asphalt product produced from the Empower Calgary Facility. The detailed terms of any third-party sales are confidential.
  - **Planning, Regulatory and Government Agency Support:** McAsphalt will support Northstar in planning, regulatory and government agency engagement with respect to the Empower Calgary Facility.
  - **Carbon Credits:** Northstar and McAsphalt will work together on the development of a protocol to create carbon credits. Should carbon credits be created, the sustainability premium will be calculated based on the joint contribution to the protocol development.

- On November 8, 2022, Northstar announced that it has been issued a patent for the Company's front-end technology for reprocessing asphalt shingles by the United States Patent and Trademark Office ("USPTO"). This patent is expected to remain in force until 2042. Further, Northstar has filed follow-on continuation patent applications with the USPTO. As well as an application for patent approval in Canada and plans to file a Patent Cooperation Treaty international application.

- On November 15, 2022, Northstar completed an internal transaction with its wholly-owned subsidiary, Empower Environmental Solutions Ltd. ("Empower") in which the Company acquired intellectual property related to the Company's proprietary shingle reprocessing technology (the "Technology"). In consideration, the Company designated a new series of its previously authorized preferred shares, designated as the Series A Preferred Shares, and it issued all 1,000 of those Series A Preferred Shares (collectively, the "Consideration Shares") to Empower at a deemed price per share of $3,580. Following the issuance of the Consideration Shares, the Company approved the redemption of the Consideration Shares in accordance with their special rights and restrictions.

- On November 17, 2022, Northstar announced the first collection of previously landfill bound asphalt shingles at the Company's asphalt shingle reprocessing facility in Delta, British Columbia.

- On November 18, 2022, Northstar announced a corporate and intellectual property update.

- On November 22, 2022, Northstar announced that it signed a letter of intent with a major industrial customer to purchase Northstar's asphalt and products from one or more future facilities in the United States

- On December 15, 2022, Northstar announced that it closed $1,440,000 non-brokered private placement of non-transferable unsecured convertible debentures. The Convertible Debentures bear an interest of 10% per year, paid semi-annually in arrears, and mature 36 months from the date of issue.

Subsequent to Q4 2022

- On January 30, 2023, Northstar announced that on January 20, 2023, the Landlord for the land for Northstar's Empower Calgary Facility near Calgary, Alberta received a conditional development permit from Rocky View County, a municipal district in Alberta adjacent to the City of Calgary. The Conditional Development Permit was issued to the Landlord and includes standard conditions that need to be completed prior to issuance of a development permit.

- On February 13, 2023, the Company announced that Northstar's Empower Calgary Facility was approved for a non-repayable government grant of up to approximately $7.1 million by Emissions Reduction Alberta ("ERA"), an Alberta-based government entity funded by the Government of Alberta. The lead applicant organization is Empower Calgary, a wholly owned subsidiary of Northstar, and the net proceeds received by the Company from the government grant will be used to further design, construct and commission the Empower Calgary Facility. ERA's funding approval is subject to timely written confirmation from Northstar that all other sources of funding for the Empower Calgary Facility have been secured, as well as the successful negotiation of a contribution agreement with ERA on terms satisfactory to ERA.

- On February 14, 2023, Northstar announced that it received notice from the Canadian patent office that its patent application has been approved for fast track due to Northstar's green technology.

- On February 24, 2023, Northstar announced that its wholly owned subsidiary Empower Environmental Solutions Calgary Ltd. signed a long-term 15-year lease agreement with Mook Group of Companies for an industrial-zoned property of 3.98 acres located in Rocky View County, a municipal district adjacent to the City of Calgary, Alberta, as the site for the Company's planned scale-up facility in Calgary. The lease is for an initial term of 15 years, with two extension options of five years each. All municipal permits have been received to proceed with construction, collection of asphalt shingles and production.

- On February 28, 2023, Northstar closed $625,000 in a non-brokered private placement of non-transferable unsecured convertible debentures. The Convertible Debentures bear an interest of 10% per year, paid semi-annually in arrears, and mature 36 months from the date of issue.

- On March 2, 2023, Northstar announced the execution of an offtake agreement with Colas Canada's subsidiary McAsphalt Industries Ltd. for 100% of liquid asphalt production from its Empower Calgary facility. The key commercial terms of the Offtake Agreement are unchanged from the binding term sheet announced by the company on October 6, 2022 and include:
  - Term: an initial five-year term with automatic three-year renewal options, unless either party provides 180 days written notice of its intention not to renew
  - Pricing: The agreed terms of the sale price of liquid asphalt is confidential due to commercial sensitivity reasons, but pricing is market based and includes the market index, a quality and locational differential, and a sustainability premium
  - Risk Management: risk management pricing is incorporated into the pricing mechanism and other sharing mechanisms to allow best risk allocation for the benefit of both parties and ultimately the project.
  - Third Party sales: Northstar and McAsphalt will have the ability to enter into third party sales agreements for the liquid asphalt product produced from the Empower Calgary facility. The detailed terms of any third-party agreement are confidential.
  - Life-Cycle Analysis: Northstar and McAsphalt will work together to develop a life-cycle analysis for Northstar's proprietary clean technology.
  - Environmental Credits: Northstar and McAsphalt will work together on the development of a protocol to create environmental credits. Should environmental credits be created, the sustainability premium will be calculated based on the joint contribution to the protocol development.

- On March 8, 2023, Northstar announced that numerous major domestic and international asphalt shingle and flat roofing manufacturers successfully completed their detailed research and development testing of Northstar's liquid asphalt for use in asphalt shingles and flat roofing systems. They will now commence product manufacturing and quality testing with Northstar's liquid asphalt. Manufacturing testing will test both the suitability of Northstar's liquid asphalt in the Manufacturers' production process, and the quality of the final products made using Northstar's liquid asphalt.

- On March 14, 2023, Northstar announced that it received an environmental awareness award from Waste Management Association of British Columbia.

- On April 6, 2023, Northstar announced a $2 million non-brokered private placement of up to 13,333,333 units of the Company at a purchase price of $0.15 per unit for aggregate proceeds of up to $2,000,000. Each unit will consist of one common share of the company and one common share purchase warrant of the company, with each such warrant entitling the holder thereof to acquire one additional common share at an exercise price of $0.20 per warrant share for a period of 36 months following the closing date of the private placement.

- On April 14, 2023, Northstar announced that it upsized its non-brokered private placement previously announced on April 6, 2023 from up to $2,000,000 to up to $2,300,000. As a result of the upsizing, the Private Placement will consist of $2,000,000 additional units of the Company at a price of $0.15 per unit which, upon expected closing, would increase aggregate gross proceeds from the non-brokered private placement from approximately $2,000,000 to approximately $2,300,000

PERFORMANCE SUMMARY

The following is a summary of the significant events and transactions that occurred during the year ended December 31, 2022 and for the previous period to the report date hereof:

(a) During the year ended December 31, 2022
- On January 18, 2022, the Company incorporated Empower Environmental Solutions Calgary Ltd.
- On January 20, 2022 the Company incorporated Empower Environmental Solutions Toronto West Ltd.
- the Company spent $797,095 on acquisitions of plant equipment.
- the Company spent $1,575,828 in research and development expenses.

- Empower repaid $92,363 in loan repayments.
- The company closed $1,440,000 non-brokered private placement of unsecured convertible debentures. The Convertible Debentures bear an interest of 10% per year, paid semi-annually in arrears, and mature 36 months from the date of issue.

(b) During the year ended December 31, 2021

- the Company spent $1,050,129 on acquisitions of plant equipment
- the Company sold a piece of equipment that was not suitable for $24,000 incurring a loss of $80,000
- the Company wrote-off $109,321 of equipment that failed during testing.
- the Company spent $633,461 in research and development expenses.
- Empower repaid $2,205,800 in loan repayments.
- Empower renegotiated a new 5-year lease agreement on its premises effective January 1, 2021 for an initial term of 5 years with an option to extend for an additional 5 year. The Basic annual rents are as follows:
  o from January 1, 2021 to December 31, 2022 - $558,435 per annum
  o from January 1, 2023 to December 31, 2024 - $583,563 per annum, and
  o from January 1, 2025 to December 31, 2025 - $609,837 per annum
  o Estimated additional rents are approximately $126,000 per annum.
- The Company filed a preliminary prospectus dated April 15, 2021 an amended and restated preliminary prospectus dated May 7, 2021, and a final prospectus dated June 18, 2021 and began trading on the TSX Venture Exchange ("TSX-V") on July 13, 2021 under the symbol "ROOF".
- The Company raised $12,241,312 on the issue of 34,975,178 Units at a price of $0.35 per Unit. Each Unit is comprised of one common share in the capital of the Company (each, a "Share") and one-half of one transferable common share purchase warrant (each whole warrant, a "Warrant"). Each Warrant will entitle the holder thereof to acquire one Share (each, a "Warrant Share") at a price of $0.50 per Warrant Share for a period of two years from listing on a public market and such warrants trade on the TSX-V under the symbol "ROOF.WT". In addition, to the cash portion of the finder's fees in the amount of $705,098, 2,014,565 Broker Warrants on Escrow Release valued at $391,873.
- The Company issued 702,736 shares to settle outstanding loans payable of $200,000 plus $45,958 in accrued interest. Each of the directors, being Neil Currie, James Currie, Gordon Johnson, James Borkowski and Gregg Sedun, provided bridge loans totaling $480,000 in aggregate during the period which were repaid in the same period with interest totaling $2,495.
- The Company negotiated $270,000 plus GST and PST in equipment purchases with an offsetting loan with a company controlled by an Officer of the Company.

Selected Annual Information

	Year Ended December 31, 2022	Year Ended December 31, 2021	Year Ended December 31, 2020
Loss and comprehensive loss	$ 8,200,936	$ 7,207,912	$ 6,596,793
Basic and diluted loss per share	0.08	0.08	0.16
Total assets	6,829,057	12,374,613	4,859,762
Total liabilities	4,044,550	3,102,023	2,503,071

SUMMARY OF QUARTERLY RESULTS

	December 31, 2022	September 30, 2022	June 30, 2022	March 31, 2022
Total assets	$ 6,829,057	$ 7,123,935	$ 8,532,713	$ 10,180,750
Property, plant and equipment	3,286,540	3,318,021	3,329,674	3,235,492
Working capital (deficit)	(419,585)	397,412	1,739,915	3,661,725
Shareholders' equity (deficit)	2,784,507	4,342,589	5,697,220	7,510,032
General and administrative expenses	1,906,416	1,430,191	1,664,057	1,769,094
Loss and comprehensive loss	(2,267,507)	(1,960,482)	(1,940,007)	(2,032,940)
Basic and diluted loss per share	(0.03)	(0.02)	(0.02)	(0.02)

	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Total assets	$ 12,374,613	$ 14,281,219	$ 16,094,979	$ 12,816,534
Property, plant and equipment	3,205,404	2,893,593	2,712,702	2,573,141
Working capital (deficit)	5,492,200	7,835,056	9,331,991	(1,358,439)
Shareholders' equity	9,272,590	11,467,820	12,801,486	1,991,514
General and administrative expenses	1,715,220	1,793,040	1,804,089	1,107,245
Loss and comprehensive loss	(2,320,211)	(1,904,360)	(1,853,482)	(1,129,859)
Basic and diluted loss per share	(0.02)	(0.02)	(0.02)	(0.02)

Results of Operations

The following discussion addresses the operating results and financial condition of the Company for the three months ended December 31, 2022, compared with the three months ended December 31, 2021.

For the three-month period ended December 31, 2022:

Loss and comprehensive loss for the period

The Company had a loss and comprehensive loss for the three-month period ended December 31, 2022, of $2,267,507 (2021 - $ 2,320,211). The net decrease of $52,704 in the loss and comprehensive loss for the three-month period ended December 31, 2022 compared to the three-month period ended December 31, 2021 was mainly due an increase of $191,196 in General and administrative expenses, an increase in Research and development expenses of $133,790, a decrease in other items of $175,171 mainly consisting of foreign exchange gains, interest income, a gain from sale of assets and a disposition of failed equipment. There was also an income tax recovery of $123,962 relating to the deferred tax on convertible debentures and a investment tax credit recovery of $78,557 from a SR&ED claim. The changes in General and administrative, Research and development expenses and other income are noted below.

Other income

During the three-month period ended December 31, 2022, the Company reported interest income of $4,522 (2021 - $5,015), a foreign exchange loss of $2,085 (2021 - $11,570 gain), loss on sale of equipment under construction of $Nil (2021 - $80,000), and a disposition of failed equipment of $NIL (2021 - $109,321) compared to the three-month period ended December 31, 2022. The interest income is due from a net investment in sublease and reported separately from the interest expense of $3,556 on the lease liability, and the exchange loss is on US currency purchases.

Research and development expenses ("R&D")

During the three-month period ended December 31, 2022, the Company reported R&D of $566,047 compared to $297,262 for the three-month period ended December 31, 2021. The items that caused the $268,785 increase is noted in the following:

In comparison to the three-month period ended December 31, 2021:

- Contract consulting fees of $104,078 (2021 - $264,180) decreased by $160,102 due to the Company pushing to complete its final phase of testing of the asphalt shingle processing equipment and decreasing the use of consultants for its R&D.
- Repairs and maintenance of $9,253 (2021 - $66,388) decreased by $57,135 on repairs and small modifications to the processing equipment as the Company has streamlined the current equipment and has focused most of its attention to new capital equipment.
- Site materials of $452,715 (2021 - $101,688) increased by $351,027 as the Company has continuously increased production and has continued to refine and do numerous tests which consumed materials and equipment, as well as increased costs for health & safety supplies. Equipment rentals also increased to allow testing of different equipment models.

General and administrative expenses

General and administrative expenses of $1,906,416 (2021 - $1,715,220) are primarily comprised of advertising and promotion, bank charges & interest, consulting fees, depreciation, insurance, IT & communications, office expenses, professional fees, rent and utilities, share-based compensation, transfer agent and regulatory fees, travel, and wages & benefits. The net decrease was $191,196 compared to the three-month period ended December 31, 2021. Items that caused the net decrease are noted in the following:

In comparison to the three-month period ended December 31, 2021:

- Advertising and promotion of $101,736 (2021 - $373,359) decreased by $271,623 as the Company focused on decreasing its monthly burn rate.
- Bank charges and interest of $59,243 (2021 - $59,514) decreased by $271. Accretion interest on new leases on the premises and acquisition of the Northstar lease account for a decrease of $10,913, interest expense on convertible debentures accounts for $6,000 increase, accretion interest on the convertible debenture accounts for an increase of $4,228, and an increase of bank charge and other interest of $414.
- Consulting of $39,449 (2021 - $194,620) decreased by $155,171 due to some of the consultants being hired as employees after the Company listed in the public market, causing an increase in wages and benefits and the Company's focus on reducing its monthly burn rate.
- Depreciation of $289,605 (2021 - $115,491) increased by $174,114 mainly due to the Company beginning to depreciate its processing equipment at the Empower Pilot Facility.
- Insurance of $28,402 (2021 - $36,166) decreased by $7,764 due to the renewal rates for D&O and property and plant liability insurance.
- IT and Communications of $35,502 (2021 - $40,534) decreased by $5,032 due to the Company switching to a different IT support company and incurring less monthly fees offset by additional fees for website development and the cost of maintaining a datasite.
- Office and administration of $11,281 (2021 - $15,897) decreased by $4,616 due to an increase in subscription, licences, and postage, offset by a decrease in general office supplies.
- Professional fees of $178,582 (2021 - $150,064) increased by $28,518. Legal fees increased by $12,019 as the Company required such services to complete certain securities based transactions, accounting fees increased by $21,607 due to services required on specific business transactions, and professional fees decreased by $5,108 due to professional services not required in current year.
- Rent and utilities of $161,621 (2021 - $106,768) increased by $54,853 due to the new lease beginning January 1, 2021 which accounted for a decrease of $35,952, utilities increased by $76,514, ground maintenance increased by $6,665, and the remaining amount of the $7626 increase was due to additional office space required.
- Share-based compensation of $123,619 (2021 - $142,738) decreased by $19,119 due to the vesting of the stock options on historical issuances.
- Transfer agent and regulatory fees of $33,538 (2021 - $16,635) increased by $14,903 mainly due to the renewal of the OTC Markets application fee which occurred in Q1 of the prior year.

- Travel of $39,763 (2021 - $67,967) decreased by $28,204 as the Company stopped all unessential travel to decrease its burn rate.
- Wages and benefits of $804,260 (2021 - $528,462) increased by $275,798 as the Company hired an additional executive staff member in 2022 Q1, the plant hired additional operators during the year, and the company added an employee benefits plan.

For the year ended December 31, 2022:

Loss and comprehensive loss for the period

The Company had a loss and comprehensive loss for the year ended December 31, 2022, of $8,200,936 (2021 - $7,207,912). The net increase of $993,024 in the loss and comprehensive loss for the year ended December 31, 2022 compared to the year ended December 31, 2021 was mainly due to an increase of $350,164 in General and administrative expenses, an increase in research and development expenses of $942,367, a decrease in other items of $55,186 mainly consisted of foreign exchange gains (losses), interest income and other income, a loss on tax receivable of $130,522 and an income tax recovery of $120,359 relating to a SRED claim and $123,962 from deferred taxes on convertible debentures. The changes in General and administrative, Research and development expenses and other income are noted below.

Other income

During the year ended December 31, 2022, the Company reported interest income of $19,703 (2021 - $22,000), foreign exchange loss of $988 (2021 - $12,463 gain), other income of $12,136 (2021 – Nil), and a loss on tax receivable of $130,522 compared to the year ended December 31, 2021. The interest income is due from a net investment in sublease and reported separately from the interest expense of $16,465 on the lease liability and interest received on GST refunds, the exchange gain is on US currency purchases, other income is from a BC Hydro and PST rebate, and the loss on tax receivable was from a write off of GST Input tax credits that will likely be disallowed by CRA.

Research and development expenses ("R&D")

During the year ended December 31, 2022, the Company reported R&D of $1,575,828 compared to $633,461 for the year ended December 31, 2021. The items that caused the $942,367 increase is noted in the following:

In comparison to the year ended December 31, 2021:

- Contract consulting fees of $477,539 (2021 - $316,182) increased by $161,357 due to the Company pushing to complete its final phase of testing of the asphalt shingle processing equipment and the use of consultants for its R&D.
- Repairs and maintenance of $18,347 (2021 - $89,278) decreased by $70,931 on repairs and small modifications to the processing equipment as the Company has streamlined the current equipment and has focused most of its attention to new capital equipment.
- Site materials of $1,079,942 (2021 - $228,001) increased by $851,941 as the Company has started producing product and has continued to refine and do numerous tests which consumed materials and equipment, as well as increased costs for health & safety supplies. Equipment rentals also increased to allow testing of different equipment models.

General and administrative expenses

General and administrative expenses of $6,769,758 (2021 - $6,419,594) are primarily comprised of advertising and promotion, bank charges & interest, consulting fees, depreciation, insurance, IT & communications, office expenses, professional fees, rent and utilities, share-based compensation, transfer agent and regulatory fees, travel, and wages & benefits. The net increase was $350,164 compared to the year ended December 31, 2021. Items that caused the net increase are noted in the following:

In comparison to the year ended December 31, 2021:

- Advertising and promotion of $609,334 (2021 - $909,395) decreased by $300,061 as the Company focused on decreasing its burn rate in 2022.
- Bank charges and interest of $228,589 (2021 - $292,679) decreased by $64,090. Accretion interest on new leases on the premises and acquisition of the Northstar lease account for a decrease of $41,984, a decrease of Loan interest of $18,334 due to a principal reduction in the Company's bank loan and a reduction of bank charge and finance charges of $3,772.

- Consulting of $276,664 (2021 - $501,785) decreased by $225,121 due to some of the consultants being hired as employees after the Company listed in the public market, causing an increase in wages and benefits and from minimizing consultant use to decrease the Company's burn rate.
- Depreciation of $1,075,999 (2021 - $461,966) increased by $614,033 mainly due to the Company beginning to depreciate its processing equipment at the beginning of 2022.
- Insurance of $128,060 (2021 - $73,215) increased by $54,845 due to acquiring D&O and property and plant liability insurance.
- IT and Communications of $159,386 (2021 - $43,873) increased by $115,513 due to money spent on software licenses and external IT services that were needed to support the business.
- Office and administration of $55,133 (2021 - $23,203) increased by $31,930 was due to an increase in subscriptions, licences, general office supplies, and employee health & safety training.
- Professional fees of $591,795 (2021 - $576,485) increased by $15,310. Legal fees decreased by $70,740 as the Company required such services to complete its listing in the prior period and has hired in house counsel, offset by increases in Accounting fees of $81,374 due to extra audit and tax services required, and an increase in other professional fees of $4,676.
- Rent and utilities of $426,116 (2021 - $227,257) increased by $198,859 due to the new lease at the Empower Pilot Facility beginning January 1, 2021, which accounted for $3,461, utilities increased by $121,163, ground maintenance increased by $21,910 and the remaining amount of the $52,325 increase was due to additional office space required.
- Share-based compensation of $656,932 (2021 - $2,357,265) decreased by $1,700,333 due to timing of options granted in the current period and the vesting of the stock options on historical issuances.
- Transfer agent and regulatory fees of $106,671 (2021 - $106,967) decreased by $296.
- Travel of $226,945 (2021 - $123,767) increased by $103,178 as the Company brought in certain consultants to assist in refining and promoting the Company's and its processing equipment as well as a full year of travel by the executives.
- Wages and benefits of $2,228,134 (2021 - $721,737) increased by $1,506,397 as the Company hired the Empower management team, including Mr. Gord Johnson and Mr. Terry Charles, as employees on the RTO and the costs reported in Wages and benefits were previously reported as Consulting fees. In addition, the Company hired additional executive staff in Q4 2021 and Q1 2022 and additional plant operators during the year.

LIQUIDITY AND CAPITAL RESOURCES

The Company's development of asphalt processing activities has been funded to date primarily through the issuance of common shares and loan financings, and the Company expects that it will continue to be able to utilize this source of financing until it develops cash flow from its reprocessing operations. Other than as discussed herein, the Company is not aware of any trends, demands, commitments, events or uncertainties that may result in its liquidity either materially increasing or decreasing at present or in the foreseeable future. Material increases or decreases in the Company's liquidity will be substantially determined by the success or failure of its commercialization of a proprietary process technology for the reprocessing of asphalt shingles and the extraction and recovery of asphalt, fiber and aggregate to be sold and used in asphalt pavement, shingle manufacturing, construction products, and other industrial applications, as well as its continued ability to raise capital.

The Company anticipates spending approximately $15,000,000 in capital resources on its processing equipment and R&D in the next twelve months.

Currently, the Company's overhead expenses are averaging approximately $300,000 per month on a consolidated basis (excluding share-based payments on issuance of stock options) during the development and setting up of the asphalt processing plant. The Company assesses its financing requirements and its ability to access equity or debt markets on an ongoing basis. The assessment considers: the stage and success of the Company's evaluation activities to date; the continued participation of the Company's partners in evaluation activities; and financial market conditions. It is possible that future economic events and global conditions may result in further volatility in the financial markets which could negatively impact the Company's ability to access equity or debt markets in the future.

In March 2021, the Company issued 702,736 shares in settlement of $245,958 in Debt. On March 25, 2021, and March 26, 2021, the Company raised $12,241,312 on 34, 975,178 Subscription Receipts at a price of $0.35 per Subscription Receipt. The Subscription Receipts incurred $705,098 in finders' fees payable in cash of which $352,649 was withheld from the Subscription Receipts and the balance of $352,449 in finders' fees were paid on Escrow Release. Each Subscription Receipt converted into one unit upon the receipt of the final prospectus by the British Columbia Securities Commission on June 22, 2021. In May 2021, the Company received an aggregate of $480,000 in loans from each of the directors, being Neil Currie, James Currie, Gordon Johnson, James Borkowski and Gregg Sedun, as bridge loans as the Company completed its public listing and repaid the bridge loans in full in June 2021 from proceeds of the share issuances.

On August 15, 2022, the Company issued 1,250,000 shares to Renewable U in a non-brokered private placement for a subscription price of $0.40 per share for total gross proceeds of $500,000.

On October 3, 2022, Northstar issued 625,000 shares to Renewable in a non-brokered private placement at a price of $0.40 per Common Share for gross proceeds of $250,000.

On December 15, 2022, the Company issued $1,440,000 in a non-brokered private placement of unsecured Convertible Debentures.

As at December 31, 2022, the Company had working capital deficit of $419,585 compared to a working capital of $5,492,200 as at December 31, 2021. As at December 31, 2022, the Company had cash of $1,114,166 compared to $5,948,876 as at December 31, 2021.

Net cash used in operating activities for the year ended December 31, 2022, was $5,687,091 compared to $4,094,560 for the year ended December 31, 2021, consisting primarily of the operating loss for the period and the change in non-cash items.

Net cash used in investing activities for the year ended December 31, 2022, was $647,889 compared to $1,139,729 used in investing activities during the year ended December 31, 2021 was consisting of cash used for the acquisition of property, plant and equipment of $716,853 (2021 - $761,229), the acquisition of intangible assets of $26,036 (2021 $NIL), proceeds from government grants on PPE of $100,000 (2021 - $Nil), proceeds from disposition of property, plant and equipment of $NIL (2021 $24,000), and refundable deposits paid $5,000 (2021 - $402,500).

Net cash increase in financing activities for the year ended December 31, 2022 was $1,500,270 compared to $9,205,370 provided during the year ended December 31, 2021 which consisted of $1,398,704 (2021 $NIL) from convertible debentures, net of issuance costs, $Nil (2021 - $480,000) in loan proceeds, $750,000 (2021 - $12,241,312) in proceeds from share subscriptions, $90,000 (2021 - $2,205,800) in loan repayments, $Nil ($2021 - $759,209) in share issue costs, and $634,367 (2021 - $632,257) in lease repayment on IFRS-16 leased premises.

OFF-BALANCE SHEET ARRANGEMENTS

The Company has not entered into any off-balance sheet transactions.

PROPOSED TRANSACTIONS

On October 4, 2022, Northstar and Renewable U announced that they have entered into a binding term sheet for a strategic financing of debt and securities, including common shares in the capital of the Company and secured convertible debentures for Northstar's proposed Phase 1 plan of building and constructing three scale-up asphalt shingle reprocessing facilities in Calgary, and, as presently intended, both the Greater Toronto Area and the Pacific Northwest, USA. The total amount of the financing for three Northstar facilities (proposed for Calgary, Greater Toronto Area and Pacific Northwest) is approximately $43.5 million, which would be funded in tranches over the course of several years. The initial $1 million proceeds due on October 31, 2022 to the Company from Renewable U was not received. Consequently, the Company has agreed with Renewable U that this transaction will not proceed. Therefore, the Company is currently in the advanced stages of negotiating other funding alternatives.

In February 2023, the Company was selected by Emissions Reduction Alberta for a non-repayable project level government grant award of up to approximately $7.1 million. There is considerable risk that the Company may not sufficiently satisfy the requirements for this award from ERA. The Company's grant is based on numerous milestones, of which ERA will only release funds to the Company based on its ability to satisfy certain conditions. There cannot be any guarantee that the Company achieves those milestones and therefore the award of some or all of the grant from ERA may not occur. The Company's risk of construction, operation and collection of feedstock is still considerable and if the Company does not achieve these hurdles, the opportunity to receive the ERA would be adversely impacted.

CHANGES IN ACCOUNTING POLICIES

Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)

The IASB has published Classification of Liabilities as Current or Non-Current (Amendments to IAS 1) which clarifies the guidance on whether a liability should be classified as either current or non-current. The amendments:

- clarify that the classification of liabilities as current or non-current should only be based on rights that are in place "at the end of the reporting period"
- clarify that classification is unaffected by expectations about whether an entity will exercise the right to defer settlement of a liability
- make clear that settlement includes transfers to the counterparty of cash, equity instruments, other assets or services that result in extinguishment of the liability.

The amendment is effective for annual periods beginning on or after January 1, 2023. Earlier application is permitted. The Company does not expect the adoption of this amendment to have a significant impact.

RELATED PARTY TRANSACTIONS

(a) As at December 31, 2022, accounts payable and accrued liabilities include $754,656 (December 31, 2021 - $178,759) owing to companies with certain directors in common and companies controlled by certain directors and officers or former directors. The amounts are unsecured, non-interest bearing and due on demand.

(b) Key management personnel include those persons having authority and responsibility for planning, directing and controlling the activities of the Company as a whole. During the years presented the Company paid or accrued the following key management personnel compensation to directors, officers, and/or companies controlled by directors and officers and/or companies with certain directors in common:

	December 31, 2022	December 31, 2021
Advertising, marketing and promotion	$ 55,800	$ 106,300
Consulting fees	42,000	64,000
Professional fees	80,000	118,000
Wages, bonuses and benefits	1,166,210	505,134
Share-based payment	453,994	1,377,542
	$ 1,798,004	$ 2,170,976

(c) During the year ended December 31, 2021, the Company acquired equipment in the amount of $270,000 plus GST and PST from a company controlled by a former director of a wholly owned subsidiary of the Company. See Note 7 for additional disclosure.

(d) On December 15, 2022, $360,000 was received in convertible debenture proceeds by officers or directors of the Company.

(e) As at December 31, 2022 prepaids includes $45,000 to a company controlled by a director.

COMMITMENTS

The Company renegotiated a new lease for the Empower Pilot Facility in Delta, BC effective January 1, 2021 for an initial term of 5 years with an option to extend for an additional 5 year. The basic annual rents are as follows:

- from January 1, 2021 to December 31, 2022 - $558,435 per annum
- from January 1, 2023 to December 31, 2024 - $583,563 per annum, and
- from January 1, 2025 to December 31, 2025 - $609,837 per annum

Estimated additional rents are approximately $126,000 per annum.

Subsequent to the year ended December 31, 2022, Northstar's wholly owned subsidiary, Empower Environmental Solutions Calgary Ltd., signed a new lease for the planned scale up facility in Rocky View County, near Calgary, Alberta effective July 1, 2023 for an initial term of 15-years with an option to extend for two additional 5 year terms. The basic annual rents are as follows:

- from July 1, 2023 to June 30, 2028 - $346,516 per annum
- from July 1, 2028 to June 30, 2033 - $381,168 per annum, and
- from July 1, 2033 to June 31, 2038 - $419,284 per annum

Estimated additional rents are approximately $120,000 per annum.

The Company negotiated a definitive take-or-pay binding offtake agreement with Colas Canada's subsidiary McAsphalt Industries for 100% of liquid asphalt production from its Empower Calgary Facility. The key commercial terms of the Offtake Agreement are:

- **Term:** an initial five-year term with automatic three-year renewal options, unless either party provides 180 days written notice of its intention not to renew
- **Pricing:** The agreed terms of the sale price of liquid asphalt is confidential due to commercial sensitivity reasons, but pricing is market based and includes the market index, a quality and locational differential, and a sustainability premium
- **Risk Management:** Risk management pricing is incorporated into the pricing mechanism and other sharing mechanisms to allow best risk allocation for the benefit of both parties and ultimately the project.
- **Third Party sales:** Northstar and McAsphalt will have the ability to enter into third party sales agreements for the liquid asphalt product produced from the Empower Calgary Facility. The detailed terms of any third-party agreement are confidential.
- **Life-Cycle Analysis:** Northstar and McAsphalt will work together to develop a life-cycle analysis for Northstar's proprietary clean technology.
- **Environmental Credits:** Northstar and McAsphalt will work together on the development of a protocol to create environmental credits. Should environmental credits be created, the sustainability premium will be calculated based on the joint contribution to the protocol development.

LOANS PAYABLE

	Credit Facility	Shareholder Loans	Directors' Loans	Equipment Loan	Total
Loans payable:					
Balance – December 31, 2020	**1,365,557**	**551,710**	**-**	**-**	**1,917,267**
Advances	-	-	480,000	-	480,000
Accrued interest	35,252	16,744	2,495	-	54,491
Repayment of loan and interest	(1,400,809)	(322,496)	(482,495)	-	(2,205,800)
Shares for debt	-	(245,958)	-	-	(245,958)
Equipment received for loan	-	-	-	270,000	270,000
Interest accretion on low interest loan	-	-	-	(30,985)	(30,985)
Balance – December 31, 2021	**-**	**-**	**-**	**239,015**	**239,015**
Less current portion	-	-	-	(90,000)	(90,000)
Long term portion	**$ -**	**$ -**	**$ -**	**$ 149,015**	**$ 149,015**
Balance – December 31, 2021	**-**	**-**	**-**	**239,015**	**239,015**
Accrued interest	-	-	-	2,363	2,363
Repayment of loan	-	-	-	(92,363)	(92,363)
Interest accretion on low interest loan	-	-	-	18,946	18,946
Balance – December 31, 2022	**-**	**-**	**-**	**167,961**	**193,866**
Less current portion	-	-	-	(121,250)	(121,250)
Long term portion	**$ -**	**$ -**	**$ -**	**$ 46,711**	**$ 46,711**

Credit Facility:

The Company previously had a variable rate term loan with a maximum authorized limit of $1,500,000 with Vancity Savings Credit Union. The credit facility carried an annual interest rate of Vancity Prime + 1.75%, was calculated and payable monthly and secured by a general security agreement and personal guarantees of certain Directors and Shareholders. All amounts due under the credit facility were due on demand and the remaining balance was repaid in December 2021.

Shareholder loans:

The Company had a loan payable to a non-related party shareholders in the amount of $523,520. The loans carried an annual interest rate of 10%, were unsecured and were paid in full in June 2021 of which $245,958 was settled with the issuance of 702,736 shares (Note 9).

The Company had a loan payable to a non-related party shareholder in the amount of $28,190. The amount was non-interest bearing, is unsecured and was repaid in full in June 2021.

Directors' loans:

During the year ended December 31, 2021, the Company had borrowed $480,000 from directors of the Company. The loans carried an annual interest rate of 6%, were unsecured and were paid in full in June 2021 with interest totaling $2,495.

Equipment loan:

The Company acquired $270,000 of equipment from a company controlled by a former officer and current employee of the Company during the year ended December 31, 2021. The loan carries an annual interest rate of 1% per annum, secured by the equipment and repayable in monthly instalments of $5,000 plus interest for the first 6 months and $10,000 per month plus interest until fully paid. Interest payments begin in July 2022. The equipment loan was recognized as the present value using a 10% market rate of interest. The difference was recognized as a shareholder contribution in reserves on low interest loan. The amount outstanding as at December 31, 2022 was $167,961 (December 31, 2021 - $239,015).

CAPITAL MANAGEMENT

The Company's capital comprises its shareholders equity under management. The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order to pursue the development of its processing technology and to maintain a flexible capital structure which optimizes the costs of capital at an acceptable risk.

The Company manages the capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. To maintain or adjust the capital structure, the Company may attempt to issue new shares, issue new debt or convertible debt, enter into strategic partnerships, and/or acquire or dispose of assets.

In order to facilitate the management of its capital requirements, the Company prepares expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment and general industry conditions. The Board of Directors does not establish quantitative return on capital criteria for management, but rather relies on the expertise of the Company's management to sustain future development of the business.

In order to maximize ongoing development efforts, the Company does not pay dividends. The Company's investment policy is to invest its short-term excess cash in highly liquid short-term interest-bearing investments with maturities of 365 days or less from the original date of acquisition, selected with regards to the expected timing of expenditures from continuing operations.

To fund future operations, the Company will need to raise funds through future share issuances, issue new debt, secure government grants, dispose of assets, or enter into strategic partnerships.

There have been no changes to the Company's approach to capital management during the year ended December 31, 2022. The Company is not subject to externally imposed capital requirements.

FAIR VALUE OF FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

Financial Risk Management Objectives

The Company examines the various financial instrument risks to which it is exposed and assesses the impact and likelihood of those risks. These risks may include credit risk, liquidity risk, currency risk and interest rate risk. Where material, these risks are reviewed and monitored.

Liquidity and Capital Management

The Company manages its capital to ensure that it will be able to continue as going-concern while maximizing the return to shareholders through the optimization of debt and equity balances.

The capital of the Company consists of items included in Shareholders' Equity of $2,784,507.

The Company manages its capital structure and makes adjustments in light of changes in economic conditions. To maintain or adjust the capital structure, the Company may issue equity or return capital to shareholders. There were no changes to the Company's approach to capital management during the year ended December 31, 2022. The Company is not subject to externally imposed capital requirements.

Credit risk

Credit risk is the risk that a counterparty to a financial instrument will fail to discharge an obligation or commitment that it has entered into with the Company. The carrying amounts of financial assets best represent the maximum credit risk exposure at the reporting date.

Cash is held with reputable banks in Canada. The long-term credit rating of these banks, as determined by Standard and Poor's, was A+.

Liquidity risk

Liquidity risk is the risk that the Company will not meet its financial obligations as they become due.

Accounts payables and accrued liabilities are paid in the normal course of business generally according to their terms. In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments. As at December 31, 2022, the Company had $1,114,166 in cash to settle current liabilities of $1,905,317 and as such, management believes it has exposure to liquidity risk.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of financial instruments will fluctuate because of changes in market interest rates. The Company is not subject to interest rate risk.

Foreign currency risk

The Company is exposed to foreign currency risk to the extent that monetary financial instruments are denominated in United States dollars. The Company has not entered any foreign currency contracts to mitigate this risk. The Company's sensitivity analysis suggests that a 10% change in the rate of exchange between the Canadian and United States dollar would have an insignificant impact on its results of operations as it held nominal financial assets and liabilities denominated in United States dollars.

Force Majeure Events

The Company's operations may be adversely impacted by factors that are beyond the Company's control including pandemics, natural disasters, terrorism, labour disruptions, outbreaks of war, and other forms of economic, health or political disruptions. Such factors may not be foreseeable and may significantly adversely affect global economic conditions, including inflation, supply chain, global shipping, and currency volatility. While many of the restrictions imposed during the COVID-19 pandemic are now being eased globally, the Company's business may still be impacted through lingering or renewed effects of the pandemic, including through supply chain, financial constraints of its customers and suppliers, increasing costs, and difficulty attracting skilled labor, with a result that it may not be able to build, own and operate its Empower Pilot Facility and/or the Empower Calgary Facility within the anticipated timeframe or on budget. In some cases, such delays may result in liquidated damages, and may adversely affect the Company's operations.

The Russia-Ukraine war has drastically reduced capacity for Ukraine to supply goods and raw materials, such as steel. The sanctions imposed on Russia have also led to the reduced availability of Russian-produced steel and other products.

Climate change has increased the incidence of natural disasters caused by weather and climate extremes including heatwaves, droughts, forest fires, atmospheric rivers, torrential downpours and flooding.

Future incidents could significantly adversely affect the Company's operations either directly, or by affecting the businesses of its suppliers or customers. Other events and factors that are beyond the Company's control but that may have a significant adverse effect on the Company's operations include but are not limited to strikes and labour disruptions affecting the Company's suppliers or customers, and global political instabilities such as the outbreak of war, discussed below under "Macroeconomic and Geopolitical Risks and Uncertainties".

While the Company works to mitigate the effects of these uncontrollable events, there is no assurance that they will be effective in doing so in future, particularly when multiple events coincide, and they may negatively impact the Company's operations and profitability.

Unexpected Disruptions Affecting Projects and Operations

The Company's current and future operations can sometimes be subject to delays for a variety of reasons, including labour slowdowns, construction delays unrelated to the Company's products, technological malfunctions, defective materials, or workplace safety. Such delays may delay the recognition of revenue, discourage customers from doing business with the Company, and may hurt the Company's reputation, affecting future sales prospects. The Company may lose sales and may not be able to replace those sales at an acceptable margin or at all. There can be no assurance that such delays will be overcome in a timely manner and to the satisfaction of the customer.

Furthermore, the Company enters into agreements which, consistent with industry standards, may include liquidated damages or termination provisions which may allow customers to claim amounts or terminate and not proceed with proposed projects.

Macroeconomic and Geopolitical Risks and Uncertainties

Macroeconomic and geopolitical risks and uncertainties may have a material adverse impact on the Company's operations. The Company procures a portion of its supplies and equipment from global suppliers. Economic, legal and political conditions globally could adversely affect the Company's ability to conclude sales and procure and timely deliver products. These factors may significantly adversely affect the availability and costs of raw materials and equipment, contribute to inflation and cause currency fluctuations, and cause market volatility, all of which could significantly impact the Company's revenues and profitability and its ability to raise capital as needed.

The Russia-Ukraine war and its related economic and political sanctions on global fuel sources has exacerbated an already challenged global shipping environment and supply chain challenges, for example. These conditions are beyond the Company's control and there can be no assurances that any mitigating actions by the Company or the Company's suppliers will be effective.

Sourcing Equipment

The continuation of global transportation and logistics challenges may have a negative impact on the Company's ability to timely source products and capital equipment. To the Company's knowledge, none of the Company's suppliers or customers have entered into bankruptcy due to the COVID-19 pandemic, natural disaster or other adverse supply chain effects. The Company's purchasing plan identifies alternative sources of supply for equipment suppliers and product fabricators that are essential to the Company's business operations. In 2022, the global supply chain, which was already disrupted by the COVID-19 pandemic, was further impacted by the Russia-Ukraine war. The prices for goods and services continued to increase due to worldwide inflation. The Company is subject to a continued risk resulting from the COVID-19 pandemic, the war in Ukraine and other risks affecting the global supply chain.

Fair Value Measurements Recognized in the Statement of Financial Position

The following table summarizes the carrying values of the Company's financial instruments.

	December 31, 2022	December 31, 2021
Financial assets at FVTPL (i)	$ 1,114,166	$ 5,948,876
Financial liabilities at amortized cost (ii)	$ 2,385,089	$ 998,558

(i) Cash
(ii) Accounts payable and accrued liabilities and equity-based compensation payable and loans payable, and convertible debentures

The Company categorizes its financial assets and liabilities measured at the fair value into one of three different levels depending on the observability of the inputs used in the measurement.

The three levels are defined as follows:

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Cash is measured at fair value using Level 1 inputs. There has been no change to the fair value hierarchy levels during the period.

The fair values of other financial liabilities approximate their carrying value, due to their short-term nature or market rate of interest.

OUTSTANDING SHARE DATA AS AT DECEMBER 31, 2022 AND AS AT THE DATE OF THE MD&A:

a) Authorized Share Capital:
Unlimited number of common shares without par value

b) Issued Share Capital:
108,000,903 common shares with a stated value of $25,448,274

c) Outstanding stock options:

	Expiry Date	Exercise Price	Number of Options
	May 31, 2023	$ 0.35	850,000
	December 15, 2024	$ 0.35	625,000
	February 16, 2026	$ 0.35	2,800,000
	July 12, 2026	$ 0.35	2,100,000
	December 15, 2026	$ 0.35	400,000
	February 7, 2027	$ 0.35	200,000
	April 19, 2027	$ 0.35	260,854
	August 30, 2027	$ 0.35	20,000
Outstanding			**7,255,854**
Exercisable			**6,312,500**

d) Outstanding share purchase warrants:

	Expiry Date	Exercise Price	Number of Warrants
	July 13, 2026	$ 0.279	4,596,268
Finders warrants	July 13, 2026	$ 0.279	406,249
	July 13, 2026	$ 0.465	490,615
Finders warrants	July 13, 2026	$ 0.465	204,457
	June 22, 2023	$ 0.500	17,472,584
Broker warrants	June 22, 2023	$ 0.500	2,014,565
Broker warrants	December 15, 2025	$ 0.350	157,200
Outstanding and exercisable			**25,341,938**

e) Issued Restricted Stock Units and Performance Stock Units:

	Vesting Date	Issued	Cash Settled	Stock settled
Restricted Stock Units	June 23, 2023	130,424	11,785	118,639
Restricted Stock Units	March 31, 2024	130,424	11,785	118,639
Restricted Stock Units	March 31, 2025	130,424	11,785	118,639
Maximum Performance Stock Units	June 23, 2023	1,956,421	769,996	1,186,425
Maximum Performance Stock Units	July 13, 2024	1,956,421	769,996	1,186,425
Maximum Performance Stock Units	July 13, 2025	1,956,421	769,996	1,186,425
Total Restricted Stock Units and Performance Stock Units		**6,260,535**	**2,345,343**	**3,915,192**

f) Shares held in escrow or pooling agreements: As of the date of this MD&A, there are currently 7,668,416 common shares, and 33,750 warrants held in escrow. In connection with the listing of the Common Shares for trading on the TSXV in July 2021, an aggregate of 17,040,927 Common Shares, and 75,000 Warrants were deposited in escrow with Computershare on June 18, 2021, of which 10% of such Common Shares were released from escrow on the date the Common Shares were listed on the TSXV, and 15% are to be release from escrow every six months thereafter, subject to the provisions provided for in NP 46-201.

SUBSEQUENT EVENTS

a) On February 13, 2023, Northstar announced that Northstar's Empower Calgary Facility has been approved for a non-repayable government grant of up to approximately $7.1 million (the "ERA Grant") by Emissions Reduction Alberta, an Alberta-based government entity funded by the Government of Alberta. The lead applicant organization is Empower Calgary, a wholly owned subsidiary of Northstar, and the net proceeds received by the Company from the government grant will be used to further design, construct and commission the Empower Calgary Facility.

b) On February 24, 2023, Northstar announced that its wholly owned subsidiary Empower Environmental Solutions Calgary Ltd. signed a long-term 15-year lease agreement with Mook Group of Companies for an industrial-zoned property of 3.98 acres located in Rocky View County, a municipal district adjacent to the City of Calgary, Alberta, as the site for the Company's planned scale-up facility in Calgary. The lease is for an initial term of 15 years, with two extension options of five years each. All municipal permits have been received to proceed with construction, collection of asphalt shingles and production.

c) On February 28, 2023, Northstar announced the closing of a $625,000 non-brokered private placement of unsecured convertible debentures. The terms of the February 2023 Convertible Debentures were identical to the December 2022 Convertible Debentures. Combining the total raised from the December 2022 Convertible Debentures and the February 2023 Convertible Debentures, the Company closed a total of $2,065,000, including an aggregate of $410,000 from Insiders of the Company. In connection with the sale of the February 2023 Convertible Debentures, Insiders invested $50,000 in the February 2023 Convertible Debentures, which was considered a "related party transaction" within the meaning of MI 61-101, which issuance was exempt from the valuation requirement of MI 61-101 by virtue of the exemption contained in section 5.5(b) as the Common Shares are not listed on a specified market and from the minority shareholder approval requirements of MI 61-101 by virtue of the exemption contained in section 5.7(a) of MI 61-101 in that the fair market value of the consideration of the securities issued to the related party did not exceed 25% of the Company's market capitalization.

d) On March 2, 2023, Northstar announced that, further to its announcement on October 6, 2022 regarding the McAsphalt Offtake Term Sheet, it has executed an offtake agreement (the "McAsphalt Offtake Agreement") with McAsphalt Industries Ltd. a wholly owned subsidiary of Colas Canada, for a five-year take-or-pay agreement whereby Northstar will sell and McAsphalt will buy, on an exclusive basis, 100% of liquid asphalt production from the Company's Calgary Empower Facility. The McAsphalt Offtake Agreement is subject to two conditions precedent: (1) sufficient funding to build the facility, and (2) appropriate permitting having been received to build and operate the facility. The key commercial terms of the McAsphalt Offtake Agreement are unchanged from the McAsphalt Offtake Term Sheet, as previously announced by the Company on October 6, 2022. Due to commercial sensitivity reasons, a redacted copy of the McAsphalt Offtake Agreement has been filed on the Company's SEDAR profile at www.sedar.com.

e) On April 6, 2023, Northstar announced a non-brokered private placement of up to 13,333,333 units of the Company (the "April 2023 Units") at a purchase price of $0.15 per Unit for aggregate gross proceeds of up to $2,000,000. Each Unit will consist of one common share of the Company and one Common Share purchase warrant of the Company, with each such Warrant entitling the holder thereof to acquire one additional Common Share at an exercise price of $0.20 per Warrant Share for a period of 36 months following the closing date of the Private Placement, subject to an acceleration right whereby, if during the period beginning four months and one day after the Closing Date, the Common Shares trade on TSXV at or above a volume weighted average trading price of $0.75 per Common Share for a period of 10 consecutive trading days, the Company may accelerate the expiry of the Warrants by giving notice to the holders thereof (by disseminating a news release advising of the acceleration) and, in such case, the Warrants will be deemed to have expired on the day which is 30 days after the date of such notice.

f) On April 14, 2023, Northstar announced that it upsized its non-brokered private placement previously announced on April 6, 2023 from up to $2,000,000 to up to $2,300,000. As a result of the upsizing, the Private Placement will consist of $2,000,000 additional units of the Company at a price of $0.15 per unit which, upon expected closing, would increase aggregate gross proceeds from the non-brokered private placement from approximately $2,000,000 to approximately $2,300,000.

On March 2, 2023 the Company issued 11,000 stock options to an employee at an exercise price of $0.21 for a 5-year term, to vest as to 25% on each of 6, 12, 18 and 24 months post-issuance