



**CANADIAN PREMIUM SAND INC.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS**

**For the three and nine months ended**

**June 30, 2022**

**Dated August 26, 2022**

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*This Management's discussion and analysis ("MD&A") dated August 23, 2022, should be read in conjunction with the unaudited interim condensed financial statements and related notes for the three and nine months ended June 30, 2022 and the audited financial statements and related notes for the year ended September 30, 2021.*

*All financial information is reported in Canadian dollars unless stated otherwise and has been prepared in accordance with International Financial Reporting Standards ("IFRS"). Certain figures have been reclassified to conform to the current year presentation in this MD&A.*

*This MD&A contains "forward-looking statements" or "forward-looking information" within the meaning of applicable Canadian securities laws (collectively, "forward-looking statements") based on the Company's current expectations and projections. For information on the material risk factors and assumptions underlying such forward-looking statements, refer to the Forward-Looking Statements Section of this MD&A.*

*Any technical information contained in this MD&A related to the Company's Wanipigow reserves (the "Wanipigow Sand Quarry") has been extracted or summarized based on the information contained in the Inferred Resource Estimate (the "Technical Report") of Wanipigow Sand Quarry dated October 14, 2021, reviewed and approved by Roy Eccles, P. Geol. And Rachelle Hough, P. Geo. of APEX Geoscience Ltd., each of whom is independent of the Company and a "qualified person" under National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"). Readers are cautioned not to solely rely on the summary of this information but should read the Technical Report in its entirety which is available for review on the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).*

## **About Canadian Premium Sand Inc. ("CPS")**

The Company was formed under the Business Corporations Act (Ontario) on September 21, 2005 by articles of incorporation and continued under the Canada Business Corporations Act in 2019. The Company is presently a "Venture Issuer" as defined in National Instrument 51-102 and trades under the trading symbol "CPS". The Company's head and principal office is located at Suite 2000, 715 – 5th Avenue S.W., Calgary, Alberta T2P 2X6.

The Company is developing a business to manufacture patterned solar glass. The manufacturing facility is to be constructed at a site identified in the City of Selkirk, Manitoba. It is currently in the process of finalizing detailed engineering work to refine the associated capital expenditures, and to obtain the necessary permits and regulatory approvals for construction and operation.

The Company has 41 contiguous quarry leases located approximately 160 kilometers north of Winnipeg, Manitoba that grant the Company the exclusive right to quarry silica sand which the Company intends to use as feedstock for the glass manufacturing facility. Laboratory testing of this quartzite sand deposit has confirmed the sand to be of high-purity silica content with low iron contamination. This combination of physical properties makes the sand well suited for use as the base material to formulate low iron, patterned solar glass.

The Company's silica sand deposit is extensive as detailed in a National Instrument 43-101 ("NI 43-101") compliant Technical Report dated October 14, 2021. This report illustrates the Company would have ample silica sand supply of the necessary physical characteristics to support the development of a company-owned solar glass manufacturing facility.

The Company has separate economic participation agreements with Hollow Water First Nation and the Incorporated Community of Seymourville which reflect the parties' commitment and support for the Wanipigow Sand Quarry.

A Conditional Use Order has been granted to the Company by the Incorporated Community of Seymourville (the "Conditional Use Order"), approving the conditional use of lands within its jurisdictional boundaries for the Wanipigow Sand Quarry. This includes accessory uses, buildings and structures. The Company has also secured an environmental license with respect to operating the Wanipigow Sand Quarry, Environment Act License No. 3285: <https://www.gov.mb.ca/sd/eal/registries/5991wanipigow/index.html>.

## Operational Highlights

The Company has devoted its time and resources during the three months ended June 30, 2022, to advancing its solar glass manufacturing business strategy. Specifically, the Company:

- Finalized and reported the results of its Front End Engineering and Design (“FEED”) study that was carried out by cm.project.ing GmbH, an internationally recognized engineering firm, specializing in glass manufacturing facilities and processes. Highlights of the FEED study included a Class 4 capital cost estimate of \$400 to \$500 million and approximately \$200 million of annual EBITDA for the first phase of the project, inputs which contribute to an unlevered before-tax NPV10 of approximately \$800 million and internal rate of return (IRR) of approximately 25%;
- Announced the engagement of Green City Glass LLC as its client technical representative to assist in the selection and oversight of key service providers as the Company proceeds to the detailed engineering phase;
- Advanced discussions with potential solar glass customers concerning future offtake agreements;
- Progressed the formal process to select key contractors for detailed project engineering and construction;
- Continued bulk sand testing activities in a 3<sup>rd</sup> party laboratory that will provide support to processing equipment selection; and
- Advanced the regulatory and permitting processes required for construction.

## Subsequent Events

Subsequent to the period ended June 30, 2022, the Company:

- Announced on July 21, 2022, the execution of a Memorandum of Understanding with Hanwha Solutions Corporation with respect to a commercial offtake agreement for patterned solar glass from the Company’s glass manufacturing facility being developed in Selkirk, Manitoba.
- Announced on July 27, 2022, the launch of a private placement financing for gross proceeds of up to \$8,100,000 (the “Offering”). As part of the Offering, management and directors of CPS, as well as certain of the Company’s largest shareholders, including Paramount Resources Ltd. and David J. Wilson, have indicated they will subscribe for approximately 25% of the Offering, to maintain their current ownership position in the Company. The net proceeds from the Offering will be used to advance the Company’s vertically integrated patterned solar glass manufacturing facility to a shovel-ready state, such that it is ready to commence construction by Q1 2023.
- Announced on August 10, 2022, that due to strong demand, the Offering launched on July 27, 2022, was increased from \$8,100,000 to up to \$9,630,000. The upsized financing will enable the Company to accelerate the development activities underway for its solar glass manufacturing project.

## Business Outlook

The Company is positioned to benefit from exposure to strong solar panel installation growth in North America through the provision of patterned solar glass which is a critical component in the supply chain. The Solar Energy Industries Association estimates that solar panel installations are to increase by 21% on a compound annual basis between 2021 and 2030.

The growth rate for North American patterned solar glass demand is further supported by the domestic industry’s effort

to onshore the solar panel manufacturing supply chain. Currently, 100% of the supply of North America’s patterned solar glass is sourced from Asia Pacific based manufacturers.

The Company’s discussions with domestic solar panel manufacturers have indicated a need for a reliable local supply of high-quality patterned solar glass to accommodate both current production and future growth plans. Establishing a solar glass facility in Canada using responsibly sourced local silica sand and Canadian renewable energy creates a unique opportunity to provide much needed sustainably manufactured solar glass to the North American markets in an environmentally responsible manner. The City of Selkirk and the greater Winnipeg area presents an opportunity for significant long-term manufacturing cost and logistics advantages for a solar glass facility. The proposed facility will be designed to utilize the best available technology with a focus on sustainability initiatives such as waste heat recovery and optimizing Manitoba’s abundant and inexpensive renewable electricity to set a new standard for low-carbon footprint glass manufacturing.

During the remainder of 2022, the Company plans to engage an engineering, procurement, and construction (“EPC”) consortium to finalize facility design and refine the associated capital and operating costs that are outlined in the Front End Engineering and Design study. The Company will also advance the environmental and regulatory permitting process required to begin construction. Additionally, the Company will continue to engage with potential customers to formalize commercial offtake agreements. Finally, the Company will pursue the funding necessary to commence construction of the solar glass manufacturing facility and related quarry infrastructure.

## Review of Operations for the Three and Nine Months Ended June 30, 2022 and 2021

### Overall Performance and Share Capital

	Three months ended June 30,		Nine months ended June 30,	
	2022	2021	2022	2021
Net loss and comprehensive loss	<b>\$(1,222,913)</b>	\$(690,275)	<b>\$(3,297,367)</b>	\$(1,483,936)
Loss per share – basic and diluted	<b>\$(0.03)</b>	\$(0.03)	<b>\$(0.07)</b>	\$(0.07)
Issued and outstanding common shares	<b>45,615,660</b>	23,758,649	<b>45,615,660</b>	22,082,523

The Company will continue to incur losses based on completing the required project development activities until it achieves commercial operations. As noted in the Liquidity, Capital Resources and Going Concern section of this MD&A, the Company remains dependent on external financing to fund its activities and will need to seek additional funding to complete all activities required to complete the development and construction of a solar glass manufacturing facility.

At June 30, 2022, the issued and outstanding common shares are 45,615,660.

### Exploration and Evaluation Expenditures

The exploration and evaluation expenditures relate to the development of the Wanipigow Sand Quarry and are broken down by category as follows:

	Three months ended June 30,		Nine months ended June 30,	
	2022	2021	2022	2021
	\$	\$	\$	\$
Advance royalty payments	<b>50,000</b>	50,000	<b>100,000</b>	100,000
Acquisition and participation costs	<b>27,608</b>	25,866	<b>52,744</b>	50,760
Permitting and Environmental	<b>23,113</b>	1,949	<b>26,902</b>	2,585
Silica Sand Feasibility	<b>44,422</b>	17,607	<b>81,618</b>	88,432
Field office expenses	<b>9,052</b>	1,393	<b>30,782</b>	2,186

Labour	<b>47,426</b>	33,491	<b>146,561</b>	94,828
Equipment rental and site supplies	<b>3,775</b>	520	<b>78,311</b>	4,124
Quarry Design	<b>20,851</b>	(2,834)	<b>215,024</b>	(2,834)
Depreciation	<b>3,627</b>	3,627	<b>10,882</b>	12,585
Decommissioning	<b>(12,035)</b>	-	<b>(22,680)</b>	(16,846)
<b>Total exploration and evaluation expenditures</b>	<b>217,839</b>	131,619	<b>720,144</b>	335,820

The costs incurred during the three and nine months ended June 30, 2022 increased over the same periods in the prior year as the Company conducted preliminary quarry design activities, the environmental permitting process and bulk testing of the silica sand resource.

Wage and rent subsidies that were received as part of the Canada Emergency Wage and Rent Subsidy (“CEWS” and “CERS”) programs and netted in exploration and evaluation expenditures were \$nil for the three and nine months ended June 30, 2022 compared to \$10,897 for the three months ended and \$44,269 for the nine months ended June 30, 2021.

The cumulative exploration and evaluation expenditures at June 30, 2022 are \$20,560,493.

### Glass Plant Development Expenditures

	Three months ended June 30,		Nine months ended June 30,	
	2022	2021	2022	2021
	\$	\$	\$	\$
Plant feasibility	<b>46,133</b>	29,890	<b>286,577</b>	88,804
Glass plant design	<b>173,236</b>	-	<b>532,647</b>	-
Labour, equipment & supplies	-	33,750	-	33,750
Logistics	-	-	<b>14,250</b>	-
Permitting & environmental	<b>71,140</b>	9,300	<b>138,348</b>	27,900
<b>Total glass plant development expenses</b>	<b>290,509</b>	72,940	<b>971,822</b>	150,454

Expenses related to the development of the glass manufacturing facility for the three and nine months ended June 30, 2022, were primarily focused on preliminary glass plant feasibility and design activities, geotechnical work and an initial submission for engineering designs related to the delivery of hydroelectric power to the glass plant site. Also included in the current year periods were expenses related to environmental permitting activities.

### Selling, General & Administrative Expenditures

The following table disaggregates the selling, general and administrative expenses for the three and nine months ended June 30, 2022.

	Three months ended June 30,		Nine months ended June 30,	
	2022	2021	2022	2021
	\$	\$	\$	\$
Employee compensation and benefits	<b>208,097</b>	82,404	<b>616,123</b>	199,893
Professional fees	<b>163,712</b>	140,828	<b>340,221</b>	335,987
Office	<b>28,400</b>	32,502	<b>104,094</b>	56,901
Shareholder information	<b>3,294</b>	21,856	<b>28,158</b>	61,259
<b>Total selling, general and administrative expenses</b>	<b>403,503</b>	277,590	<b>1,088,596</b>	654,040

Selling, general and administrative expenses for the three and nine month periods ended June 30, 2022 were higher than the prior year periods due to a higher full-time employee headcount. Additionally, office expenses for the nine months ending June 30, 2022 increased over the same period last year due to travel costs related to permitting activities and customer engagement. Finally, the current year periods did not benefit from any wage or rent subsidies that were received in the prior year periods as part of the CEWS and CERS programs. The comparable year periods included CEWS and CERS subsidies of \$21,944 for the three months ended and \$79,464 for the nine months ended June 30, 2021.

### Share-Based Compensation

Share-based compensation expenses for the three and nine months ended June 30, 2022, are \$203,965 and \$317,228 respectively which compares to \$147,133 and \$198,577 in the prior year periods. Share-based compensation expense is based on the value and timing of grants of stock options. There were 1,050,000 options granted and 516,666 options that expired in the nine months ended June 30, 2022.

### Foreign Exchange (Gain) Loss

For the three and nine months ended June 30, 2022, there was a foreign exchange loss of \$27,337 and \$22,346 respectively, which compares to a gain of \$12,890 and \$72,939 in the same periods in 2021. These foreign exchange fluctuations relate to US dollar denominated accounts payable and expenses.

### Net Finance Costs

The Company had net finance costs for the three and nine months ended June 30, 2022 of \$79,760 and \$234,031 respectively, which compares to \$73,883 and \$209,617 in the same periods in 2021. The increase in net finance costs is primarily attributable to accrued interest on the convertible debentures issued in February 2020.

### Selected Quarterly Financial Data

	June 30, 2022	March 31, 2022	December 30, 2021	September 30, 2021	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020
	\$	\$	\$	\$	\$	\$	\$	\$
<b>Revenue</b>	-	-	-	-	-	-	-	208,807
<b>Gross profit (loss)</b>	-	-	-	-	-	-	-	(19,214)
<b>Net (loss) income</b>	(1,222,913)	(1,256,724)	(817,730)	(1,015,844)	(690,275)	(394,127)	(399,536)	(132,133)
<b>Net (loss) income per share</b>	\$(0.03)	\$(0.03)	\$(0.02)	\$(0.02)	\$(0.03)	\$(0.02)	\$(0.02)	\$(0.01)
<b>Total assets<sup>1</sup></b>	1,901,294	2,804,413	3,846,396	4,864,581	4,474,054	659,210	1,006,146	1,553,741

<sup>1</sup>The change in net (loss) income and total assets quarter over quarter is primarily a result of the timing and amount of exploration and evaluation and glass plant development expenditures incurred to progress the Company's business model.

### Liquidity, Capital Resources and Going Concern

The Company's financial statements for the three and nine months ended June 30, 2022 and 2021 have been prepared in accordance with IFRS on the basis of accounting principles applicable to a going concern, which assume the Company will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities in the normal course of operations.

As at June 30, 2022 the Company had a deficit of \$33,359,356 (September 30, 2021 of \$30,061,989), cash of \$1,864,256 (September 30, 2021 of \$4,831,257), accounts payable and accruals and current lease liabilities of \$1,408,094 (September 30, 2021 of \$1,622,305) and participation agreements along with commitments for the acquisition of quarry

leases for the twelve-month period to June 30, 2023 of \$158,500. For further details see Commitments and Contingencies Section of this MD&A.

The Company's continued existence is dependent upon the preservation of its interest in the Company's quarry leases, continued development of its integrated solar glass manufacturing project and the successful pursuit of additional financing to fund future operations. These material uncertainties lend significant doubt as to the ability of the Company to meet its obligations as they come due and, accordingly, the appropriateness of the use of accounting principles applicable to a going concern.

The Company successfully closed two private placements in June and July 2021 for aggregate gross proceeds of \$6,450,000 to fund the Front-End Engineering and Design for a solar glass manufacturing facility in the greater Winnipeg area, initiate permitting applications and other key activities to progress the business plan, as well as for general working capital purposes. While the Company has commenced the process to fund the construction of the glass manufacturing facility and quarry infrastructure, there is no assurance that this initiative will be successful.

Significant challenges in raising new capital through the equity and debt markets exist, compounded by the global economic impacts created by the COVID-19 pandemic. It is uncertain how long these events will continue to influence the economy and the Company's ability to secure future financing. If the Company is unsuccessful in obtaining additional sources of financing when needed and on acceptable terms, the going concern assumption may not be appropriate. The Company's financial statements for the three and nine months ended June 30, 2022 and 2021 do not reflect the adjustments to the carrying values of assets and liabilities and the reported expenses and balance sheet classifications that would be necessary if the Company were unable to realize its assets and settle its liabilities as a going concern in the normal course of operations. Such adjustments could be material.

## Transactions with Related Parties

The related parties are directors and officers of the Company and entities over which executive management and directors have control or significant influence. The Company's Directors and Officers as at June 30, 2022 are as follows:

Lowell Jackson	Chairman & Director
John Assman	Director
Todd Garman	Director
Rodrigo Sousa	Director
Richard D. Williams	Corporate Secretary and Director
Glenn Leroux	President & Chief Executive Officer and Director
Cam Deller	Chief Financial Officer
Anshul Vishal	Vice President of Corporate Development
Alasdair Knox	Vice President of Project Engineering

Related party transactions during the three and nine months ended June 30, 2021 and 2022 are as follows:

- The Company completed a private placement for an aggregate of 20,799,200 common shares (the "Common Shares") at a price of \$0.25 per Common Share for gross proceeds of \$5,199,800, on June 15, 2021. Certain directors and officers of the Company, being Lowell Jackson, John Assman, Rodrigo Sousa, Richard Williams, Glenn Leroux and Anshul Vishal, as well as its largest shareholder, being Paramount Resources Ltd., directly or indirectly participated in the Offering in the aggregate amount of \$1,262,675, thereby making the Offering a "related party transaction" as defined under Multilateral Instrument 61-101.

## Commitments and Contingencies

The Company is committed to payments under the terms of quarry leases, royalty and participation agreements and provincial statutes as follows:

As at June 30, 2022	Payments due by period		
	Less than 1 year	1-3 years	4-5 years
	\$	\$	\$
Quarry lease agreements <sup>1</sup>	58,500	175,500	117,000
Royalty and participation agreements <sup>2</sup>	100,000	375,000	-
<b>Total commitments</b>	<b>158,500</b>	<b>550,500</b>	<b>117,000</b>

<sup>1</sup> Beyond five years, the Company is committed to annual quarry lease payments of \$27 per hectare under lease.

<sup>2</sup> Certain of the royalty and participation agreements require payments to be made prior to the commencement of commercial production. Once commercial production commences, royalty and participation payments are based on tonnes sold, less any reductions related to advanced royalty payments already made as described in further detail below.

#### a) Royalty and Economic Participation Agreement Commitments

The Company has economic participation agreements with respect to the Wanipigow Sand Quarry with Hollow Water First Nation and the Incorporated Community of Seymourville (together, the "Economic Participation Agreements"). The Company has also entered into various contractual agreements relating to the acquisition of title for 18 of its quarry leases.

Once commercial production commences, the royalty and participation agreements combined with the royalty due under Manitoba Provincial statutes, have varying future payments based on a number of factors including the rate, location and type of mineral extracted and the sale point end use. Due to the variability in the royalty and participation obligations, the Company's future commitment ranges from a maximum of \$4.80 per tonne sold to a minimum of \$3.80 per tonne sold.

The Company has an option to acquire 50% of the production royalty under one agreement for \$1,500,000 within the first three years of achieving initial production. This option can be extended a further two years by increasing the payment to \$2,000,000. This would reduce the maximum royalty per tonne sold to \$4.30 and the minimum royalty per tonne sold to \$3.55.

#### b) Future Royalty Income

The Company received a Net Smelter Royalty (the "NSR") when it sold its Timmins mineral exploration properties that vary from 1% to a maximum of 2%, depending upon the claims and the pre-existing NSR burden if the Timmins properties achieve commercial production. The NSR payable to the Company is capped at \$5,000,000.

#### c) Reduction in Future Cash Royalty Payments

The Company is required to make semi-annual advance royalty payments of \$50,000 under one of its royalty agreements and under another agreement, prepaid a lump sum of \$1.3 million which accrues interest at 9% per annum. The total accrued interest plus cash payments is \$2,522,879 as at June 30, 2022. These prepaid royalties will reduce future cash payments required under the royalty agreements, once production commences, and will continue to reduce cash payments for a number of years, depending on the annual mineral extraction rate.

## Financial Instruments and Management of Financial and Other Risks

#### a) Fair value

The fair values of cash and cash equivalents, trade and other receivables, and accounts payable and accruals included in the statement of financial position approximate their carrying amount due to the short-term maturity of these instruments. The fair value of the liability component of the convertible debentures is determined based on discounted

cash flows, including interest at current rates for similar instruments. At June 30, 2022, the fair value of the convertible debentures is \$2.4 million.

**b) Credit and interest rate risk**

The Company's credit risk is primarily attributable to cash and cash equivalents and trade and other receivables included in current assets. Cash and cash equivalents consist of bank deposits, which are held by a Canadian chartered bank. At June 30, 2022 the Company holds interest-bearing cash balances of \$1,758,671 (September 30, 2021 was \$4,707,707). The Company has collected the trade and other receivables balance in full, subsequent to the period end.

**(c) Liquidity risk**

The Company's approach to managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due and ensuring an adequate supply of funds to enable the Company to carry out its intended programs.

**d) Foreign currency risk**

The Company is exposed to foreign currency exchange risk as the Company undertakes certain transactions in US dollars, Australian dollars and Euros. The Company has not entered into any derivative financial instruments to manage exposures to currency fluctuation. For the three months ended June 30, 2022, with other variables unchanged, a 10% strengthening (weakening) of the Canadian dollar against the US dollar would have decreased (increased) net loss in aggregate by approximately \$116,412. Included in accounts payable and accruals at June 30, 2022 is USD \$668,759 (September 30, 2021 was USD \$685,825).

## **Off-Balance Sheet Arrangements**

The Company has no off-balance sheet arrangements.

## **Critical Accounting Estimates**

The preparation of the interim condensed financial statements in accordance with IFRS, requires management to make judgments, estimates, and assumptions that affect the reported assets, liabilities, revenues, expenses and the disclosure of contingencies. Actual results may differ significantly from these estimates.

A description of the significant accounting judgments, estimates and assumptions are set out in annual audited financial statements for the year ended September 30, 2021.

## **New Accounting Policies and Future Accounting Pronouncements**

The significant accounting policies adopted in the preparation of these interim condensed financial statements are the same as those set out in the annual audited financial statements for the year ended September 30, 2021. Unless otherwise stated, these policies have been consistently applied to all periods presented.

There are standards and interpretations that are issued, but not yet effective, and the Company is in the process of evaluating whether they would have any significant impact on the Company's financial statements in future periods.

## **Risks and Uncertainties**

The COVID-19 pandemic and general uncertainty in the financial and geopolitical realm, increases the Company's exposure to many of the risks described below including, but not limited to, the ability to obtain sufficient financing to advance the development of a patterned solar glass manufacturing facility and remain a going concern.

There is a risk that the COVID-19 pandemic and the response thereto, may result in a prolonged continuation of adverse

business conditions affecting the Company's plans, increased volatility in financial markets and foreign currency exchange rates, significantly depressed share prices, health restrictions or guidelines adversely affecting the ability of the Company or third parties to efficiently conduct operations and/or an overall slowdown in the Canadian and global economies. These and other risks associated with the COVID-19 pandemic could result in events and circumstances that have a material adverse impact on the Company's business, financial condition and results of operations.

The course of the COVID-19 pandemic remains highly uncertain. The extent to which COVID-19 impacts the Company's business, financial condition and results of operations will depend on future developments which are currently unknown, including, but not limited to: the duration and severity of the pandemic, the impact of the pandemic on economic growth and commodity prices and financial and capital markets and government responses and restrictions. The adverse impacts of the COVID-19 pandemic may be more significant in upcoming financial periods. Even after the COVID-19 pandemic has subsided, the Company may continue to experience materially adverse effects as a result of the pandemic's global economic impact and its lasting impact on the Company's ability to execute on its strategic plans with efficiency due to; inhibited access to capital, restrictions on travel and in person meetings and difficulties recruiting and re-locating potential staff members.

### **General Risks/No History of Operations**

The Company is a development stage company and does not hold any interest in any property which is in commercial production nor does it have a history of operations. As such, the Company is dependent on further external financing to continue to advance its business model. In order to carry out the planned development and pay for administrative costs, the Company will spend its existing working capital and attempt to raise additional funds as needed.

The Company's viability lies in its ability to develop, finance, construct and generate future revenue, profits and cash flow from a glass manufacturing facility.

There is no assurance that the Company will be successful in its development activities and the Company's likelihood of success must be considered in light of its early stage of operations.

### **Capital Risk**

The development and construction activities of the Company required to achieve commercial operations will require substantial additional financing. Failure to obtain sufficient financing may result in delaying or indefinite postponement of its planned patterned solar glass manufacturing facility. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financings will be favorable to the Company.

### **Industry Risks**

The Company is subject to numerous risk factors that may affect its business prospects in the future. These include risks inherent to the development and operation of the sand quarry and glass manufacturing facility, dependence on key personnel, raw material input prices, product sales prices, availability of capital, environmental, regulatory and permitting risks, acquisition risks, competition and potential risks relating to land titles. There are other risk factors that could have material effects on the Company that are not quantifiable at present due to the nature of the Company's stage of operation, industry segment and other considerations.

### **Development Risks**

The development of the patterned solar glass manufacturing facility and associated quarry involves a high degree of risk. There is no assurance that the Company's development activities will result in successful operations. The long-term profitability of the Company's operations will be in part directly related to the cost and success of its development program. The development of the solar glass manufacturing facility and associated quarry is premised on future production and capital cost estimates. If commercial production commences, actual production and costs may vary from the estimates for a variety of reasons such as estimates of raw materials input costs, labour costs, revisions to processing plant plans, production waste, quality and other characteristics of the glass produced, risks and hazards

associated with the operations, unexpected labor shortages or strikes, equipment failures and other interruptions in production capabilities. Production costs may also be affected by inflation and fluctuations in currency exchange rates. Failure to achieve production targets or cost estimates could have a material adverse impact on the Company's future cash flow and overall financial performance.

### **Business Risk**

The success of the operations and activities of the Company is dependent to a significant extent on the efforts and abilities of its management, outside contractors, experts and other advisors. Investors must be willing to rely on management's discretion and judgment as well as the expertise and competence of the outside contractors, experts and other advisors. The Company does not have a formal program in place for succession of management and training of management. The loss of one or more of the key employees or contractors, if not replaced on a timely basis, could adversely affect the Company's operations and financial performance.

### **Price Risk**

The price of the Company's common shares, its financial results, and development activities have been, or may in the future be, adversely affected by changes in the price of raw materials used in manufacturing and the external market price of the products produced and sold. These prices fluctuate and are affected by numerous factors beyond the Company's control, such as expectations of inflation or deflation, currency exchange fluctuations, interest rates, global or regional consumptive patterns, international supply and demand, market speculation activities, improved production methods, international economic and political trends and the entrance of new competitors in the business. The effect of these factors on the input costs and price of the Company's products, and therefore the economic viability of the Company, are speculated but cannot accurately be predicted.

### **Environmental Risk**

All phases of the Company's operations are subject to various federal, provincial, municipal, and international laws and statutory instruments governing the use of lands and protection of the environment, which may be modified from time to time. These laws, among other things, govern air and water quality standards, land reclamation requirements, transportation, storage and the disposal of hazardous waste. Environmental legislation may over time require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors, and employees. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Company's operations. To the Company's knowledge, there are no material liabilities to date which relate to environmental risks or hazards.

### **Regulatory Risks**

The Company and its prospective customers are subject to extensive environmental, health and safety regulations that impose, and will continue to impose, significant costs and liabilities. In addition, future regulations, or more stringent enforcement of existing regulations, could increase those costs and liabilities, which could adversely affect the Company's results of operations.

### **Land Title Risk**

The Company has not sought formal title opinions on its quarry lease interests in Canada. Any of the Company's properties may be subject to prior unregistered agreements or transfers or Indigenous land claims and title may be affected by undetected defects. The Company has no present knowledge of any material defect in the title of any of the properties in which the Company has or may acquire an interest.

### **Limitation of Controls and Procedures**

Management has established processes to provide them sufficient knowledge to support representations that they have

exercised reasonable diligence that (i) the unaudited condensed interim financial statements do not contain any untrue statement of material fact or omit to state a material fact required to be stated or that is necessary to make a statement not misleading in light of the circumstances under which it is made, as of the date of and for the periods presented by the financial statements, and (ii) the unaudited condensed interim financial statements fairly present in all material respects the financial condition, financial performance and cash flow of the Company, as of the date of and for the periods presented.

In contrast to the certificate required for non-venture issuers under National Instrument 52-109, *Certification of Disclosure in Issuers' Annual and Interim Filings* ("NI 52-109"), the Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR"), as defined in NI 52-109. In particular, the certifying officers filing this certificate do not make any representations relating to the establishment and maintenance of:

- (i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and
- (ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with the issuer's generally accepted accounting principles (IFRS).

The issuer's certifying officers are responsible for ensuring that processes are in place to provide them with sufficient knowledge to support the representations they are making in the certificate. Investors should be aware that inherent limitations on the ability of certifying officers of a venture issuer to design and implement on a cost-effective basis DC&P and ICFR as defined in NI 52-109 may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

## **Forward-Looking Statements**

Certain statements contained in this MD&A constitute forward-looking statements relating to, without limitation, expectations, intentions, plans and beliefs, including information as to the future events, results of operations and the Company's future performance (both operational and financial) and business prospects. In certain cases, forward-looking statements can be identified by the use of words such as "expects", "estimates", "forecasts", "intends", "anticipates", "believes", "plans", "seeks", "projects" or variations of such words and phrases, or state that certain actions, events or results "may" or "will" be taken, occur or be achieved. Such forward-looking statements reflect the Company's beliefs, estimates and opinions regarding its future growth, results of operations, future performance (both operational and financial), and business prospects and opportunities at the time such statements are made, and the Company undertakes no obligation to update forward-looking statements if these beliefs, estimates and opinions or circumstances should change. Forward-looking statements are necessarily based upon estimates and assumptions made by the Company that are inherently subject to significant business, economic, competitive, political and social uncertainties and contingencies. Forward-looking statements are not guarantees of future performance. In particular, this MD&A contains forward-looking statements pertaining, but not limited, to: the statements made under the heading "Business Outlook"; the design and operation of the glass manufacturing facility and associated sand quarry; the ability to transport raw materials to the glass manufacturing facility and the ultimate products sold; the benefits to be derived from the Economic Participation Agreements including anticipated economic and social benefits and opportunities, including employment, contracting and training initiatives; the plans with respect to financing ongoing operating activities; the timing and approval or permitting process; the intention to use cash on hand and proceeds from future equity issuances to fund the Company's operations and future development plans; industry activity levels; industry conditions pertaining to the glass manufacturing industry; the ability of and manner by which the Company expects to meet its capital needs and remain a going concern basis; and the Company's objectives, strategies and competitive strengths.

By their nature, forward-looking statements involve numerous current assumptions, known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to

differ materially from those anticipated by the Company and described in the forward-looking statements.

With respect to the forward-looking statements contained in this MD&A, assumptions have been made regarding, among other things: the ability to obtain the necessary stakeholder, regulatory and environmental approval and external funding to advance the development of the glass manufacturing facility and associated sand quarry; no material capital project and financing cost overrun or delay related to the construction of the facility; the ability to continue to consult with, and address feedback received from interested stake holders including the Hollow Water First Nation and surrounding communities; environmental risks and regulations; future global economic and financial conditions; future raw material input cost prices; product market prices, operating costs; that the regulatory environment in which the Company operates will be maintained in the manner currently anticipated by the Company; future exchange and interest rates; the recoverability and consistent quality of the Company's silica sand; the accuracy and veracity of information and projections sourced from third parties respecting, among other things, future industry conditions; demand for the Company's glass products; the Company's ability to obtain qualified staff and equipment in a timely and cost-efficient manner; the regulatory framework governing royalties, taxes and environmental matters in the jurisdictions in which the Company conducts its business and any other jurisdictions in which the Company may conduct its business in the future; future capital expenditures to be made by the Company; future sources of funding for the Company's capital program; the Company's future debt levels; the impact of competition on the Company; the supply and demand and future projected growth of the markets in which the Company operates and the Company's ability to obtain financing on acceptable terms.

A number of factors, risks and uncertainties could cause results to differ materially from those anticipated and described herein including, among others: the effects of competition and pricing pressures; effects of fluctuations in the price of glass products and raw materials input costs; risks related to indebtedness and liquidity, including the Company's capital requirements; risks related to interest rate fluctuations and foreign exchange rate fluctuations; changes in general economic, financial, market and business conditions in the markets in which the Company operates; the Company's ability to obtain, maintain and renew required permits, licenses and approvals from regulatory authorities; the stringent requirements of and potential changes to applicable legislation, regulations and standards; the ability of the Company to comply with unexpected costs of government regulations; liabilities resulting from the Company's operations; the results of litigation or regulatory proceedings that may be brought against the Company; uninsured and underinsured losses; risks related to the transportation of the Company's products, including potential rail line interruptions or a reduction in rail car availability; the geographic and customer concentration of the Company; the ability of the Company to retain and attract qualified management and staff in the markets in which the Company operates; labor disputes and work stoppages and risks related to employee health and safety; general risks associated with the glass manufacturing and sand quarry industries, loss of markets, consumer and business spending and borrowing trends; limited, unfavorable, or a lack of access to capital markets; uncertainties inherent in estimating quantities of products; processing problems; and the use and suitability of the Company's accounting estimates and judgments.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in its forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will materialize or prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. The forward-looking statements contained in this MD&A are expressly qualified by this cautionary statement. Readers should not place undue reliance on forward-looking statements. These statements speak only as of the date of this MD&A. Except as may be required by law, the Company expressly disclaims any intention or obligation to revise or update any forward-looking statements or information whether as a result of new information, future events or otherwise.

Any financial outlook and future-oriented financial information contained in this MD&A regarding prospective financial performance, financial position or cash flows is based on assumptions about future events, including economic conditions and proposed courses of action based on management's assessment of the relevant information that is currently available. Projected operational information contains forward-looking information and is based on a number of material assumptions and factors, as are set out above. These projections may also be considered to contain future oriented financial information or a financial outlook. The actual results of the Company's operations for any period will likely vary from the amounts set forth in these projections and such variations may be material. Actual results will vary from projected results. Readers are cautioned that any such financial outlook and future-oriented financial information contained herein should not be used for purposes other than those for which it is disclosed herein. The forward-looking

information and statements contained in this document speak only as of the date hereof and the Company does not assume any obligation to publicly update or revise them to reflect new events or circumstances, except as may be required pursuant to applicable laws.

### **Market, Independent Third Party and Industry Data**

Certain market, independent third-party and industry data contained in this MD&A is based upon information from government or other independent industry publications and reports or based on estimates derived from such publications and reports. Government and industry publications and reports generally indicate that they have obtained their information from sources believed to be reliable, but the Company has not conducted its own independent verification of such information. This MD&A also includes certain data derived from public filings made by independent third parties. While the Company believes this data to be reliable, market and industry data is subject to variations and cannot be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey. The Company has not independently verified any of the data from independent third-party sources referred to in this MD&A or ascertained the underlying assumptions relied upon by such sources.