



LOW-CARBON MANUFACTURING OF SOLAR GLASS

January 2024





Introduction

Canadian Premium Sand Inc. (“CPS” or “the Company”) is a public company listed on the TSX-Venture Exchange

Building North America’s first integrated solar glass manufacturing facility
(Industry currently dependent on Asia Pacific glass producers)

Significant, growing demand for patterned solar glass
(62% of production contracted, an additional 170% of demand in MOUs)

Developing a low-carbon facility with a long-term cost advantage
(Strategically located, renewable energy supply, integration of sand resource)

Pre-construction development complete, financing process underway
(Shovel-ready status achieved, led by an experienced management team)

Compelling project economics, with phased growth potential
(Phase 1 EBITDA of \$170-\$190mm, unlevered pre-tax IRR >18%)

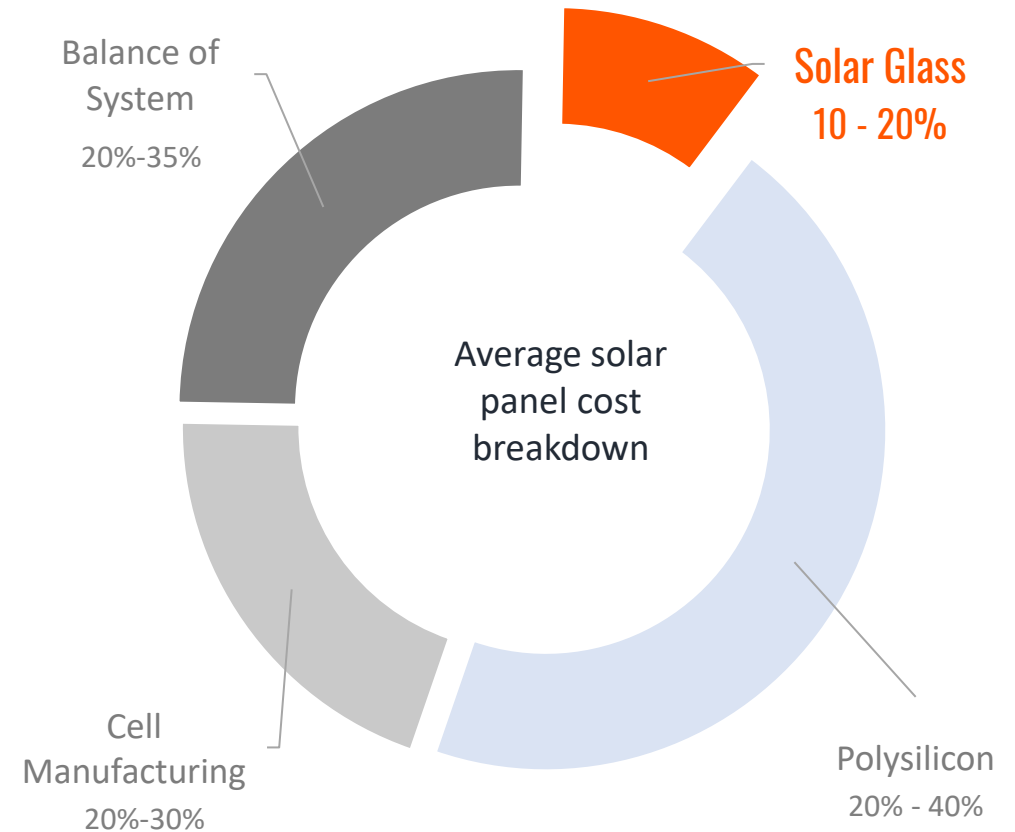
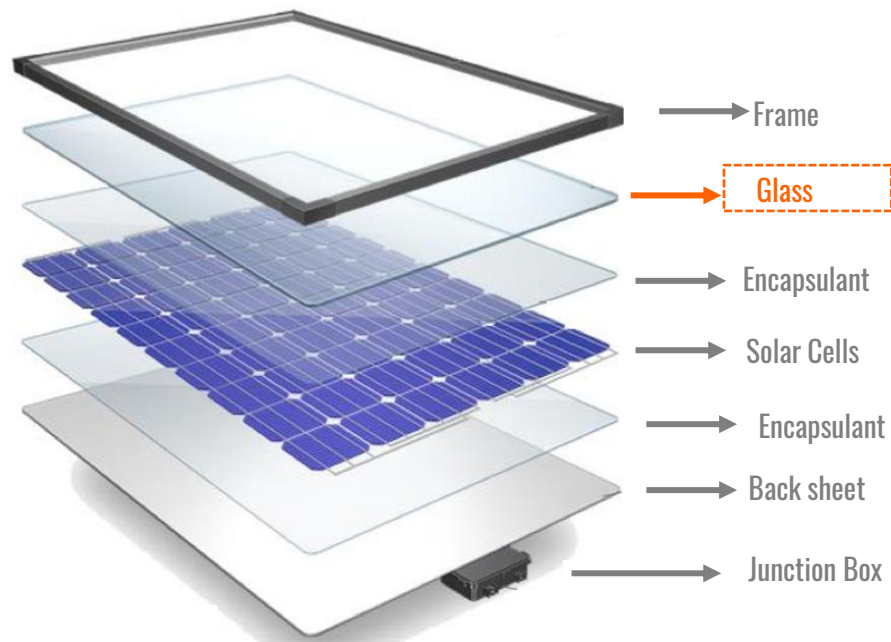




Solar Glass is a Critical Component of Solar Panels

Patterned solar glass:

- Maximizes light transmittance
- Protects solar panel from elements
- Carries limited technology risk or obsolescence

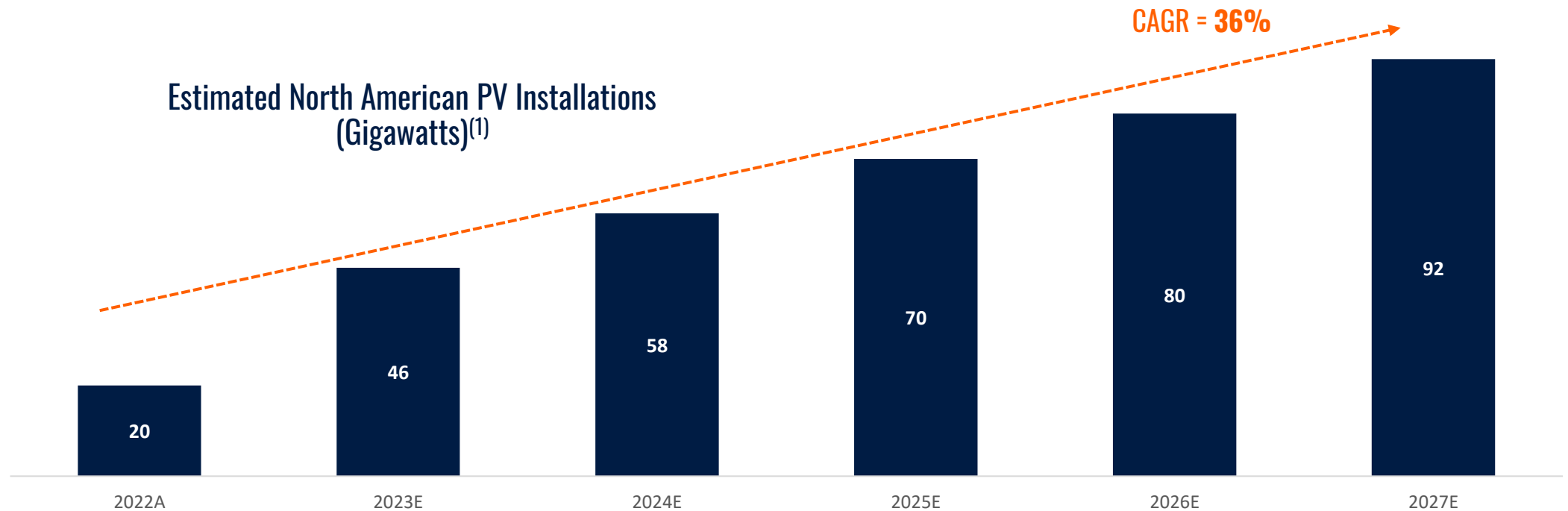




Significant North American Market Growth

Annual solar panel **installations** are expected to grow **36%** annually:

- Decarbonization target for the electricity grid
- Corporate sustainability commitments
- State level policies for net-metering
- Solar energy is cost competitive with traditional sources of energy





Current Dependence on Asia-Pacific Suppliers

Domestic solar panel manufacturers are aggressively seeking a local supply of glass and CPS is the only option

Asia-Pacific Supply Issues:

- Unpredictable costs
- Volatile tariff environment
- Insecure logistics
- High carbon intensity





Reducing Dependence on Asia-Pacific Suppliers

The U.S. Inflation Reduction Act provides significant measures to support domestic solar manufacturing capacity build-out in the U.S.

- ✓ **\$800 billion** in spending to support decarbonization goals
- ✓ Access to investment and production **tax credits** (ITC and PTC) totaling **\$241 billion** for solar manufacturing facilities and solar electricity generation projects
- ✓ ITC provides a tax incentive totaling nearly 50% of the manufacturing cost across the entire solar value chain

The Canadian federal government 2023 Budget outlines numerous investment tax credits for clean energy

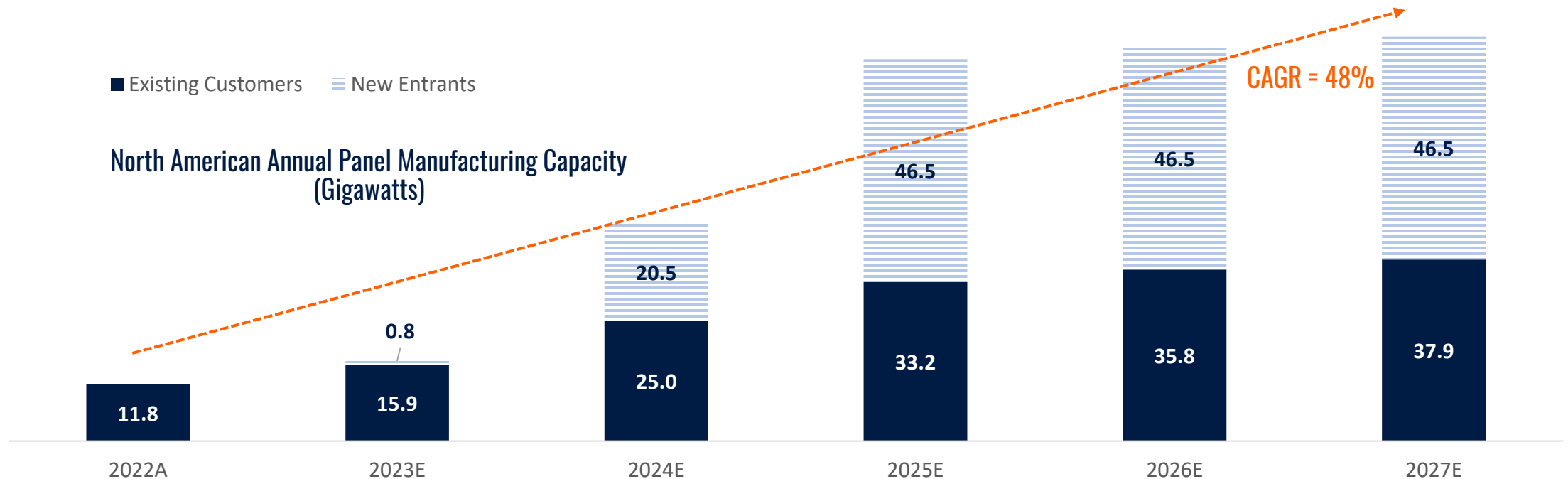
- ✓ **\$75 billion** in spending to support decarbonization goals
- ✓ Refundable 30% ITC for clean energy manufacturing

A Resurgence of North American Solar Energy Manufacturing Capacity is Underway



Resurgence of Domestic Manufacturing

- Existing North American panel manufacturers are expected to increase capacity over 3x from 12 GW per year to 38 GW
- Several new entrants have announced new facilities for panel manufacturing that could see another 47 GW of panel capacity added by 2027



✓ [Hanwha Solutions \(Qcells\)](#) recently announced the largest investment in U.S. solar history (US\$2.5B) to build out a sustainable North American solar supply-chain to support growth.

✓ [Heliene Inc.](#) recently announced completion of a new facility and further expansion plans to become the second largest campus in the U.S, with the potential to start cell manufacturing in the near future.

✓ [Meyer Burger Technology AG](#) announced plans for a 1.5GW facility in Arizona to support U.S. clean energy transition and [announced 5GW in offtakes](#) for its panels from this facility.



Pre-Construction Development Activities Completed

- ✓ Secured and delineated a rare, wholly-owned silica sand resource of 7.25 million tonnes (inferred resource = 40 years of supply) with an additional ~20.0 million tonnes identified for exploration
- ✓ Conducted geochemical analysis and bulk process testing of sand resource confirming appropriate purity, low-iron characteristics and simple processing required for solar glass manufacturing
- ✓ Secured a 121-acre land parcel in Selkirk, Manitoba with ideal characteristics for the project
- ✓ Finalized detailed pre-construction engineering and design for an integrated 800 tonne per day manufacturing facility
- ✓ Signed a turn-key, fixed price construction agreement with an industry-leading EPC consortium that provides capital cost certainty and operational performance assurances
- ✓ Secured firm commercial offtake agreements with Hanwha Solutions, Meyer Burger and Heliene Inc., for a minimum of 62% of phase 1 capacity, with optionality for an increase to 77%
- ✓ Financing process launched to capitalize the project



Strategically Located and Vertically Integrated

Integration of sand resource with value-added manufacturing offers significant benefits



Sand Processing Facility

- ✓ Rare low-iron silica resource
- ✓ Abundant supply of 40+ years
- ✓ Cost certainty of key raw material
- ✓ Minimal overburden
- ✓ Minimal processing required



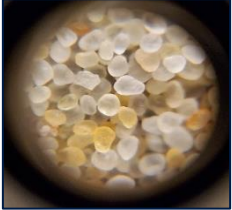
Solar Glass Manufacturing Facility

- ✓ Close to sand resource
- ✓ Low-cost hydro-electric power
- ✓ Designed with sustainability in mind
- ✓ Strong labour pool
- ✓ Efficient transportation hub
- ✓ Proximity to large solar panel manufacturers



Sand Processing Facility

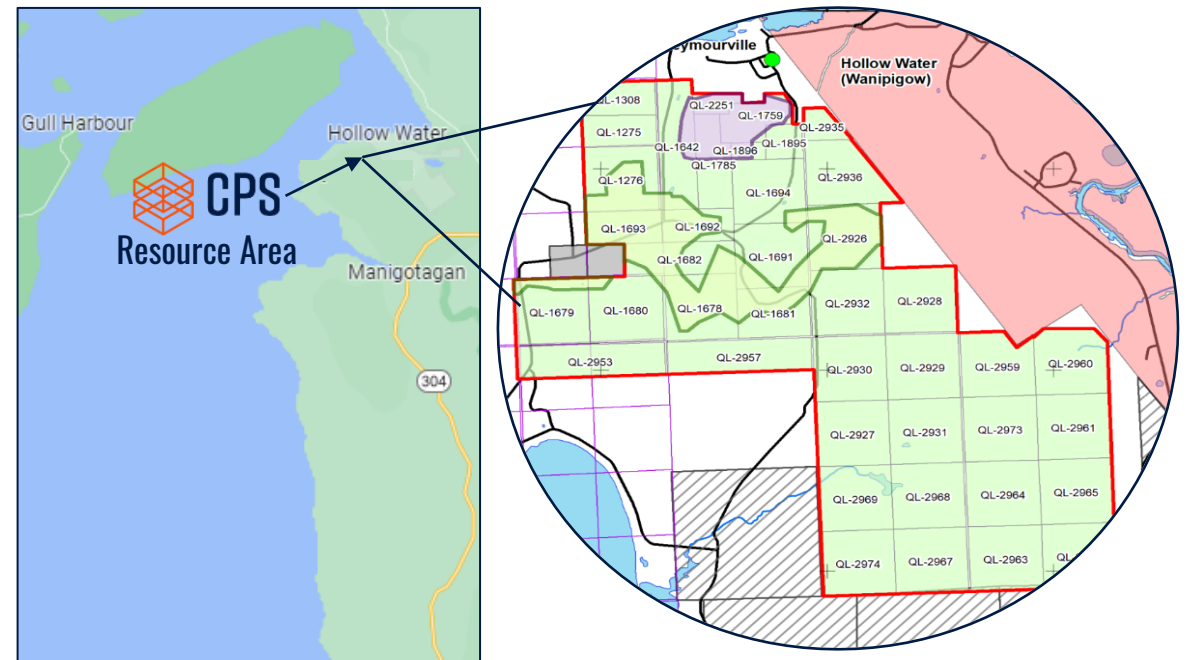
- CPS' rare, low-iron silica sand deposit is located only 160 km north of the planned glass manufacturing facility and is ideally suited for solar glass
- Limited processing is required for this ultra-pure sand: only sizing, scrubbing and magnetic iron removal is required
- CPS currently has 40 years of silica sand resources available for Phase 1 in the Main Glass Sand Resource Area
- The Future Target Exploration Area offers additional supply with approximately 20 million tonnes identified

Sand Quality Overview		
Technical Characteristics	 CPS Solar Spec Sand	Typical Glass Sand (North America)
SiO ₂ (purity)	99.6%+	99.0%+
Fe ₂ O ₃ (iron)	0.0092% (92ppm)	>0.018% of 180ppm
Photomicrograph		

Sand Processing Overview



Sand Extraction Map



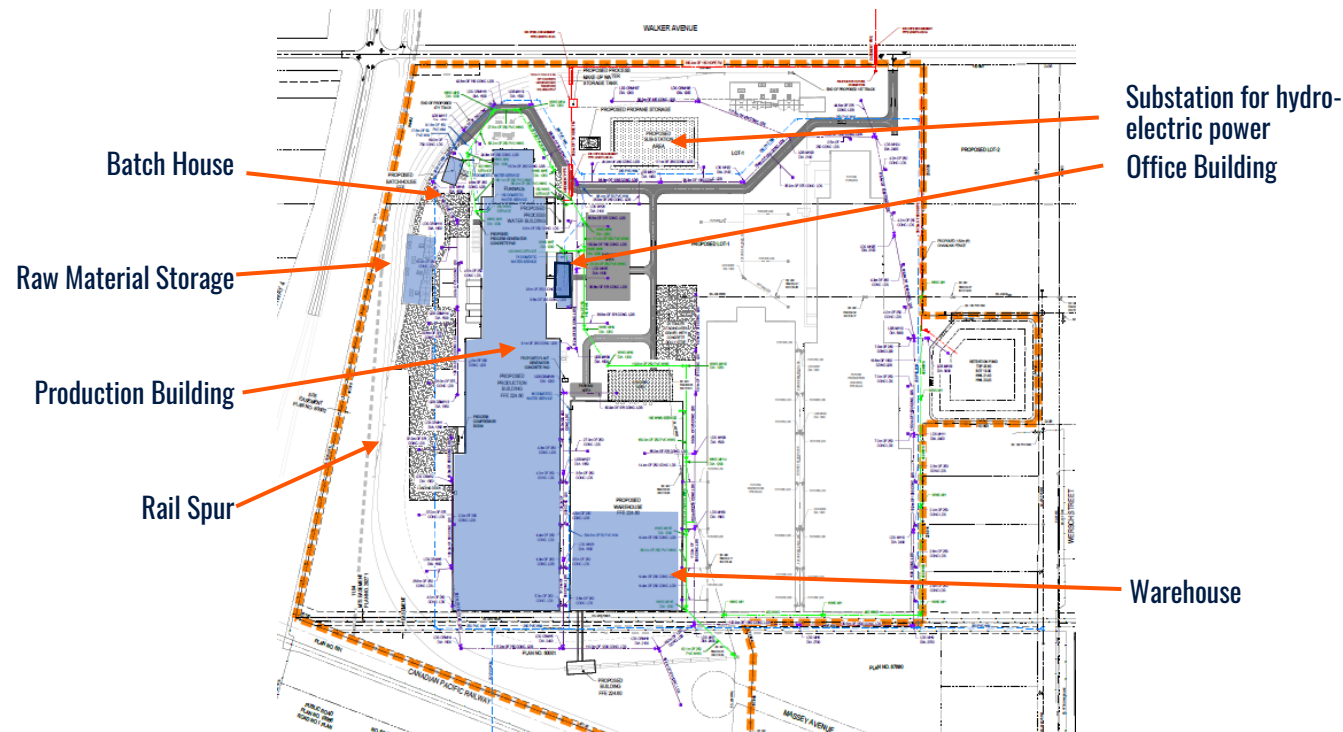


Glass Manufacturing Facility

CPS has secured 121 acres of heavy industrial land in the City of Selkirk, ideally suited for manufacturing:

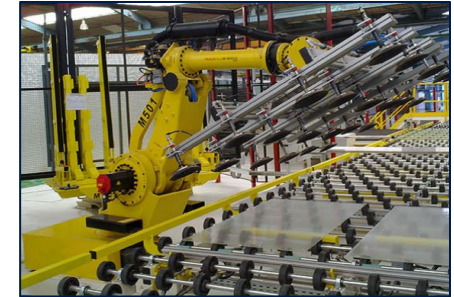
- Proximity to Manitoba Hydro 115kV power line, enabling access to renewable hydro-electric energy
- Pipeline access to wastewater plant, enabling use of high-quality recycled water
- Access to Class 1 rail line located on the south boundary

Heavy Industrial Zoned 121-acre Site



Solar Glass Manufacturing Overview

- 800 tpd furnace with 4 production spurs
- Automated rolled patterned production
- 12 production lines for front and back solar glass
- Anti-reflective coaters and tempering ovens





Project Execution

EPC consortium of two capable firms operating under a Joint Venture, delivering on a lump sum contracting model

- Canada's largest general contractor with operations in the civil infrastructure, heavy industrial, and buildings markets with an annual construction volume of over \$8B
- Serving as Prime Contractor on-site managing site safety and Balance of Plant scope including buildings, infrastructure and site development



- Global glass manufacturing specialists with over 2,100 projects completed in the company's 75-year history
- Responsible for the overall glass manufacturing and sand treatment process, interface between balance of plant and manufacturing process

Solar Glass Manufacturing Facility Subcontractors



Raw materials batch plant equipment



Furnace, forehearth, rolling equipment & lehrs



Glass processing and fabrication



Steel, mechanical & electrical installations



Furnace refractory installations

Sand Extraction Facility Subcontractors



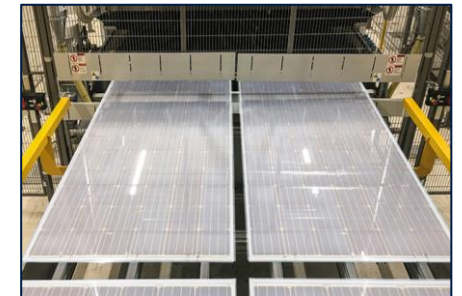
Sand processing equipment and conveyors



Steel, mechanical & electrical installations

EPC Agreement

- Fixed price, turn-key execution for both facilities
- Operational and quality performance assurances
- Schedule incentives for early completion
- Incentives for identifying cost reduction opportunities

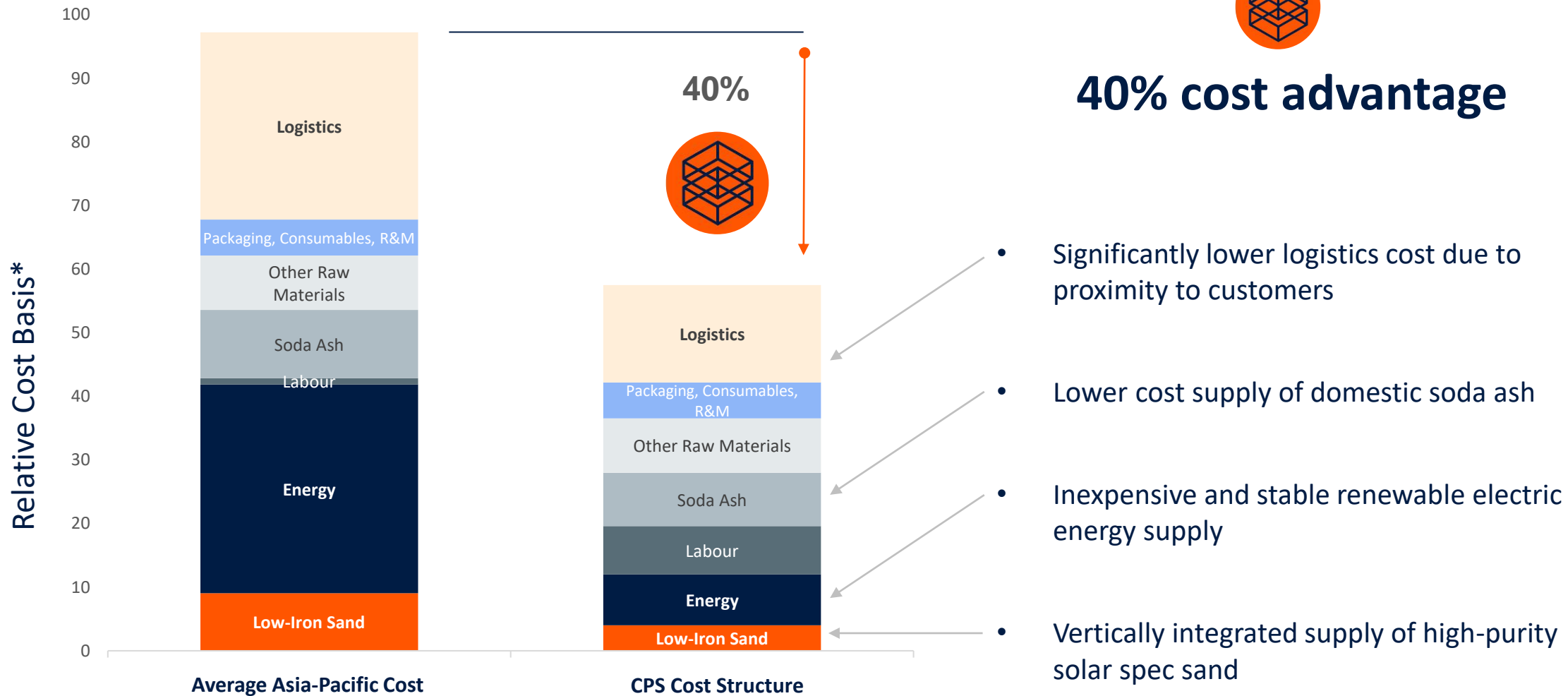




Long Term Cost Advantage



40% cost advantage



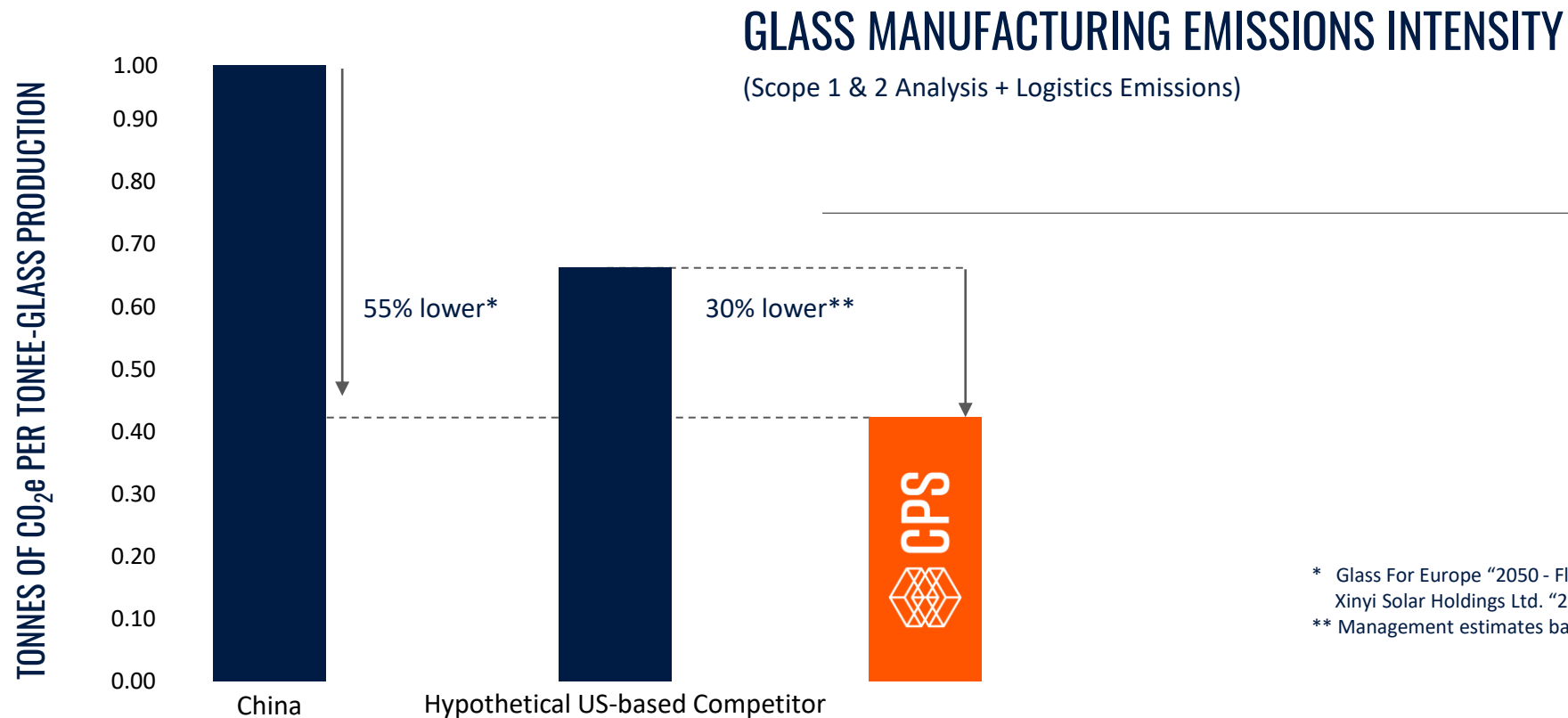
* Cost comparison is based on commodity futures for LNG and current ocean freight cost from Asia-Pacific



Low-Carbon Manufacturing

CPS will set a new standard for low-carbon manufacturing:

- Hydro-electric power
- Integration and proximity of solar spec sand resource
- Proximity to customers



* Glass For Europe "2050 - Flat Glass in Climate-Neutral Europe" 2020; Xinyi Solar Holdings Ltd. "2020 ESG Report"

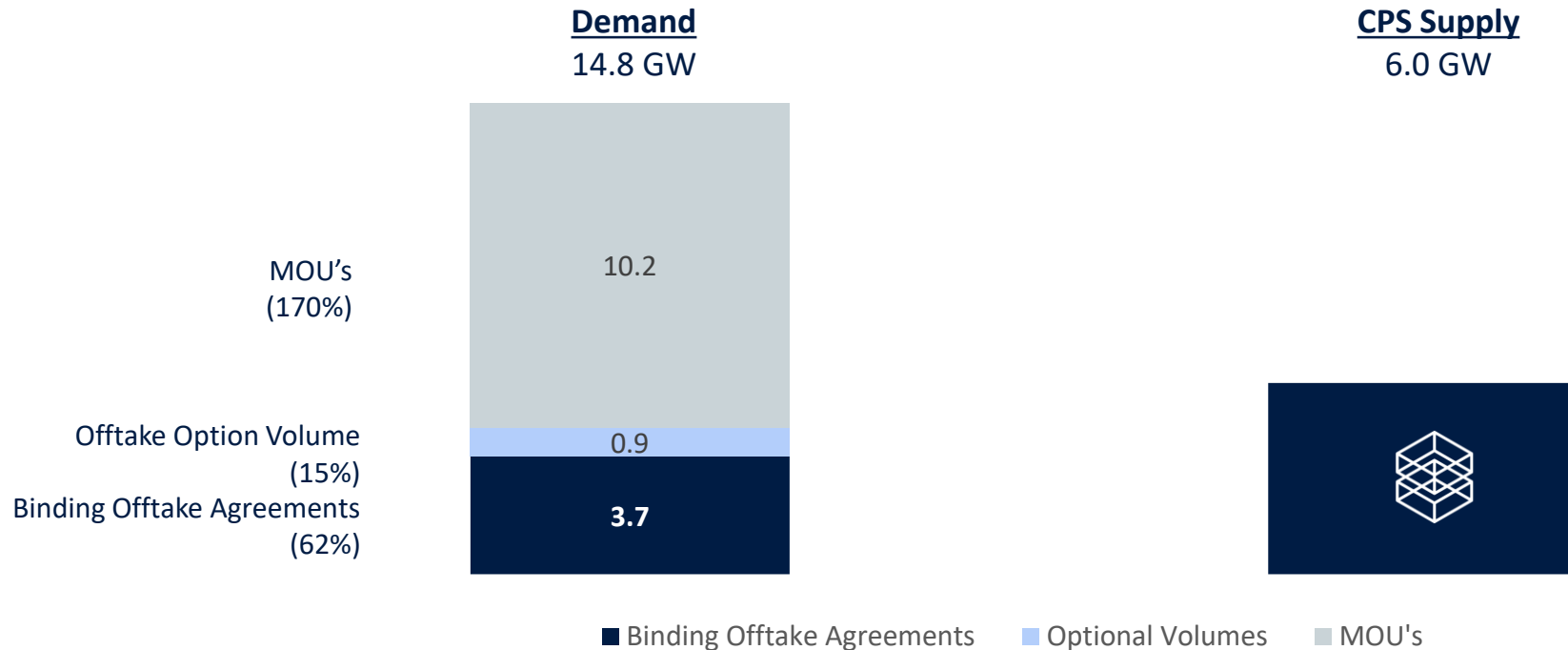
** Management estimates based on carbon-intensity of grid in U.S.



Commercial Offtake Status

Significantly more demand exists than CPS can supply:

- Binding offtake agreements with Hanwha, Heliene and Meyer Burger for 62% of annual production capacity with option to increase to 77%
- Several MOU's in place for an additional 170% of production capacity





Attractive Economics

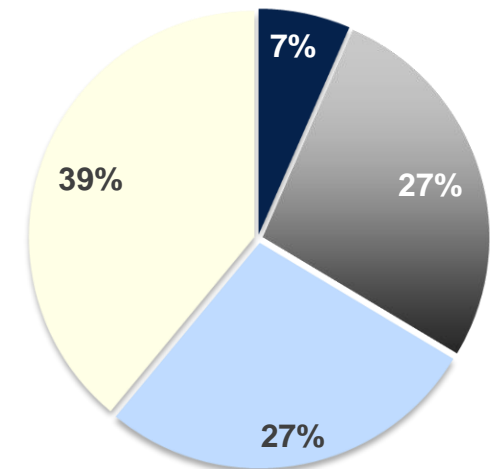
- Expected annual revenue of **\$300 to \$330 million**
 - Strong revenue visibility through binding commercial offtake agreements
- Expected annual EBITDA of **\$170 to \$190 million**
 - Cost advantages result in EBITDA margins of approximately **60%**
- Unlevered before-tax IRR of greater than **18%**
 - Subsequent phases offer additional upside through leveraging investment in common infrastructure



Corporate Overview

Capitalization

		Current
Share price (January 25, 2024)	(\$/share)	\$0.34
Common shares outstanding	(MM)	83.3
Market capitalization (basic)	(\$MM)	\$28.3
Net cash outstanding		
Cash and equivalents (Q4 2023 FS)	(\$MM)	\$1.8
Less: 12.0% convertible debentures due February 26, 2025	(\$MM)	-\$3.0
Net cash	(\$MM)	-\$1.2
Enterprise value	(\$MM)	\$27.1



- Management & Directors
- Paramount Resources & Strategic Investors
- Institutional Investors
- Other

Management Team

- Glenn Leroux, P.Eng**
President & CEO, Director
- Cam Deller, B. Comm, CFA**
Chief Financial Officer
- Dana Partridge, BSc., JD**
VP, Glass Operations
- Anshul Vishal, P. Eng, MBA**
Vice President, Corporate Development
- Alasdair Knox, P. Eng, PMP, MBA**
Vice President, Project Engineering

Board of Directors

- Lowell Jackson, P. Eng | Chairman**
Previously CEO and President of WestFire Energy Ltd. and Real Resources Inc.
- Theresa Jester**
Previous executive roles at Solar World, Solaria and Hudson Energy Partners
- Rick Williams, B.A., LLB**
President of Blackwell Investor Relations and Waseco Resources
- Rod Sousa, B. Comm., CFA**
Executive Vice-President, Corporate Development Planning at Paramount Resources Ltd.
- Todd Garman, B. Comm., MBA**
President at Iron Horse Energy Services
- John Assman**
President & CEO of Landtran Systems Inc.



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Technical Disclosure

Technical information contained in this Presentation that relate to the silica sand resource has been extracted or summarized based on the information contained in the independent Technical Report and Mineral Resource update of Wanipigow Sand Quarry dated October 14, 2021, reviewed and approved by Roy Eccles, P. Geol. of APEX Geoscience Ltd., who is independent of the Company and a "qualified person" under National Instrument 43-101 - *Standards of Disclosure for Mineral Projects*. 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.

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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; supply chain risks; inflationary risks; 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; the use and suitability of the Company's accounting estimates and judgments; and the other risk factors outlined in CPS's most recent Management's Discussion and Analysis which is available on SEDAR at www.sedar.com. 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 Presentation 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 Presentation. 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 Presentation regarding prospective financial performance, financial position, cash flows, EBITDA or net debt projections are 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



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In this Presentation, CPS has used the following terms (each a "**Non-GAAP Financial Measure**") which is not defined by International Financial Reporting Standards ("**IFRS**") but is used by management to evaluate the performance of CPS and its business: "EBITDA" and "net debt". EBITDA is defined as earnings before interest, taxes, depreciation and amortization. Management uses the term "net debt", as a key measure for evaluating its capital structure and to provide shareholders and potential investors with a measurement of the Company's total indebtedness. These measures may also be used by investors, financial institutions and others to assess CPS's performance and ability to service debt. Non-GAAP Financial Measures do not have standardized meanings prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies. Securities regulations require that Non-GAAP Financial Measures are clearly defined, qualified and reconciled to their most comparable IFRS financial measures. Except as otherwise indicated, Non-GAAP Financial Measures are calculated and disclosed on a consistent basis from period to period. Specific items may only be relevant in certain periods. The intent of Non-GAAP Financial Measures is to provide additional useful information to investors and analysts, and the measures do not have any standardized meaning under IFRS. The measures should not, therefore, be considered in isolation or used in substitute for measures of performance prepared in accordance with IFRS. Other issuers may calculate Non-GAAP Financial Measures differently. Investors should be cautioned that EBITDA and net debt should not be construed as an alternative to net earnings, cash flow from operating activities or other measures of financial results determined in accordance with GAAP as an indicator of CPS's performance.

Currency

All references to "\$" in this Presentation are to Canadian dollars, unless otherwise noted.

Internal Financial Modeling

Certain information contained in this Presentation including the information presented on slides 4 and 13 is derived from internal financial modeling based on: capital and operating cost details from the FEED study; current solar glass price data from Singapore Solar Exchange and PV InfoLink; and logistics quotes for delivery costs of solar glass to North American locations. Implicit in forward-looking information in respect of the EBITDA projections contained in this Presentation are certain current assumptions, including, among others, that the Company will continue to execute on its strategy of developing manufacturing capacity for solar glass, attracting customers and end-users, realize operational efficiencies from its integrated sand quarry, and extract procurement and cost synergies on time and on budget. Additional assumptions include no changes to the current economic environment, no material changes in interest rates and foreign exchange rates, procurement, development or supply costs, access to equity and debt capital and sufficient cash flow for ongoing operations. These assumptions are based on the fact that funding for the construction of the facility will be obtained, the project will receive final investment decision approval from the CPS board and the ultimate construction of the facility will proceed as scheduled and on budget, markets for solar glass and access to end markets. See also "Forward Looking Information" above.