



CIELO

Window to a Cleaner World™

CIELO PROVIDES OPERATIONAL UPDATE AND PRODUCTION FORECAST FOR ALDERSYDE AND FORT SASKATCHEWAN FACILITIES

November 12, 2021 – Vancouver, British Columbia, Canada - Cielo Waste Solutions Corp. (TSXV:CMC; OTCQB:CWSFF) ("Cielo" or the "Company") is pleased to provide an operational update and production forecast including project timelines, corporate goals and objectives associated with its operating demonstration facility at Aldersyde, Alberta, (the "Aldersyde Facility") as well as Cielo's planned research and development facility at Fort Saskatchewan, Alberta (the "R&D Facility").

The Company's business strategy is focused on converting waste to fuel through proprietary technology centred on a thermal catalytic depolymerization process. Today's update builds upon the Company's press release dated September 27, 2021, in which Cielo confirmed that engineering design enhancements and system modifications were underway at the Aldersyde Facility, in order to resolve the System Issues (defined below) and achieve steady-state production. Within that same press release, the Company announced its plans for the development of the R&D Facility.

ALDERSYDE DEMONSTRATION FACILITY OVERVIEW

The objectives of the Aldersyde Facility are focused on demonstrating the steady-state production of distillate for the sale of diesel and naphtha derived from wood waste utilizing used motor oil ("UMO") as the carrier fluid. The facility will also serve the purposes of generating revenue, product yield and control systems optimization, operations training, maintenance planning, and establishing best practices. Operational experience and philosophy from the Aldersyde Facility will translate to larger full-scale facilities.

Improving the Aldersyde Facility

Cielo is focused on increasing production rates at the Aldersyde Facility to a commercial level that supports revenue generation. Earlier this year, the Company implemented various process modifications which resulted in an improvement in production performance and enabled Cielo to achieve continuous production. However, these process modifications created unintended system bottlenecks and plugging issues which resulted in decreased operational run times (the "System Issues"). Immediate efforts to rectify the System Issues proved unsuccessful. In August 2021, Cielo commenced a comprehensive analysis of the Aldersyde Facility by utilizing an internal engineering team, with the support of third-party engineering consultants and technical experts.

Utilizing the findings from this comprehensive analysis, the engineering design work at the Aldersyde Facility has continued since August 2021, with the focus on reducing downtime to achieve steady-state production. Engineering modification and design are being undertaken on three elements of the existing process: (i) the process infeed mixing system, (ii) reactor modifications and improvements, and (iii) the biomass waste system management (together, the "Aldersyde Project"). The Company is pleased to announce that it is on schedule to execute the following planned work for the Aldersyde Project:

- | | |
|---------------------------------------|-----------------------------|
| • Engineering design | Commenced - August 2021 |
| • Initiation of equipment procurement | To commence - December 2021 |
| • Construction initiation | To commence - January 2022 |
| • Commissioning and start-up | Forecast - April 2022 |



Benefits of Aldersyde Facility Improvements

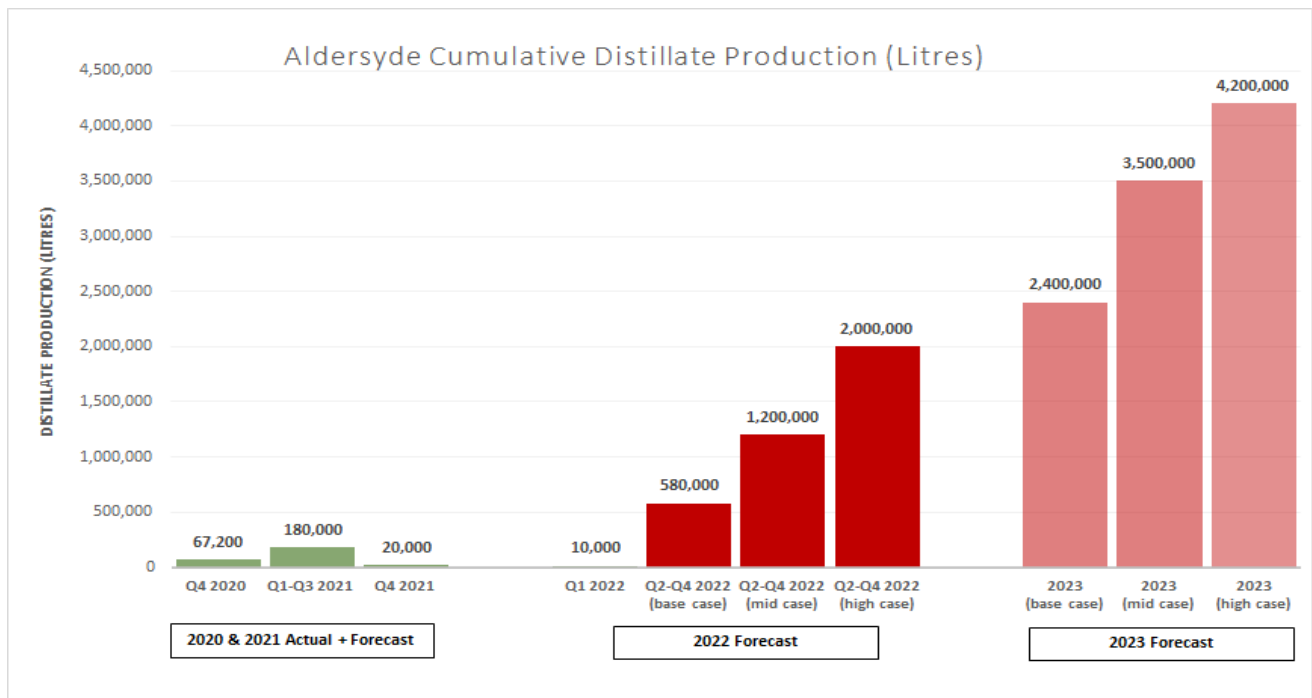
By completing the planned work for the Aldersyde Project, Cielo anticipates realizing the following benefits at the Aldersyde Facility:

- **Improved Reliability** – system constraints, process plugging issues and system deficiencies will be addressed.
- **Steady-State Production** – once current design modifications are implemented, commissioned and optimized, the Aldersyde Facility’s maximum throughput level can be established, enabling Cielo to better assess the economics associated with anticipated increases in production rates.
- **Potential Production Increases** – as steady-state production is stabilized, Cielo can explore production improvements related to limitations of the Aldersyde Facility’s physical area and any equipment upgrade requirements needed to support investing in an expansion of the Aldersyde Facility.
- **Revenue Generation** – as the Aldersyde Facility achieves steady-state production, Cielo will be able to produce both high sulphur content diesel and low sulphur content diesel from distillate and be in a position to generate revenue and report on product sales, volumes and revenue, along with clarity on operating costs plus revenue per litre.

Historical and Forecasted Production

Based upon the historic production level realized at the Aldersyde Facility and the expected outcomes from the Aldersyde Project, Cielo is in a position to predict the cumulative volumes of distillate production at the Aldersyde Facility during 2022 and 2023 with base, mid-case, and high-case scenarios.

The graph below illustrates the historical distillate production that Cielo produced into its storage tanks over the period from Q4 2020 to the date of this press release. The graph also illustrates the forecasted range of cumulative distillate production for 2022 and 2023 calendar years.



2020 and 2021 Actual and Forecast – The 2020 production was realized while operating the facility in a batch mode. Modifications to the Aldersyde Facility were made in early Q1 2021 where continuous production was attained but not sustained due to operational bottlenecks and plugging issues. Currently the facility continues to operate at a reduced rate as the Company addresses the System Issues.

2022 Forecast – The Q1 2021 production forecast reflects the Aldersyde Facility downtime associated with the construction activities for the Aldersyde Project. Upon completion and successful commissioning of the Aldersyde Project, a range of forecasted cumulative distillate production volumes are presented for the balance of 2022 as the Aldersyde Facility is anticipated to perform in a steady-state mode with significantly reduced downtime.

2023 Forecast – The 2023 full year forecast reflects a range of cumulative distillate production with increased volumes compared to 2022, as a result of the anticipated continuous operational and systems improvements.

Further Aldersyde Facility Enhancements

Following completion of the Aldersyde Project, Cielo will undertake a third phase of enhancements at the Aldersyde Facility, targeting upgrades to existing instrumentation, measurement and process system controls that are needed to improve production run time, reduce operating costs and optimize process management.

Cielo also anticipates completing engineering feasibility reviews for the following:

- Design of a distillate fractionation system to improve the quality and value of the diesel and naphtha produced at the Aldersyde Facility and enable the production of kerosene in commercial volumes.
- Design of UMO pre-treating and pre-conditioning to drive a more consistent carrier fluid for utilization in the conversion of wood waste into distillate, as well as potentially generating an additional revenue stream by flashing off the light ends of the UMO which could be captured as diesel.

Following commissioning and start-up of the Aldersyde Facility, the Company's strategy is to generate revenue streams that can assist in funding future projects and apply the operational experience and philosophy from the Aldersyde Facility to larger full-scale facilities.

FORT SASKATCHEWAN R&D FACILITY OVERVIEW

Cielo previously announced the purchase of a 60-acre land and an approximately 32,000 square feet industrial building at Fort Saskatchewan, Alberta (the "Site"). Cielo intends to build a R&D Facility with a capacity of 60 litres per hour ("lph") at the Site, which will guide the planning and design for its full-scale waste-to-fuel facility to be located at Fort Saskatchewan, Alberta (the "Full-Scale Facility"). The R&D Facility will consist of a scaled-down version of a full-scale facility, equipped with the latest process control technology for data trending, system automation, remote monitoring and process analytics. The objectives of the R&D Facility will be to determine optimal reactor design for various biomass inputs and catalyst combinations in order to maximize distillate production, improve carbon intensity score, and determine the best operational practices (collectively, the "Data"). Given the size of the Aldersyde Facility, the Data cannot be obtained in a cost-efficient manner from the Aldersyde Facility.

Cielo previously estimated a full-scale facility would have a capacity of approximately 4,000-lph; however, the Company intends to assess the economics of establishing an even larger full-scale facility given the significant footprint offered by the Site. Since the R&D Facility has a smaller 60-lph capacity, it will be fabricated and constructed within the warehouse, while the Full-Scale Facility will be constructed on the currently vacant land.

Engineering output data from the R&D Facility will provide critical information to fully understand material balance, energy balance, thermodynamics and fluid mechanics for the system which is required for modelling and scale-up calculations. These calculations would then be provided to a qualified Engineering,

Procurement and Construction (“EPC”) firm capable of fabricating a full-scale, state-of-the-art, commercial waste-to-fuel facility.

R&D Facility Activities and Milestones

Current work at the Company’s Fort Saskatchewan location is focused on the design, procurement and construction of the R&D Facility. The primary objective is to produce high quality engineering data for the front-end engineering design of a full-scale waste-to-fuel facility. Thereafter, the R&D Facility will undertake continuous testing of plastics, organics, railway ties, and other waste products. In 2021 the Company has made progress on meeting milestones related to construction and commissioning of the R&D Facility as follows:

- | | |
|--|-------------------------------------|
| • Engineering design and document approval | Commenced - August 2021 |
| • Detailed engineering | Expected completion - November 2021 |
| • Equipment procurement | Expected completion - November 2021 |
| • Construction | To commence - November 2021 |
| • Vessel and equipment fabrication | To commence - January 2022 |
| • Structural fabrication | To commence - February 2022 |
| • Commissioning and start-up | Forecast - August 2022 |
| • Pilot testing and control experimentation start-up | Forecast - August 2022 |

Expected Outcomes from the R&D Facility Testing

Immediately following commissioning of the R&D Facility, the system will be put into operation and Cielo intends to realize the following outcomes:

- Testing and data collection of using wood waste as the biomass infeed will commence following the engineering testing conditions and parameters;
- Obtaining a full energy balance and material balance for the conversion of wood waste to fuel;
- Identification of optimum reactor design, reactor configuration, catalyst combination, product loading and operational philosophy for wood waste;
- Inputting of all testing results and experiment data for process simulation modelling, calibration and tuning that is required for system scale up calculations to predict optimum process system flow and product quality; and
- Data provided to the EPC firm will enable preparation of cost estimates for the fabrication of a full-scale facility and allow Cielo to provide economic metrics on a per litre basis.

R&D Facility Next Steps

Following completion of process testing with wood waste and the acquisition of sufficient data, Cielo will begin a controlled engineering approach to experiment, test and analyze plastics as the biomass infeed to produce distillate at a commercial scale. This work will include engineering design for front end process modifications and tuning of the reactor waste management system to achieve maximum yields and optimal product quality. Following testing and studies of using plastics as biomass infeed, the Company will commence additional research on commercial quantities of fuel production utilizing organic materials, railway ties, and other waste.

Full-Scale Facility Design at Fort Saskatchewan

Once testing and engineering data analysis from the R&D Facility concludes, the Company plans to commence concept work and front-end engineering design for the Full-Scale Facility. Cielo then intends to construct the Full-Scale Facility with specific capacity design, production rates, product revenue streams, operating costs, capital costs and overall economic metrics determined based on data from the R&D Facility as well as the operational characteristics observed at the Aldersyde Facility. Contemplation of the design engineering of the Full-Scale Facility is expected to commence in early 2023.



CIELO

Window to a Cleaner World™

Details and timing of the Company's plans for the Aldersyde Facility, the R&D Facility and Cielo's future larger full-scale facilities are dependent on funding, which the Company anticipates obtaining through future revenues and financing as needed from time to time. Cielo remains committed to providing updates to shareholders on a timely basis as the Company continues to meet its milestones, and as new key objectives are established.

Company Contact:

Chris Sabat
Email: csabat@cielows.com
Telephone: 1-(403)-348-2972
Website: www.cielows.com

For further information please contact:

Cielo Investor Relations
Email: investors@cielows.com
Telephone: 1-(403)-348-2972
Website: www.cielows.com

RB Milestone Group LLC (USA):

Trevor Brucato, Managing Director
Email: cielo@rbmilestone.com
New York, NY & Stamford, CT

About Cielo Waste Solutions Corp.

Cielo utilizes proprietary technology that transforms certain types of landfill garbage into high-grade diesel, kerosene (aviation jet and marine fuel) and naphtha. Cielo's proven and patented technology is currently being deployed in the Company's Aldersyde Facility, where wood waste is converted into renewable fuels. Cielo's experienced management team is well positioned with strategic partners to expand aggressively across Canada, into the US and then globally. The waste/feedstock that will be used in the Company's green facilities is the world's widely available and inexpensive feedstock, including household, commercial and construction garbage, used tires, railway ties, telephone poles, as well as all types of plastic, some of which currently cannot be recycled or deposited into landfills. Cielo's goal is to manufacture waste to fuel while ridding the world of unwanted and problematic garbage.

Cautionary Note Regarding Forward-looking Statements

This News Release contains certain forward-looking statements and forward-looking information (collectively referred to herein as "forward-looking statements") within the meaning of applicable Canadian securities laws. All statements other than statements of present or historical fact are forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "anticipate", "achieve", "could", "believe", "plan", "intend", "objective", "continuous", "ongoing", "estimate", "outlook", "expect", "may", "will", "project", "should" or similar words, including negatives thereof, suggesting future outcomes.

Forward-looking statements are subject to both known and unknown risks, uncertainties and other factors, many of which are beyond the control of the Company, that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward looking statements. CIELO is making forward looking statements, with respect to, but not limited to: in general, production forecast including project timelines, corporate goals and objectives associated with the Aldersyde Facility and the R&D Facility; anticipated projects and the results therefrom including production of distillate and waste derived fuel at both the Aldersyde Facility and for the R&D Facility; the objectives of the Aldersyde Facility and the purpose(s) to be served by the Aldersyde Facility; the timeline for certain milestones for the Aldersyde Facility, leading up to commissioning and start-up in March or April 2022; the generation of revenue at the Aldersyde Facility; the anticipated benefits realized at the Aldersyde Facility following the completion of the Aldersyde Project milestones; forecasted range of volumes of distillate that may be produced at the Aldersyde Facility during 2022 and 2023, including the activities during each identified period affecting such volumes; the future ability to increase efficiency by



CIELO

Window to a Cleaner World™

minimizing down-time and maintenance at the Aldersyde Facility based on data to be obtained from the R&D Facility; details of, and activities in connection with, the third phase of enhancements following completion of the Aldersyde Project; the intended completion of engineering feasibility studies and the substance thereof, including the design of a distillate fractionation system and its effects and the design of a UMO pre-treating and pre-conditioning system and the effects and benefits thereof, including the potential for additional revenues streams; additional purposes of the Aldersyde Facility and the effects thereof, including returns generated with respect to future facilities; the use for the Company's site in Fort Saskatchewan, including for the construction of the R&D Facility and for the future construction of a full-scale facility; the objectives associated with the R&D Facility; the design and construction of an additional full-scale facility(s) at Fort Saskatchewan or other locations; potential capacity for Cielo's future full-scale facilities; the anticipated data and related benefits from the R&D Facility and the use of such data; the ability to complete anticipated milestones and enhancements at the Aldersyde Facility and at the Fort Saskatchewan location; further research with plastics, railway ties and other waste; the anticipated timeline and milestones for the construction and commissioning of the R&D Facility; the intended outcomes to be realized from and following the commissioning of the R&D Facility; experimentation, testing and analysis to follow process testing of the R&D Facility and details of the related activities, and the subsequent commencement of utilizing other waste materials; plans related to the design of a full-scale facility in Fort Saskatchewan following testing and analysis at the R&D Facility and subsequent construction and the timing thereof; operational updates to be provided by the Company in the future generally and with respect to its facilities at Aldersyde and Fort Saskatchewan and the timing and content thereof. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended.

Forward-looking statements are not a guarantee of future performance and involve a number of risks and uncertainties, some of which are described herein. Such forward-looking statements necessarily involve known and unknown risks and uncertainties, which may cause the Company's actual performance and results to differ materially from any projections of future performance or results expressed or implied by such forward-looking statements. Any forward-looking statements are made as of the date hereof and, except as required by law, neither the Company assumes no obligation to publicly update or revise such statements to reflect new information, subsequent or otherwise. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange), nor OTCQB nor WKN, have reviewed, and do not accept responsibility for the adequacy or accuracy of, the content of this News Release.