

Cielo Waste Solutions Corp. – SPECULATIVE BUY

Turning Garbage into Renewable Gold

ACTION - Initiating Coverage with SPECULATIVE BUY Rating and \$1.50 Target

We are initiating coverage on **Cielo Waste Solutions Corp.** (“Cielo” or “the Company”) with a **SPECULATIVE BUY** rating and a \$1.50 target price. Cielo has patented, proprietary technology that transforms garbage into high grade diesel, kerosene, and naphtha, reducing greenhouse gas emissions and landfill waste. The feedstock can be anything with cellulosic fiber, including used tires, wood shavings, old railway ties, cardboard, organics, municipal solid waste, and all seven types of plastics. With the success of the proof-of-concept pilot facility at Aldersyde, Cielo is moving forward with plans to build multiple full-scale plants through the construction of 100% owned facilities as well as joint venture funded facilities. We expect significant stock price appreciation as the Company expands its production capacity and demonstrates the substantial cash flow generation potential of its waste-derived-fuel technology.

DETAILS – Diverting Garbage From Landfill to Produce High Quality Fuels

Profitable, Without Government Subsidies: Cielo’s business model is to build full-size modular plants that will produce approximately 4,000 liters per hour of fuel and is expected to cost approximately \$50 million to construct and generate ~\$28 million of EBITDA annually.

Aldersyde – Pilot Plant In Production: Over the past 17 years, Cielo has invested approximately \$100 million into research and development of its waste-derived-fuel technology leading to the construction of the Aldersyde pilot plant. The plant is capable of producing up to 1,000 liters per hour (“lph”) and Cielo plans to double capacity to 2,000 lph in CQ4/22. The waste-derived-diesel receives a premium price due to its high quality, and gross margins are over 65%, primarily due to the low cost of the feedstock.

Fort Saskatchewan – First 100% Owned Full-Scale Plant: In August 2021, Cielo completed the acquisition of a 63-acre site located in Fort Saskatchewan, Alberta, ideally located within Canada’s largest hydrocarbon processing region. The Fort Saskatchewan site includes a 31,750 f² building, and access to rail lines and pipelines to deliver fuel directly to the off-take client. The 4,000 liter per hour plant within the facility is expected to be operational in CQ3/24. Two additional 4,000 lph plants will be added immediately after commissioning.

Dunmore – First Joint Venture Facility: Cielo has a signed MOU with its JV partner Renewable U to construct nine facilities. The first facility will be located at Dunmore which is near Medicine Hat, Alberta and will include three, 4,000 liter per hour plants. The JV partner is responsible for 100% of the cost of the project, and Cielo is initially entitled to 30% of the profits, which increases to 50.1% after the JV partner recovers its costs. The facility is expected to be operational in CQ2/24.

Big Revenue Growth Potential: Based only upon the Aldersyde, Fort Saskatchewan, and Dunmore facilities, we forecast annualized revenue of \$277 million and EBITDA of \$153 million. Over the next three to four years, Cielo is targeting to have up to five facilities in operation. The substantial cash flow generated from the initial five facilities should fund the construction and commissioning of a new facility, approximately every quarter, putting the Company on track for 20 locations in the next five to seven years.

IMPACT: Initiating with SPECULATIVE BUY and \$1.50 Target

We are initiating coverage of CMC with a **SPEC. BUY** recommendation and a target price of \$1.50 per share based on applying a 9.0x EV/EBITDA multiple to our 2025 EBITDA estimate of \$138 million discounted by 10%.

ANALYST INFORMATION

Bill Newman CFA

403.260.2460

bnewman@researchcapital.com

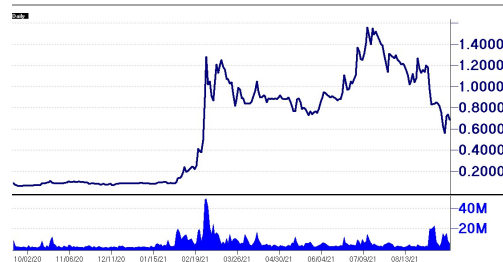
MARKET DATA

CMC - TSX V	\$0.69
TARGET:	\$1.50
PROJ. RETURN:	117%
VALUATION:	9.0x 2025 EV/EBITDA

Share Data

Basic Shares O/S (mm):	645.2
Fully Diluted O/S (mm):	649.9
Market Cap (\$mm):	445.2
Enterprise Value (\$mm):	446.4
Net Debt (W.C.) (\$mm):	1.3
Next Reporting Date	September

THOMSON CHART – ONE YEAR



COMPANY PROFILE

Cielo has patented, proprietary technology that transforms garbage into high-grade diesel, aviation jet fuel, and naphtha, reducing greenhouse gas emissions and landfill waste. Cielo’s proven technology is currently being deployed in the Company’s Aldersyde, AB facility, where wood waste is currently being converted into waste-derived-diesel. Cielo’s experienced management team is well positioned with strategic partners in place to expand aggressively across Canada, into the US and then globally.

UPCOMING EVENTS/CATALYSTS

- Expansion of Aldersyde facility
- First production from Dunmore facility
- First production from the Fort Saskatchewan facility

RENEWABLE ENERGY SECTOR

CIELO WASTE SOLUTIONS CORP.

TABLE OF CONTENTS

COMPANY OVERVIEW	3
Proprietary Technology: - Proprietary Catalyst Plus Heat to Convert Garbage into Fuels	3
Advantages of Cielo’s Waste Derived Diesel over Traditional Biofuels	4
CANADIAN BIOFUEL INDUSTRY OVERVIEW	6
Biodiesel Demand Growth:	6
Experienced Management Team and Board of Directors	6
CIELO 100% OWNED FACILITIES	7
Aldersyde, Alberta - Pilot Facility in Production	7
Fort Saskatchewan, Alberta - First 100% Owned Full-Scale Facility	8
JOINT VENTURE FACILITIES.....	9
Renewable U to Build Up To 9 Facilities	9
Medicine Hat (Dunmore) Alberta - First Joint Venture Facility	10
PRODUCTION GROWTH FORECAST	11
FINANCIAL FORECAST	12
VALUATION	12
SUMMARY AND RECOMMENDATION.....	13
APPENDIX	14
Management	14
Directors	15
RISKS	16

Note: All financial figures in this report are in Canadian dollars, unless stated otherwise. Report pricing date: 09-20-21

COMPANY OVERVIEW

Cielo is a waste-to-fuel technology company, headquartered in Red Deer, Alberta, with a worldwide exclusive license to a patented (Canada & the US) proprietary technology process capable of converting multiple waste streams into high quality fuel, helping to reduce landfill waste and greenhouse emissions. Research and development commenced in late 2004, and over the past 17 years, approximately \$100 million has been invested into the waste-to-fuel technology. The feedstock can be anything with cellulosic fiber, including used tires, wood shavings, old railway ties, cardboard, municipal solid waste, blue box recycling, organics, and all seven types of plastics. To date, Cielo has tested 63 different types of feedstocks.

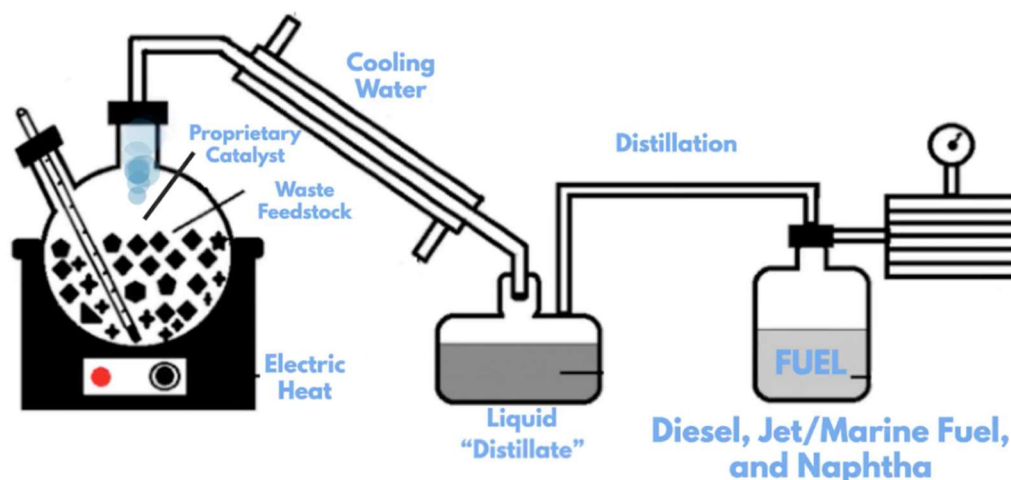
The Company constructed a proof-of-concept pilot facility in Aldersyde Alberta which commenced commercial operations in July 2019. With the success of the pilot facility, Cielo is moving forward with plans to build multiple, full-scale facilities through the construction of 100% owned facilities as well as through partner funded joint ventures. The Company is currently in the process of completing the commissioning of the 1,000 litres per hour ("lph") production capacity of the Aldersyde facility with future plans to double the production to 2,000 lph expected to be completed in CQ4/22. A second, 100% owned full size facility will be constructed at Fort Saskatchewan, Alberta and is expected to be operational in CQ3/24. Cielo has also signed memorandums of understanding ("MOU") to build up to nine additional facilities with its joint venture partner, Renewable U Energy Inc. ("Renewable U"). Renewable U is responsible for 100% of the costs to construct and commission the facility, and Cielo is initially entitled to 30% of the profits, which increases to 50.1% after its partner recovers its costs. The first JV facility in Medicine Hat, Alberta, recently hosted the official sod turning where all levels of government were in attendance to show their support of a grassroots Canadian company assisting with the economic recovery and providing good local jobs. This facility is expected to be operational in CQ2/24. Cielo is also in discussions with numerous municipal and industrial parties to build up to 20 additional, 100% owned facilities.

Cielo has signed multiple MOU's for different types of feedstock, and has a MOU with Elbow River Marketing to purchase all the Waste Derived Diesel ("WDD") produced by the Company. On September 2, 2021, Cielo announced that it had signed a non-binding Letter of Intent with Kodiak Chemical Solutions ("Kodiak") to supply Waste Derived Naphtha ("WDN") from all of the Company's Alberta facilities. A definitive agreement is expected to be announced before year-end 2021.

Proprietary Technology: - Proprietary Catalyst Plus Heat to Convert Garbage into Fuels

Two Step Process: Cielo uses a patented thermal catalytic depolymerization process to convert garbage to fuels. Specifically, waste feedstock is mixed with a carrier fluid (currently used motor oil), which is heated and then combined with the Company's proprietary catalyst which reacts to form a liquid distillate (Figure 1). The distillate is then distilled into highway diesel, jet/marine fuel, and naphtha. The primary purchaser of the waste to fuels are large blending refineries and users of large amounts of transportation fuels including trucking, railway, marine, northern communities, and aviation industries. The module design allows for the facilities to be built almost anywhere which reduces transportation costs and can be scaled to match the available feedstock. Cielo's process does not have any toxic emissions or toxic waste. The only waste that is generated is an ash which can be easily landfilled, or possibly used for fertilizer. Cielo is also investing the incinerate of the ash to produce heat.

Figure 1: Waste Feedstock Combines With Catalyst and Reacts to Make Distillate, then Distilled into High Quality Fuels.



Source: Company presentation, Research Capital Corp.

Advantages of Cielo’s Waste Derived Diesel over Traditional Biofuels

Ethanol and biomass-diesel fuels are the two primary transportation biofuels that are made from biomass feedstock such as sugar cane, corn, soybean, and canola. These fuels are usually blended with petroleum fuels such as gasoline and diesel fuel in accordance with government environmental regulations. The production of biofuels can require a significant amount of water, and as a result, the production of these fuels can be seasonal due to freezing during winter months, if the end users are not located in a warm climate. Cielo’s waste to fuel process leaves little to no water in the fuel, and therefore is deemed a “drop-in fuel” that may be blended up to 100% where biofuels are limited in the percentage of blend. Cielo’s fuel has a high cloud point which makes it suitable for cold climates and high-altitude temperatures. The modular design allows for a facility to be located almost anywhere and close to the feedstock, allowing for lower transportation costs and lower capex.

A key environmental and economic advantage of Cielo’s process is the use of garbage as feedstock. Traditional biofuels require the growing and harvesting of crops, which may require pesticides, fertilizer and water while diverting land that could be used for growing food. These crops are also dependant on optimal growing conditions and will fluctuate in quantity and market price based on many factors affecting their growing season. We note that this year the commodity prices for these agriculture crops have increased significantly. The average cost of feedstock for traditional bio-diesel is ~\$0.97 per litre while Cielo’s garbage feedstock is expected to cost in the range of \$0.06 to \$0.11 per litre. Also, Cielo’s diesel has a high cetane number of 50 and Cielo’s diesel has characteristics that look very similar to petroleum derived diesel, and therefore receives a 25% premium price. Additionally, Cielo’s facilities operate with no harmful emissions, and by diverting garbage, Cielo helps to lower the emissions of methane gas (GHG) that are generated in landfills.

Summary: Cielo’s waste to diesel is far more environmentally and economically beneficial than traditional Biodiesel, as the process uses garbage that is destined for a landfill as feedstock, which is supplied at a substantially lower cost, and produces a higher quality fuel that receives a premium price, resulting in excellent gross margins. The 63.4% gross margin shown in Figure 2 assumes a C\$1.67/litre price, well below the current Alberta price of over C\$2.00/litre and excludes any benefits from expected carbon credits and incentives.

Figure 2. Cielo's Renewable Diesel Economic Advantage over Traditional Biodiesel

	Traditional Biodiesel	Cielo's Waste to Diesel
Production Cost/L	\$0.36 - \$0.50 (Avg \$0.43)	\$0.50
Feedstock Cost/L	\$0.85 - \$1.32 (Avg \$0.97)	\$0.06 - \$0.11
Total Cost	\$1.21 - \$1.82 (Avg \$1.40)	\$0.56 - \$0.61
Price in Alberta	\$1.25/Liter	\$1.67/Liter*
Gross Margin	-12 %	63.4 %

Source: Estimates by Cielo Waste Solutions.

Source: Company presentation, Research Capital Corp.

CANADIAN BIOFUEL INDUSTRY OVERVIEW

Biodiesel Demand Growth:

Canadian regulators have set minimum percentage blends of renewable diesel into all transportation diesel, of which 98% is imported. In 2022, demand for Canadian renewable diesel is expected to increase by 26% to 1.1 billion litres. We note that Cielo's diesel is high cetane, with chemical characteristics that look very similar to petroleum derived diesel, and therefore can be used not just for blending purposes, but as a direct substitute.

Figure 3. Biodiesel Demand In Canada

Locations	Blend	Diesel Consumed 2015	Biofuels Required 2020	Biofuels Required 2021	Biofuels Required 2022
BC	4.0%	1,852	74	82	103
AB	2.0%	4,019	80	82	103
SK	2.0%	1,315	26	30	38
MB	2.0%	1,350	27	26	33
ON	2.0%	5,427	109	251	316
QC	0.0%	3,177	0	0	0
Maritimes	0.0%	1,140	0	0	0
Territories	0.0%	178	0	0	0
Federal Mandate	2.0%	17,412	348	401	505
Total/Average	3.8%	17.4 Billion L/Y	664 Million L/Y	872 Million L/Y 31% increase over 2020	1,098 Million L/Y 26% increase over 2021

Source: Company reports, Research Capital Corp.

Experienced Management Team and Board of Directors

Cielo is led by **Don Allan**, who is President and Chief Executive Officer and a director of the Company. For the past seventeen years, Mr. Allan has helped to develop Cielo's proprietary thermal catalytic depolymerization technology, both within the laboratory through to the Aldersyde pilot facility and will be instrumental in helping to buildout of multiple commercial Cielo facilities. As Cielo begins its transition from research and development to commercial production, the company recently made key management and Board of Directors additions. On July 23, 2021, Cielo announced the appointment of **Gregg Gegunde** as Chief Operating Officer. Mr. Gegunde has over 26 years of experience in the energy sector, with extensive experience in production operations, asset development, asset management, process, joint ventures, environmental and health & safety. He has recently retired as Senior Vice President of Exploitation, Production and Delivery at Penn West Petroleum. Additionally, **Lionel Robins** was appointed SVP of Global Development and Indigenous Relations, **Raphael Bohlmann** was appointed SVP of Corporate Development & Investor Relations, and **Stephanie Li** was brought on as the company's CFO. These additions and appointments to the senior leadership team further strengthen the ability for the company to grow. The company is in the process of moving its working offices to Calgary and will continue to strengthen the team with additional experienced individuals including **Chris Sabat** who will be Cielo's Corporate Secretary. On April 12, 2021, Cielo announced the appointment of former cabinet minister the **Hon. Peter MacKay**, P.C., Q.C. to the Board. Mr. MacKay served in the Parliament of Canada for over 18 years as a Member of Parliament and cabinet minister for 10 years, in high-profile positions, including Minister of Justice and Attorney General, Minister of National Defense, Minister of Foreign Affairs and the Atlantic Canada Opportunities. Additional board members and management are under recruitment. Collectively, the management team and directors hold ~130 million (~20%) of the issued and outstanding shares of Cielo. See the Appendix for a more complete summary of the management and directors.

CIELO 100% OWNED FACILITIES

Aldersyde, Alberta – Pilot Facility in Production

Cielo’s first commercial 100% owned facility is located in Aldersyde, Alberta, approximately 25 km south of Calgary (Figure 4). The facility uses waste wood chips as the current feedstock which is supplied to Cielo under a long-term agreement at a cost of \$0.11 per litre. In July 2018, the Company commenced Phase 1 of the development plan, which included retrofitting a failed biofuel facility, and the completion of numerous tests and modifications, that has resulted in significant improvements to its waste-to-fuel facility process. On January 24, 2021, Cielo announced that newly engineered proprietary cooling equipment had been installed, which has eliminated the need for operations to shut down for 6 hours to allow for the distillate to cool, and as a result the company has achieved its goal of continuous flow production. On July 2, 2021, Cielo began making distillate from wood waste on a full-time continuous basis and the Aldersyde facility is now completing the commissioning for the production of up to 1,000 litres per hour. The Company has near future plans to commence Phase II, which includes the installation of additional equipment to increase production capacity to 2,000 lph, targeted for completion in CQ4/22.

First Waste to Diesel Sale Contract: On February 23, 2021, Cielo announced the first significant sale of its waste-derived-diesel (“WDD”). The purchaser committed to 900,000 litres of diesel at a price of C\$1.67/litre for a total purchase price of \$1.5 million with an option to purchase another 600,000 litres, at C\$1.67/litre (\$1.0 million) for a period of six months. Cielo is currently producing the waste to diesel into on-site storage tanks, which will be treated to reduce the sulphur content, and then sold for the purchaser.

Desulphurization: Cielo is working with the University of Calgary to design a scalable, cost-effective process to reduce the number of parts per million (ppm) of sulfur in its WDD to below the highway industry standard of 15 ppm. On March 8, 2021, Cielo announced a 3rd party engineering firm hired to tests the process demonstration laboratory unit, successfully reduced the sulfur content to as low as 5 ppm, well below the required highway standard. Commissioning and installation of the desulphurization equipment at the Aldersyde facility has commenced and management is targeting to have it fully operational by the end of this year.

Figure 4: Aldersyde Facility



Source: Company Documents, Research Capital Corp.

Fort Saskatchewan, Alberta – First 100% Owned Full-Scale Facility

Ideal Location: On May 27, 2021, Cielo announced an agreement to acquire 60+ acres in Fort Saskatchewan, which is located approximately 25 km to the northeast of Edmonton, Alberta, and within the Alberta Industrial Heartland, Canada’s largest hydrocarbon processing region. The purchase price was \$13 million. The site was previously developed in 2015 at a cost of approximately \$22 million and includes a new 31,750 square foot building, gravel yard, and is located across the street from both CN and CP Rail yards, major diesel refineries (clients) and feedstock supply and suppliers (Figure 5). The facility will have a designed initial production capacity of 4,000 lph and is expected to produce approximately 33 million litres of high-grade WDD a year. The site is large enough to allow for multiple modular expansions. Cielo is currently working towards securing the necessary permits, completing the site design, and other engineering work, and is targeting to have the first plant in production in 2024. Two additional 4,000 lph plants will be added immediately after commissioning. The total cost to build the initial plant is budgeted at \$90 million (including the site acquisition cost), with the second and third plants costing \$30 million each.

Figure 5: Fort Saskatchewan Facility Location

WHY THIS LOCATION?

- Well located in Canada’s largest hydrocarbon processing region - the Heartland is within Alberta’s Capital Region, the Northernmost metropolitan area of Canada and home to over 1.3 million people
- Ongoing capital spending in the immediate area - within the province, planned, underway or recently completed projects have an aggregate value of over \$224 billion - of this, \$4.8 billion in chemical/petrochemical sectors, \$15.1 billion in oil and gas and a staggering \$97.5 billion in the oil sands sector
- Federal and local governments continue to create incentives for companies to build facilities in the immediate area
- Alberta’s Industrial Heartland’s industrial cluster creates ideal conditions for establishing utility islands and eco-industrial developments - the region encompasses over 20 major facilities in a large area, but virtually all are interconnected in one way or another
- Investment in Alberta’s Industrial Heartland currently exceeds \$40 billion - given the region’s locational advantage, diverse range of feedstock, access to global markets, and strong R&D sector; investment potential is limitless
- In recognizing the above benefits, several companies have plans for multi-billion dollar facilities
- Read more [here](#)



Source: Cushman & Wakefield Edmonton Documents

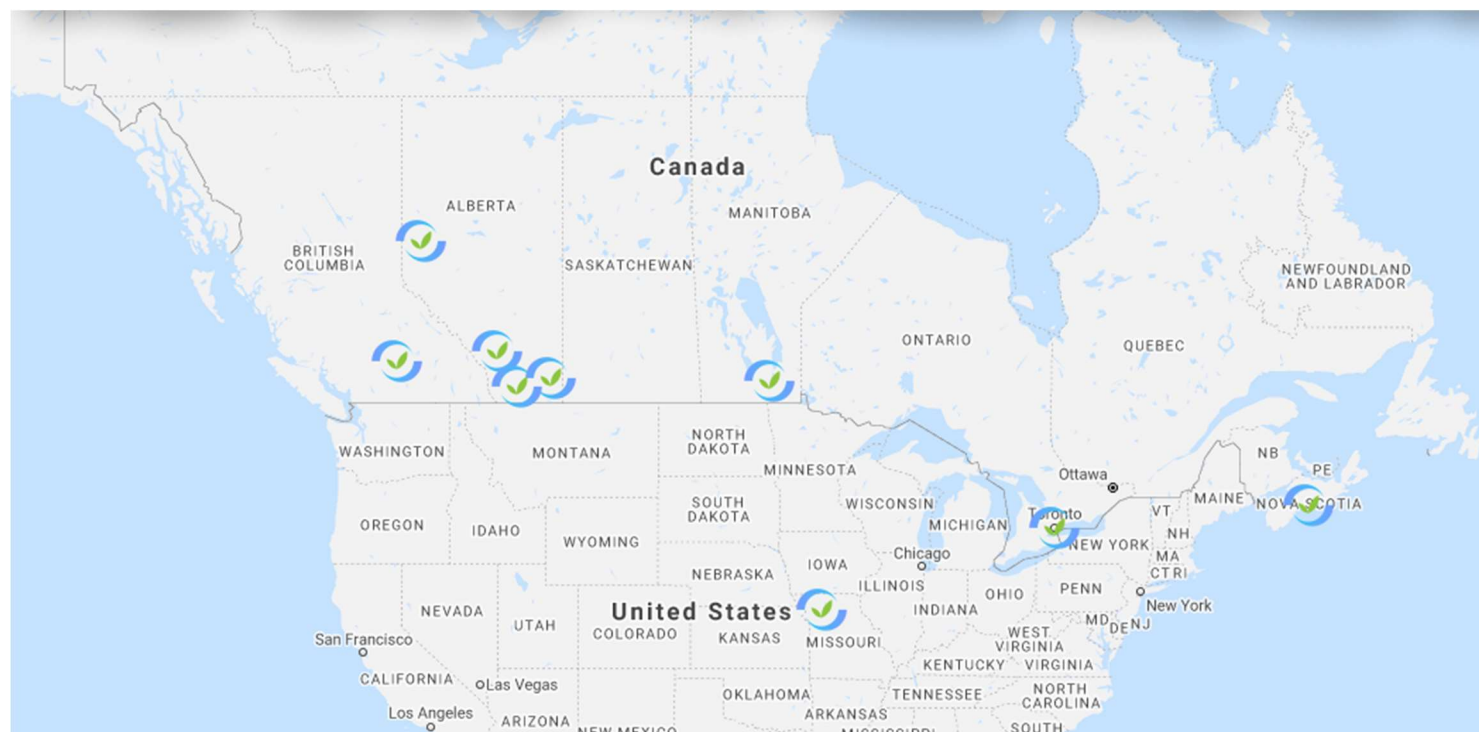
JOINT VENTURE FACILITIES

Cielo plans to accelerate growth through the construction of additional facilities funded by joint venture partners. Potential partners include, municipalities, recycling companies, First Nations, and finance companies, all of which have shown an interest in utilizing Cielo’s technology to solve its land fill issues. The JV partner will fund 100% of the costs to build and commission the facilities. In return, the JV partner will receive 70% of the operating profits until that cost is recovered. After the cost recovery the JV partner will receive 49.9% of the operating profits. Cielo receives 30% of the operating profits before cost payout and 50.1% after payout, and also receives a project management fee of 10% of the construction costs. The Company’s first joint venture partner is Renewable U Energy Inc. (“Renewable U”).

Renewable U to Build Up To 9 Facilities

Renewable U Energy Inc. is a privately-owned corporation that invests in waste to green fuel technology and other ESG technologies. Renewable U has signed memorandums of understanding for joint ventures to build up to nine Cielo facilities located in Grande Prairie, Calgary, Medicine Hat, Lethbridge, Kamloops, Winnipeg, Toronto, Halifax and one additional, yet to be finalized location in the US (Figure 6). The first JV facility will be located in Medicine Hat with construction expected to commence in 2022.

Figure 6: Renewable U Inc. Proposed JV Facility Locations



Source: Company reports, Renewable U, Research Capital Corp.

Medicine Hat (Dunmore) Alberta - First Joint Venture Facility

On November 28, 2019, Cielo announced a supply agreement with Canadian Pacific (“CP”) where CP will deliver scrap rail ties to be used as feedstock for a proposed new 4,000 lph facility. Renewable U has acquired an 80-acre site, ideally located in Medicine Hat (Dunmore), and located next to CP’s rail transfer yard and the Trans-Canada highway. Other parties have since shown a keen interest in supplying additional feedstock that would otherwise be disposed of in landfills, including plastics, glossy paper, cardboard, and agricultural waste. As a result, the JV partnership elected to scale up the facility to a production capacity of up to 12,000 lph of waste to fuel.

Cielo recently hosted the official sod turning where all levels of government were in attendance to show their support of a grassroots Canadian company assisting with the economic recovery and providing good local jobs (Figure 7).

Figure 7: Medicine Hat (Dunmore) - Sod Turning Ceremony

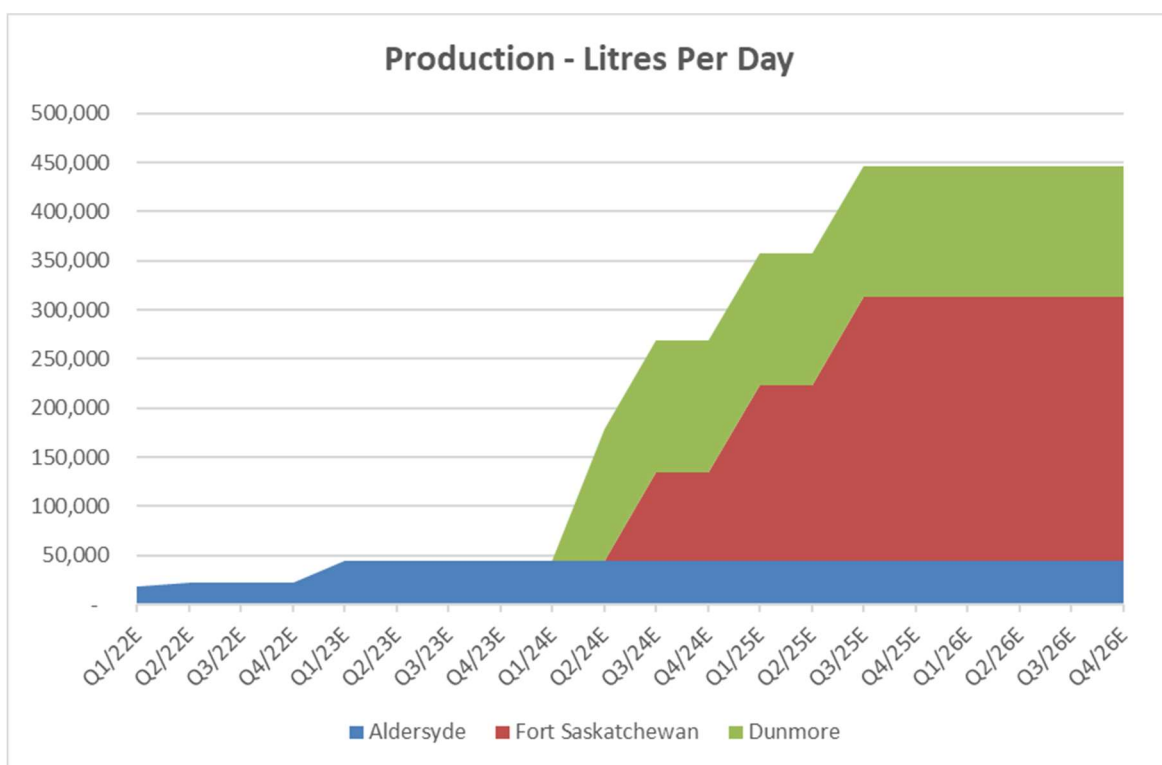


Source: Company Documents

PRODUCTION GROWTH FORECAST

We assumed the Aldersyde facility reaches its expanded capacity of 2,000 lph in CQ4/22, the 12,000 lph Dunmore facility commences operations in CQ2/24, and the Fort Saskatchewan facility commences production from its initial plant in CQ3/24 at 4,000 lph followed by the second and third plants (each 4,000 lph) in CQ1/25 and CQ3/25 respectively. The total gross production capacity from the three facilities is expected to be 26,000 lph, or 624,000 lpd. In Figure 8, we show Cielo’s net share of production, assuming a 93% plant uptime rate.

Figure 8: Waste-To-Fuel Production Forecast (net)



Source: Company Reports, Research Capital Corp.

FINANCIAL FORECAST

Capital Expenditures: We assumed total capital expenditures of \$65 million in 2022 for the expansion of the Aldersyde facility and initial construction costs of the first plant at Fort Saskatchewan. We assumed a \$75 million capital budget in 2023 which includes completion the first plant and cost of the second Fort Saskatchewan plant and \$30 million in 2024 for the third Fort Saskatchewan plant.

Revenue & EBITDA: Based upon a flat Biodiesel sales price of \$1.70 per litre and our production forecast shown in Figure 8, we forecast 2024 revenue of \$118 million, increasing to \$250 million in 2025. We forecast 2024 EBITDA of \$66 million increasing to \$138 million in 2025. Base only upon the fully expanded Aldersyde, Fort Saskatchewan, and Medicine Hat facilities, we forecast annualized revenue of \$277 million and EBITDA of \$154 million.

Revenue Upside: We note that our forecast only includes additions from the Aldersyde, Fort Saskatchewan, and the Dunmore facilities. Over the next three to four years, Cielo is targeting to have up to five facilities up and running. The substantial cash flow generated from the initial five facilities should fund the construction and commissioning of a new facility, approximately every quarter, putting the Company on track for 20 locations in the next five to seven years.

Figure 9: Production, Revenue and EBITDA Forecast

		2022E	2023E	Q1/24E	Q2/24E	Q3/24E	Q4/24E	2024E	Q1/25E	Q2/25E	Q3/25E	Q4/25E	2025E	2026E
Net Daily Production														
Aldersyde	lpd	21,255	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640	44,640
Fort Saskatchewan	lpd	-	-	-	-	89,280	89,280	44,884	178,560	178,560	267,840	267,840	223,567	267,840
Dunmore	lpd	-	-	-	134,188	134,188	134,188	100,824	134,188	134,188	134,188	134,188	134,188	134,188
Total	lpd	21,255	44,640	44,640	178,828	268,108	268,108	190,348	357,388	357,388	446,668	446,668	402,395	446,668
Revenue														
Price	\$/l	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70	\$ 1.70
Aldersyde	\$mm	\$ 13.2	\$ 27.7	\$ 6.9	\$ 6.9	\$ 7.0	\$ 7.0	\$ 27.8	\$ 6.8	\$ 6.9	\$ 7.0	\$ 7.0	\$ 27.7	\$ 27.7
Fort Saskatchewan	\$mm	\$ -	\$ -	\$ -	\$ -	\$ 14.0	\$ 14.0	\$ 27.9	\$ 27.3	\$ 27.6	\$ 41.9	\$ 41.9	\$ 138.7	\$ 166.2
Dunmore	\$mm	\$ -	\$ -	\$ -	\$ 20.8	\$ 21.0	\$ 21.0	\$ 62.7	\$ 20.5	\$ 20.8	\$ 21.0	\$ 21.0	\$ 83.3	\$ 83.3
Total Revenue	\$mm	\$ 13.2	\$ 27.7	\$ 6.9	\$ 27.7	\$ 41.9	\$ 41.9	\$ 118.4	\$ 54.7	\$ 55.3	\$ 69.9	\$ 69.9	\$ 249.7	\$ 277.2
EBITDA														
Aldersyde	\$mm	\$ 6.2	\$ 15.3	\$ 3.8	\$ 3.8	\$ 3.9	\$ 3.9	\$ 15.4	\$ 3.8	\$ 3.8	\$ 3.9	\$ 3.9	\$ 15.3	\$ 15.3
Fort Saskatchewan	\$mm	\$ -	\$ -	\$ -	\$ -	\$ 7.7	\$ 7.7	\$ 15.5	\$ 15.1	\$ 15.3	\$ 23.2	\$ 23.2	\$ 76.9	\$ 92.1
Dunmore	\$mm	\$ -	\$ -	\$ -	\$ 11.5	\$ 11.6	\$ 11.6	\$ 34.8	\$ 11.4	\$ 11.5	\$ 11.6	\$ 11.6	\$ 46.1	\$ 46.1
Total EBITDA	\$mm	\$ 6.2	\$ 15.3	\$ 3.8	\$ 15.3	\$ 23.2	\$ 23.2	\$ 65.6	\$ 30.3	\$ 30.6	\$ 38.7	\$ 38.7	\$ 138.3	\$ 153.5

Source: Company Documents, Research Capital Corp.

VALUATION

On a 2024E EV/EBITDA basis, Cielo is trading at a 32.3x multiple, which is above its peer group average of 12.9x (Figure 10). Note that we expect significant revenue growth in 2025 as the Fort Saskatchewan facility reaches full capacity. Based upon our 2025 EBITDA forecast of \$138 million, Cielo is trading at an EV/EBITDA multiple of 3.6x. To arrive at our target price of \$1.50 per share, we applied a 9x EV/EBITDA multiple to our 2025 EBITDA forecast discounted by 10% (Figure 11). Our forecasts include revenue streams from the Company's Aldersyde, Fort Saskatchewan, and Dunmore projects, and exclude any potential upside from the eight additional joint venture projects, or potential benefits from expected carbon credits and other incentives.

Figure 10: Valuations of Comparable Companies

Company	Capitalization				Multiples				Growth				Margin	
	Shares (mil)	Price \$US	Mkt Cap. (\$US mil)	EV (\$US mil)	EV/Sales		EV/EBITDA		Sales Growth		EBITDA Growth		EBITDA/REVENUE	
					2022E	2023E	2022E	2023E	2022	2023	2022	2023	2022	2023
Enviva Partners LP	45	\$ 52.83	\$ 2,378	\$ 3,161	2.2x	2.0x	9.4x	8.6x	20.6%	15.0%	26.3%	9.8%	23.5%	22.5%
Green Plains Inc	54	\$ 33.27	\$ 1,785	\$ 2,213	0.8x	0.8x	9.5x	6.1x	2.6%	6.2%	59.2%	56.4%	8.5%	12.5%
Renewable Energy Group Inc	50	\$ 47.57	\$ 2,390	\$ 2,097	0.7x	0.7x	7.5x	7.9x	0.4%	1.7%	na	na	9.1%	8.6%
Renewable Energy Group Inc	50	\$ 47.57	\$ 2,390	\$ 2,097	0.7x	0.7x	7.5x	7.9x	0.4%	1.7%	na	na	9.1%	8.6%
Montauk Renewables Inc	144	\$ 11.45	\$ 1,644	\$ 1,689	11.6x	9.1x	30.7x	17.7x	11.5%	28.3%	57.1%	72.7%	37.9%	51.1%
Clean Energy Fuels Corp	223	\$ 7.58	\$ 1,690	\$ 1,521	4.2x	3.9x	23.1x	14.5x	22.4%	8.8%	5.8%	58.9%	17.8%	26.1%
CropEnergies AG	87	\$ 13.07	\$ 1,140	\$ 951	1.0x	1.0x	7.4x	6.8x	11.6%	1.7%	na	na	9.8%	13.7%
Aemetis Inc	32	\$ 13.75	\$ 436	\$ 621	2.2x	1.3x	34.4x	5.5x	36.0%	62.5%	na	520.2%	6.3%	24.0%
Xebec Adsorption Inc	154	\$ 2.09	\$ 322	\$ 403	2.4x	2.2x	43.2x	35.5x	35.4%	12.6%	na	23.2%	5.6%	6.2%
Greenlane Renewables Inc	150	\$ 1.10	\$ 165	\$ 137	2.7x	2.1x	35.3x	18.8x	30.4%	29.7%	316.3%	88.0%	7.7%	11.2%
Cielo Waste Solutions Corp	557	\$ 0.55	\$ 304	\$ 385	37.4x	17.8x	79.6x	32.3x	na	109.8%	na	146.8%	47.0%	54.0%
Mean			\$ 1,434	\$ 1,489	2.9x	2.4x	20.8x	12.9x	17%	17%	93%	105%	14%	19%

Source: Bloomberg, Research Capital Corp.

Figure 11: Target Price Based Upon EV/EBITDA Multiple, Discounted at 10%

	2025E EV/EBITDA				
	\$87.5	\$96.3	\$105.9	\$116.5	\$128.2
7.0x	\$0.94	\$1.04	\$1.14	\$1.25	\$1.38
8.0x	\$1.08	\$1.18	\$1.30	\$1.43	\$1.58
9.0x	\$1.21	\$1.33	\$1.47	\$1.61	\$1.77
10.0x	\$1.35	\$1.48	\$1.63	\$1.79	\$1.97
11.0x	\$1.48	\$1.63	\$1.79	\$1.97	\$2.17

Source: Company Reports, Research Capital Corp.

SUMMARY AND RECOMMENDATION

We see massive demand potential for Cielo's green technology which could provide a solution to the growing problem of garbage generated by municipalities, industries, and many other sources. By diverting waste that would otherwise be disposed of in a landfill, and producing high quality waste-to-fuel, while reducing greenhouse gases, we see large environmental and economic benefits. As Cielo has just begun to transition from research and development to commercial production, we see the potential for market volatility, however, we expect significant stock price appreciation as the Company proves up its technology and begins to expand its production capacity leading to substantial cash flow generation.

We are initiating coverage of **Cielo Waste Solutions Corp.** with a **SPECULATIVE BUY** recommendation and a 12-month target price of \$1.50 per share. Our valuation is based on applying a 9x EV/EBITDA multiple to our 2025 EBITDA estimate of 138 million discounted by 10%.

APPENDIX

Management

- **Don Allan, President & Chief Executive Officer, Director:** Don Allan has 30+ years of executive leadership experience, including experience in debt and equity capital markets, strategy and planning, risk management and investor relations. Mr. Allan has an extensive background in business development, engineering, marketing, and project development. Mr. Allan was also President and CEO of Blue Horizon Industries Inc., past Board member of the Rainbow Council and was runner-up for the Ernst & Young "Entrepreneur of the Year" award in 2007.
- **Gregg Gegunde, Chief Operating Officer:** Mr. Mr. Gegunde has over 26 years of experience in the energy sector with diverse executive and technical leadership skills. Mr. Gegunde has extensive experience in production operations, asset development, asset management, process, joint ventures, environmental and health & safety. He has recently retired as Senior Vice President of Exploitation, Production and Delivery at Penn West Petroleum. Mr. Gegunde holds a Bachelor of Science in Chemical Engineering from the University of Calgary and a diploma in Mechanical Engineering from the Southern Alberta Institute of Technology. Mr. Gegunde is a professional engineer and a member of the Association of Professional Engineers & Geoscientists of Alberta and a member of the Association of Professional Engineers & Geoscientists of Saskatchewan.
- **Stephanie Li, CPA, CA, Chief Financial Officer.** Stephanie Li spent 15 years as specialist in high growth environments, working with publicly traded entities operating domestically and internationally. She has previously served as Director of Finance and Controller for a publicly traded entity with over \$4 billion asset value. Cielo will benefit from her experience in capital markets, and her high level of negotiation skills in business transactions.
- **Dr. Roderick Facey, Chief Technology Advisor.** Dr. Roderick Facey is a professional engineer with a doctorate degree in Chemical Engineering from University of Alberta. Dr. Facey is also a chemical, systems and process engineering specialist with several years of experience in refinery technologies. Dr. Facey leads the Cielo engineering and design team, which continues to refine and develop advancements in renewable diesel technology and production methodologies.
- **Stuart McCormick, VP of Environment:** Stuart McCormick is a professional civil/ environmental engineer with 30+ years' experience, and an accomplished entrepreneur with excellent working knowledge of multiple industries. Mr. McCormick has an extensive experience in engineering science and technology, safe operations, strategic planning, project management, sales and marketing, financial analysis, and capital allocation.
- **Lionel Robins, Senior VP of Global Development & Indigenous Relations:** Lionel Robins has 20+ years of senior management and C-suite experience. Mr. Robins, a process and resultsdriven businessman, is skilled in project management, corporate finance, and recruiting and training high impact teams.
- **Raphael Bohlmann, Senior VP of Corporate Development & Investor Relations:** Raphael Bohlmann has 25+ years of corporate experience in marketing and management with building and developing teams within companies. Mr. Bohlmann, a critical thinker, has a proven track record in marketing initiatives, including brand and strategy solutions, capital markets and Investor Relations.
- **Chris Saban, Corporate Secretary and General Counsel:** As the General Counsel, Corporate Secretary, for Cielo, Mr. Saban is responsible for the management of legal affairs for Cielo. He is a practicing lawyer and a member of the law societies of British Columbia, Alberta, and Saskatchewan. Having been in private practice for over 20 years, Mr. Saban has worked in government, at an international law firm, and for exploration and production companies with both domestic and international operations. He most recently held the position of General Counsel with a financial services firm that focused on strategic investment and tax planning services for high- net-worth entrepreneurial families located in both Canada and the United Kingdom.
- **Mark Haldane, Project Manager:** Mark Haldane has 32+ years of experience in fabricating, designing, constructing facilities. Mr. Haldane has an extensive process engineering and project management experience.

Directors

- **Don Allan:** See bio in Management section above.
- **Hon. Peter MacKay, P.C., Q.C.:** The Hon. Peter MacKay has over two decades of public service and private sector work. Mr. MacKay will provide strategic advice and invaluable guidance on government and public services industry practice, infrastructure, economic development and will represent Cielo as a catalyst to Cielo's growth moving forward. Mr. MacKay served in the Parliament of Canada for over 18 years as a Member of Parliament and cabinet minister for 10 years, in high-profile positions, including, Minister of Justice and Attorney General, Minister of National Defense, Minister of Foreign Affairs and the Atlantic Canada Opportunities Agency. Mr. MacKay chaired the Government National Security Committee for almost 10 years and served on numerous other inter parliamentary committees. Mr. MacKay is currently working with McInnes Cooper and is also a strategic advisor with Deloitte and works nationally and internationally in areas such as aerospace and defence, procurement, infrastructure and justice reform. Mr. MacKay earned a B.A. from Acadia University in 1987, and his LL.B. from Dalhousie University in 1990. He is entering his 30th year as a member of the Nova Scotia Barristers Society and is also called to the bar in Ontario.
- **Jasdeep Dhaliwal, CPA, CA:** Jasdeep K. Dhaliwal is a Chartered Professional Accountant (CPA, CA) with extensive experience in risk management. Ms. Dhaliwal's career has provided her with expertise in the oversight and auditing of financial statements, financial reporting processes, and internal controls, as well as providing governance and strategic guidance to enhance organizational value. Ms. Dhaliwal has extensive knowledge of accounting standards and has assisted corporations in achieving their strategic goals through the oversight of management decisions, performance measures and technological strategy. Ms. Dhaliwal has previously worked with large public entities listed on North American markets as well as consulting with private corporations during periods of rapid expansion and growth. Ms. Dhaliwal has a passion for giving back to her community and has been recognized with several community leadership awards.
- **George H. Brookman:** George Brookman is well known in Calgary's business and volunteer community. He is a third generation Albertan and was born in Calgary. In 1984, Mr. Brookman acquired West Canadian Industries Group, an industry leading digital print and information management company. Today the company operates as WCD with employees located in BC, Alberta, and Ontario. After 36 years at the helm, he recently transitioned to Chairman and Corporate Ambassador to pass the torch to his daughters. Mr. Brookman served as a Director for Obsidian Energy (formerly Penn-West Energy) for 12 years and was interim chairman for 6 months. He currently serves as a Director of Calgary Flames Foundation, The Field of Crosses, The Global Affairs Institute, and he is a Past Chairman of the Board of the Calgary Stampede, Tourism Calgary, and the Calgary Downtown Rotary Club. Mr. Brookman is also a member of the Institute of Corporate Directors. Among many awards received, in 2020, Mr. Brookman proudly received the Order of Canada for outstanding achievement, community service and contribution to the nation
- **Larry Schafran:** Larry Schafran is a private investor with interests in "disruptive" technologies. He recently co-founded a new oil/gas recovery company (Legacy Oil, Inc.) that "adopts" stranded, orphaned and/or marginal oil/gas wells. He resides in New York City, and recently served on numerous boards, including as a Director and Audit Committee Chairman of VerifyMe, Inc. (VRME), which provides individual, document and product authentication and anti-counterfeiting services, and Glasstech, Inc., a manufacturer of furnaces that manufacture automotive glass and glass for solar panels. He currently serves as a Director of Wright Investors' Service Holdings, Inc. (IWSH), formerly National Patent Development Corp. In addition, Mr. Schafran was Lead Director and Audit Committee Chairman, and later a Consultant to the Chairman, of WorldSpace, Inc. He also served as Trustee, Chairman/Interim CEO/President and Co-Liquidating Trustee of the Special Liquidating Trust of Banyan Strategic Realty Trust, Director and Chairman of the Executive Committees of Dart Group Corporation, Crown Books Corporation, TrakAuto Corporation, and Shoppers Food Warehouse, Inc. (also as Vice-Chairman). Mr. Schafran holds BBA and MBA degrees from the University of Wisconsin, where he was also an instructor, teaching Corporate Finance and Modern Corporate Problems
- **Ryan Jackson:** Ryan Jackson is a seasoned executive with extensive experience in real estate, finance, franchise businesses, and green technology. Mr. Jackson is an accomplished entrepreneur with great vision and insight and has extensive board experience. Mr. Jackson will deliver that experience and governance to the Cielo board.

RISKS

Cielo is subject to risks inherent in the renewable energy technology sector, as well as those risks normally encountered in a company transitioning from R&D to a commercial business. While this is not an exhaustive list, we view the following risks as being noteworthy to investors in Cielo.

DEVELOPMENT AND EXECUTION RISK | Although the Aldersyde proof-of-concept facility has proven Cielo's ability to transform waste into fuel, the Company continues to engineer improvements to the reactor design and waste recovery process, to optimized and enhanced performance. Development issues could delay the build out of full-scale plants which could materially impact the stock price.

FINANCIAL RISK | Cielo has a limited history of revenues, and to a large degree our financial forecast relies on management's guidance. With limited current revenue, an investment in Cielo is speculative. The Company and its joint venture partner will need to secure significant additional capital to fund the construction of the Aldersyde, Fort Saskatchewan, and Dunmore projects. There are no assurances that funds will be available to the Company when required, which could result in a delay or cancelation of certain projects, and significantly impact our valuation and target price.

REGULATORY RISK | Cielo's current operations are located in Alberta, Canada, and as such could be impacted by provincial and federal regulation and policy changes.

COMMODITY PRICE RISK | We expect Cielo to fund a portion its capital expenditures with cash flow. Periods of significant weakness in the price of refined products would negatively affect Cielo's cash flow and ultimately its ability construct new facilities.

COMPETITION | Cielo competes with entities which are larger and better financed. The competitors could materially and adversely affect the business, financial condition, and results of operations of the Company.

RELEVANT DISCLOSURES APPLICABLE TO COMPANIES UNDER COVERAGE

1. Non-Applicable for this Issuer
2. Relevant disclosures required under IIROC Rule 3400 applicable to companies under coverage discussed in this research report are available on our web site at www.researchcapital.ca

ANALYST CERTIFICATION

I, Bill Newman, certify the views expressed in this report were formed by my review of relevant company data and industry investigation, and accurately reflect my opinion about the investment merits of the securities mentioned in the report. I also certify that my compensation is not related to specific recommendations or views expressed in this report.

Research Capital Corporation publishes research and investment recommendations for the use of its clients. Information regarding our categories of recommendations, quarterly summaries of the percentage of our recommendations which fall into each category and our policies regarding the release of our research reports is available at www.researchcapital.com or may be requested by contacting the analyst.

Each analyst of Research Capital Corporation whose name appears in this report hereby certifies that (i) the recommendations and opinions expressed in this research report accurately reflect the analyst's personal views and (ii) no part of the research analyst's compensation was or will be directly or indirectly related to the specific conclusions or recommendations expressed in this research report.

Information about Research Capital Corporation's Rating System, the distribution of our research to clients and the percentage of recommendations which are in each of our rating categories is available on our website at www.researchcapital.ca.

The information contained in this report has been drawn from sources believed to be reliable but its accuracy or completeness is not guaranteed, nor in providing it does Research Capital Corporation assume any responsibility or liability. Research Capital Corporation, its directors, officers and other employees may, from time to time, have positions in the securities mentioned herein. Contents of this report cannot be reproduced in whole or in part without the express permission of Research Capital Corporation. US Institutional Clients – Research Capital USA Inc., a wholly owned subsidiary of Research Capital Corporation, accepts responsibility for the contents of this report subject to the terms and limitations set out above. US firms or institutions receiving this report should effect transactions in securities discussed in the report through Research Capital USA Inc., a Broker – Dealer registered with the Financial Industry Regulatory Authority (FINRA).

Member – Canadian Investor Protection Fund / membre – fonds canadien de protection des épargnants

Toronto 416.860.7600 | Montreal 514.399.1500 | Vancouver 604.662.1800 | Calgary 403.218.6375 | Regina 306.566.7550 | St. Albert 780.460.64

INSTITUTIONAL EQUITY DEPARTMENT

RESEARCH

TORONTO

Adam Schatzker	416.860.6781	Managing Director, Mining
Stuart McDougall.....	416.860.8636	Analyst, Mining
Andre Uddin.....	416.860.8675	Managing Director, Healthcare Research
Yue Ma.....	902.367.4786	Analyst, Healthcare Research
Venkata Velagapudi	416.860.8633	Analyst, Special Situations
Jack Keating	416.860.7658	Research Associate
Sara Becher	416.860.7795	Research & Marketing Manager

CALGARY

Bill Newman, CFA	403.260.2460	Senior Analyst
------------------------	--------------------	----------------

SALES & TRADING

TORONTO

Jeff Crane.....	416.860.8681
Terry Sugrue.....	416.860.7747
Doug Van Peteghem	416.860.7755
Jamie Riff.....	416.860.6849
Elena Laudisa	416.860.7651
Evan Trott	416.860.7655