

# ECOLOMONDO CORPORATION

(ECM-TSXV, ECLMF-OTC)

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## GEARING UP USED TIRES INTO THE CIRCULAR ECONOMY

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SEPTEMBER 28 2021



*Volt Strategic Research is initiating coverage on Ecolomondo Corporation (ECM-TSXV) (ECLMF-OTC) (“ECM” or the “Company”) with this report.*

ECM is well-positioned to capitalize on its TDP technology to process the hydrocarbon waste like end-of-life tires, plastics, disposed diapers, and, auto fluff that would otherwise end up in a landfill. The high-margin business with EBITDA margins going up to 55% by 2026 offers an attractive investment opportunity as the Company scales its physical resources, technology, and expertise to solve the waste tire and other waste hydrocarbon problem; and introduces industrial/manufacturing raw materials like carbon black, pyrolysis oil, syngas and steel back into the circular economy for re-use and to reduce GHG emission across the value chain. **We believe that the recent investment trend supports cleantech financing, and ECM would have access to both asset-backed loans and equity markets to fund its future projects. Management and Board own a considerable portion of the basic outstanding shares, at 75.7%. We see this, as a significant positive alignment of interests between management, shareholders and stakeholders.**

## INVESTMENT CONSIDERATIONS

**Upcoming Launch of Hawkesbury Facility:** Ecolomondo is expected to commission and launch its first commercial facility in early Q4 2021. The successful implementation would confirm the management’s ability to execute a plan and operate the ‘TDP’ technology to process used tires at scale. **ECM introduces one of the world’s largest end-of-life tire processing plants with 14K tons annual processing capacity (equivalent to annual processing ability of 1.4M tires, assuming 330 operating days each year).**

Unless stated otherwise, all figures are in C\$

**Fair Value Estimate: \$0.60 (lowest), \$2.50 (average), \$15.40 (Highest) [Pg. 20]**

Ecolomondo Corp. (ECM-TSXV)				
<b>Cleantech Industry</b>				
Share Price (Last Close)				\$1.16
Shares O/S (Basic, Current, M)				183.5
Shares O/S (Dil., Current M)				198.7
Market Capital (Basic, \$M)				212.8
Net Debt (Current, \$M)				7.4
Enterprise Value (FD, \$M)				237.9
Avg. Volume ('000)				11.8
<b>Fundamentals (\$M):</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Revenue</b>	<b>0.0</b>	<b>0.7</b>	<b>7.7</b>	<b>19.0</b>
y/y change %	NA	NA	1020.5%	147.4%
<b>Gross Profit</b>	<b>0.0</b>	<b>0.5</b>	<b>5.6</b>	<b>13.8</b>
y/y change %	NA	NA	1036.1%	146.8%
Gross Margin %	NA	71.7%	72.7%	72.5%
<b>EBITDA</b>	<b>-1.3</b>	<b>-0.5</b>	<b>3.3</b>	<b>8.0</b>
y/y change %	NA	NA	NA	142.5%
EBITDA Margin %	NA	-80.1%	42.9%	42.1%
<b>Company Description:</b>				
Ecolomondo is a cleantech company specializing in the development of proprietary Thermal Decomposition Process (“TDP”) recycling technology and the commercialization of waste-to-products operations and turnkey TDP facilities used to convert tires, plastics, and other hydrocarbon waste into marketable commodity end-products including carbon black substitute, oil, gas, steel, and fiber. Ecolomondo Corporation is headquartered in Saint-Laurent, Canada.				

**Source:** Volt Strategic Research, Capital IQ

**Analyst:** Pooja Sharma; [pooja@voltstrategic.ca](mailto:pooja@voltstrategic.ca)

*Ecolomondo is a research client of Volt Strategic Research. Your use of this report is subject to, and condition upon, the terms within the Disclosure, Disclaimer, and Waiver of Liability located at the end of this report.*

**We believe that the \$32M+ loan from Export Development Canada (EDC) and the timely execution to build the Hawkesbury plant supports the business strategy and confirms our confidence in the management team.**

**Valuation and Financial Considerations:** At 12.5x EV/Sales for 2023, 3.0x for 2024 and 1.4x for 2025, we believe that ECM shares trade at considerable discount. We present our conservative valuation scenarios on pg. 20. We expect to use higher multiples in the future as the business model evolves.

Our rather conservative assumptions show ECM revenues growing exponentially from \$7.7M in 2022 (first full year after commercialization) to \$329M in 2026. The Company expects to generate revenues by building and operating TDP turnkey facilities. **We are assuming 20 completed sites including 14 sites with full-year financial impact by the end of 2026 – to be built mostly across North America. We have EBITDA margins going up from 42% in 2022 to 55% in 2026 because:**

- **The Company gets paid (tipping fees) instead of paying for most of its critical raw material i.e. used tire;**
- **Produces end products that can reach pricing: rCB at US\$900-1,000/ton, pyrolysis oil at US\$65-70/bbl and also steel at US\$220/ton;**
- **A proprietary mechanism to consume syngas as the energy source for the thermal reactors;**
- **And, by achieving operational and construction cost efficiencies by building larger plants of four, six and eight reactors.**

**Capex and Payback Period:** The Company has invested ~\$38-39M in the Hawkesbury plant, which has an estimated production life of 25+ years and can operate 24 hours, seven days of the week, year-round. **We estimate sales payback duration at 3.5-4.0 years and EBITDA payback period at approximately 7.0-8.0 years with 50.0% EBITDA margins for a two-reactor plant (exhibit: 11). We expect these durations to improve as the Company achieves economies of scale.**

**TDP Facilities Expansion Opportunities:** Every year, the US disposes of ~300M<sup>1</sup> end-of-life tires, representing 30% of the global tire waste. Probable expansion into the US represents a significant market to source feedstock and capitalize on output materials. **We forecast a large potential market for the Company as waste tire recycling in North America moves away from the traditional practices of merely burning and shredding. (Refer pg. 21)**

**Multiple Revenue Streams:** The business model offers multiple revenue streams with very low requirements for spending on raw material; instead, the Company gets paid in the form of **tipping fees** for its most critical raw material, the end-of-life tire, by government agencies, recyclers, and haulers.

<sup>1</sup> <https://www.azocleantech.com/article.aspx?ArticleID=1227>

The sale of output material **recovered carbon black (rCB)** is a top revenue source for the Company. The demand for both recovered and virgin carbon black (vCB) has been on a steady rise due to the recovery of the end market after getting hit at the beginning of the pandemic. In North America, a metric ton of virgin N351 carbon black (a variety of vCB) costs more than US\$1,600<sup>2</sup>, and the prices have steadily risen in 2021, increasing 30% y/y or 21% YTD. Tire manufacturers represents a massive opportunity; however, ECM is focused on easily accessible paints, ink, coating and plastic manufacturers as of now. We believe partnership with a global tire manufacturer is highly likely and would be a massive boost to the business. Other output materials include **pyrolysis oil** and **#2 busheling steel** that can be conveniently sold in the open market.

**We have not included revenue from carbon credits in assumptions; however, because the Company produces recycled materials that help reduce overall CO<sub>2</sub> emission in the environment, it can earn carbon credits and sell them in the marketplace anywhere in the world for a fee. We look to add this stream into revenue estimates as the business model evolves, and we have better control over the variables in our assessments.**

**We strongly believe that the Company would consider joint venture prospects and strategic partnerships for new plants, that support the long-term objectives and/or perhaps attractive exit opportunities.**

**Partnership Prospects:** Michelin and Bridgestone are among the tire companies that use rCB. Michelin has established a partnership with Scandinavian Enviro Systems and Bridgestone has joined with Delta-Energy Group to bring at-scale use of rCB to the tire market. **Similar partnership prospects for Ecolomondo would support the business growth and will positively impact the shareholder value.**

**Industry Dynamics - Alignment with Government Greenhouse Gas Pollution Reduction Targets:** Under the Biden administration, the US has set a national target to reduce GHG emissions by 50-52% below 2005 levels by 2030 and achieve carbon neutrality by 2050. Similarly, Canada's enhanced NDC plan aims to achieve emission cuts by 40-45% below the 2005 level by 2030 and net-zero by 2050. **The Company estimates that the use of rCB results in 90-95% less emissions of CO<sub>2</sub> compared to the high polluting production of vCB. We believe that the business alignment with government targets will attract investment in the sector and in the Company, thus supporting share price growth in the years to come.**

**Investment Risks:** We consider ECM a high risk and high return investment opportunity as the Company is just beginning to enter the commercialization stage. We believe the successful launch and ongoing operations of the Hawkesbury plant help mitigate future risk. In our view, government regulations support the business case, however output material prices can fluctuate depending on end market demand and the use of alternative non-hydrocarbon materials, which could impact forecasted profitability.

<sup>2</sup> <https://www.chemanalyst.com/Pricing-data/carbon-black-42>

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## BUSINESS PROPOSITION

Ecolomondo has invested \$38–39M to build its first commercial plant in Hawkesbury, Ontario, Canada. We estimate sales payback duration to be ~3.5-4.0 years and EBITDA payback period to be 7.0-8.0 years at 50% EBITDA margins for a two-reactor plant (exhibit: 11). We expect these durations to improve as the Company achieves and takes advantage of the economies of scale. The plant operates with two reactors, each with an annual capacity to process 7.0 tons of end-of-life tires (ELT) in one batch. With two reactors and three eight-hour batches per day, the plant can process ~14,000 tons of tires or ~1.4M tires (assuming average tire weight of 20 pounds) in a year (330 days working, adjusted for maintenance and repair days). **The ability to handle large waste volumes efficiently is a huge competitive advantage compared to other existing tire recycling technologies in the market. The Company expects future plants to have a higher processing capacity of 8.0 tons/reactor/batch versus 7.0 tons/reactor/batch at Hawkesbury. Also, because ECM's TDP technology is modular, plant size and capacity could be scaled with a minimum of ease.**

The operating conditions (e.g., optimal operating temperature, pressure, reaction time, absence of any catalyst, and, automation, among others) have been fine-tuned through 25+ years of ongoing research and development at ECM's original industrial-scale pilot plant. Pilot consists of two reactors, located in Contrecoeur, Quebec, and has been used to repeatedly validate and improve reactor payloads, cycle times, production yields, efficiency, and safety. **Pilot has also validated TDP decomposition of other types of hydrocarbon waste including disposed diapers, asphalt roof shingles, plastics, and auto fluff.**

**The successful launch of the Hawkesbury plant in the coming weeks should set the stage for exponential growth and market opportunities, as well as for potential partnerships with large industry players.**

## EXPANSION OPPORTUNITIES

We expect ECM to add more facilities in the North American region. The US offers an attractive opportunity with the high availability of feedstock material. The industry estimates that the US generates ~30% of the 1.0B global waste tires each year, and ~20% of that 30% ends in a landfill or is stockpiled. With only these unused scrap tires, the Company would have access to 60M tires each year (ECM two-reactor plant can process ~1.4-1.6M tires each year). The remaining 70% of tires recycled in the US are generally used for a low-quality output like tire-derived fuel (TDF), aggregate, mulch, rubber crumb, rubber additives or playgrounds that are increasingly identified as harming the soil and the source of carcinogens in the environment (Refer exhibit 23).

**We see significant potential for the Company, especially in North America and Europe, as waste tire recyclers move away from traditional practices of burning, landfilling and shredding whereby they adopt processes that produce higher value yield like that of Ecolomondo, thanks to the proliferation of a global circular economy and supply concerns.**

## REVENUE MODEL

The business model offers multiple revenue streams with very low requirements for spending on raw material. The Company is paid in the form of tipping fees for its most critical raw material, the end-of-life tire, by government agencies, recyclers, and haulers. Tipping fees vary between Provinces and States, generally ranging between US\$0.50 to US\$3.00 per tire. Rates are typically higher in the US compared to Canada. We expect these fees to contribute 15.0% to overall revenue. **Provincial/state governments pay tipping fees to support higher tire recycling rates and subsidize tire recycling businesses that may otherwise operate at losses due to limited scalability.**

**Sales of high-quality rCB equivalent to N660 (used for general purposes) vCB is expected to generate 58.5% of revenue.** The rCB is the highest value output material that is produced during the used tire processing and has potential to replace vCB in certain applications. The tire industry increasingly uses alternative materials to replace vCB produced by direct burning of hydrocarbons, which result in large quantities of CO<sub>2</sub> to be emitted into the atmosphere. (This opportunity is discussed in greater detail in the industry section of the report.) **In addition to tire manufacturing, carbon black is used in the production of ink, paints, coatings, and plastics as a colorant, specialty chemicals and as a reinforcing agent — a prime target market for ECM.** Buyers can realize immediate margin expansion by using US\$900-1,000/ton rCB versus US\$1,200-1,400/ton vCB, all without compromising quality. The exponential growth in construction, automotive, and industrial sectors are all expected to support strong markets for ECM's rCB.

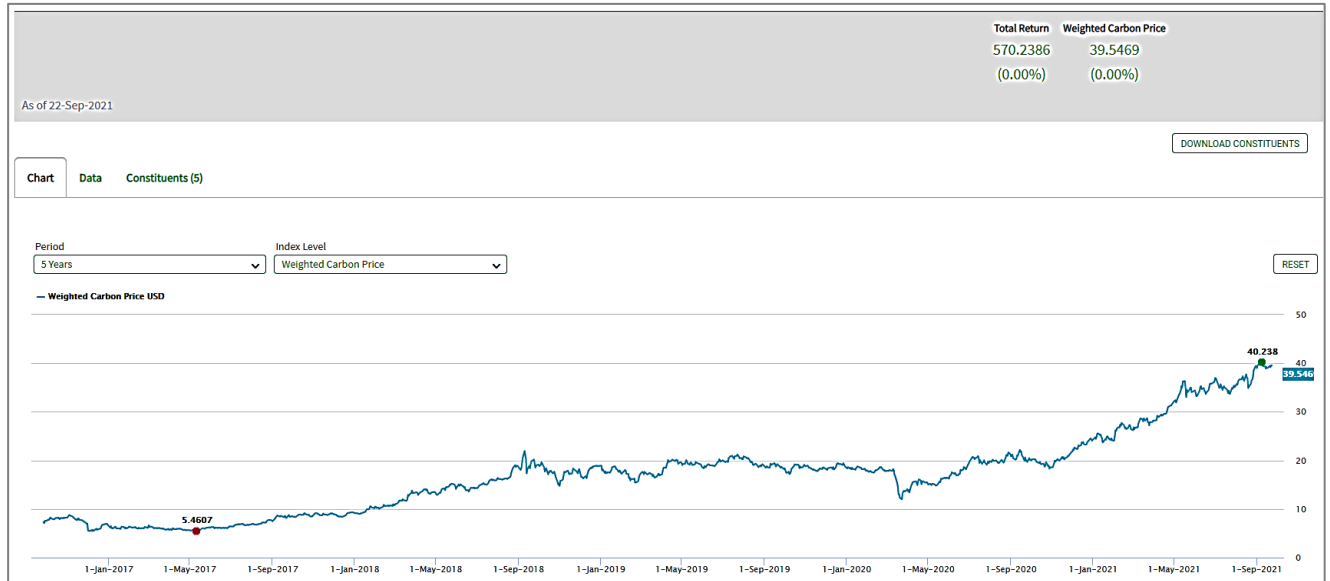
**Pyrolysis oil is expected to contribute ~23.2% of total revenue.** We expect demand to expand as companies look for alternatives to using new fossil fuels. Both rCB and pyrolysis oil are refined at the ECM facility to increase commercial value and to avoid additional transportation costs to tolling subcontractors.

**Steel** from the tire is removed as the tire is shredded and baled to be sold to recycled steel traders. This segment contributes ~3.4% to the consolidated revenues in the forecast periods.

An additional revenue stream not included in baseline estimates but will update and add as the business model evolves and variables become clearer: **revenue from carbon credits. The Company produces recycled materials that help reduce overall CO<sub>2</sub> emission in the environment, it can earn carbon credits and sell them in the marketplace anywhere in the world for a fee. We look to add this stream into revenue estimates as the business model evolves, and we have better control over the variable in our assessments.** According to IHS Markit's Global Carbon Index, which combines data from the European Union Allowances (EUA), California Carbon Allowances (CCA), and Regional Greenhouse Gas Initiative (RGGI), the current weighted carbon price is US\$39.55, up from around US\$17 near the end of 2020. Carbon credits can be traded in the international market. Europe carbon credit prices are at €62 (or ~US\$73) or nearly twice of IHS Markit Global weighted carbon prices. (See exhibit 1) The prices are clearly on the uptrend globally with Europe leading the way and will support the ECM's business case. **Investors should note that carbon credit pricing can vary based on the CO<sub>2</sub> emission during the process and CO<sub>2</sub> saved by using recycled materials and the type of the recycled materials. We will monitor how the dynamics evolve for the Company.**

A second likely revenue stream not yet priced into our baseline estimates includes joint venture prospects and partnerships for new plants. We believe the Company will consider such arrangements that would support its long-term objectives while offering attractive exit opportunities as the Company scales.

**Exhibit 1: IHS Markit Global Carbon Index (USD); EU Carbon Permits (EUR)**

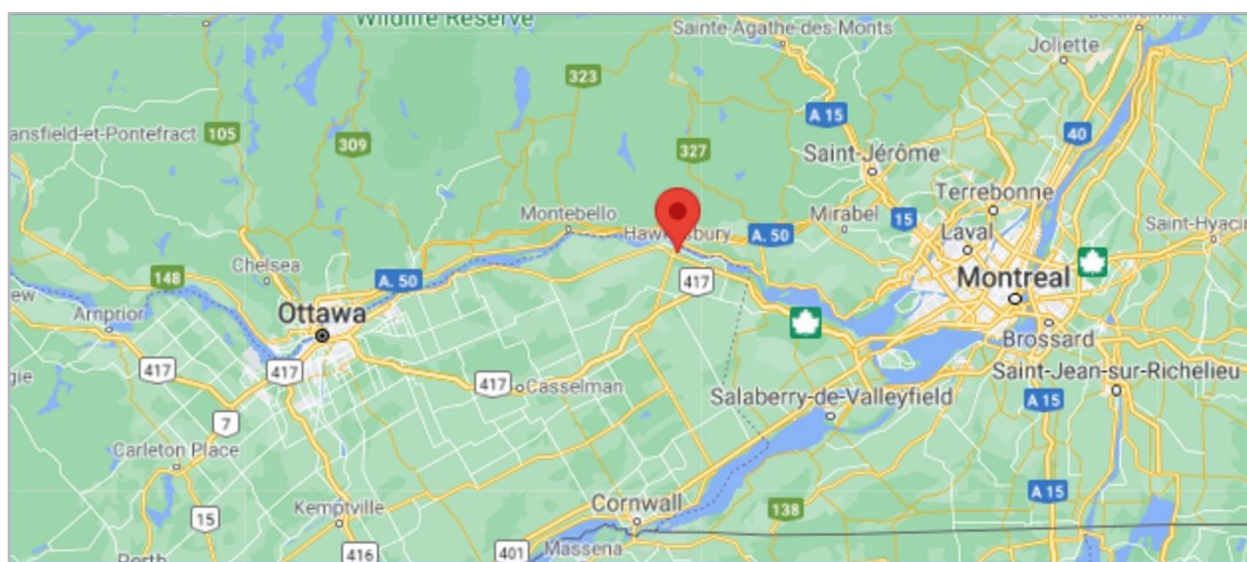


Source: IHS Markit, Trading Economics



**Plant location:** Plant location is a critical consideration that will greatly affect the operation's ROI and profitability. ECM's facilities are designed for real-time processing, eliminating the need to store, and used tires and greatly reducing the risk of tire fires, insect, and rodent infestations. The Hawkesbury facility is strategically located on the border of Quebec and Ontario to effectively serve both the markets. Within a radius of 100 miles, Hawkesbury offers a population of over 5M people, affording ECM feedstock supply, qualified labor, lower transportation costs and immediate markets for its end-products.

**Exhibit 2: Hawkesbury, Ontario on the map**



Source: Google Maps



## COMPANY OVERVIEW

Ecolomondo has developed Thermal Decomposition Process (TDP) pyrolysis technology to build industrial-size reactors that process hydrocarbon wastes into high-quality, marketable end-products (e.g., recycled carbon black, pyrolysis oil, steel and, syngas, among others), but for now, with a primary focus on processing end-of-life tires (ELT). The Company was incorporated and acquired by current CEO and Chairman Elio Sorella in 2007, with a vision of developing a commercially viable industrial-scale facility. Since then, management has focused on creating a scalable end-to-end automated process with rigorous safety features in place. The Company has tested and refined the process for years, conducting hundreds of trial runs at its two-reactor pilot research and development (R&D) facility in Contrecoeur, Quebec, proving the ability to handle large volumes and generate consistent, high-quality output.

The facility and its output have been studied by Polytechnique Montréal Chemical Engineering Department (affiliated with Université de Montréal) and the Institute for Chemicals and Fuels from Alternative Resources at the University of Western Ontario. TDP technology, process and high-quality end products are extensively studied and confirmed by third-party industry experts.

### EXPERT TESTIMONIALS:

- *“The test results noted that the efficiency of the process is very good. It is also a stellar example of **durable development**; in that it recycles tires into new products. With respect to the **operational efficiency** of the tire recycling equipment, the report presents a totally accounted for and impressive recovery of gas, oil, carbon black, steel and water. The emissions: All of the parameters analyzed were **below the regulatory requirements**.”*

— Tony Hawke, B.Sc. Géó, President, Terrapex Environment Ltée

- *“I was impressed by the simplicity of the operation, which was complemented by the **automation system**. The simplicity also supports the **consistent quality** of the recycled carbon black and the oil.”*

— Dr. Franco Berruti, Ph. D., P. Eng., Director, Institute for Chemicals and Fuels from Alternative Resources at Western Univ.

- *“The solution developed by Ecolomondo team of scientists and engineers is a green one. **Nothing goes to waste!** The technology is robust, safe and the products are of high quality.”*

— Dr. Gerald Kutney, Ph. D., Managing Director, Sixth Element Sustainable Management

- *“It is important to mention that Ecolomondo owns one of the **rare pyrolysis technologies** in the world which has demonstrated it can operate successfully at an industrial scale.” (Translation from doctorate thesis)*

— Jean-Remi Lanteigne, Ph.D., Polytechnique Montreal

- *“All air measurements from stack from the TDP comply easily (**much less than 10% of the specified norm**) with **EPA Air Emission Standards** and also to each parameter specified in Environment Quebec Air Quality Standards.”*

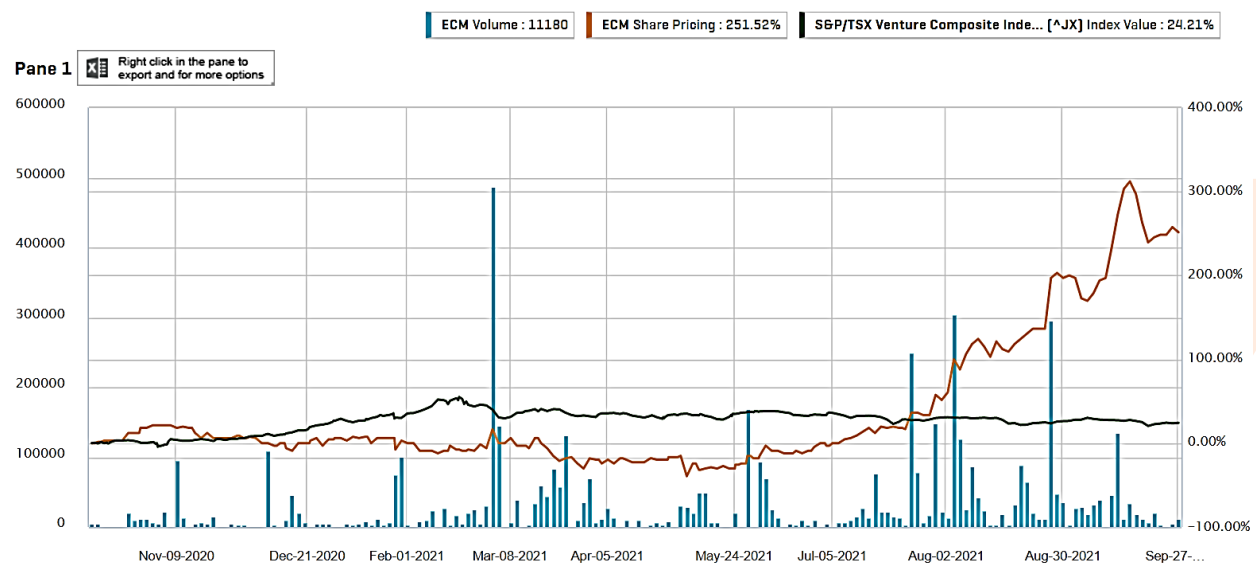
— Gilles Tremblay, P.Chem., M.Sc., Consultant

In February 2019, Ecolomondo successfully secured \$32.1M project funding from Export Development Canada (EDC) to support the construction of its Hawkesbury, Ontario, turnkey project. EDC is Canada’s export credit agency and has the mandate to help small and medium enterprises with the tools needed to succeed in the international market. With its Green Bonds, EDC has set a goal to fund companies that help reduce GHG emissions, particularly operating in sectors that include public ground transportation, smart grid energy infrastructure, renewable energy, waste management, and emissions abatement. **Ecolomondo’s TDP technology satisfies both conditions with its ability to take ELT and other hydrocarbon wastes from the landfills and efficiently convert those into fuel and commercially valuable materials, with minimum CO<sub>2</sub> and Sulphur emissions.**

Each reactor at the Hawkesbury facility can process 7.0 tons of tires in a batch that lasts for eight hours. This translates into ~42 tons or 89,000 pounds of feedstock handled in three batches per day or 14,000 tons per year (assuming operating 330 days each year) with both reactors. **End-of-life tire (ELT) as a feedstock has been Ecolomondo’s primary focus; however, the TDP technology has proven to effectively process other types of hydrocarbon waste streams: plastics, discarded diapers, asphalt roof shingles and automobile shred residue (ASR).** Once the Company solidifies its position in processing ELTs, the Company expects to begin processing discarded plastics and eventually, other types of hydrocarbon wastes.

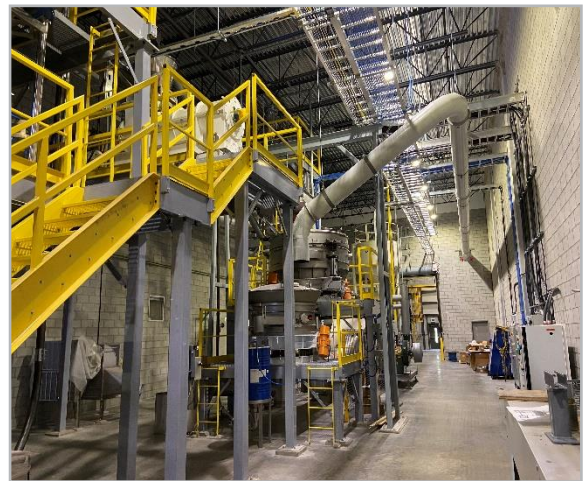
The Company became public trading in 2017 through a reverse merger transaction, acquiring Cortina Capital Corp. The chart below shows one-year performance of ECM shares versus the TSX Venture Composite Index.

**Exhibit 3: ECM-TSXV 1-Year Price Chart**



Source: CapiQ

**Exhibit 4: Ecolomondo Hawkesbury Facility**



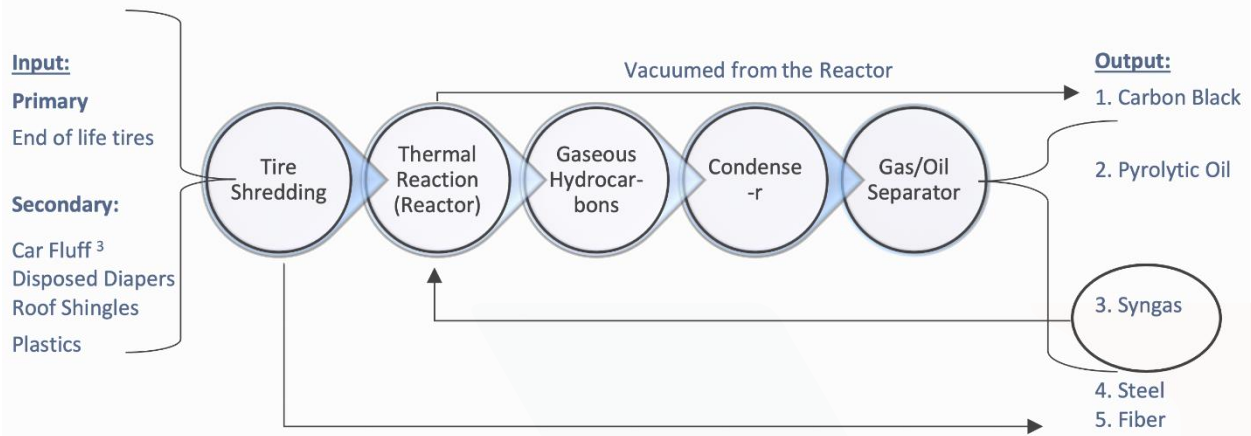
*Source: Volt Strategic Research*

## TDP TECHNOLOGY

Thermal Decomposition Process (TDP) technology operates on the principles of closed batch, slow pyrolysis process in the absence of oxygen and uses syngas produced by the process as the energy source for the thermal reactors. The control over process parameters ensures that the plant generates the same quality and consistent output in the same time frame. The low positive pressure and sealed reactors ensure no gas leakage and effective emission control while creating very little waste residue (1% of the total input volume, and mostly water that is reused). **The management highlights the high safety and emission control standards at the facility, resulting in process safety with 2ppm Sulphur emissions compared to 50ppm allowed.**

The plant is equipped to separate the non-hydrocarbon components (e.g., steel from the tires) at the shredding stage, while the remaining tire continues along the processing line to be turned into small granules of 10-20 mesh ready to be fed into the reactor. On the output side, the end-products are further processed or refined to remove most of the impurities. The removal of water and hydrocarbons from carbon black is a critical step to ensure that the product is ready for use. On-site treatment of the feedstock and on-site refining of the output results in major cost savings in the end-to-end tire recycling value-chain, enabling ECM to offer quality and consistent end-products to the users at a lower price.

### Exhibit 5: Ecolomondo: Thermal Decomposition Process (TDP)

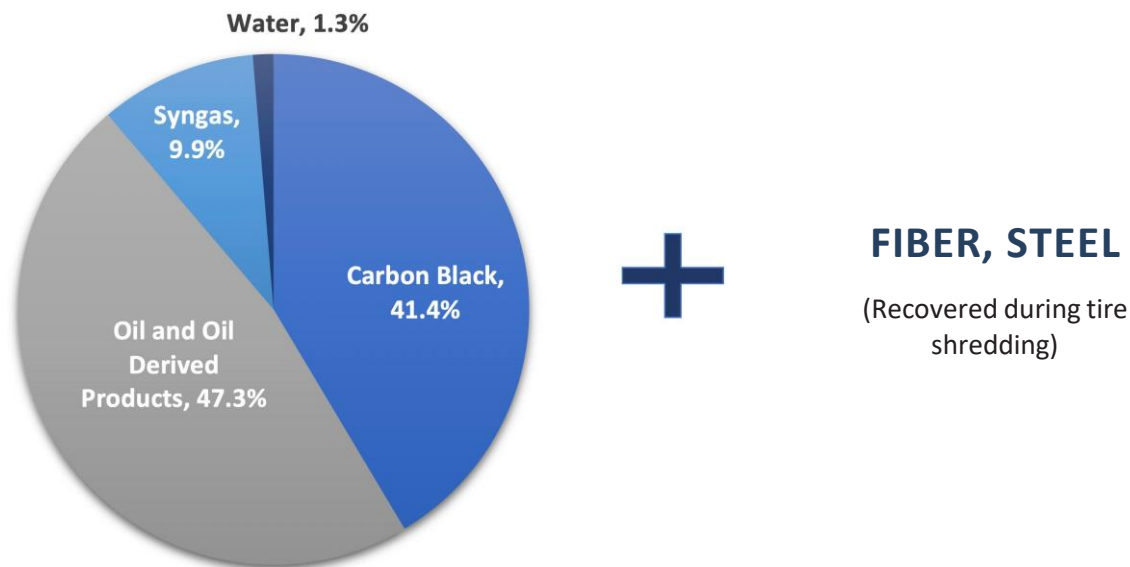


Source: Volt Strategic Research, ECM Investor Presentation 2021

**Reactor temperature: Reaches 1200° F (or 649 °C)**

<sup>3</sup> Auto fluff: Complex mixture of non-ferrous materials including plastics, foam, textiles, rubber and glass, that remains after most of the automobile components are taken out for recycling. Typically, 25% of a recycled automobile is discarded as auto fluff.

**Exhibit 6: TDP Output; Composition; Quality**



End-products	Average Virgin market price	Estimated Market Price for TDP Recycled End-products	Quality of End-Products Comparable to:	Users of End-products
Carbon Black	US\$1,200-1,400/ton	US\$900-1,000/ton	N660 (general purposes) <sup>4</sup>	Strengthening agent for tire and rubber products, colouring agent for plastics
Oil and Oil Derived Products	US\$60-70/barrel	US\$40-45/barrel	Diesel Light Oil #2 Heavy Oil #4 – #6	Fuel, lubricants, heating oil, asphalt
Steel	US\$220-240/ton	US\$220-240/ton	Busheling #2	Manufacturing of other steel products
Syngas	Consumed as the energy source for the reactors			

Source: Volt Strategic Research, ECM 2017 White Paper, ECM Investor Presentation 2021

<sup>4</sup> N stands for the 'normal' cure of a rubber compound. The first number indicates the particle size: N100 series has the smallest having a particle size of 11-19 nm (average); N900 series has the largest particle size of 201-500 nm (average). The second and third digit are used to describe the functionality or structure of the carbon black.

## LEADERSHIP – BOARD AND MANAGEMENT TEAM

Name	Ownership	Experience
<b>Eliot Sorella, B.Comm.</b> Chairman and CEO	<b>75.4%</b> (138.3M shares)	<ul style="list-style-type: none"> <li>• CEO of ECM.V since 2007</li> <li>• CEO of Futurplast Extrusions and Sorella Group for the last 20+ years</li> <li>• Futurplast Extrusions, a plastic extrusion manufacturing company, specializes in over 2,200 products (e.g. acrylic and polycarbonate tubes, rods and profile). Main plant located in Montreal with distribution facilities in Los Angeles, NY/NJ-area, Chicago, Seattle, Houston, Kansas City and Jacksonville</li> <li>• Experience in textiles, cosmetics, real estate, plastic extrusion and transport</li> </ul>
<b>Donald Prinsky, CPA, CA</b> CFO	<b>0.04%</b> (72K Shares)	<ul style="list-style-type: none"> <li>• CFO of Ecolomondo since 2010</li> <li>• Richter LLP — named partner in 1979</li> <li>• Founder of Donald Prinsky Consulting Services</li> <li>• 35+ years of auditing and consulting experience</li> </ul>
<b>Joseph Sorella</b> Compensation Committee	–	<ul style="list-style-type: none"> <li>• V.P. of Futurplast Extrusions and Sorella Group since 2001</li> <li>• Previously V.P. of Sonic Group of transportation companies</li> <li>• Well-rounded and experienced executive</li> <li>• Certified Systems Engineer (MCSE)</li> </ul>
<b>Alain Denis, MBA, IAS.A.</b> Audit & Compensation Committees	–	<ul style="list-style-type: none"> <li>• SVP, Fonds de Solidarité FTQ</li> <li>• Held several executive positions in financial and venture capital firms</li> <li>• Special assistant to the Minister of finance and regional development of Canada</li> <li>• Board member on multiple corporate and non-profit organizations, as well as a member of the Institute of Corporate Directors</li> </ul>
<b>Brigitte Gauthier, Esq., LL.B.</b> Secretary	–	<ul style="list-style-type: none"> <li>• Senior and Founding Partner, law firm Alepin Gauthier</li> <li>• Chair of several organization’s boards, including the Bar of Laval and the Laval Women Center</li> <li>• Board member of several non-profit organizations, including Montgomery College and Hospital Cite de la Sante foundations</li> </ul>
<b>Mario Girard</b> Audit Committee	<b>0.31%</b> (575K shares)	<ul style="list-style-type: none"> <li>• President &amp; CEO, the Quebec Port Authority</li> <li>• CEO, Quebec Foundation of Entrepreneurship</li> <li>• Founder and CEO, Nstein Technologies</li> <li>• Founder and CEO, Gespro Technologies</li> <li>• Member of the World Presidents’ Organizations</li> </ul>
<b>Michelle Rosa, LL.B.</b> Audit & Compensation Committees	<b>0.012%</b> (21K shares)	<ul style="list-style-type: none"> <li>• Notarial law practice, law firm Dunton Rainville</li> <li>• Practice includes estates, planning and implementation strategies</li> <li>• Member of Chambre des Notaires du Quebec since 2008</li> <li>• Speaker on numerous conferences and training sessions to businesses</li> </ul>

**Management**

Name	Ownership	Experience
<b>Eliot Sorella, B.Comm.</b> Chairman and CEO		– As shown above –
<b>JF Labbé, MBA, LL.M.</b> Chief Operating Officer	–	<ul style="list-style-type: none"> <li>• Strategy consulting with PWC, Balanced Scorecard Collaborative and SECOR</li> <li>• Special Assistant to the Minister of Finance of Canada and of regional development (Quebec)</li> <li>• Counsel for Hydro-Quebec</li> <li>• Founding President of Recycor, a former leading Canadian scrap tire recycler</li> </ul>
<b>Donald Prinsky, CPA, CA</b> CFO		– As shown above –
<b>Lawrence Culliford, B.Eng.</b> End Product Specialist	–	<ul style="list-style-type: none"> <li>• Over 23 years of experience on business development in hydrocarbon waste solutions</li> <li>• Extensive experience on waste management businesses and solutions</li> </ul>
<b>Hugo Morin, Eng.</b> Director of Engineering	–	<ul style="list-style-type: none"> <li>• Industrial engineer for biotech and waste-to-energy companies including PGNature and Biofour</li> <li>• Experienced in design, manufacture, installation and management of waste processing equipment</li> </ul>
<b>Ali Alizadeh, PhD, PEng.</b> Director of Process Technologies	–	<ul style="list-style-type: none"> <li>• Gas separation and conversion specialist</li> <li>• R&amp;D Director, Project Manager and Process engineer in oil companies and specialty enterprises</li> </ul>
<b>Hari Krishna, B. Eng.</b> Global Sales Director End Products	–	<ul style="list-style-type: none"> <li>• Over 12 years of extensive Carbon Black Sales and Marketing experience</li> <li>• Headed the international sales and marketing teams at Epsilon Carbon Pvt. Ltd. And Rex-tone Industries Ltd.</li> <li>• Manufacturing and Business Development experience at Philips Carbon Black Ltd.</li> </ul>

*Source: Volt Strategic Research, LinkedIn, and ECM Corporate Website*

Ecolomondo’s management has shown over the years that it has both vision and experience. History has proven that it has the ability to deliver on goals set by the Company. Collectively, they own a considerable portion of the basic shares outstanding, at 75.7%. We see this as a significant positive alignment of interests between management and shareholders. Chairman and CEO Elio Sorella (75.4%) is the largest shareholder. Eliot has 40+ years of leadership experience and has led Ecolomondo, Futurplast Extrusions and Sorella Group. COO Jean Francois Labbé has 20+ years of executive and strategy consulting experience. He was a founding partner of an end-of-life tire and rubber recycling company Recycor Rubber. CFO Donald Prinsky joined Ecolomondo in 2010, and he has 35+ years of auditing and consulting experience. As noted in the tables above, the board comprises seven members, including Eliot (CEO) and Donald (CFO), and the management team has six members. ECM has built a strong management and board team with a complementary skill set, combining experience from backgrounds in cleantech, manufacturing and engineering.



## CAPITAL STRUCTURE

Ecolomondo has ~183.5M basic shares outstanding and ~198.7M diluted shares outstanding. The Company has 75K options outstanding at an exercise price of \$0.10, 8.8M shares at \$0.35 and 3.3M at \$0.30, held mainly by the employees and ~3M warrants outstanding at an exercise price of \$1.00. The Company recently raised \$4.0M (gross proceeds) in a non-brokered private placement deal at a price \$0.65/unit. Each unit included one common share and half warrant. Each whole warrant is equivalent to one common share, exercisable at \$1.00/warrant share, from the three years of the date of issue. Nearly, 75.7% of the Company is owned by the insiders.

Ecolomondo has an asset-backed loan (ABL) from EDC that stood at \$32.1M as of the end of Q221. The Company pays an interest rate of CDOR+6.5% on this loan. We believe that the recent investment trend supports cleantech financing, and ECM would have access to both asset-backed loans and equity markets to fund its future projects.

## FORECAST ASSUMPTIONS

### Exhibit 7: ECM # Sites Forecast

Ecolomondo Corp. (ECM-TSXV) Year ending December 31	2021E	2022E	2023E	2024E	2025E	2026E
<b># Sites</b>						
Hawkesbury	1	1	1	1	1	1
2-Reactors	0	0	1	2	3	4
4-Reactors	0	0	1	3	6	10
6-Reactors	0	0	1	1	3	4
8-Reactors	0	0	0	0	0	1
<b>Total Sites</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>20</b>

Source: Volt Strategic Research

We anticipate the Company will have three additional plants by the end of 2023, each with 2-, 4- and 6- reactors. By the end of 2026 (the last forecast year), we estimate ECM to have 20 plants; 50% of those would be 4-reactor plants with an ability to process ~3.5–4.0M tires in a year. We believe that the expansion would occur in cities across Canada and the US. The output includes:

- **Steel:** Steel volume is ~11.8% of the total weight of the tire. We have assumed that each tire weighs ~20 lbs with steel.
- **Carbon Black, Pyrolysis Oil (Oil and Oil Derived Product) and Syngas:** Carbon black is assumed at 41.4%, pyrolysis oil at 47.3%, syngas at 9.9% and water at 1.3% of the total input weight loaded into the reactor, excluding steel.

**Exhibit 8: ECM: Production Volume Forecast**

<b>Ecolomondo Corp. (ECM-TSXV)</b> <b>Year ending December 31 (C\$ '000)</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>
<b>Production Output (in tons)</b>						
# of unused tires processed	102,060.0	1,128,330.0	2,731,320.0	11,135,880.0	23,629,320.0	44,572,680.0
Steel extracted (tons)	116.3	1,286.3	3,113.7	12,694.9	26,937.4	50,812.9
Carbon Black (tons)	422.5	4,671.3	11,307.7	46,102.5	97,825.4	184,530.9
Pyrolysis Oil (bbl.)	3,538.5	39,120.2	94,697.3	386,091.0	819,249.8	1,545,374.9
Gas (tons) – Consumed Internally	101.0	1,117.0	2,704.0	11,024.5	23,393.0	44,127.0
Water or Particulate loss (tons)	13.3	146.7	355.1	1,447.7	3,071.8	5,794.4

\*1 ton = 7.33 bbl.

Source: Volt Strategic Research

In the model, we have assumed rather conservative tipping fees of US\$1.00/tire, steel price of US\$200/ton, carbon black prices of US\$950/ton and pyrolysis oil/bbl price of US\$45/bbl. We grow these prices at a conservative 2% annual escalation to arrive at the following revenue estimates.

**Exhibit 9: ECM: Segment-wise Revenue Forecast**

<b>Ecolomondo Corp. (ECM-TSXV)</b> <b>Year ending December 31 (C\$ '000)</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>
<b>Revenue ('000)</b>						
Tipping Fees	102.1	1,143.6	2,829.0	11,750.4	25,427.4	48,922.6
Steel	23.3	260.7	645.0	2,679.1	5,797.4	11,154.4
Carbon Black	401.4	4,497.7	11,126.4	46,214.2	100,005.8	192,412.5
Pyrolysis Oil	159.2	1,784.2	4,413.7	18,332.8	39,671.5	76,328.6
Bitumen	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total Revenue</b>	<b>686.0</b>	<b>7,686.2</b>	<b>19,014.1</b>	<b>78,976.4</b>	<b>170,902.2</b>	<b>328,818.0</b>

Source: Volt Strategic Research

Direct labour and benefits are the most significant expense items and are estimated to grow to account for 16-18% of revenue as labour costs increase. Salaries (office) are expected to account for 6% of the revenue from 9% in 2023, as the Company begins to achieve economies of scale. We see most cost items grow at a slower rate with the capacity expansion in the future periods.

**Exhibit 10: ECM: Operating Expenses Forecast**

<b>Ecologondo Corp. (ECM-TSXV)</b> <b>Year ending December 31 (C\$ '000)</b>	<b>2021E</b>	<b>2022E</b>	<b>2023E</b>	<b>2024E</b>	<b>2025E</b>	<b>2026E</b>
<b>Expense Distribution %</b>						
<b>Direct labor and benefits</b>	<b>120.0</b>	<b>1,306.7</b>	<b>3,422.5</b>	<b>13,189.1</b>	<b>28,198.9</b>	<b>52,610.9</b>
% of revenue	17.5%	17.0%	18.0%	16.7%	16.5%	16.0%
y/y change %		988.5%	161.9%	285.4%	113.8%	86.6%
<b>Coolants, chemicals and lubricants</b>	<b>10.3</b>	<b>115.3</b>	<b>190.1</b>	<b>947.7</b>	<b>854.5</b>	<b>1,644.1</b>
% of revenue	1.5%	1.5%	1.0%	1.2%	0.5%	0.5%
y/y change %		1020.5%	64.9%	398.4%	-9.8%	92.4%
<b>Freight and transport</b>	<b>13.7</b>	<b>115.3</b>	<b>247.2</b>	<b>1,184.6</b>	<b>2,563.5</b>	<b>6,576.4</b>
% of revenue	2.0%	1.5%	1.3%	1.5%	1.5%	2.0%
y/y change %		740.4%	114.4%	379.3%	116.4%	156.5%
<b>Carbon treatment parts &amp; supplies</b>	<b>16.1</b>	<b>179.9</b>	<b>422.8</b>	<b>1,848.6</b>	<b>3,800.2</b>	<b>6,542.0</b>
% of revenue	2.3%	2.3%	2.2%	2.3%	2.2%	2.0%
y/y change %		1020.5%	135.0%	337.2%	105.6%	72.1%
<b>Royalties</b>	<b>34.3</b>	<b>384.3</b>	<b>950.7</b>	<b>3,948.8</b>	<b>8,545.1</b>	<b>16,440.9</b>
% of revenue	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
y/y change %		1020.5%	147.4%	315.4%	116.4%	92.4%
<b>Real estate taxes</b>	<b>75.0</b>	<b>300.0</b>	<b>1,300.0</b>	<b>3,499.0</b>	<b>7,703.7</b>	<b>14,205.0</b>
% of revenue	10.9%	3.9%	6.8%	4.4%	4.5%	4.3%
y/y change %		300.0%	333.3%	169.2%	120.2%	84.4%
<b>Reactor parts &amp; supplies</b>	<b>55.0</b>	<b>222.8</b>	<b>469.9</b>	<b>1,046.0</b>	<b>2,213.4</b>	<b>3,971.1</b>
% of revenue	8.0%	2.9%	2.5%	1.3%	1.3%	1.2%
y/y change %		305.0%	110.9%	122.6%	111.6%	79.4%
<b>Shredding parts &amp; supplies</b>	<b>37.5</b>	<b>151.9</b>	<b>315.9</b>	<b>700.1</b>	<b>1,472.9</b>	<b>2,616.9</b>
% of revenue	5.5%	2.0%	1.7%	0.9%	0.9%	0.8%
y/y change %		305.0%	108.0%	121.7%	110.4%	77.7%
<b>Building maintenance and repairs</b>	<b>21.3</b>	<b>86.1</b>	<b>177.3</b>	<b>389.0</b>	<b>811.1</b>	<b>1,455.2</b>
% of revenue	3.1%	1.1%	0.9%	0.5%	0.5%	0.4%
y/y change %		305.0%	106.0%	119.3%	108.5%	79.4%
<b>Additional Energy</b>	<b>175.0</b>	<b>708.8</b>	<b>1,501.7</b>	<b>3,533.4</b>	<b>8,152.3</b>	<b>15,961.1</b>
% of revenue	25.5%	9.2%	7.9%	4.5%	4.8%	4.9%
y/y change %		305.0%	111.9%	135.3%	130.7%	95.8%
<b>Salaries</b>	<b>55.0</b>	<b>222.8</b>	<b>953.9</b>	<b>2,663.6</b>	<b>6,108.6</b>	<b>11,091.4</b>
% of revenue	13.7%	5.0%	8.6%	5.8%	6.1%	5.8%
y/y change %		305.0%	328.2%	179.2%	129.3%	81.6%
<b>Administration</b>	<b>82.5</b>	<b>334.1</b>	<b>859.9</b>	<b>2,088.7</b>	<b>4,551.9</b>	<b>8,207.4</b>
% of revenue	12.0%	4.3%	4.5%	2.6%	2.7%	2.5%
y/y change %		305.0%	157.4%	142.9%	117.9%	80.3%
<b>Corporate</b>	<b>13.7</b>	<b>230.6</b>	<b>190.1</b>	<b>1,579.5</b>	<b>3,418.0</b>	<b>6,576.4</b>
% of revenue	2.0%	3.0%	1.0%	2.0%	2.0%	2.0%
y/y change %		1580.7%	-17.5%	730.7%	116.4%	92.4%

Source: Volt Strategic Research

**Exhibit 11: ECM: Capital Requirement Assumptions**

<b>Capex (C\$ '000)</b>	<b>Hawkesbury (2- reactors)</b>		<b>Future plants with # reactors:</b>			
<b># reactors</b>		<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>	
Project Cost - Equipment		31,250	31,250	55,000	73,125	97,500
Project Cost - Building		6,250	6,250	7,500	10,000	12,500
Placement fees		625	765	1,265	1,677	2,215
Issuance fees		700	734	734	734	734
<b>Total Capex</b>		<b>38,825</b>	<b>38,999</b>	<b>64,499</b>	<b>85,536</b>	<b>112,949</b>
<b>Payback period - Sales (years)</b>		<b>3.9</b>	<b>3.5</b>	<b>2.9</b>	<b>2.5</b>	<b>2.5</b>
<i>Each plant constructed over a period of 15 months</i>						

The sales payback period reduces exponentially with the increase in the number of reactors because larger plants yield more efficient economies of scale. In the model, we have assumed a 2% annual escalation in prices. The land cost is also capitalized and included in 'project costs – building' as shown in exhibit 11 above. Note that capital issuance cost and placement fees are capitalized. Placement fees are 2% of the total capital requirement. We assume that the plants are constructed in 15 months (actual production life is 25+ years), and we have used 15-year plant life for depreciation purposes.

## FORECAST SUMMARY

Exhibit 12: ECM: Forecast Summary

Ecolomondo Corp. (ECM-TSXV) - Summary								
Year ending December 31 (C\$ M)	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
<b>Revenue</b>	<b>0.0</b>	<b>0.0</b>	<b>0.7</b>	<b>7.7</b>	<b>19.0</b>	<b>79.0</b>	<b>170.9</b>	<b>328.8</b>
% growth - y/y		NA	NA	1020.5%	147.4%	315.4%	116.4%	92.4%
<b>COGS</b>	<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>2.1</b>	<b>5.2</b>	<b>21.1</b>	<b>44.0</b>	<b>83.8</b>
Gross Profit	0.0	0.0	0.5	5.6	13.8	57.9	126.9	245.0
<b>Gross Margin</b>	<b>NA</b>	<b>NA</b>	<b>71.7%</b>	<b>72.7%</b>	<b>72.5%</b>	<b>73.3%</b>	<b>74.3%</b>	<b>74.5%</b>
<b>EBITDA</b>	<b>-0.8</b>	<b>-1.3</b>	<b>-0.5</b>	<b>3.3</b>	<b>8.0</b>	<b>42.4</b>	<b>92.5</b>	<b>180.9</b>
<b>EBITDA Margin %</b>	<b>NA</b>	<b>NA</b>	<b>-80.1%</b>	<b>42.9%</b>	<b>42.1%</b>	<b>53.6%</b>	<b>54.1%</b>	<b>55.0%</b>
% growth - y/y		NA	NA	NA	142.5%	429.2%	118.4%	95.6%
<b>Net Income</b>	<b>-1.1</b>	<b>-1.8</b>	<b>-2.4</b>	<b>-1.2</b>	<b>-6.2</b>	<b>-0.3</b>	<b>4.0</b>	<b>27.3</b>
<b>Net Income Margin %</b>	<b>NA</b>	<b>NA</b>	<b>-350.6%</b>	<b>-15.9%</b>	<b>-32.5%</b>	<b>-0.4%</b>	<b>2.4%</b>	<b>8.3%</b>
% growth - y/y		NA	NA	NA	NA	NA	NA	NA
<b>EPS - Fully Diluted</b>	<b>-\$0.01</b>	<b>-\$0.01</b>	<b>-\$0.01</b>	<b>-\$0.01</b>	<b>-\$0.03</b>	<b>-\$0.00</b>	<b>\$0.02</b>	<b>\$0.10</b>
Capital Expenditure	-3.4	-16.7	-14.0	-92.8	-221.9	-348.4	-509.6	-577.7
Depreciation	0.7	0.7	1.1	2.5	6.3	18.7	37.7	68.7
Fixed Assets	6.8	26.4	38.8	129.1	344.7	674.4	1,146.2	1,655.2
CFO	-1.0	-1.9	-3.3	0.9	-0.7	12.6	37.5	86.3
Total Debt	5.0	22.3	31.4	105.7	285.1	554.4	933.8	1,333.1
<b>Net Debt</b>	<b>-0.3</b>	<b>18.5</b>	<b>28.1</b>	<b>98.9</b>	<b>277.5</b>	<b>543.2</b>	<b>913.3</b>	<b>1,294.7</b>
<b>Total Equity</b>	<b>1.8</b>	<b>0.7</b>	<b>5.9</b>	<b>25.8</b>	<b>63.6</b>	<b>133.3</b>	<b>239.4</b>	<b>376.7</b>
<b>Operating Metrics:</b>								
# Site	0.0	0.0	1.0	1.0	4.0	7.0	13.0	20.0
Processing Capacity (tons)	0.0	0.0	1.0	11.3	27.3	111.4	236.3	445.7
Processing Capacity (# Unsed Tires, Million)	0.0	0.0	0.1	1.1	2.7	11.1	23.6	44.6
<b>Output Volume:</b>								
Steel extracted ('000 tons)	0.0	0.0	0.1	1.3	3.1	12.7	26.9	50.8
Carbon Black ('000 tons)	0.0	0.0	0.4	4.7	11.3	46.1	97.8	184.5
Pyrolysis Oil ('000 bbl.)	0.0	0.0	3.5	39.1	94.7	386.1	819.2	1,545.4
Gas ('000 tons) -- Consumed Internally	0.0	0.0	0.1	1.1	2.7	11.0	23.4	44.1
Particulate loss (' 000 tons)	0.0	0.0	0.0	0.1	0.4	1.4	3.1	5.8
<b>Revenue (by product):</b>								
Tipping Fees	0.0	0.0	0.1	1.1	2.8	11.8	25.4	48.9
Steel	0.0	0.0	0.0	0.3	0.6	2.7	5.8	11.2
Carbon Black	0.0	0.0	0.4	4.5	11.1	46.2	100.0	192.4
Pyrolysis Oil	0.0	0.0	0.2	1.8	4.4	18.3	39.7	76.3
<b>Revenue</b>	<b>0.0</b>	<b>0.0</b>	<b>0.7</b>	<b>7.7</b>	<b>19.0</b>	<b>79.0</b>	<b>170.9</b>	<b>328.8</b>

Source: Company Filings (Historical figures), Volt Strategic Research (Forecast)

Our conservative baseline assumptions support ~\$320M+ revenues in 2026 with a gross margin of ~75% and EBITDA margin of ~55%+. We have included direct labour cost, freight and transportation, coolants, chemicals & lubricants in the COGS calculation. **We forecast a slight drop in the EBITDA margin in 2023 due to start-up costs associated with three additional plants that year.** With the first month's capacity at 25%, gradually going up by 10% each month till the plant reaches its full capacity, margins will remain compressed during those periods, impacting the full-year margins in 2023. We see EBITDA margin expanding to ~50%+ by 2024 and beyond.

## VALUATION SUMMARY – EXPECTED VALUE ANALYSIS

Below we present our valuation scenarios. The table on the left considers the future capital needs, i.e., increased forecasted net debt and forecasted shares outstanding. The table on the right is based on the current capital structure of the Company. As depicted in the table below, we have used a lower valuation assumption for the right-side table to take into consideration the funding requirements in the forecast years of 2022, 2023 and 2024.

We have used conservative valuation assumptions and have accounted for various scenarios to account for possibilities with the successful alignment of the ECM's strategy and overall valuation of the cleantech space in the stock market. We expect to use higher multiples in the future as the business model evolves.

### Exhibit 13: ECM: Valuation

		Implied EV/Sales (Forecasted)			
		30.0x	40.0x	50.0x	60.0x
<b>Sales (\$ M)</b>					
2022E	7.7	\$0.57	\$0.90	\$1.23	\$1.56
2023E	19.0	\$1.05	\$1.74	\$2.42	\$3.11
2024E	79.0	\$5.67	\$8.13	\$10.58	\$13.03
<b>Average:</b>		<b>\$2.43</b>	<b>\$3.59</b>	<b>\$4.74</b>	<b>\$5.90</b>
		Implied EV/EBITDA (Forecasted)			
		70.0x	90.0x	110.0x	130.0x
<b>EBITDA (\$ M)</b>					
2022E	3.3	\$0.57	\$0.85	\$1.14	\$1.42
2023E	8.0	\$1.02	\$1.59	\$2.17	\$2.75
2024E	42.4	\$7.52	\$10.15	\$12.79	\$15.42
<b>Average:</b>		<b>\$3.04</b>	<b>\$4.20</b>	<b>\$5.36</b>	<b>\$6.53</b>
<b>Net Debt (\$M, FD)</b>		<b>Shares O/S (M, FD)</b>			
2022E	98.9	2022E			
2023E	277.5	2023E			
2024E	543.2	2024E			

		Implied EV/Sales (Current)			
		20.0x	30.0x	40.0x	50.0x
<b>Sales (\$ M)</b>					
2022E	7.7	\$0.74	\$1.12	\$1.51	\$1.90
2023E	19.0	\$1.88	\$2.83	\$3.79	\$4.75
2024E	79.0	\$7.91	\$11.88	\$15.86	\$19.83
<b>Average:</b>		<b>\$3.51</b>	<b>\$5.28</b>	<b>\$7.05</b>	<b>\$8.83</b>
		Implied EV/EBITDA (Current)			
		50.0x	70.0x	90.0x	110.0x
<b>EBITDA (\$ M)</b>					
2022E	3.3	\$0.79	\$1.13	\$1.46	\$1.79
2023E	8.0	\$1.98	\$2.78	\$3.59	\$4.39
2024E	42.4	\$10.62	\$14.88	\$19.14	\$23.41
<b>Average:</b>		<b>\$4.46</b>	<b>\$6.26</b>	<b>\$8.06</b>	<b>\$9.86</b>
<b>Net Debt (\$M, FD)</b>		<b>Shares O/S (M, FD)</b>			
Current	7.4	Current			
		198.7			

Source: Volt Strategic Research

## INDUSTRY OVERVIEW: NEED FOR TIRE RECYCLING | CLIMATE CHANGE IMPACT, WASTE MANAGEMENT

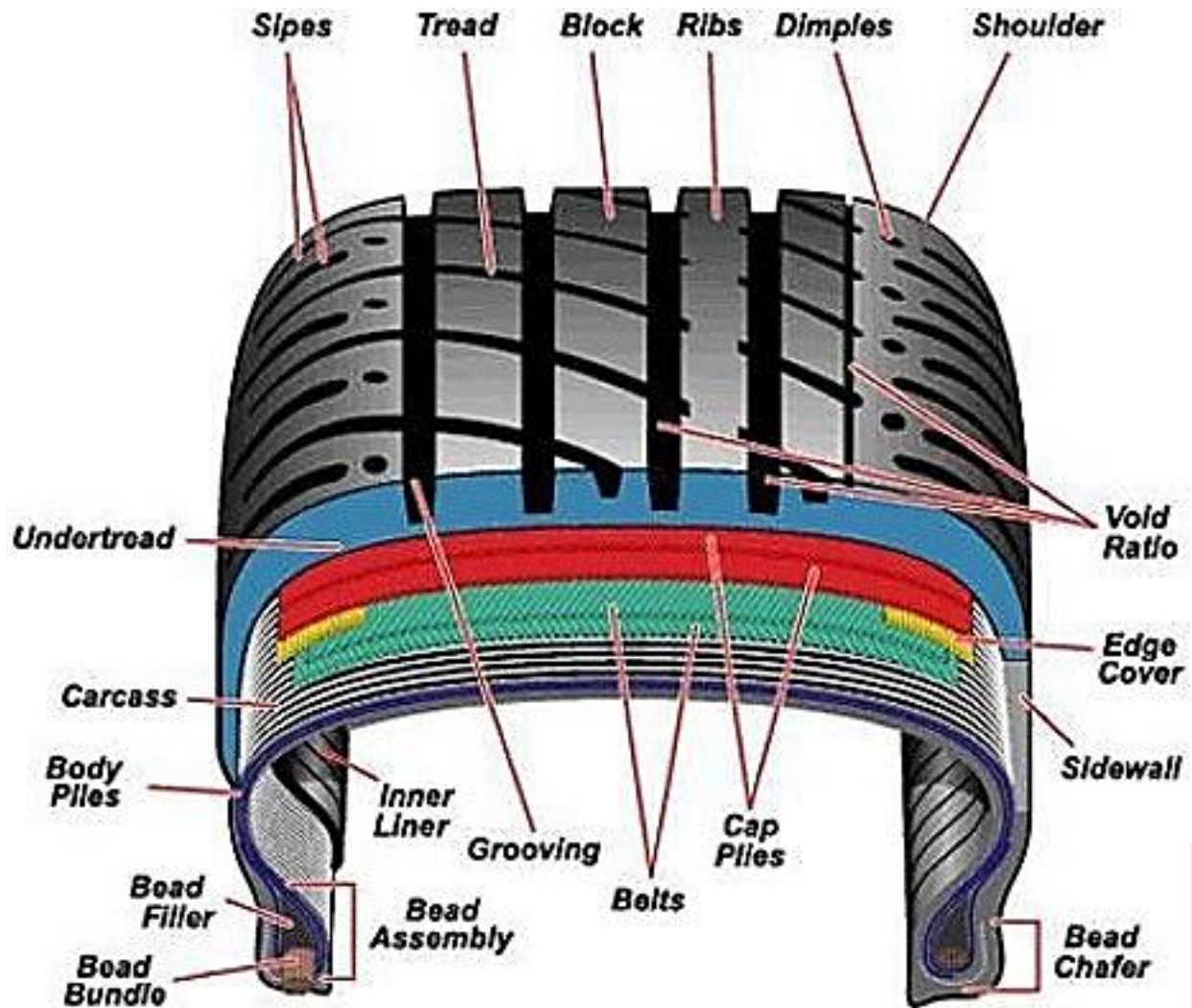
In our Cleantech Industry Report we have covered the industry dynamics in detail. In this section, we will primarily focus on used tires problem, solution, and opportunities. In Canada, hydrocarbon wastes account for 34% of the waste that's put in landfills every year. Most of the hydrocarbon wastes can be processed in the same way in a pyrolytic reactor, however the output product and quality would depend on the composition of the original material. End-of-life tires (ELT) offers unique monetization opportunity due to its high-quality composition and enormous availability, while helping to solve a critical environmental problem.

### THE TIRE PROBLEM AND THE TIRE OPPORTUNITY

End-of-life tires pose a considerable problem to the environment if left to decay in a landfill or simply stockpiled. However, they also feature high-quality components that can be extracted and treated to produce marketable commodities of high value. Tire manufacturers use premium quality raw material to ensure endurance and performance throughout the lifespan of a tire—typically of ~5-7 years. A standard tire composition includes carbon black, silica, natural and synthetic rubber, steel, and fiber. These non-biodegradable components create environmental issues after the tire reaches the end of its useful life and is discarded.

In the US alone, 300M tires are discarded each year, representing 30% of tires discarded globally. According to the US Environmental Protection Agency (EPA), about 80% (or ~240M of 300M collected) of scrap tires are recycled each year in the country, and the remaining 20% are either exported or sent to landfills. In most cases, the end recycled product is not of high value, or the process of producing those low-value products itself is not environmentally friendly. **According to a 2020 study conducted by the Michigan Department of Environment, the focus of the scrap tire industry has been on low-value end products like tire-derived fuels (TDF), tire-derived aggregates (TDA), crumb rubber and rubber modified asphalts, among others, due to limited investment in technology and infrastructure.** (Refer exhibit 15)

Exhibit 14: Tire Components



Source: Tireworks.net

**Exhibit 15: Summary of Scrap Tire End Use Markets and Environmental Impact**

End Use (Output)	Opportunities for Market Growth	Value of Products Created	Environmental Benefit (Compared to Alternative)
Tire Derived Fuel (TDF)	<b>Low:</b> Market is large but declining and unlikely to grow in short to medium term due to low natural gas prices	<b>Low:</b> typically uses chipped, shredded, or whole tires which have low value	<b>Moderate:</b> Impact is less than that of coal or oil but greater than natural gas and renewables
Rubber Modified Asphalt (RMA)	<b>Moderate:</b> Market is currently small. There are significant challenges but potential for rapid growth exists if key decision makers are convinced of benefits	<b>High:</b> Utilizes crumb rubber sized to 20-30 mesh which has a relatively high value	<b>Moderate:</b> LCAs (Life Cycle Assessment) are mixed depending on the study, the process (wet vs. dry mix) and what is considered the base case being replaced by RMA (polymer modified asphalt or regular asphalt)
Playgrounds/ Athletic Fields (GTR)	<b>Low:</b> Market is small and has been growing slowly in recent years following highly publicized claims linking crumb rubber in athletic fields to cancer	<b>High:</b> Utilizes crumb rubber sized to 10-20 mesh which has a relatively high value	<b>High:</b> LCAs indicate significant environmental benefits compared to virgin synthetic rubber. Numerous studies indicate that toxic compounds that may be present are not bio-accessible and are unlikely to leach toxins into the environment
Backfill/Civil Engineering (TDA)	<b>Moderate:</b> This is currently a very small and mostly unknown market, but could grow with expanded education campaign	<b>Low:</b> Relies on chipped and shredded tires which has a relatively low value	<b>High:</b> Comparative LCAs show significant benefits compared to use of sand and gravel
Molded and Extruded Products (both GTR and MRP)	<b>Low:</b> Markets where it is easy to use recycled tire rubber are largely saturated. Expanding to new markets takes time and required investment in R&D	<b>High:</b> Relies on fine crumb rubber which has a high market value.	<b>High:</b> Numerous LCAs show positive environmental benefits across a wide range of environmental impact areas
Pyrolysis (rCB)	<b>High:</b> Plateauing supply and increasing demand of resources should make pyrolysis technologies profitable	<b>High:</b> Primary outputs include oil and gases used as fuels and carbon black, which have relatively high market values	<b>High:</b> Generates clean burning fuels once impurities are separated, and eliminates the need for combustion to create new carbon black

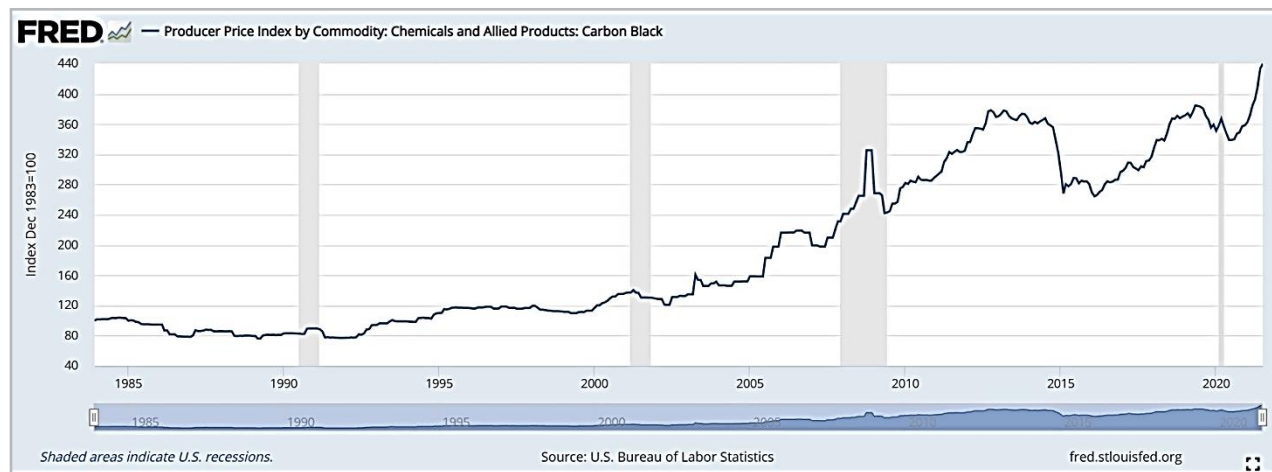
Source: Volt Strategic Research, Scrap Tire Market Development Study, Michigan.gov, January 2020



The Michigan Department of Environment study highlights that ~40% of the total tires collected are burned to extract only fuel. The incineration process produces outputs of a low-quality and a low-value tire-derived fuel (TDF) and tire-derived additive (TDA) with a market value of ~US\$30/tons.

In contrast, rCB is a valuable commodity that can be used in applications like manufacturing new tires, plastics, coatings, and ink & paints, among others. In North America, a metric ton of virgin N351 carbon black costs more than US\$1,600<sup>5</sup>, and the prices have steadily risen in 2021, increasing 30% y/y or 21% YTD. Demand for rCB is driven by the post-COVID-19 recovery of the automotive sector in the North American region and the rise in the raw material prices (like hydrocarbon fuels) used in manufacturing carbon black. **We expect a steady rise in the vCB prices in the short term. In the medium-to-long term, we see preference shifting towards alternative materials like rCB, silica and even moss in some cases as the technologies evolve and simply because supply of vCB is plateauing.**

**Exhibit 16: Carbon Black PPI**

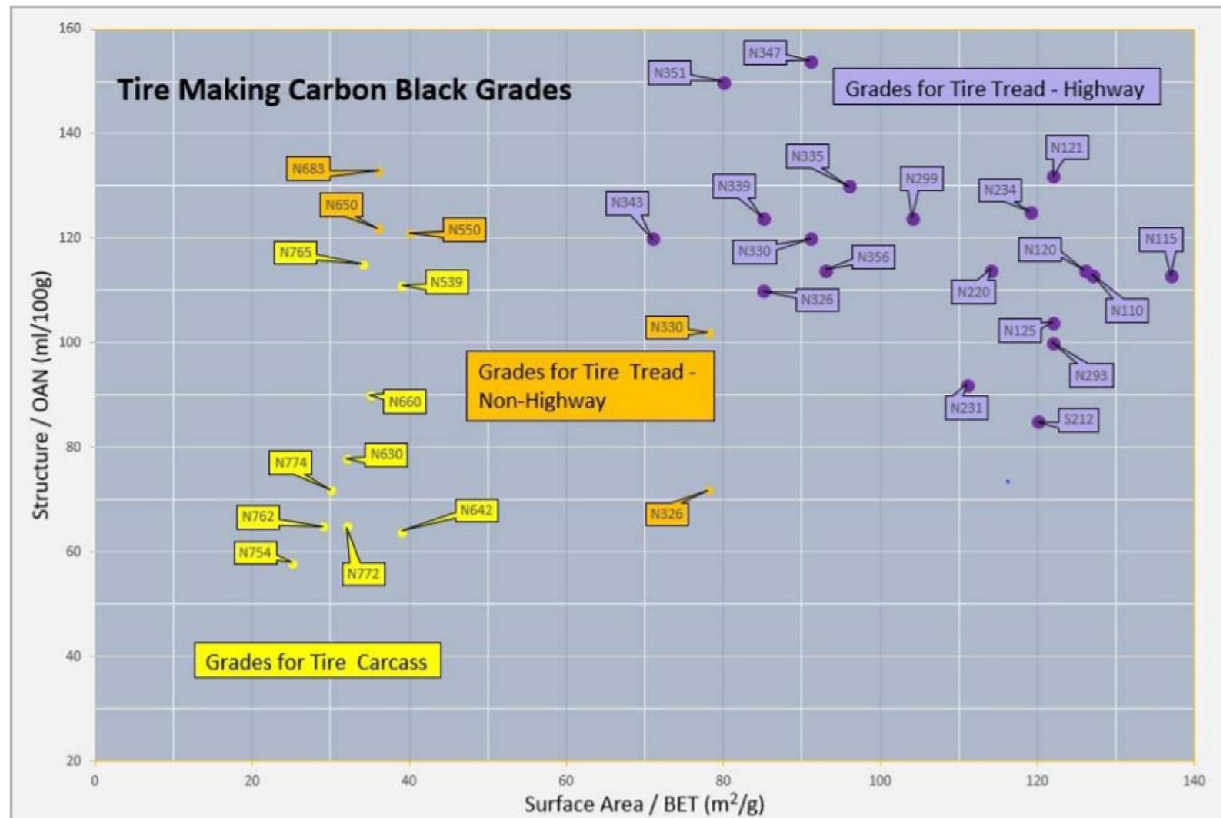


Source: US FRED

**Ecolomondo's reactors produce rCB that is N660 (used for general purposes) equivalent of vCB. American Society for Testing and Materials classifies vCB based on particle size, nitrogen surface area, porosity, and structure that determines the usage of the carbon black. (Exhibit below)**

<sup>5</sup> <https://www.chemanalyst.com/Pricing-data/carbon-black-42>

**Exhibit 17: vCB Grades and use-case**



Source: G3C Technologies Corporation

## PARTNERSHIPS AND TREND TOWARDS THE USE OF VIRGIN CARBON BLACK (VCB) ALTERNATIVES

Typically, the production of rCB produces ~80-90% less CO<sub>2</sub> emission than vCB. Michelin (ENXTPA:ML) aims to have all its tires produced 100% with sustainable materials by 2050. In line with this commitment, the company showcased a track tire in June 2021 that was 46% made with sustainable materials, mainly natural rubber and rCB. The company has a strategic partnership and holds a 20% interest in Scandinavian Enviro Systems (O.M.: SES), an ELT processing company. Another top tire manufacturer, Bridgestone Corporation (TSE:5108), has announced that using 100% sustainable materials by 2050 would cut the company's CO<sub>2</sub> emission by half. In its 2020-2021 Sustainability Report, the company said that it used 1,200 metric tons of rCB from Delta-Energy Group LLC (private co.), resulting in CO<sub>2</sub> emission reduction of 1,900 metric tons and use of 380K end-of-life tires. Bridgestone is looking to increase the annual use of rCB to 6,800 metric tons to reduce CO<sub>2</sub> emissions by 10,800 metric tons. The company sources its rCB from Delta-Energy Group LLC, in which it is an early-stage minority investor. **Assuming an average tire weight of 20 lbs, ~32% of Delta-Energy's processed output is rCB, compared to 38-40% for Ecolomondo's plants.**

Pirelli (BIT: PIRC) has taken a different approach to focus on the increased use of renewable materials like natural rubber and discarded rice husk silica. Its target is to use 40% renewable materials and 3% recycled materials by 2025, and 60% renewable materials, 7% recycled materials and under 30% use of fossil fuel-derived material by 2030. The company has already replaced 30% of its tire material with renewable and recycled material. It uses natural rubber and discarded rice husk silica in the tires, and it plans to increase the use of rCB, powder and regenerated de-vulcanized rubber as the technology for extracting these materials advances. Similarly, The Goodyear Tire and Rubber Company (NasdaqGS: G.T.) has successfully integrated rice husk ash (RHA) silica in its tires and is expected to double the consumption in 2021. *“The addition of silica enhances a tire tread’s flexibility and elasticity at lower temperatures, which gives better traction and grip. Goodyear has also found that silica improves tires’ rolling resistance when compared to carbon black. The resulting lower rolling resistance also allows for enhanced vehicle fuel economy and wet weather tire performance.”* (Source: Goodyear, Nov. 10, 2020, article)

## RECOVERED CARBON BLACK (RCB)

Smithers<sup>6</sup> reported that the market demand for carbon black was at ~15M tons in 2018, with expectations to reach ~18.0M tons in 2023. A separate report from Research and Markets<sup>7</sup> suggests global carbon black production in 2018-2019 to be around 13.3M tons, highlighting a gap in the demand and the supply. **With steady growth in the demand for consumer and industrial products, we expect the gap to further widen as vCB production plateaus. This in turn supports carbon black prices and the use of rCB as a replacement raw material. Quince Market Insights reported carbon black to be at US\$17.2B in the 2020. Assuming a conservative average of 20% substitution rate, the rCB market can be expected to reach US\$3-4B in the near future.**

The tire industry represents 70% of carbon black demand, with 20% from non-tire rubber industry and 10% from the paint, ink, toner, plastic, and coatings industry.<sup>8</sup> Carbon black is extensively used in the paints and plastics industry as a jet-black colorant and adds strength owing to its reinforcement properties, making U.V. resistant plastics and anti-static treatments. **ECM is targeting this segment with a significant potential to serve the market with a high-quality product at a reasonable price—an opportunity to offer high quality rCB at a cheaper price than that of vCB. Chemically, rCB is similar to vCB but has impurities like ash, hydrocarbons, and some residues. Over the last 25 years, ECM has spent considerable resources to crack the code of producing high-quality and consistent rCB.**

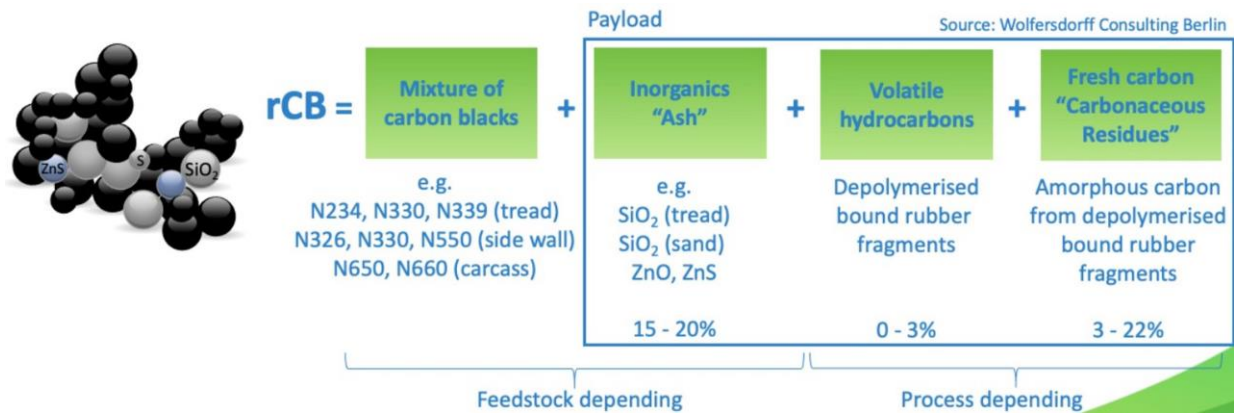
The use of rCB prevents direct burning of hydrocarbon to produce carbon black and can easily replace vCB in certain applications. TDP produces oil as an output that can be used as an alternative to crude oil and related oil products. Just to put things in perspective, as per market estimates, ~1.5-2.0 kgs of crude oil is needed to produce 1 kg of vCB. At full capacity, Hawkesbury facility produces 5,750 tons (41.3% of 14,000 tons annual capacity) of rCB each year. The production of similar amount of vCB would consume 8,600-11,500 tons (or 5.4-7.2 million gallon) of crude oil, thus releasing a significant amount of CO<sub>2</sub> in the atmosphere. ECM estimates that the use of rCB reduces carbon emission by over 90% compared to vCB.

<sup>6</sup> <https://www.smithers.com/services/market-reports/materials/the-future-of-carbon-black-to-2023>

<sup>7</sup> <https://www.businesswire.com/news/home/20200326005520/en/Global-Carbon-Black-Market-Growth-Trends-Forecast-2020-2025---ResearchAndMarkets.com>

<sup>8</sup> Weibold Academy

**Exhibit 18: Composition of rCB**



Source: Wolfersdorf Consulting

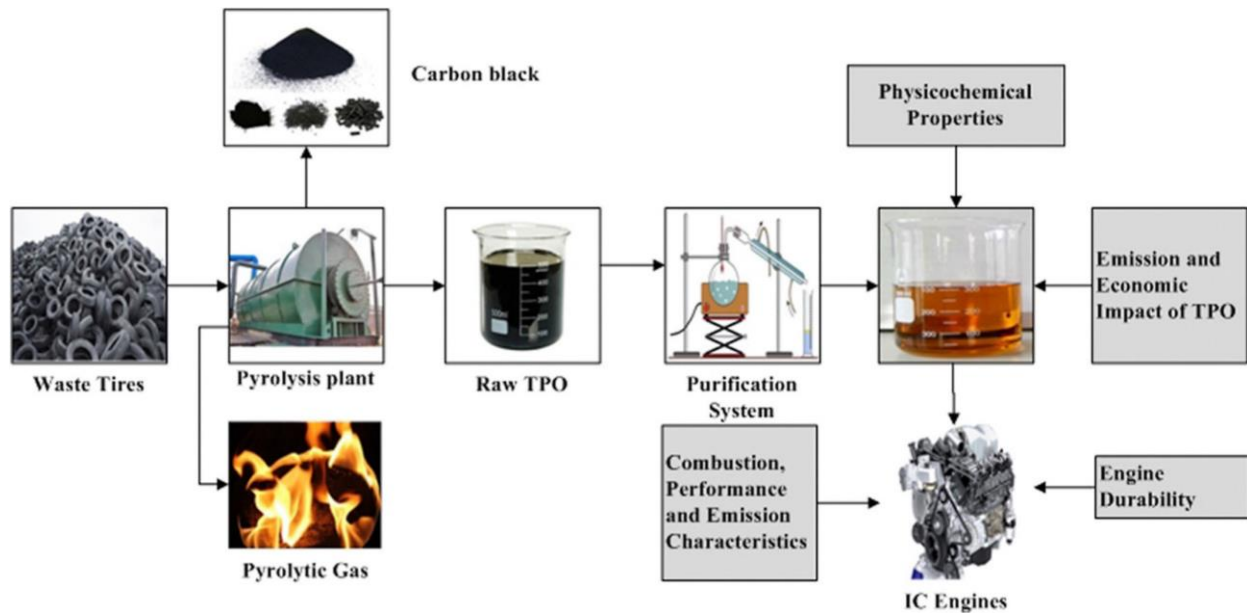
Carbon Black Trading represents a potential revenue stream for Ecolomondo. We foresee the Company partnering with tire manufacturers in the future as it successfully enters the commercialization stage with its Hawkesbury plant and then scales with more plants in different locations.

### TIRE PYROLYSIS OIL (TPO)

In Europe, BASF SE (XTRA:BAS), a global chemical company, has invested €16M in Pyrum Innovations AG (private co.) to support the expansion and the roll-out of Pyrum's tire pyrolysis technology. BASF plans to consume most of the pyrolytic oil produced at the 10K-ton used tire processing facility (expected to be expanded in 2022). BASF has indicated the capability to consume 100K tons of pyrolysis oil. With the increase in the prices of traditional fossil fuels and their impact on the environment, demand for tire pyrolysis oil has gained a lot of attention recently as an alternative energy fuel due to similar physiochemical properties. We expect the market growth to continue in the US and Canada because of growth in the industrial diesel engines and industrial boilers industry, the overall expansion in the energy and power market. New markets are being continually found in the petrochemical industry, to be used as and in dilutants, and to be mixed in other fuels.

**Ecolomondo has a considerable advantage in the marketplace with the ability to refine tire pyrolysis oil in the facility because of its superior quality and because it is a ready-to-use product. With annual capacity to produce 43,000+ bbl oil and derived products at the Hawkesbury two-reactor facility, the Company is in a favorable position to attract well-positioned strategic alliances.**

**Exhibit 19: TPO Process**



Source: *Potential of tire pyrolysis oil as an alternate fuel for diesel engines: A review, Journal of the Energy Institute, June 2021*

Steel and other metals are also extracted from ELTs as a part of the preparation process for pyrolysis. As discussed before, very high-quality raw materials are used to produce a commercial tire for its last 5-7 years of continued rugged use. At full capacity, Ecolomondo’s Hawkesbury plant can produce ~2,500 tons of #2 Busheling Scrap steel<sup>9</sup>, which represents a ~\$0.5M+ annual revenue opportunity at a conservative price estimate of \$220/ton.

<sup>9</sup> #1 and #2 Busheling is a high grade of industrial scrap metal. Ferrous scrap metal is classified in two ways: by thickness and length. “#1” refers to scrap greater than 1/4 inch thick while “#2” is less than 1/4 inch thick. Scrap metal that is greater than 4 feet in length is referred to as “oversized” while material less than 4 feet is called “prepared”.  
Source: <http://cacre recycling.com/scrap-metal/>

North America, US East Coast: US\$ 255 per Lb; US Midwest, West Coast: US\$ 255 per Lb  
Source: <https://www.scrapmonster.com/scrap/1-busheling-scrap/59>

## APPENDIX 1: COMPETITOR PROFILING

Company Name	Ticker	Description
Scandinavian Enviro Systems AB (publ)	OM:SES	Scandinavian Enviro Systems AB (publ), develops, constructs, owns, and operates plants for material recovery of resources from used tires worldwide. The company's plants and circular materials include carbon black, oil, steel, and gas for general rubber and rubber membrane applications. It offers recycled materials; plants and components; and consulting services for design, training, installation, maintenance, etc. for plants. The company was incorporated in 2001 and is headquartered in Gothenburg, Sweden.
Environmental Waste International Inc.	TSXV:EWS	Environmental Waste International Inc., together with its subsidiaries, designs and develops environmental products for waste treatment and disposal in Canada and the United States. It researches, designs, develops, sells, and maintains systems based on the patented Reverse Polymerization process and related delivery system. The company provides systems for feed tire reduction, biological wastewater sterilization, shipboard food waste sterilization/dehydration, and batch-based infectious medical waste sterilization. Its tire system breaks the molecular bonds in tires and other rubber products and reduces them to their base components of carbon black, steel, and hydrocarbon vapors. The company also offers FS-6000 and FS-POD biocontainment and wastewater sterilization units; MD-1000, a three-stage, three chamber, medical waste reduction unit that produces a sterilized carbon residue; and AW-1000 to process and reduce animal waste into its constituents. Environmental Waste International Inc. was incorporated in 1987 and is headquartered in Whitby, Canada.
Lead Innovation Corporation	OTCPK:LEIC	Lead Innovation Corporation engages in off the road tire pyrolysis processing business. It collects and processes oversize off road tires, such as large mining trucks and agricultural vehicles tires into component parts comprising pyrolysis oil, syngas, carbon black, and steel, as well as sells these component parts to petroleum product manufacturers and rubber blenders. The company was formerly known as Hitec Corp. and changed its name to Lead Innovation Corporation in February 2018. Lead Innovation Corporation is headquartered in Jefferson City, Missouri.
Amanasu Environment Corporation	OTCPK:AMSU	Amanasu Environment Corporation, a development stage company, engages in the research and development, marketing, and sale of environmental technologies. It provides Amanasu Furnace, a technology that disposes toxic and hazardous wastes through a high temperature combustion system; hot water boiler technology, which incinerates waste tires in a non-polluting manner and extracts heat energy from the incineration process; and ring-tube desalination methodology that purifies seawater and removes hazardous pollutants from wastewater. The company was formerly known as Amanasu Energy Corporation and changed its name to Amanasu Environment Corporation in November 2002. The company was incorporated in 1999 and is headquartered in New York, New York. Amanasu Environment Corporation is a subsidiary of Amanasu Corporation.
Green EnviroTech Holdings Corp.	OTCPK:GETH	Green EnviroTech Holdings Corp. operates as a plastics recovery, separation, cleaning, and recycling company. The company transforms unusable scrap tires into various end products, such as carbon black, oil, and steel. It also offers Generation One, which produces a blend stock oil, char/carbon, and steel. The company was founded in 2008 and is based in Jamestown, California.
Bolder Industries	Private	Bolder Industries processes and produces tire-derived carbon black materials. Bolder Industries was formerly known as Waste to Energy Partners, LLC. The company was founded in 2011 and is headquartered in Boulder, Colorado.
Delta-Energy	Private	Delta Energy Inc operates as a resource recovery company. The Company provides alternative, higher value solutions for tire recycling. Delta Energy Inc is based in Ohio.
Black Bear Carbon Black	Private	Black Bear Carbon BV engages in the conversion of waste/end-of-life tires into carbon black and green energy in the Netherlands and internationally. Its carbon black is used for various applications, including tires, technical rubber products, plastics, and paint and ink. The company uses its electricity to power the local operations (tire shredding), as well as delivers to nearby industries or grids. Black Bear Carbon BV was founded in 2010 and is based in Nederweert, the Netherlands.
Integrated Resource Recovery, Inc.	Private	Integrated Resource Recovery, Inc. manufactures performance materials from waste tires. It develops IRR Black which is used in many applications where conventional carbon black is used for reinforcing and tinting, primarily in the rubber and plastics markets. The is used across multiple industries including automotive, construction, agriculture, electronics, and industrial segments such as equipment, motors, and HVAC. Integrated Resource Recovery, Inc. was incorporated in 2005 and is headquartered in San Mateo, California.
Smart Tire Recycling, Inc.	Private	Smart Tire Recycling, Inc. recycles scrap tire rubber into carbon black and oil. The company's product Carbon black is used as reinforcer in tires, filler in rubber products, and pigment in inks and plastic products. Its product Oils is used for heating or as blending oil with recyclers. The company was founded in 2014 and is based in Pittsburgh, Pennsylvania.
Waverly Carbon Ltd	Private	Waverly Carbon Ltd produces recovered Carbon Black (rCB). The company's products include Waverly rCBp, and Waverly rCBg. The company serves pyrolysis operators, and companies. Waverly Carbon Ltd was formerly known as T2CB Ltd. The company was incorporated in 2011 and is based in Melton Mowbray, United Kingdom.
Pyrum Innovations AG	Private	Pyrum Innovations AG develops, builds, and operates recycling systems. The company was founded in 2007 and is based in Dillingen, Germany.

Source: CapIQ, Bloomberg, Volt Strategic Research



**ECM Comps:**

Company	Local Currency	Price (Local Currency)	Price (C\$)	S/O - Diluted	Market Cap. (C\$)	EV (C\$)	Cash	Net Debt	FY2021	FY2022	FY2023	FY2024	FY2025	FY2021	FY2022	FY2023	FY2024	FY2025
									EV/Sales					EV/EBITDA				
<b>Tire Recyclers</b>																		
Ecolomondo Corporation	CAD	\$1.16	\$1.16	198.7	212.8	237.9	8.9	7.4	346.8x	31.0x	12.5x	3.0x	1.4x	-432.8x	72.1x	29.7x	5.6x	2.6x
Scandinavian Enviro Systems AB (publ)	SEK	\$1.87	\$0.27	590.8	160.5	155.1	5.7	-5.4	27.2x	25.9x	6.4x	NA	NA	-4.1x	-3.8x	-5.9x	NA	NA
Environmental Waste International Inc.	CAD	\$0.14	\$0.14	266.7	34.9	37.3	0.4	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead Innovation Corporation	USD	\$0.20	\$0.25	155.4	39.3	39.4	0.0	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Amanasu Environment Corporation	USD	\$0.07	\$0.08	44.1	3.7	4.3	0.0	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Green EnviroTech Holdings Corp.	USD	\$0.00	\$0.00	3.1	0.0	3.6	0.0	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Average</b>					<b>47.7</b>	<b>48.0</b>			<b>27.2x</b>	<b>25.9x</b>	<b>6.4x</b>	<b>NA</b>	<b>NA</b>	<b>-4.1x</b>	<b>-3.8x</b>	<b>-5.9x</b>	<b>NA</b>	<b>NA</b>
<b>Waste to Energy - North America</b>																		
Ecolomondo Corporation	CAD	\$1.16	\$1.16	198.7	212.8	237.9	8.9	7.4	346.8x	31.0x	12.5x	3.0x	1.4x	-432.8x	72.1x	29.7x	5.6x	2.6x
PyroGenesis Canada Inc.	CAD	\$5.25	\$5.25	177.9	878.8	921.0	18.1	-12.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cielo Waste Solutions Corp.	CAD	\$0.49	\$0.49	673.4	316.3	311.2	17.2	-15.4	32.4x	15.6x	11.9x	NA	NA	129.6x	34.6x	23.9x	NA	NA
Environmental Waste International Inc.	CAD	\$0.14	\$0.14	266.7	34.9	37.3	0.4	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aduro Clean Technologies Inc.	CAD	\$0.88	\$0.88	48.7	30.5	43.7	0.0	0.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Garb Oil & Power Corporation	USD	\$0.00	\$0.00	47,497.6	0.0	5.2	0.0	5.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead Innovation Corporation	USD	\$0.20	\$0.25	155.4	39.3	39.4	0.0	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Green EnviroTech Holdings Corp.	USD	\$0.00	\$0.00	3.1	0.0	3.6	0.0	3.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Average</b>					<b>185.7</b>	<b>194.5</b>			<b>32.4x</b>	<b>15.6x</b>	<b>11.9x</b>	<b>NA</b>	<b>NA</b>	<b>129.6x</b>	<b>34.6x</b>	<b>23.9x</b>	<b>NA</b>	<b>NA</b>
<b>Waste to Energy - Europe</b>																		
Scandinavian Enviro Systems AB (publ)	SEK	\$1.87	\$0.27	590.8	160.5	155.1	5.7	-5.4	27.2x	25.9x	6.4x	NA	NA	-4.1x	-3.8x	-5.9x	NA	NA
Groupe Pizzorno Environnement	EUR	\$24.60	\$36.40	3.9	140.5	266.4	29.6	125.9	1.3x	1.3x	1.3x	NA	NA	NA	NA	NA	NA	NA
Pryme B.V.	NOK	\$34.00	\$5.00	15.0	75.0	75.0	0.0	0.0	NA	8.9x	4.9x	0.8x	NA	-18.3x	60.9x	12.4x	1.6x	NA
Griñó Ecologic, S.A.	EUR	\$2.16	\$3.20	30.4	97.1	114.4	2.5	17.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ecoslops S.A.	EUR	\$10.05	\$14.87	4.4	65.9	95.0	12.4	29.0	7.0x	3.6x	2.5x	NA	NA	-127.3x	12.0x	6.8x	NA	NA
Europlasma S.A.	EUR	\$0.37	\$0.55	37.8	20.6	26.1	6.5	5.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ATON-HT S.A.	PLN	\$0.25	\$0.08	19.7	1.6	2.8	0.0	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Average</b>					<b>80.2</b>	<b>105.0</b>			<b>11.9x</b>	<b>9.9x</b>	<b>3.8x</b>	<b>0.8x</b>	<b>NA</b>	<b>-49.9x</b>	<b>23.0x</b>	<b>4.4x</b>	<b>1.6x</b>	<b>NA</b>

Source: CapIQ, Volt Strategic Research



## APPENDIX 2: ECM – FINANCIAL STATEMENTS AND FORECAST

Ecolomondo Corp. (ECM-TSXV) Year ending December 31 (C\$ '000)	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
<b>Income statement</b>								
<b>Revenue</b>	<b>0.0</b>	<b>0.0</b>	<b>686.0</b>	<b>7,686.2</b>	<b>19,014.1</b>	<b>78,976.4</b>	<b>170,902.2</b>	<b>328,818.0</b>
COGS	0.0	0.0	194.4	2,101.5	5,233.4	21,118.8	43,962.2	83,814.3
<b>Gross profit</b>	<b>0.0</b>	<b>0.0</b>	<b>491.6</b>	<b>5,584.7</b>	<b>13,780.7</b>	<b>57,857.6</b>	<b>126,940.0</b>	<b>245,003.8</b>
<b>Gross margin (%)</b>	<b>NM</b>	<b>NM</b>	<b>71.7%</b>	<b>72.7%</b>	<b>72.5%</b>	<b>73.3%</b>	<b>74.3%</b>	<b>74.5%</b>
General and administrative expenses	393.1	1,098.6	461.1	334.1	859.9	2,088.7	4,551.9	8,207.4
Operating, research and development expenses	126.2	41.4	414.4	1,700.1	3,954.9	10,747.1	23,771.5	44,785.6
Salaries and other short-term benefits	242.3	151.4	73.9	222.8	953.9	2,663.6	6,108.6	11,091.4
Rent to companies under common control	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stock-based compensation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depreciation and amortization	746.7	701.6	1,095.1	2,517.4	6,259.8	18,723.0	37,730.6	68,718.4
<b>Total operating expenses</b>	<b>1,528.4</b>	<b>1,993.0</b>	<b>2,136.4</b>	<b>4,802.6</b>	<b>12,037.4</b>	<b>34,225.3</b>	<b>72,163.4</b>	<b>132,803.1</b>
<b>Operating Income</b>	<b>-1,528.4</b>	<b>-1,993.0</b>	<b>-1,644.8</b>	<b>782.2</b>	<b>1,743.3</b>	<b>23,632.4</b>	<b>54,776.5</b>	<b>112,200.7</b>
<b>EBITDA</b>	<b>-781.7</b>	<b>-1,291.5</b>	<b>-549.8</b>	<b>3,299.6</b>	<b>8,003.1</b>	<b>42,355.4</b>	<b>92,507.1</b>	<b>180,919.1</b>
EBIT margin %	NM	NM	-239.8%	10.2%	9.2%	29.9%	32.1%	34.1%
EBITDA margin %	NM	NM	-80.1%	42.9%	42.1%	53.6%	54.1%	55.0%
Foreign exchange gain	-110.5	-46.7	-94.2	0.0	0.0	0.0	0.0	0.0
Investment tax credits	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest on lease liabilities	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0
Financial expenses	1.2	68.6	948.9	2,962.9	11,523.1	26,022.8	48,740.6	74,818.7
Ancillary Income	-76.6	-98.0	-26.0	0.0	0.0	0.0	0.0	0.0
<b>Non-operating Expenses</b>	<b>-185.9</b>	<b>-76.0</b>	<b>832.7</b>	<b>2,962.9</b>	<b>11,523.1</b>	<b>26,022.8</b>	<b>48,740.6</b>	<b>74,818.7</b>
<b>EBT</b>	<b>-1,342.5</b>	<b>-1,917.0</b>	<b>-2,477.6</b>	<b>-2,180.8</b>	<b>-9,779.8</b>	<b>-2,390.4</b>	<b>6,035.9</b>	<b>37,382.0</b>
Deferred tax	-224.2	-87.6	-72.3	-1,000.0	-3,600.0	-2,600.0	-450.0	0.0
Cash Tax				39.3	0.0	506.2	2,438.4	10,093.1
Implied income tax rate				26.5%				
<b>Net income (losses)</b>	<b>-1,118.3</b>	<b>-1,829.4</b>	<b>-2,405.3</b>	<b>-1,220.1</b>	<b>-6,179.8</b>	<b>-296.6</b>	<b>4,047.5</b>	<b>27,288.9</b>
Weighted average common shares outstanding - basic	177,227.7	177,310.4	180,387.3	197,273.0	216,945.2	242,409.5	264,971.0	274,655.3
Weighted average common shares outstanding - diluted	177,227.7	177,310.4	180,387.3	197,273.0	216,945.2	242,409.5	264,971.0	274,655.3
EPS - basic	-\$0.01	-\$0.01	-\$0.01	-\$0.01	-\$0.03	-\$0.00	\$0.02	\$0.10
EPS - diluted	-\$0.01	-\$0.01	-\$0.01	-\$0.01	-\$0.03	-\$0.00	\$0.02	\$0.10



Ecologomondo Corp. (ECM-TSXV) Year ending December 31 (C\$ '000)	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
<b>Balance Sheet</b>								
<b>Assets</b>								
<b>Current</b>								
Cash	5,331.6	3,806.8	3,241.7	6,812.0	7,630.1	11,220.0	20,456.3	38,381.4
Term deposit	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
Sales taxes receivable	486.5	399.3	423.3	423.3	423.3	423.3	423.3	423.3
Investment tax credits receivable	22.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prepaid expenses	0.0	90.0	0.0	0.0	0.0	0.0	0.0	0.0
Trade receivables	0.0	0.0	266.8	861.8	3,311.6	10,229.5	17,970.3	32,961.5
<b>Total current assets</b>	<b>5,991.0</b>	<b>4,446.1</b>	<b>4,081.8</b>	<b>8,247.2</b>	<b>11,515.1</b>	<b>22,022.9</b>	<b>39,000.0</b>	<b>71,916.2</b>
<b>Non-current assets</b>								
Plant under construction	4,209.4	24,452.4	37,378.4	128,070.1	343,980.8	673,867.4	1,145,868.5	1,654,940.7
Deposit on plant under construction	1,917.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	2,573.4	1,990.3	1,420.2	1,002.8	708.0	499.9	353.0	249.2
Right of use assets	68.3	133.1	41.1	13.0	4.1	1.3	0.4	0.1
<b>Total non-current assets</b>	<b>8,768.4</b>	<b>26,575.8</b>	<b>38,839.8</b>	<b>129,085.9</b>	<b>344,693.0</b>	<b>674,368.6</b>	<b>1,146,221.9</b>	<b>1,655,190.0</b>
<b>Total assets</b>	<b>14,759.4</b>	<b>31,021.9</b>	<b>42,921.6</b>	<b>137,333.1</b>	<b>356,208.1</b>	<b>696,391.5</b>	<b>1,185,221.8</b>	<b>1,727,106.2</b>
<b>Liabilities</b>								
<b>Current</b>								
Accounts payable and accrued liabilities	2,027.3	2,499.5	315.3	525.4	2,223.4	3,359.6	6,811.8	12,090.1
Deferred revenues	1,325.1	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Deposit from a future partner	2,467.7	2,419.1	2,321.6	2,321.6	2,321.6	2,321.6	2,321.6	2,321.6
Current portion of long term debt	20.0	582.0	0.0	0.0	0.0	0.0	0.0	0.0
Current portion of lease liabilities	50.0	50.0	25.0	0.0	0.0	0.0	0.0	0.0
<b>Total current liabilities</b>	<b>5,890.1</b>	<b>6,550.5</b>	<b>3,661.9</b>	<b>3,847.0</b>	<b>5,545.0</b>	<b>6,681.2</b>	<b>10,133.4</b>	<b>15,411.7</b>
<b>Non-current Liabilities</b>								
Advance from a company under common control	1,518.9	1,518.9	1,518.9	1,518.9	1,518.9	1,518.9	1,518.9	1,518.9
Long term debt	5,017.8	21,727.5	31,369.4	105,738.8	285,095.6	554,439.5	933,770.2	1,333,087.4
Lease liabilities	19.7	87.8	26.3	26.3	26.3	26.3	26.3	26.3
Deferred income taxes	557.0	469.4	397.1	397.1	397.1	397.1	397.1	397.1
<b>Total non-current liabilities</b>	<b>7,113.3</b>	<b>23,803.6</b>	<b>33,311.6</b>	<b>107,681.1</b>	<b>287,037.9</b>	<b>556,381.7</b>	<b>935,712.4</b>	<b>1,335,029.7</b>
<b>Total liabilities</b>	<b>13,003.4</b>	<b>30,354.1</b>	<b>36,973.4</b>	<b>111,528.1</b>	<b>292,582.9</b>	<b>563,063.0</b>	<b>945,845.8</b>	<b>1,350,441.3</b>
<b>Equity</b>								
Common shares	17,195.2	17,195.2	24,880.8	45,957.7	89,957.7	159,957.7	261,957.7	371,957.7
Options	4,045.1	4,786.4	3,817.4	3,817.4	3,817.4	3,817.4	3,817.4	3,817.4
Warrants	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Accumulated deficit	-19,484.3	-21,313.8	-22,750.1	-23,970.1	-30,149.9	-30,446.5	-26,399.1	889.8
<b>Total equity</b>	<b>1,756.0</b>	<b>667.8</b>	<b>5,948.1</b>	<b>25,805.0</b>	<b>63,625.2</b>	<b>133,328.5</b>	<b>239,376.0</b>	<b>376,664.9</b>
<b>Total liabilities and equity</b>	<b>14,759.4</b>	<b>31,021.9</b>	<b>42,921.6</b>	<b>137,333.1</b>	<b>356,208.1</b>	<b>696,391.5</b>	<b>1,185,221.8</b>	<b>1,727,106.2</b>
<b>Check</b>	<b>0.0</b>	<b>0.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Source: Company Filings, Volt Strategic Research

Ecolomondo Corp. (ECM-TSXV) Year ending December 31 (C\$ '000)	2019	2020	2021E	2022E	2023E	2024E	2025E	2026E
<b>Cash flow Statement</b>								
<b>Net loss</b>	-1,118.3	-1,829.4	-2,405.3	-1,220.1	-6,179.8	-296.6	4,047.5	27,288.9
<b>Non-cash items:</b>	<b>522.5</b>	<b>1,313.4</b>	<b>1,017.3</b>	<b>2,545.6</b>	<b>6,268.7</b>	<b>18,725.9</b>	<b>37,731.5</b>	<b>68,718.7</b>
Government assistance	0.0	-46.6	0.0	0.0	0.0	0.0	0.0	0.0
Unrealized foreign exchange gain	0.0	-48.6	-97.5	0.0	0.0	0.0	0.0	0.0
Depreciation of equipment	581.4	583.1	570.1	417.4	294.7	208.1	146.9	103.7
Depreciation of plants			525.0	2,100.0	5,965.1	18,514.9	37,583.6	68,614.7
Depreciation of right of use assets	95.1	118.4	92.0	28.1	8.9	2.8	0.9	0.3
Amortization of intangible assets	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Amortization of debt transaction costs	0.0	53.4	0.0	0.0	0.0	0.0	0.0	0.0
Stock based compensation	0.0	741.3	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income taxes	-224.2	-87.6	-72.3	0.0	0.0	0.0	0.0	0.0
<b>Changes in working capital items</b>	<b>-441.5</b>	<b>-1,418.8</b>	<b>-1,884.2</b>	<b>-384.9</b>	<b>-751.9</b>	<b>-5,781.7</b>	<b>-4,288.6</b>	<b>-9,712.8</b>
Receivables	-382.9	87.2	-290.8	-595.0	-2,449.9	-6,917.9	-7,740.8	-14,991.2
Investment tax credits receivable	33.9	22.9	0.0	0.0	0.0	0.0	0.0	0.0
Prepaid expenses	4.4	-90.0	90.0	0.0	0.0	0.0	0.0	0.0
Accounts payable and accrued liabilities	-81.0	-1,113.8	-1,683.4	210.1	1,698.0	1,136.2	3,452.2	5,278.3
Deferred revenue	-15.9	-325.1	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net cash from (used) operating activities</b>	<b>-1,031.0</b>	<b>-1,919.7</b>	<b>-3,272.2</b>	<b>940.6</b>	<b>-663.0</b>	<b>12,647.5</b>	<b>37,490.3</b>	<b>86,294.7</b>
<b>Investing Activities</b>								
Investments in term deposits	-150.0	-150.0	0.0	0.0	0.0	0.0	0.0	0.0
Disposal of term deposits	2,349.4	150.0	0.0	0.0	0.0	0.0	0.0	0.0
Plant under construction	-3,383.8	-16,739.7	-13,951.8	-92,791.7	-221,875.8	-348,401.5	-509,584.7	-577,686.9
Acquisition of equipment	-4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net cash used for investing activities</b>	<b>-1,188.8</b>	<b>-16,739.7</b>	<b>-13,951.8</b>	<b>-92,791.7</b>	<b>-221,875.8</b>	<b>-348,401.5</b>	<b>-509,584.7</b>	<b>-577,686.9</b>
<b>Financing Activities</b>								
Deposit from a future partner	2,467.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proceeds from equity financing			3,600.0	18,000.0	44,000.0	70,000.0	102,000.0	110,000.0
Long term debt	4,857.8	17,285.0	9,059.8	75,000.0	180,000.0	270,000.0	380,000.0	400,000.0
Repayment of long term debt	-20.0	-20.0	0.0	-630.5	-643.2	-656.1	-669.3	-682.8
Repayment of lease liabilities	-93.7	-115.2	-86.5	-25.0	0.0	0.0	0.0	0.0
Proceeds from exercise of options/warrants	38.1	0.0	4,085.6	3,076.9	0.0	0.0	0.0	0.0
<b>Net cash provided by financing activities</b>	<b>7,243.5</b>	<b>17,134.6</b>	<b>16,658.9</b>	<b>95,421.4</b>	<b>223,356.8</b>	<b>339,343.9</b>	<b>481,330.7</b>	<b>509,317.2</b>
<b>Net increase (decrease) in cash</b>	<b>5,023.8</b>	<b>-1,524.8</b>	<b>-565.1</b>	<b>3,570.4</b>	<b>818.1</b>	<b>3,589.9</b>	<b>9,236.3</b>	<b>17,925.1</b>
<b>Cash, beginning of year</b>	<b>307.8</b>	<b>5,331.6</b>	<b>3,806.8</b>	<b>3,241.7</b>	<b>6,812.0</b>	<b>7,630.1</b>	<b>11,220.0</b>	<b>20,456.3</b>
<b>Cash, end of year</b>	<b>5,331.6</b>	<b>3,806.8</b>	<b>3,241.7</b>	<b>6,812.0</b>	<b>7,630.1</b>	<b>11,220.0</b>	<b>20,456.3</b>	<b>38,381.4</b>
Check	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company Filings, Volt Strategic Research

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