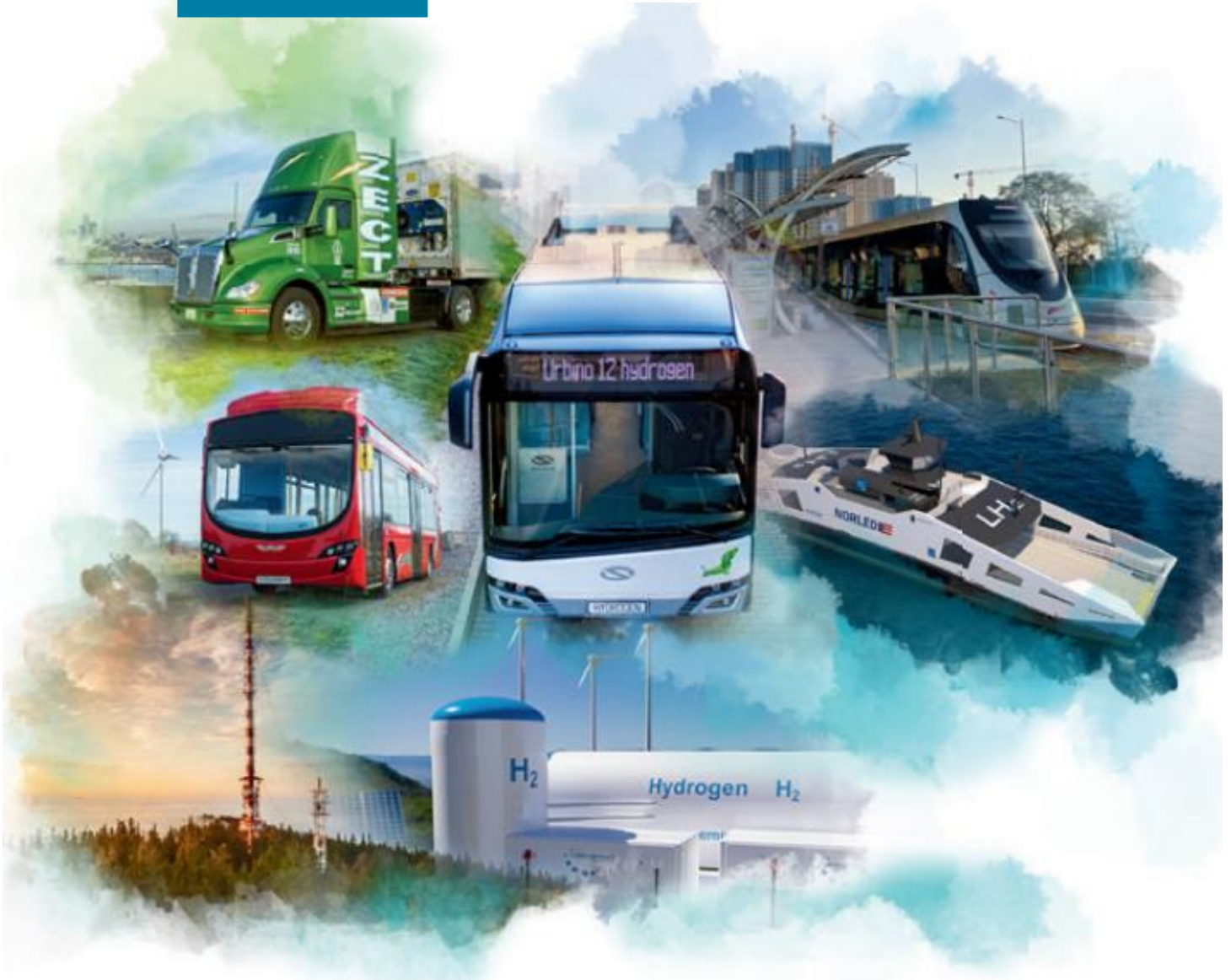




**BALLARD POWER SYSTEMS INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS
FOURTH QUARTER AND FISCAL YEAR 2021**



FUEL CELL
POWER FOR A
SUSTAINABLE
PLANET

CAUTION REGARDING FORWARD-LOOKING STATEMENTS

This document contains forward-looking statements about expected events and the financial and operating performance of Ballard Power Systems Inc. ("Ballard", "the Company", "we", "us" or "our"). Forward-looking statements include any statements that do not refer to historical facts. Forward-looking statements are based on the beliefs of management and reflect our current expectations as contemplated under the safe harbor provisions of Section 21E of the United States Securities Exchange Act of 1934, as amended. Such statements include, but are not limited to, statements related to the expected or potential impact of the novel coronavirus ("COVID-19") pandemic, and the related responses of the government, our customers and partners, joint venture operations and suppliers, on our business, financial condition and results of operations; and statements with respect to our objectives, goals, liquidity, sources of capital and our outlook including our estimated revenue and gross margins, cash flow from operations, Cash Operating Costs, EBITDA and Adjusted EBITDA (see Non-GAAP Measures), order backlog, order book of expected deliveries over the subsequent 12-months, future product costs and selling prices, future product sales and production volumes, expenses / costs, contributions and cash requirements to and from joint venture operations, our strategy, the markets for our products, and research and development activities, as well as statements with respect to our beliefs, plans, objectives, expectations, anticipations, estimates and intentions. Words such as "estimate", "project", "believe", "anticipate", "intend", "expect", "plan", "predict", "may", "should", "will", the negatives of these words or other variations thereof and comparable terminology are intended to identify forward-looking statements. These statements are not guarantees of future performance and involve assumptions, risks and uncertainties that are difficult to predict. In particular, these forward-looking statements are based on certain factors and assumptions relating to our expectations with respect to new and existing customer and partner relationships, the generation of new sales, producing, delivering, and selling the expected product and service volumes at the expected prices and controlling our costs. They are also based on a variety of general factors and assumptions including, but not limited to, our expectations regarding technology and product development efforts, manufacturing capacity and cost, product and service pricing, market demand, and the availability and prices of raw materials, labour, and supplies. These assumptions have been derived from information available to the Company including information obtained by the Company from third parties. These assumptions may prove to be incorrect in whole or in part. In addition, actual results may differ materially from those expressed, implied, or forecasted in such forward-looking statements. Factors that could cause our actual results or outcomes to differ materially from the results expressed, implied or forecasted in such forward-looking statements include, but are not limited to: the severity, magnitude and duration of the COVID-19 pandemic, including impacts of the pandemic and of businesses' and governments' responses to the pandemic on our operations, personnel and joint venture operations, and on commercial activity and demand across our and our customers', partners' and joint venture businesses, and on global supply chains; global economic trends and geopolitical risks, including changes in the rates of investment, inflation or economic growth in our key markets, or an escalation of trade tensions such as those between the U.S. and China; market developments or customer actions (including developments and actions arising from the COVID-19 pandemic) that may affect levels of demand and/or the financial performance of the major industries and customers we serve, such as secular, cyclical and competitive pressures in the bus, truck, rail and marine sectors; the rate of mass adoption of our products or related ecosystem, including the availability of cost-effective hydrogen; changes in product or service pricing or cost; changes in our customers' requirements, the competitive environment and/or related market conditions; the relative strength of the value proposition that we offer our customers with our products or services; changes in competitive technologies, including battery and fuel cell technologies; product safety, liability or warranty issues; challenges or delays in our technology and product development activities; changes in the availability or price of raw materials, labour, supplies and shipping; our ability to attract and retain business partners, suppliers, employees and customers; changing government or environmental regulations, including subsidies or incentives associated with the adoption of clean energy products, including hydrogen and fuel cells; our access to funding and our ability to provide the capital required for product development, operations and marketing efforts, working capital requirements, and joint venture capital contributions; our ability to protect our intellectual property; our ability to extract value from joint venture operations; currency fluctuations, including the magnitude of the rate of change of the Canadian dollar versus the U.S. dollar; potential merger and acquisition activities, including risks related to integration, loss of key personnel, disruptions to operations, costs of integration, and the integration failing to achieve the expected benefits of the transaction; the general assumption that none of the risks identified in the Risks and Uncertainties section of this document or in our most recent Annual Information Form will materialize. Readers should not place undue reliance on Ballard's forward-looking statements. The forward-looking statements contained in this document speak only as of the date of this Management Discussion and Analysis ("MD&A"). Except as required by applicable legislation, Ballard does not undertake any obligation to release publicly any updates or revisions to these forward-looking statements to reflect events or circumstances after the date of this MD&A including the occurrence of unanticipated events.

MANAGEMENT'S DISCUSSION AND ANALYSIS

March 11, 2022

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1. INTRODUCTION

1.1 Preparation of the MD&A

This discussion and analysis of financial condition and results of operations of Ballard Power Systems Inc. ("Ballard", "the Company", "we", "us" or "our") is prepared as of March 11, 2022, and should be read in conjunction with our audited consolidated financial statements for the year ended December 31, 2021. The results reported herein are presented in U.S. dollars unless otherwise stated and have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board. Additional information relating to the Company, including our Annual Information Form, is filed with Canadian (www.sedar.com) and U.S. securities regulatory authorities (www.sec.gov) and is also available on our website at www.ballard.com.

1.2 Management's Report on Disclosure Controls and Procedures and Internal Controls over Financial Reporting

Disclosure controls and procedures

Our disclosure controls and procedures are designed to provide reasonable assurance that relevant information is gathered and reported to senior management, including the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO"), on a timely basis so that appropriate decisions can be made regarding public disclosures.

As of the end of the period covered by this report, we evaluated, under the supervision and with the participation of management, including the CEO and the CFO, the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 ("Exchange Act"). The CEO and CFO have concluded that as of December 31, 2021, our disclosure controls and procedures were effective to ensure that information required to be disclosed in reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified therein, and accumulated and reported to management to allow timely discussions regarding required disclosure.

Internal control over financial reporting

The CEO and CFO, together with other members of management, are responsible for establishing and maintaining adequate internal control over the Company's financial reporting. Internal control over financial reporting is designed under our supervision, and overseen by the Company's board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS.

There are inherent limitations in the effectiveness of internal control over financial reporting, including the possibility that misstatements may not be prevented or detected. Accordingly, even effective internal controls over financial reporting can provide only reasonable assurance with respect to financial statement preparation. Furthermore, the effectiveness of internal controls can change with circumstances.

Management, including the CEO and CFO, have evaluated the effectiveness of internal control over financial reporting, as defined in Rules 13a-15(f) of the Exchange Act, in relation to criteria described in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation,

management has determined that internal control over financial reporting was effective as of December 31, 2021.

KPMG LLP, our independent registered public accounting firm, has audited our consolidated financial statements and expressed an unqualified opinion thereon. KPMG LLP has also expressed an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2021.

Changes in internal control over financial reporting

During the year ended December 31, 2021, there were no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting. Our design of disclosure controls and procedures and internal controls over financial reporting includes controls, policies and procedures covering our subsidiaries including Ballard Power Systems Europe A/S, Ballard Fuel Cell Systems Inc., and Guangzhou Ballard Power Systems Co., Ltd.

On November 11, 2021, we completed the acquisition of Arcola Energy Limited (“Arcola”), a UK-based systems engineering company (subsequently renamed Ballard Motive Solutions) specializing in hydrogen fuel cell powertrain and vehicle systems integration. As Arcola was acquired in the last 365 days, we have limited the scope of our design of disclosure controls and procedures and internal controls over financial reporting to exclude controls, policies and procedures of Arcola. Summary financial information of Arcola from the date of acquisition on November 11, 2021, to December 31, 2021, included in our consolidated financial statements for fiscal 2021, are as follows:

Select Arcola financial information (Expressed in thousands of U.S. dollars)	2021
Revenues	\$ 138
Total Operating Expenses	\$ 1,385
Cash Operating Costs (1)	\$ 1,152
Adjusted EBITDA (1)	\$ (1,205)
Net loss	\$ (1,114)
Total assets	\$ 44,591

¹ Cash Operating Costs and Adjusted EBITDA are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See reconciliation to GAAP in the Supplemental Non-GAAP Measures section.

1.3 Risks and Uncertainties

An investment in our common shares involves risk. Investors should carefully consider the risks and uncertainties described below and in our Annual Information Form. The risks and uncertainties described in our Annual Information Form are not the only ones that we face. Additional risks and uncertainties, including those that we do not know about now or that we currently deem immaterial, may also adversely affect our business. For a more complete discussion of the risks and uncertainties which apply to our business and our operating results, please see our Annual Information Form and other filings with Canadian (www.sedar.com) and U.S. (www.sec.gov) securities regulatory authorities.

A summary of our identified risks and uncertainties are as follows:

- We may not be able to successfully execute our business plan.
- In China, a significant amount of operations are conducted by joint ventures that we

cannot operate solely for our benefit.

- We are dependent on third party suppliers for the supply of key materials and components for our products and services.
- We are dependent upon Original Equipment Manufacturers and Systems Integrators to purchase certain of our products.
- In our Heavy-Duty Motive market, we depend on a limited number of customers for a majority of our revenues and are subject to risks associated with early stage market activities related to fuel cell bus, truck, rail and marine applications.
- We depend on Chinese customers for a significant portion of our revenues in our Heavy-Duty Motive market, and we are subject to risks associated with economic conditions and government policies and practices in China.
- In our Technology Solutions market, we depend on a limited number of customers for a majority of our revenues and are subject to risks related to the continued commitment of these customers to their fuel cell programs.
- We could be adversely affected by risks associated with mergers and acquisitions.
- We could be adversely affected by risks associated with capital investments and new business processes.
- We could lose or fail to attract the personnel necessary to operate our business.
- We currently face and will continue to face significant competition, and many current and future competitors may have significantly more resources.
- Emerging diseases, like COVID-19, may adversely affect our operations (including our joint ventures in China), our suppliers, our customers and/or partners.
- In our Material Handling market, we depend on a single customer for the majority of our revenues and are subject to risks from that customer's internal fuel cell stack development and commercialization plans.
- Warranty claims, product performance guarantees, or indemnification claims could negatively impact our gross margins and financial performance.
- Our technology and products may not meet the market requirements, including requirements relating to performance, integration and / or cost.
- We may not be able to sell our products on a commercially viable basis on the timetable we anticipate, or at all.
- A mass market for our products may never develop or may take longer to develop than we anticipate.
- We have limited experience manufacturing fuel cell products on a commercial basis and our experience has been limited to relatively low production volumes.
- We are subject to risks inherent in international operations, including restrictions on the conversion of currencies and restrictions on repatriation of funds, including out of China.
- We may experience cybersecurity threats to our information technology infrastructure and systems, and unauthorized attempts to gain access to our proprietary or confidential information, as may our customers, suppliers and/or partners.
- We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our expected future growth and success.

- Global macro-economic and political conditions are beyond our control and may have an adverse impact on our business, our joint ventures, our key suppliers, and/or customers.
- Climate change risks may adversely affect our operations, or the operations of our suppliers, customers and/or partners.
- Public policy and regulatory changes could hurt the market for our products and services.
- Regulatory agencies could require us to modify or terminate existing investments, acquisitions or joint ventures and could delay or prevent future opportunities.
- Exchange rate fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.
- Commodity price fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.
- We expect our cash reserves will be reduced due to future operating losses, working capital requirements, capital expenditures, capital contributions to our joint venture(s) in China and potential acquisitions and other investments by our business, including in certain hydrogen infrastructure and growth equity funds, and we cannot provide certainty as to how long our cash reserves will last or that we will be able to access additional capital when necessary.
- Our products use flammable fuels and some generate high voltages, which could subject our business to product safety, product liability or other claims.
- Potential fluctuations in our financial and business results make forecasting difficult and may restrict our access to funding for our commercialization plan.
- We could be liable for environmental damages resulting from our research, development or manufacturing operations.

2. CORE BUSINESS AND STRATEGY

2.1 Core Business

At Ballard, our vision is to deliver fuel cell power for a sustainable planet. We are recognized as a world leader in proton exchange membrane ("PEM") fuel cell power system development and commercialization.

Our principal business is the design, development, manufacture, sale and service of PEM fuel cell products for a variety of applications, focusing on our power product markets of Heavy-Duty Motive (consisting of bus, truck, rail and marine applications), Material Handling and Backup Power, as well as the delivery of Technology Solutions, including engineering services, technology transfer, and the license and sale of our extensive intellectual property portfolio and fundamental knowledge for a variety of PEM fuel cell applications. With the recent acquisition of Arcola (now Ballard Motive Solutions), we now also offer hydrogen fuel cell powertrain and vehicle systems integration solutions.

A fuel cell is an environmentally clean electrochemical device that combines hydrogen fuel with oxygen (from the air) to produce electricity. The hydrogen fuel can be obtained from natural gas, kerosene, methanol, or other hydrocarbon fuels, or from water through electrolysis. Ballard's PEM fuel cell products typically feature high fuel efficiency, relatively low operating temperature, high durability, low noise and vibration, compact size, quick response to changes in electrical demand, and modular design. Embedded in each Ballard fuel

cell product lies a stack of unit cells designed with our proprietary PEM fuel cell technology, which include membrane electrode assemblies, catalysts, plates, and other key components, and draw on intellectual property from our patent portfolio, together with our extensive experience and know-how, in key areas of PEM fuel cell stack design, operation, production processes and systems integration.

We are based in Canada, with head office, research, technology and product development, engineering services, testing, manufacturing and after-sale service facilities in Burnaby, British Columbia. We also have sales, assembly, research and development, certain engineering services and after-sale service facilities in Hobro, Denmark, London, England, and Glasgow, Scotland, and have a sales, quality, supply chain, and after-sales service office in Guangzhou, Guangdong Province, China.

We also have a non-controlling, 49% interest, in Weichai Ballard Hy-Energy Technologies Co., Ltd. ("Weichai Ballard JV"), located in Weifang, Shandong Province, China. Weichai Ballard JV's business is to manufacture fuel cell products utilizing Ballard's LCS fuel cell stack and LCS-based power modules for bus, commercial truck, and forklift applications with certain exclusive rights in China.

In addition, we have a non-controlling 10% interest in Guangdong Synergy Ballard Hydrogen Power Co., Ltd. ("Synergy Ballard JVCo"), located in Yunfu, Guangdong Province, China. Synergy Ballard JVCo's business is to manufacture fuel cell products utilizing our FCveloCity®-9SSL fuel cell stack technology for use primarily in fuel cell engines assembled in China to provide propulsion power for zero-emission fuel cell electric buses and commercial vehicles with certain exclusive rights in China.

In 2021, we acquired a non-controlling 9.77% equity interest in Forsee Power SA ("Forsee Power"), a French company specializing in the design, development, manufacture, commercialization and financing of smart battery systems for sustainable electric transport. In 2021, we also invested in two hydrogen infrastructure and growth equity funds. We acquired a 12% interest in the HyCap Fund I SCSP ("HyCap"), a special limited partnership registered in Luxembourg; and a 1% interest in the Clean H2 Infra Fund ("Clean H2"), a special limited partnership registered in France.

2.2 Strategic Imperatives

We strive to build value for our shareholders by developing, manufacturing, selling, and servicing zero-emission, industry-leading PEM fuel cell technology products and services to meet the needs of our customers in select target markets.

Our strategy is built on 5 key themes:

- Double down in the fuel cell stack & module: invest in leading technology and products to provide leading customer value proposition to our customers;
- Selectively expand across value chain: extend across the value chain to capture control points, reduce technology adoption barriers and accelerate fuel cell deployments;
- Develop new routes to market: creatively explore partnerships to accelerate market adoption and grow volume for product sales;
- Win in key regions: build a competitive platform in North America, Europe and China; and
- Here for Life: deliver a compelling ESG proposition for all stakeholders.

Our strategy supports long-term commercialization, revenue and profitability, while also enabling future value based on longer-term market opportunities for our technology, products and intellectual property.

Our two-pronged approach is to build value through the sale and service of power products and the delivery of technology solutions. In power product sales, our focus is on meeting the power needs of our customers by delivering high value, high reliability, high quality, and innovative PEM fuel cell products with competitive life cycle cost. Through technology solutions, our focus is on enabling our customers to address new business opportunities and accelerate the adoption of fuel cell technology by delivering specialized engineering services, including powertrain integration, and integrated energy systems.

As part of our strategy, we have been working to develop a local fuel cell supply chain and related ecosystem to address new-energy bus and commercial vehicle markets in China. We believe this strategy aligns with current and expected local content requirements for government subsidies supporting the adoption of fuel cell electric vehicles ("FCEVs"). Key elements of our strategy include adopting a business model in which we seek to mitigate market adoption risk and capital investment by engaging in partnerships with local companies that are well positioned in their respective market.

We have strengthened our financial position, thereby providing additional flexibility to fund our growth strategy, including through activities such as product innovation, investments in production capacity expansion and localization, future acquisitions and strategic partnerships and investments. This includes significant investment in next generation products and technology, including our proprietary membrane electrode assemblies ("MEAs"), bipolar plates, stacks, modules, and systems integration; advanced manufacturing processes, technologies, and equipment; and technology and product cost reduction.

3. SELECT ANNUAL FINANCIAL INFORMATION AND 2022 BUSINESS OUTLOOK

3.1 Select Annual Financial Information

Results of Operations	Year ended,		
(Expressed in thousands of U.S. dollars, except per share amounts and gross margin %)	2021	2020	2019
Revenues	\$ 104,505	\$ 103,877	\$ 105,723
Gross margin	\$ 14,013	\$ 20,984	\$ 22,338
Gross margin %	13%	20%	21%
Total Operating Expenses	\$ 102,116	\$ 60,745	\$ 47,784
Cash Operating Costs ⁽¹⁾	\$ 83,782	\$ 50,029	\$ 38,801
Adjusted EBITDA ⁽¹⁾	\$ (82,188)	\$ (38,944)	\$ (26,608)
Net loss from continuing operations	\$ (114,397)	\$ (49,469)	\$ (35,291)
Net loss from continuing operations per share	\$ (0.39)	\$ (0.20)	\$ (0.15)
Financial Position	At December 31,		
(expressed in thousands of U.S. dollars)	2021	2020	2019
Total assets	\$ 1,440,943	\$ 975,599	\$ 340,319
Total non-current liabilities	\$ 29,567	\$ 22,621	\$ 25,540
Cash, cash equivalents and short-term investments	\$ 1,126,899	\$ 765,430	\$ 147,792

¹ Cash Operating Costs and Adjusted EBITDA are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See reconciliation to GAAP in the Supplemental Non-GAAP Measures section.

3.2 2021 Performance compared to 2021 Business Outlook

Consistent with the Company's past practice, and in view of the early stage of hydrogen fuel cell market development and adoption, and the ongoing uncertainties resulting from the COVID-19 pandemic, we did not provide specific financial performance guidance for 2021.

We did however provide certain qualitative outlook expectations for 2021 as we continued to maintain focus on Heavy- and Medium-Duty Motive applications – including bus, commercial truck, train, and marine markets – to increase penetration in the key markets of China, Europe, and California. In particular:

- In 2021, we invested significantly in additional technology and product innovation and development across bus, truck, rail, and marine applications, including next-generation MEAs, plates, stacks, and modules. This included collaboration with MAHLE Group ("MAHLE") on the design of fuel cell engines for large commercial trucks for Europe and North America and the formation of a strategic alliance with Linamar Corporation ("Linamar") for the co-development and sale of fuel cell powertrains and components for class 1 and 2 vehicles, weighing up to 5-tons, initially in North America and Europe. We also invested in improving our customer service capabilities in our key markets. We have expanded our MEA production capacity by 6-times at our Vancouver headquarter facility which is expected to enable production of approximately 6 million MEAs annually. We continue to review options for further localization of production capacity in China and Europe. Furthermore, corporate development work was an important priority in 2021, including the acquisition of Arcola and certain long-term strategic investments (Forsee Power, and certain hydrogen infrastructure and growth equity funds) in an effort to accelerate customer adoption, expand our capabilities, and simplify our customers' experience.
- During 2021, we fulfilled our commitment to make contributions towards our pro rata ownership share of Weichai Ballard JV in China of \$12.4 million. This is in addition to \$57.7 million contributed cumulatively through 2020, as part of Ballard's total capital commitment of approximately \$79.9 million.
- In Europe, we delivered a significant number of modules in 2021 to support deployments of fuel cell electric buses ("FCEBs") in a number of countries. We also increased market activity for FCEBs, which may result in additional module purchase orders for delivery in future years. In addition, we increased shipments of backup power systems in Europe in 2021. We also continued the execution of our automotive program in 2021 with Audi AG ("Audi") prior to its expected wind-down in August 2022.
- In North America, we increased market activity for FCEBs and fuel cell-powered trucks in 2021, which may result in additional module purchase orders for delivery in future years. In addition, we increased fuel cell stack shipments for material handling applications.

3.3 2022 Business Outlook

Consistent with the Company's past practice, and in view of the early stage of hydrogen fuel cell market development and adoption, we are not providing specific overall financial performance guidance for 2022. In 2022, we plan to increase investments in the business ahead of the hydrogen growth curve, including expanding product offering and capabilities

across the value chain. Our 2022 outlook includes:

- Total Operating Expenses: \$140 million to \$160 million - We expect total Operating Expenses for fiscal 2022 to be between \$140 million and \$160 million (compared to \$102.1 million in fiscal 2021) as we continue to invest in research and product development ahead of the hydrogen growth curve by advancing new technology, product innovation, and development across bus, truck, rail, and marine markets, including next-generation MEAs, plates, stacks, and modules, and increasing sales and marketing expenditures.
- Capital Expenditures: \$40 million to \$60 million - We expect total Capital Expenditures (being additions to property, plant and equipment and investment in other intangible assets) for fiscal 2022 to be between \$40 million and \$60 million (compared to \$14.7 million in fiscal 2021) as we continue to invest in testing, advanced manufacturing and production. Capital allocation in 2022 includes increasing testing and prototyping capabilities, including new advanced test station equipment and refurbishments of existing testing equipment in Canada, advanced manufacturing equipment in Canada for next-generation bipolar plates, and testing and assembly equipment at Ballard Motive Systems in the U.K. to support powertrain and vehicle integration and assembly operations.
- Introduce plan to expand global footprint - We believe in the value of investing ahead of the hydrogen growth curve and positioning our manufacturing capabilities to support anticipated scale in key markets. We also continue to look at opportunities to expand our presence in growing markets.
- Develop roadmap to achieve corporate "Mission Carbon Zero" goal by 2030 - We continue to focus on decarbonizing difficult to abate emissions across medium- and heavy-duty applications of bus, commercial truck, rail, marine, and certain stationary and backup power applications. We plan to complete our roadmap on achieving our corporate "Mission Carbon Zero" goal by 2030 in 2022.

Our outlook expectations for 2022 are in part supported by our 12-month Order Book of approximately \$67.3 million which is derived from our Order Backlog of approximately \$93.1 million as of December 31, 2021. Our Order Backlog represents the estimated aggregate value of orders at a given time for which customers have made contractual commitments and our 12-month Order Book represents the aggregate expected value of that portion of the Order Backlog that the Company expects to deliver in the subsequent 12-month period.

Our outlook expectations are based on our internal forecast which reflects an assessment of overall business conditions and takes into account actual sales, operating expenses, capital expenditures, and financial results in the first two months of 2022; sales orders received for units and services expected to be delivered in the remainder of 2022; purchase and cost commitments currently in existence for fiscal 2022; an estimate with respect to the generation of new sales and the timing of deliveries in each of our markets for the balance of 2022; an estimate of purchase and cost commitments to be generated in each of our locations for the balance of 2022; and assumes an average U.S. dollar exchange rate in the high \$0.70's in relation to the Canadian dollar for 2022.

The primary risk factors to our business outlook expectations for 2022 are customer, production, or program delays or cancellations in delivering against existing power products and technology solutions orders and delays from forecast in terms of closing and delivering

expected sales primarily in our Heavy-Duty Motive market; adverse macro-economic and political conditions including trade, public health (including the ongoing impact of the COVID-19 pandemic), and other geopolitical risks; changes in government subsidy and incentive programs; inadequate investment in hydrogen infrastructure and / or excessive hydrogen fuel costs, all of which could negatively impact our customers' access to capital and the success of their program plans which could adversely impact our business including potential changes, delays or accelerations in our expected operating and capital equipment requirements; disruptions in our Heavy-Duty market due to delays of supply of key materials and components from third party suppliers; disruptions in our Technology Solutions market as a result of our significant reliance on a limited number of customers including Audi and Weichai Ballard JV, which are reliant on their internal commercialization plans and budget requirements; disruptions in our Technology Solutions market as a result of delays in achieving program milestones; disruptions in the Material Handling market as a result of our reliance on a single customer in this market and that customer's internal stack development and commercialization plans; and fluctuations in the Canadian dollar relative to the U.S. dollar, as a significant portion of our operating expense commitments, capital expenditure commitments, and Technology Solutions revenues (including the technology development and engineering services agreement with Audi) are priced in Canadian dollars.

Our Order Backlog and our 12-month Order Book are currently comprised of a relatively limited number of contracts and a relatively limited number of customers. Given the relative immaturity of our industry and customer deployment programs, our Order Backlog and 12-month Order Book are potentially vulnerable to risk of cancellation, deferral or non-performance by our customers for a variety of reasons, including: risks related to continued customer commitment to a fuel cell program; risks related to customer liquidity; credit risks; risks related to changes, reductions or eliminations in government policies, subsidies and incentives; risks related to macro-economic and political conditions including trade, public health (including the ongoing impact of the COVID-19 pandemic), and other geopolitical risks; risks related to slower market adoption; risks related to vehicle integration challenges; risks related to the development of effective hydrogen refueling infrastructure; risks related to the ability of our products to meet evolving market requirements; and supplier-related risks.

Furthermore, potential fluctuations in our financial results make financial forecasting difficult. In addition, due to the early stage of development of the market for hydrogen fuel cell products, it is difficult to accurately predict future revenues, operating expenses, cash flows, or results of operations on a quarterly basis. The Company's revenues, operating expenses, cash flows, and other operating results can vary significantly from quarter to quarter. As a result, quarter-to-quarter comparisons of revenues, operating expenses, cash flows, and other operating results may not be meaningful; instead, we believe our operating performance should be assessed over a number of quarters and years. It is likely that in one or more future quarters, financial results will fall below the expectations of securities analysts and investors and the trading price of the Company's shares may be materially and adversely affected as a result.

4. RECENT DEVELOPMENTS (Including Contractual Updates)

4.1 Corporate

Acquisition of Arcola to Help Customers Integrate Fuel Cell Engines into Heavy-Duty Mobility

On November 11, 2021, we announced the acquisition of Arcola, a UK-based systems engineering company specializing in hydrogen fuel cell powertrain and vehicle systems integration. With more than 10 years of experience integrating Ballard fuel cell engines into powertrains and heavy-duty vehicles, including buses, refuse trucks and trains, Arcola currently has approximately 90 employees based in the UK.

With the acquisition of Arcola, we intend to make it easier for existing and new OEM customers globally to offer FCEVs by providing stronger support for the integration of our fuel cell engines into their vehicle platforms, including powertrain integration, vehicle integration and application engineering.

Ballard acquired 100% of Arcola for total consideration of up to \$40 million, including 337,353 Ballard common shares that vest over two years, and up to \$34 million in upfront and earn-out cash consideration based on the achievement of certain performance conditions over an up to three-year period from the acquisition date.

Long-Term Strategic Partnership with Forsee Power to Develop and Commercialize Integrated Fuel Cell and Battery Solutions for Heavy-Duty Hydrogen Mobility

On October 17, 2021, we announced with Forsee Power, a leader in smart battery systems for sustainable electromobility, the signing of a Memorandum of Understanding (“MOU”) for a strategic partnership to develop fully integrated fuel cell and battery solutions, optimized for performance, cost and installation for heavy-duty hydrogen mobility applications. Key terms of the MOU include:

- A fully integrated solution for hydrogen mobility: The partnership of Ballard and Forsee Power brings together two industry leaders to develop a fully integrated solution combining a fuel cell and battery system, optimized to meet the needs of targeted medium and heavy-duty mobility markets of bus, truck, rail, marine, and off-road. This strategic partnership is expected to be the beginning of a long-term collaboration involving the co-design, co-development, production, marketing, and sales of integrated fuel cell-battery solutions.
- Combining technological know-how and experience: For the planned integrated solution, Ballard will supply the fuel cell system and related controls, and Forsee Power will supply the battery system and related battery management system, cooling system and high voltage DC/DC conversion system. The parties will jointly develop the energy management system to optimize the hybrid fuel cell and battery system architecture. Optimization of the fuel cell-battery powertrain, resulting in improved reliability, durability, efficiency, and cost, is a logical next step for value creation.
- Strategic investment by Ballard as part of Forsee IPO on Euronext Paris: As part of the strategic relationship, Ballard committed to participate as a lead investor in connection with the initial public offering on Euronext in Paris, France, of Forsee Power. Pursuant to this commitment, Ballard made a contribution of €37.7 million (\$43.8 million) in October 2021, resulting in an ownership interest of 9.77% in Forsee Power upon completion of the

IPO. Ballard also appointed a board member to the Forsee Power board of directors. This long-term strategic investment is fair valued at its current publicly held share price at each reporting period end date converted to its U.S. dollar equivalent with any mark to market gain (loss) recognized in Finance Income (loss) and Other. During the fourth quarter of 2021, we recognized mark to market and foreign exchange losses of (\$10.5) million on this long-term investment valued at \$33.3 million as of December 31, 2021.

Announcement of 100-million-Kilometer Milestone

On October 5, 2021, we announced that our PEM fuel cell technology and products have now powered FCEVs in commercial Heavy- and Medium-Duty Motive applications for an industry-leading cumulative total of more than 100 million kilometers on roads around the globe. In just twelve months, we have more than doubled our on-the-road kilometers in service.

4.2 China

Weichai Power Co., Ltd. and Weichai Ballard Hy-Energy Technologies Co., Ltd.

On November 13, 2018, we announced the closing of a strategic collaboration transaction with Weichai. Ballard's strategic collaboration with Weichai included:

- Equity Investment – an equity investment in Ballard made by Weichai representing a 19.9% interest in the Company at that time. Weichai currently holds an approximate 15.5% interest in Ballard.

Ballard entered into an investor rights agreement with Weichai under which: (a) so long as Weichai directly or indirectly holds at least 10% of Ballard's outstanding shares, it has an anti-dilution right entitling it to maintain its percentage ownership in Ballard by subscribing for Common Shares from treasury at the same price as Ballard distributes Common Shares to other investors (to date, Weichai's anti-dilution rights with respect to all previous offerings of the Company have expired unexercised); (b) for so long as Weichai directly or indirectly holds at least 15% of Ballard's outstanding Common Shares, it has the right to nominate two directors to Ballard's board of directors; and (c) if there is a third-party offer to buy Ballard, Weichai has the right to make a superior proposal or otherwise it must vote its Common Shares in accordance with the recommendation of Ballard's board of directors.

- China Joint Venture and Technology Transfer Agreement – Weichai and Ballard have established a joint venture company in Shandong Province to support China's Fuel Cell Electric Vehicle market, with Weichai holding a controlling ownership interest of 51% and Ballard holding a 49% ownership position. The Weichai Ballard JV, Weichai Ballard Hy-Energy Technologies Co., Ltd., was established in the fourth quarter of 2018 with Weichai making an initial capital contribution of RMB 102 million and Ballard making an initial capital contribution of \$14.3 million (RMB 98 million equivalent). During fiscal 2019 and fiscal 2020, Weichai made its planned second through seventh capital contributions totaling RMB 311.1 million, and Ballard made its planned second through seventh capital contributions totaling \$43.4 million (RMB 298.9 million equivalent). During fiscal 2021, Weichai made its planned eighth through eleventh capital contributions totaling RMB 82.9 million, and Ballard made its planned eighth through eleventh capital contributions totaling \$12.4 million (RMB 79.6 million equivalent). Weichai and Ballard will fund pro rata shares of the Weichai Ballard JV based on an agreed business plan. Weichai holds three of five

Weichai Ballard JV board seats and Ballard holds two, with Ballard having certain shareholder protection provisions.

The Weichai Ballard JV will manufacture Ballard's next-generation LCS fuel cell stack and FCgen®-LCS-based power modules for bus, commercial truck, and forklift applications with exclusive rights in China and will pay Ballard a total of \$90 million under a program to develop and transfer technology to the Weichai Ballard JV in order to enable these manufacturing activities. Revenue earned from the \$90 million Weichai Ballard JV technology transfer agreement (\$4.2 million in the fourth quarter of 2021; \$18.2 million in fiscal 2021; \$6.5 million in the fourth quarter of 2020; \$21.2 million in fiscal 2020; \$22.5 million in fiscal 2019; \$1.2 million in fiscal 2018) is recorded as Technology Solutions revenues. During the fourth quarter of 2018, we received an initial 10% or \$9.0 million prepayment from Weichai Ballard JV for this program with additional amounts paid to us as program milestones are successfully completed. We retain an exclusive right to the developed technologies outside China, subject to certain restrictions on sublicensing outside China. The Weichai Ballard JV will also purchase MEAs for FCgen®-LCS fuel cell stacks exclusively from Ballard under a long-term supply agreement.

- ***Fuel Cell Sales*** – On May 1, 2019, we announced that we reached agreement with Weichai Ballard JV for the supply of a mix of certain fuel cell products and components that will be used in the assembly of modules to power zero-emission FCEVs in China. The order has a total value of approximately \$44 million to Ballard. Once assembled by Weichai Ballard JV, final products will be used to support initial deployments against Weichai's above noted commitment to supply a minimum of 2,000 fuel cell modules for commercial FCEVs in China. All products and components to be supplied by Ballard are based on Ballard's next-generation LCS stack technology. Revenue earned from these now complete agreements (\$9.6 million in the fourth quarter of 2021; \$15.0 million in fiscal 2021; \$0.4 million in the fourth quarter of 2020; \$14.8 million in fiscal 2020; \$14.7 million in fiscal 2019) is recorded as Heavy-Duty Motive revenues.

Weichai has indicated that it intends to build and supply at least 2,000 fuel cell modules using Ballard and Weichai Ballard JV technology through 2022 for commercial vehicles in China. Specific terms related to the source and scope of supply, product mix, pricing and timing of shipments are subject to future agreement between Weichai and its customers.

On December 16, 2019, we announced the receipt of an additional purchase order from Weichai Ballard JV for the delivery of MEAs valued at approximately \$19 million under a long-term MEA supply agreement. Revenue earned from this agreement (\$1.1 million in the fourth quarter of 2021; \$2.1 million in fiscal 2021; \$4.6 million in the fourth quarter of 2020; \$8.8 million in fiscal 2020) is recorded as Heavy-Duty Motive revenues. As of December 31, 2021, an additional \$8.3 million of revenue associated with shipments on this order to Weichai Ballard JV remain unrecognized until these products are ultimately sold by Weichai Ballard JV.

The Weichai Ballard JV operation, located in Shandong Province, China, has commenced production activities and assembly of next-generation LCS fuel cell stacks and LCS-based modules to power FCEVs for the China market. The Weichai Ballard JV is expected to have initial annual production capacity of 20,000 fuel cell stacks, or approximately 10,000 modules, based on a two-shift operation.

Guangdong Synergy Ballard Hydrogen Power Co., Ltd.

During 2017, the FCveloCity®-9SSL fuel cell stack joint venture operation in the city of Yunfu in China's Guangdong Province commenced operations. Ballard has a non-controlling 10% interest in the joint venture, Synergy Ballard JVCo, together with our partner Guangdong Nation Synergy Hydrogen Power Technology Co., Ltd. (a member of the "Synergy Group") who has a 90% interest. The fuel cell stacks manufactured by Synergy Ballard JVCo are expected to be used primarily in fuel cell engines assembled in China to provide propulsion power for zero-emission fuel cell electric buses and commercial vehicles in China.

Synergy Ballard JVCo retains an exclusive right to manufacture and sell FCveloCity®-9SSL stacks in China until September 30, 2026. Exclusivity is subject to Synergy Ballard JVCo maintaining certain performance criteria, including compliance with: a code of ethics; Ballard's quality policies and branding practices; payment terms; certain intellectual property covenants; achievement of certain minimum annual MEA volume commitments through 2026; and certain financing conditions.

Revenue earned from MEA and other agreements with Synergy Ballard JVCo (\$1.5 million in the fourth quarter of 2021; \$3.4 million in fiscal 2021; \$2.5 million in the fourth quarter of 2020; \$8.2 million in fiscal 2020) is primarily recorded as Heavy-Duty Motive revenues.

Ballard has the exclusive right to purchase FCveloCity®-9SSL fuel cell stacks and sub-components from Synergy Ballard JVCo for sale outside China. Ballard contributed approximately \$1.0 million for our 10% interest in Synergy Ballard JVCo in 2017, currently recognized at nil value. We have no obligation to provide future funding to Synergy Ballard JVCo.

4.3 Europe

Approval in Principle for High-Power Fuel Cell Concept to Power Ships

On February 23, 2022, we announced with ABB – a leading global technology company that energizes the transformation of society and industry to achieve a more productive, sustainable future – that they have received an approval in principle ("AiP") from leading classification society DNV for a jointly developed fuel cell concept capable of generating 3 megawatts, or 4,000 HP, of electrical power. DNV is an international accredited registrar and classification society headquartered in Norway.

The AiP represents an important milestone in developing new technology, as independent assessment of the concept confirms feasibility of the design and no significant obstacles exist to prevent the concept from being realized. With the AiP in place, the jointly developed solution can be initiated with confidence that it is eligible to receive final approval for application onboard a wide range of vessels.

The high-power fuel cell unit is a flexible solution that will support the energy needs of multi-megawatt scale vessels with diverse use cases. For example, a cruise vessel operating in coastal areas could either run entirely on zero-emission fuel cell power or switch to it when operating in environmentally sensitive areas or emission control zones, while a ferry with a regular schedule and frequent bunkering opportunities could operate solely on fuel cell power. For ocean going vessels, fuel cell power could support auxiliary needs. The concept of the solution also envisions the integration with an energy storage system. The successful development of this system concept builds on a three-year collaboration between ABB and Ballard.

Delivery of Two Class Approved FCwave™ Modules to Norled A/S

On February 2, 2022, we announced the delivery of two, 200 kilowatt (kW) FCwave™ modules to Norled A/S, one of Norway's largest ferry and express boat operators. The fuel cell modules are intended to power the world's first liquid hydrogen-powered ferry, the MF Hydra, later in 2022.

Orders for 40 Fuel Cell Modules in European Market

On November 4, 2021, we announced orders for a total of 40 FCmove™-HD (70kW) modules for planned deployment in FCEBs across Europe in 2022. These FCEBs are expected to be deployed in France, Germany, and the UK.

Ballard to Power Talgo Fuel Cell Passenger Train in European Trial, Ahead of Planned 2023 Launch

On October 12, 2021, we announced an Equipment Supply Agreement to provide 8 of our 70-kilowatt FCmove™-HD fuel cell modules to Talgo S.A. ("Talgo"), a leader in the design, manufacture, and maintenance of high-speed light rail trains, headquartered in Madrid, Spain – for trials of its Talgo Vittal-One commuter and regional passenger train. Talgo plans to conduct their demonstration in early 2022 in Spain, with expected commercialization in 2023.

Multi-Megawatt Scale Baseload Hydrogen Power Plant with HDF Energy

On October 7, 2021, we announced with our partner, Hydrogene de France ("HDF Energy"), an Independent Power Producer dedicated to renewable power generation, commenced construction of the CEOG Renewstable® Power Plant ("CEOG") in French Guiana. CEOG is the world's first multi-megawatt, baseload hydrogen power plant, and the largest green hydrogen storage of intermittent renewable electricity sources. Also, CEOG is the first order for a new generation of megawatt power fuel cell systems dedicated to stationary applications, which is expected to be mass produced in the HDF Energy facility in Bordeaux.

This project is part of a multi-staged development agreement between Ballard and HDF Energy, as initially announced in December 2019. CEOG is the first commercial project for HDF under this agreement. This is an important proof point for the use of hydrogen storage and electrical regeneration combined with renewable energy. The \$200 million French Guiana CEOG project will combine a solar park, long-term hydrogen and short-term battery storage and fuel cells specified by HDF Energy, based on Ballard's ClearGen® architecture. Revenue earned from this and other agreements with HDF Energy is recorded as Technology Solutions revenue.

Siemens AG

On November 14, 2017, we announced the signing of a multi-year Development Agreement with Siemens AG ("Siemens") for the development of a zero-emission fuel cell engine to power Siemens' Mireo light rail train. The Development Agreement has a contemplated value of approximately \$9.0 million to Ballard. Under the terms of the Development Agreement, Ballard will develop a 200-kilowatt fuel cell engine for integration into Siemens' new Mireo train platform.

On July 15, 2021, we announced that the receipt of a purchase order for two of our 200-kilowatt (kW) fuel cell modules from Siemens to power a 2-car Mireo Plus H passenger train

through a trial operation in Bavaria, Germany. The 200kW fuel cell module has been developed and tested under the Development Agreement with Siemens discussed above, in order to provide primary propulsion power for the Mireo Plus H light rail train. Ballard plans to deliver the modules ordered by Siemens for the trial operation in Bavaria in 2022.

Revenue earned from this and other agreements with Siemens (\$0.7 million in the fourth quarter of 2021; \$2.2 million in fiscal 2021; nil million in the fourth quarter of 2020; \$0.9 million in fiscal 2020; \$3.2 million in fiscal 2019; \$1.8 million in fiscal 2018) is recorded as Technology Solutions revenue.

Audi AG

On June 11, 2018, we announced the signing of a 3.5-year extension to our technology solutions contract with Audi, part of the Volkswagen Group, extending the program to August 2022. The program, through a series of technical milestone awards, encompasses automotive fuel cell stack development as well as system design support activities for the benefit of Audi. Ballard engineers are leading critical areas of fuel cell product design – including the MEA, plate and stack components – along with certain testing and integration work.

Revenue earned from this and other agreements with Audi (\$2.6 million in the fourth quarter of 2021; \$9.8 million fiscal 2021; \$5.2 million in the fourth quarter of 2020; \$16.0 million in fiscal 2020) is recorded as Technology Solutions revenues.

4.4 North America and Other

Ballard Announces MOU with Adani for Hydrogen Fuel Cells in India

On February 22, 2022, we announced the signing of a non-binding Memorandum of Understanding (“MOU”) with the Adani Group (“Adani Group”) to evaluate a joint investment case for the commercialization of fuel cells in various mobility and industrial applications in India. Under the MOU, both parties will examine various options to cooperate, including potential collaboration for fuel cell manufacturing in India.

Adani Group, founded in 1988 with a current market capitalization of approximately \$150 billion, comprising of seven publicly listed companies with businesses spanning power generation and distribution, renewable energy, gas and infrastructure, logistics (seaport, airports, shipping, and rail), mining and resources, and other sectors. Hydrogen is increasingly viewed as a critical medium for the decarbonization of energy, industry, and mobility. Efforts under this MOU will be anchored by Adani New Industries Limited, the newly formed subsidiary of Adani Enterprises, focused on generation of green hydrogen, including downstream products, green electricity generation, manufacture of electrolyzers and wind turbines, among others.

Ballard and Chart Successfully Test a Fuel Cell Powered by Liquid Hydrogen

On February 1, 2022, we announced with Chart Industries, Inc. (“Chart”), the successful test of a fuel cell powered by liquid hydrogen under the heavy-duty hydrogen fuel system joint development MOU previously announced on February 10, 2021.

For the test, a Ballard FCmove™-HD fuel cell was paired with a Chart liquid onboard hydrogen (“HLH2”) vehicle fuel system conducted at Chart’s hydrogen test facility in Minnesota, USA. The demonstration confirmed that heavy-duty vehicles powered by Ballard fuel cells should

be able to employ Chart HLH2 vehicle fuel systems that utilize liquid hydrogen as a fuel. Liquid hydrogen has a significant space, weight and range advantage compared with gaseous hydrogen, allowing for up to double the range without space claim and payload impacts, and simplified fueling infrastructure for heavy-duty mobility applications such as class-8 trucks, buses, rail, and marine.

Orders for 31 fuel cell engines to a leading global construction, electric power & off-road equipment manufacturer

On January 13, 2022, we announced orders for 31 modules, totaling 3 MW of hydrogen fuel cell power, to a leading global construction, electric power, and off-road equipment manufacturer for testing and deployment in a variety of end-use applications. The modules are expected to be delivered in 2022 and 2023 to match planned integration, testing, and deployment schedules.

Ballard Fuel Cells to Power Expansion of Canadian Pacific Hydrogen Locomotive Program

On January 19, 2022, we announced the receipt of an order for eight additional 200 kW fuel cell modules to support the expansion of Canadian Pacific's ("CP Rail") Hydrogen Locomotive Program from one to three locomotives, with expected delivery in 2022. Inclusive of Ballard's announcement in March 2021, the Company will provide a total of 14 fuel cell modules, each module with a rated power output of 200 kW, to support this program.

CP Rail intends to refine the process of converting diesel-electric powertrains to hydrogen-electric powertrains over a series of three categories of locomotives which collectively represent the majority of locomotives in use throughout North America.

Ballard teams up with Caterpillar & Microsoft to demonstrate megawatt-scale hydrogen fuel cell backup generator system for datacenters

On November 22, 2021, we announced the launch of a three-year project through a collaboration with Caterpillar Inc. and Microsoft, to demonstrate a power system incorporating large-format hydrogen fuel cells to produce reliable and sustainable backup power for data centers. The project is supported and partially funded by the U.S. Department of Energy ("DOE") under the H2@Scale initiative and backed by the National Renewable Energy Lab ("NREL").

Ballard will provide an advanced, 1.5 MW ClearGen™-II hydrogen fuel cell power generator. As the prime contractor on the project, Caterpillar is providing the overall system integration, power electronics, and controls that form the central structure of the power solution, which will be fueled by low-carbon-intensity hydrogen. Microsoft is hosting the demonstration project at a company data center in Quincy, Washington. NREL is performing analyses on safety, techno-economics, and greenhouse gas impacts.

5. RESULTS OF OPERATIONS

5.1 Operating Segments

We report our results in the single operating segment of Fuel Cell Products and Services. Our Fuel Cell Products and Services segment consists of the sale and service of PEM fuel cell products for our power product markets of Heavy-Duty Motive (consisting of bus, truck, rail, and marine applications), Material Handling and Backup Power (to be renamed Stationary Power Generation in fiscal 2022), as well as the delivery of Technology Solutions, including

engineering services, technology transfer and the license and sale of our extensive intellectual property portfolio and fundamental knowledge for a variety of fuel cell applications.

The results from Ballard Motive Systems (formerly Arcola) from the date of acquisition on November 11, 2021 to December 31, 2021, are included in our Technology Solutions market for fiscal 2021 and are expected to be recorded primarily in Heavy-Duty Motive and Technology Solutions in fiscal 2022.

5.2 Summary of Key Financial Metrics – Three Months Ended December 31, 2021 Revenue and Gross Margin

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,			
	2021	2020	\$ Change	% Change	
Heavy-Duty Motive	\$ 22,537	\$ 11,918	\$ 10,619	89%	
China	12,210	7,375	4,835	66%	
Europe	6,655	3,471	3,184	92%	
North America	3,408	926	2,482	268%	
Other	264	146	118	81%	
Material Handling	1,289	945	344	36%	
North America	1,268	945	323	34%	
Europe	21	-	21	100%	
Backup Power	2,735	2,103	632	30%	
Europe	2,690	2,100	590	28%	
North America	-	-	-	-%	
Other	45	3	42	1,025%	
Technology Solutions	10,144	13,623	(3,479)	(26%)	
China	4,175	6,822	(2,647)	(39%)	
Europe	4,731	5,469	(738)	(13%)	
North America	1,065	1,011	54	5%	
Other	173	321	(148)	(46%)	
Revenues	36,705	28,589	8,116	28%	
Cost of goods sold	31,934	22,949	8,985	39%	
Gross Margin	\$ 4,771	\$ 5,640	\$ (869)	(15%)	
Gross Margin %	13%	20%	n/a	(7 pts)	

Fuel Cell Products and Services Revenues of \$36.7 million for the fourth quarter of 2021 increased 28%, or \$8.1 million, compared to the fourth quarter of 2020. The 28% increase was driven by higher Heavy-Duty Motive, Backup Power, and Material Handling revenues which more than offset the decrease in Technology Solutions revenues.

Heavy-Duty Motive revenues of \$22.5 million increased \$10.6 million, or 89%, due primarily to higher shipments of fuel cell products to customers primarily in China, Europe and North America. Excluding sales to Weichai Ballard JV and Synergy Ballard JVCo in each of the respective periods, Heavy-Duty Motive revenues earned from other customers increased by \$5.8 million in the fourth quarter of 2021 compared to the fourth quarter of 2020. Heavy-Duty Motive revenues on a quarter to quarter basis are also impacted by product mix due to varying customer requirements and various fuel cell products, including numerous power configurations required by our customers (and the resulting impact on selling price) of our fuel cell modules, fuel cell stacks, MEAs, and related component and parts kits. Heavy-Duty Motive revenues of \$22.5 million in the fourth quarter of 2021 includes \$10.7 million to Weichai Ballard JV for the supply of a mix of certain fuel cell products and components that

will be used in the assembly of modules to power zero-emission FCEVs in China; \$1.5 million for shipments of MEAs to Synergy Ballard JVCo for use in their manufacture and assembly of FCveloCity® fuel cell stacks in China; and \$10.3 million to a variety of customers in North America and Europe including Solaris, Wrightbus, New Flyer, CP Rail, and others, primarily for shipments of FCveloCity®-HD7 and FCveloCity®-HDv8 fuel cell modules and related components for their respective bus and train programs. Heavy-Duty Motive revenues of \$11.9 million in the fourth quarter of 2020 include \$5.0 million of shipments to Weichai Ballard JV; \$2.4 million of MEA shipments to Synergy Ballard JVCo; and \$4.5 million to a variety of customers primarily in Europe.

Technology Solutions revenues of \$10.1 million decreased by (\$3.5) million, or (26%), due primarily to decreased amounts earned on the Audi and Weichai Ballard JV programs. Revenues of \$10.1 million in the fourth quarter of 2021 were from a variety of customer programs including revenue from the Weichai Ballard JV technology transfer program of \$4.2 million; the Audi program of \$2.6 million; the Siemens program of \$0.7 million; and \$2.6 million from a variety of other customer programs including HDF Energy. Revenues of \$13.6 million in the fourth quarter of 2020 were from a variety of customer programs including revenue from the Weichai Ballard JV technology transfer program of \$6.5 million; the Audi program of \$5.2 million; and \$1.9 million from a variety of other customer programs.

Material Handling revenues of \$1.3 million increased \$0.3 million, or 36%, primarily as a result of higher shipments to Plug Power.

Backup Power revenues of \$2.7 million increased \$0.6 million, or 30%, due primarily to an increase in sales of back-up power fuel cell stacks, products and service revenues in Europe.

Fuel Cell Products and Services gross margins were \$4.8 million, or 13% of revenues, for the fourth quarter of 2021, compared to \$5.6 million, or 20% of revenues, for the fourth quarter of 2020. The decrease in gross margin of (\$0.9) million, or (15%), was driven primarily by a shift to lower overall product margin and service revenue mix, and an increase in labour, supply, and freight expenses, resulting in an (7) percentage point decrease in gross margin as a percent of revenues, which more than offset the positive impact of the 28% increase in total revenues.

Gross margin in the fourth quarter of 2021 was also negatively impacted by net inventory adjustments of (\$0.2) million related primarily to excess and impaired inventory; and positively impacted by net warranty adjustments of \$0.2 million related primarily to contractual expirations. Gross margin in the fourth quarter of 2020 was positively impacted by net warranty adjustments of \$1.2 million related primarily to contractual expirations and reduced service costs; and was negatively impacted as a result of net inventory adjustments of (\$0.4) million related primarily to excess and impaired inventory.

Operating Expenses and Cash Operating Costs

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,		
	2021	2020	\$ Change	% Change
Research and Product Development	\$ 19,870	\$ 11,759	\$ 8,111	69%
General and Administrative	7,420	4,972	2,448	49%
Sales and Marketing	3,417	2,742	675	25%
Operating Expenses	\$ 30,707	\$ 19,473	\$ 11,234	58%
Research and Product Development (cash operating cost)	\$ 17,153	\$ 9,571	\$ 7,582	79%
General and Administrative (cash operating cost)	6,408	4,454	1,954	44%
Sales and Marketing (cash operating cost)	3,043	2,365	678	29%
Cash Operating Costs	\$ 26,604	\$ 16,390	\$ 10,214	62%

Cash Operating Costs and its components of Research and Product Development (cash operating cost), General and Administrative (cash operating cost), and Sales and Marketing (cash operating cost) are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See the reconciliation of Cash Operating Costs to GAAP in the Supplemental Non-GAAP Measures and Reconciliations section and the reconciliation of Research and Product Development (cash operating cost), General and Administrative (cash operating cost), and Sales and Marketing (cash operating cost) to GAAP in the Operating Expense section. Cash Operating Costs adjusts operating expenses for stock-based compensation expense, depreciation and amortization, impairment losses on trade receivables, restructuring charges, the impact of unrealized gains or losses on foreign exchange contracts, acquisition related costs, and financing charges.

Total Operating Expenses (excluding Other operating expenses) for the fourth quarter of 2021 was \$30.7 million, an increase of \$11.2 million, or 58%, compared to the fourth quarter of 2020. The increase was driven by higher research and product development expenses of \$8.1 million, higher general and administrative expenses of \$2.4 million, and higher sales and marketing expenses of \$0.7 million.

Cash Operating Costs (see Supplemental Non-GAAP Measures and Reconciliations) for the fourth quarter of 2021 was \$26.6 million, an increase of \$10.2 million, or 62%, compared to the fourth quarter of 2020. The \$10.2 million, or 62%, increase was driven by higher research and product development cash operating costs of \$7.6 million, by higher general and administrative cash operating costs of \$2.0 million, and by higher sales and marketing cash operating costs of \$0.7 million.

The increase in operating expenses and cash operating costs in the fourth quarter of 2021 was driven primarily by increased expenditure on technology and product development activities in Canada, Denmark and the U.K., including the design and development of next generation fuel cell stacks and modules for bus, truck, rail and marine applications, and increased continuation engineering investment in our existing fuel cell products, including activities related to product cost reduction. Increased program investment includes expenditures related to the launch of our FCmove™-HD+, a fuel cell module designed for buses and medium and heavy-duty trucks, the launch of our FCgen®-HPS High-Power Density Fuel Cell Stack for light-medium-and heavy-duty vehicles, the launch of our FCwave™ Fuel Cell Module for marine applications, and on the ongoing improvement of all of our fuel cell products including our high performance fuel cell module, the FCmove™-HD, and our high performance liquid-cooled fuel cell stack, the FCgen®-LCS.

These cost increases were also due to higher overall labour costs in Canada in the fourth quarter 2021 as a result of an approximate 3% higher Canadian dollar, relative to the U.S. dollar, and the resulting negative impact on our Canadian operating cost base. In addition, general and administrative costs are higher due to incurred COVID-19 administration costs,

and higher legal and contract administration, consulting, insurance, recruiting, corporate development, and professional fees, whereas sales and administrative costs are higher due to an increase in sales activity, consulting, and marketing labour costs in Canada and Europe primarily as a result of personnel increases.

Adjusted EBITDA

<i>(Expressed in thousands of U.S. dollars)</i>				
	Three months ended December 31,			
	2021	2020	\$ Change	% Change
Adjusted EBITDA	\$ (25,482)	\$ (14,470)	\$ (11,012)	(76%)

EBITDA and Adjusted EBITDA are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See reconciliation of Adjusted EBITDA to GAAP in the Supplemental Non-GAAP Measures and Reconciliations section. Adjusted EBITDA adjusts EBITDA for stock-based compensation expense, transactional gains and losses, asset impairment charges, unrealized gains or losses on foreign exchange contracts, finance and other income, and acquisition related costs.

Adjusted EBITDA (see Supplemental Non-GAAP Measures and Reconciliations) for the fourth quarter of 2021 was (\$25.5) million, compared to (\$14.5) million for the fourth quarter of 2020. The (\$11.0) million increase in Adjusted EBITDA loss was driven primarily by the decrease in gross margin of (\$0.9) and the increase in Cash Operating Costs of (\$10.2) million.

Net Loss from Continuing Operations

<i>(Expressed in thousands of U.S. dollars)</i>				
	Three months ended December 31,			
	2021	2020	\$ Change	% Change
Net loss from continuing operations	\$ (43,836)	\$ (14,408)	\$ (29,428)	(204%)

Net loss from continuing operations for the fourth quarter of 2021 was (\$43.8) million, or (\$0.15) per share, compared to a net loss from continuing operations of (\$14.4) million, or (\$0.05) per share, in the fourth quarter of 2020. The (\$29.4) million increase in net loss in the fourth quarter of 2021 was driven primarily by the increase in Adjusted EBITDA loss of (\$11.0) million, by higher depreciation and amortization expense of (\$1.5) million, and by lower finance and other income of (\$15.4) million which includes mark to market and foreign exchange losses of (\$10.5) million on our long-term investment in Forsee Power.

In addition, operating margins, and costs in the fourth quarter of 2021 were also impacted by the negative impact of a stronger Canadian dollar, relative to the U.S. dollar, as compared to the fourth quarter of 2020. As a significant amount of our net operating costs (primarily labour) are denominated in Canadian dollars, gross margin, operating expenses, Adjusted EBITDA, and net loss from continuing operations are impacted by changes in the Canadian dollar relative to the U.S. dollar. As the Canadian dollar relative to the U.S. dollar was approximately 3%, or 300 basis points, higher in the fourth quarter of 2021 as compared to the fourth quarter of 2020, negative foreign exchange impacts on our Canadian operating margins and cost base were approximately (\$0.75) million. A \$0.01 increase in the Canadian dollar, relative to the U.S. dollar, negatively impacts annual operating margins and costs by approximately \$1.0 million.

Net Loss from Discontinued Operations

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,			
	2021	2020	\$ Change	% Change	
Revenues	\$ -	\$ (19)	\$ 19	100%	
Cost of goods sold	-	-	-	-	
Gross margin	-	(19)	19	100%	
Operating expenses	4	(427)	431	101%	
Gain on sale of assets	-	168	(168)	(100%)	
Net loss from discontinued operations	\$ 4	\$ (278)	\$ 282	101%	

Net loss from discontinued operations for the fourth quarter of 2020 was (\$0.3) million, or (\$0.00) per share, and consist of the results of our former UAV business located in Southborough, Massachusetts that was sold in the fourth quarter of 2020.

5.3 Summary of Key Financial Metrics – Year Ended December 31, 2021

Revenue and gross margin

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,			
	2021	2020	\$ Change	% Change	
Heavy-Duty Motive	\$ 51,663	\$ 47,688	\$ 3,975	8%	
China	20,163	31,409	(11,246)	(36%)	
Europe	20,702	13,455	7,247	54%	
North America	10,177	2,532	7,645	302%	
Other	621	292	329	113%	
Material Handling	8,140	5,310	2,830	53%	
North America	8,119	5,310	2,809	53%	
Europe	21	-	21	100%	
Backup Power	8,214	5,602	2,612	47%	
Europe	7,306	4,706	2,600	55%	
North America	-	33	(33)	(100%)	
Other	908	863	45	5%	
Technology Solutions	36,488	45,277	(8,789)	(19%)	
China	18,655	22,858	(4,203)	(18%)	
Europe	14,559	18,323	(3,764)	(21%)	
North America	2,303	1,394	909	65%	
Other	971	2,702	(1,731)	(64%)	
Revenues	104,505	103,877	628	1%	
Cost of goods sold	90,492	82,893	7,599	9%	
Gross Margin	\$ 14,013	\$ 20,984	\$ (6,971)	(33%)	
Gross Margin %	13%	20%	n/a	(7 pts)	

Fuel Cell Products and Services Revenues of \$104.5 million for 2021 increased 1%, or \$0.6 million, compared to 2020. The 1% increase was driven by higher Heavy-Duty Motive, Material Handling, and Backup Power revenues, which more than offset decreases in Technology Solutions revenues.

Heavy-Duty Motive revenues of \$51.7 million increased \$4.0 million, or 8%, due primarily to higher shipments of fuel cell products to customers primarily in North America and Europe which more than offset declines in China. Excluding sales to Weichai Ballard JV and Synergy Ballard JVCo in each of the respective periods, Heavy-Duty Motive revenues earned from other customers increased by \$15.4 million in 2021 compared to 2020. Heavy-Duty Motive

revenues on a quarter to quarter basis are also impacted by product mix due to varying customer requirements and various fuel cell products, including numerous power configurations required by our customers (and the resulting impact on selling price) of our fuel cell modules, fuel cell stacks, MEAs, and related component and parts kits. Heavy-Duty Motive revenues of \$51.7 million in 2021 include \$17.1 million to Weichai Ballard JV for the supply of a mix of certain fuel cell products and components that will be used in the assembly of modules to power zero-emission FCEVs in China; \$3.1 million for shipments of MEAs to Synergy Ballard JVCo for use in their manufacture and assembly of FCveloCity® fuel cell stacks in China; and \$31.5 million to a variety of customers in Europe and North America including Solaris, New Flyer, Wrightbus, CP Rail, VanHool, and others, primarily for shipments of FCveloCity®-HD7 and FCveloCity®-HDv8 fuel cell modules and related components for their respective bus and train programs. Heavy-Duty Motive revenues of \$47.7 million in 2020 include \$23.6 million of shipments to Weichai Ballard JV; \$8.0 million for shipments of MEAs to Synergy Ballard JVCo; and \$16.1 million to a variety of customers in Europe and North America including Wrightbus, Solaris, VanHool, Anglo American, New Flyer, and others.

Technology Solutions revenues of \$36.5 million decreased by (\$8.8) million, or (19%), due primarily to decreased amounts earned on the Audi and Weichai Ballard JV programs. Technology Solutions revenues in 2021, as compared to 2020, continued to be impacted by a reduction in program scope as certain planned activities were completed, and by the deferral of development work on certain of our programs as a result of ongoing work, travel and other restrictions related to the COVID-19 pandemic. Revenues of \$36.5 million in 2021 were from a variety of customer programs including revenue from the Weichai Ballard JV technology transfer program of \$18.2 million; the Audi program of \$9.8 million; the Siemens program of \$2.2 million; and \$6.3 million from a variety of other customer programs including HDF Energy. Revenues of \$45.3 million in 2020 were from a variety of customer programs including revenue from the Weichai Ballard JV technology transfer program of \$21.2 million; the Audi program of \$16.0 million; the Siemens project of \$0.9 million; the Broad-Ocean program of \$0.8 million; and \$6.4 million from a variety of other customer programs. Audi program revenues were also positively impacted by approximately \$0.6 million in 2021, as compared to 2020, as a result of an approximate 7% higher Canadian dollar, relative to the U.S. dollar, as the Audi Agreement is priced in Canadian dollars. The underlying costs to satisfy the Audi Agreement are primarily denominated in Canadian dollars.

Material Handling revenues of \$8.1 million increased \$2.8 million, or 53%, primarily as a result of higher shipments to Plug Power.

Backup Power revenues of \$8.2 million increased \$2.6 million, or 47%, due primarily to an increase in sales of back-up power fuel cell stacks, products and service revenues in Europe.

Fuel Cell Products and Services gross margins were \$14.0 million, or 13% of revenues, for 2021, compared to \$21.0 million, or 20% of revenues, for 2020. The decrease in gross margin of (\$7.0) million, or (33%), was driven primarily by a shift to lower overall product margin and service revenue mix, and by an increase in labour, supply, and freight expenses, resulting in an (7) percentage point decrease in gross margin as a percent of revenues, which more than offset the positive impact of the 1% increase in total revenues.

Gross margin in 2021 was also negatively impacted by net inventory adjustments of (\$1.1) million related primarily to excess and impaired inventory; and by net warranty adjustments

of (\$0.3) million related primarily to increased service costs. Gross margin in 2020 was negatively impacted by net inventory adjustments of (\$1.5) million related primarily to excess and impaired inventory; and positively impacted by net warranty adjustments of \$1.4 million related primarily to contractual expirations and reduced service costs.

Operating Expenses and Cash Operating Costs

(Expressed in thousands of U.S. dollars)

	Year ended December 31,			
	2021	2020	\$ Change	% Change
Research and Product Development	\$ 62,162	\$ 35,519	\$ 26,643	75%
General and Administrative	24,725	16,234	8,491	52%
Sales and Marketing	12,904	8,616	4,288	50%
Operating Expenses	\$ 99,791	\$ 60,369	\$ 39,422	65%
Research and Product Development (cash operating cost)	\$ 52,539	\$ 28,981	\$ 23,558	81%
General and Administrative (cash operating cost)	19,754	13,566	6,188	46%
Sales and Marketing (cash operating cost)	11,489	7,482	4,007	54%
Cash Operating Costs	\$ 83,782	\$ 50,029	\$ 33,753	67%

Cash Operating Costs and its components of Research and Product Development (cash operating cost), General and Administrative (cash operating cost), and Sales and Marketing (cash operating cost) are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See the reconciliation of Cash Operating Costs to GAAP in the Supplemental Non-GAAP Measures and Reconciliations section and the reconciliation of Research and Product Development (cash operating cost), General and Administrative (cash operating cost), and Sales and Marketing (cash operating cost) to GAAP in the Operating Expense section. Cash Operating Costs adjusts operating expenses for stock-based compensation expense, depreciation and amortization, impairment losses on trade receivables, restructuring charges, the impact of unrealized gains or losses on foreign exchange contracts, acquisition related costs, and financing charges.

Total Operating Expenses (excluding Other operating expenses) for 2021 was \$99.8 million, an increase of \$39.4 million, or 65%, compared to 2020. The increase was driven by higher research and product development expenses of \$26.6 million, higher general and administrative expenses of \$8.5 million, and higher sales and marketing expenses of \$4.3 million.

Cash Operating Costs (see Supplemental Non-GAAP Measures and Reconciliations) for 2021 was \$83.8 million, an increase of \$33.8 million, or 67%, compared to 2020. The \$33.8 million, or 67%, increase was driven by higher research and product development cash operating costs of \$23.6 million, by higher general and administrative cash operating costs of \$6.2 million, and by higher sales and marketing cash operating costs of \$4.0 million.

The increase in operating expenses and cash operating costs in 2021 was driven primarily by increased expenditure on technology and product development activities in Canada, Denmark and the U.K., including the design and development of next generation fuel cell stacks and modules for bus, truck, rail and marine applications, and increased continuation engineering investment in our existing fuel cell products, including activities related to product cost reduction. Increased program investment includes expenditures related to the launch of our FCmove™-HD+, a fuel cell module designed for buses and medium and heavy-duty trucks, the launch of our FCgen®-HPS High-Power Density Fuel Cell Stack for light-medium-and heavy-duty vehicles, the launch of our FCwave™ Fuel Cell Module for marine applications, and on the ongoing improvement of all of our fuel cell products including our high performance fuel cell module, the FCmove™-HD, and our high performance liquid-cooled fuel cell stack, the FCgen®-LCS.

These cost increases were also due to higher overall labour costs in Canada in 2021 as a result of an approximate 7% higher Canadian dollar, relative to the U.S. dollar, and the resulting negative impact on our Canadian operating cost base, partially offset by increased government funding recoveries primarily in Canada as a result of qualifying for certain COVID-19 government recoveries primarily in the first half of 2021. Government funding recoveries are reflected primarily as a cost offset against gross research and product development expenses. In addition, general and administrative costs are higher due to incurred COVID-19 administration costs, and higher legal and contract administration, consulting, insurance, recruiting, corporate development, and professional fees, whereas sales and administrative costs are higher due to an increase in sales activity, consulting, and marketing labour costs in Canada and Europe primarily as a result of personnel increases.

Adjusted EBITDA

		Year ended December 31,			
		2021	2020	\$ Change	% Change
Adjusted EBITDA		\$ (82,188)	\$ (38,944)	\$ (43,244)	(111%)

EBITDA and Adjusted EBITDA are non-GAAP measures. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. See reconciliation of Adjusted EBITDA to GAAP in the Supplemental Non-GAAP Measures and Reconciliations section. Adjusted EBITDA adjusts EBITDA for stock-based compensation expense, transactional gains and losses, asset impairment charges, unrealized gains or losses on foreign exchange contracts, finance and other income, and acquisition related costs.

Adjusted EBITDA (see Supplemental Non-GAAP Measures and Reconciliations) for 2021 was (\$82.2) million, compared to (\$38.9) million for 2020. The (\$43.2) million increase in Adjusted EBITDA loss was driven primarily by the decrease in gross margin of (\$7.0), by the increase in Cash Operating Costs of (\$33.8) million, and by higher equity in loss of investment in joint venture and associates of (\$3.6) million primarily attributed to the ongoing establishment of operations of Weichai Ballard JV.

Net Loss from Continuing Operations

		Year ended December 31,			
		2021	2020	\$ Change	% Change
Net loss from continuing operations		\$ (114,397)	\$ (49,469)	\$ (64,928)	(131%)

Net loss from continuing operations for 2021 was (\$114.4) million, or (\$0.39) per share, compared to a net loss from continuing operations of (\$49.5) million, or (\$0.20) per share, in 2020. The (\$64.9) million increase in net loss in 2021 was driven primarily by the increase in Adjusted EBITDA loss of (\$43.2) million, higher stock-based compensation expense of (\$3.4) million, higher depreciation and amortization expense of (\$2.3) million, and by lower finance and other income of (\$13.1) million which includes mark to market and foreign exchange losses of (\$10.5) million on our long-term investment in Forsee Power.

In addition, operating margins, and costs in 2021 were impacted by the negative impact of a stronger Canadian dollar, relative to the U.S. dollar, as compared to 2020. As a significant amount of our net operating costs (primarily labour) are denominated in Canadian dollars, gross margin, operating expenses, Adjusted EBITDA, and net loss from continuing operations are impacted by changes in the Canadian dollar relative to the U.S. dollar. As the Canadian dollar relative to the U.S. dollar was approximately 7%, or 500 basis points, higher in 2021 as compared to 2020, negative foreign exchange impacts on our Canadian operating margins and cost base were approximately (\$5.0) million. A \$0.01 increase in the Canadian dollar,

relative to the U.S. dollar, negatively impacts annual operating margins and costs by approximately \$1.0 million.

Net Income (Loss) from Discontinued Operations

		Year ended December 31,			
<i>(Expressed in thousands of U.S. dollars)</i>					
	2021	2020	\$ Change	% Change	
Revenues	\$ -	\$ 262	\$ (262)	(100%)	
Cost of goods sold	-	223	(223)	(100%)	
Gross margin	-	39	(39)	(100%)	
Operating recovery (expenses)	164	(2,115)	(2,279)	(108%)	
Gain on sale of assets	-	168	(168)	(100%)	
Net income (loss) from discontinued operations	\$ 164	\$ (1,908)	\$ 2,072	109%	

Net income (loss) from discontinued operations for 2021 was \$0.2 million, or \$0.00 per share, compared to (\$1.9) million, or (\$0.01) per share, in 2020, and consists of the results of our former UAV business located in Southborough, Massachusetts that was sold in the fourth quarter of 2020.

5.4 Operating Expenses and Other Items – Three Months and Year ended December 31, 2021

Research and product development expenses

		Three months ended December 31,			
<i>(Expressed in thousands of U.S. dollars)</i>					
Research and product development	2021	2020	\$ Change	% Change	
Research and product development expense	\$ 19,870	\$ 11,759	\$ 8,111	69%	
Less: Depreciation and amortization expense	\$ (1,458)	\$ (765)	\$ (693)	(91%)	
Less: Stock-based compensation expense	\$ (1,259)	\$ (1,423)	\$ 164	12%	
Research and Product Development (cash operating cost)	\$ 17,153	\$ 9,571	\$ 7,582	79%	

		Year ended December 31,			
<i>(Expressed in thousands of U.S. dollars)</i>					
Research and product development	2021	2020	\$ Change	% Change	
Research and product development expense	\$ 62,162	\$ 35,519	\$ 26,643	75%	
Less: Depreciation and amortization expense	\$ (4,101)	\$ (3,211)	\$ (890)	(28%)	
Less: Stock-based compensation expense	\$ (5,522)	\$ (3,327)	\$ (2,195)	(66%)	
Research and Product Development (cash operating cost)	\$ 52,539	\$ 28,981	\$ 23,558	81%	

Research and Product Development (cash operating cost) is a non-GAAP measure. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. Research and Product Development (cash operating cost) adjusts Research and product development expense for depreciation and amortization expense and stock-based compensation expense. See the reconciliation of the adjustments to Research and product development expense in the table above.

Research and product development expenses for the three months ended December 31, 2021, were \$19.9 million, an increase of \$8.1 million, or 69%, compared to the corresponding period of 2020. Excluding depreciation and amortization expense and stock-based compensation expense, research and product development cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) were \$17.2 million in 2021, an increase of \$7.6 million, or 79%, compared to 2020.

Research and product development expenses for the year ended December 31, 2021, were \$62.2 million, an increase of \$26.6 million, or 75%, compared to the corresponding period of 2020. Excluding depreciation and amortization expense and stock-based compensation expense, research and product development cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) were \$52.5 million in 2021, an increase of \$23.6 million, or 81%, compared to 2020.

The respective \$7.6 million, or 79%, and \$23.6 million, or 81%, increases in research and development cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) in the fourth quarter and fiscal year 2021, as compared to the fourth quarter and fiscal year 2020, was driven primarily by increased expenditure on technology and product development activities in Canada, Denmark and the U.K., including the design and development of next generation fuel cell stacks and modules for bus, truck, rail and marine applications, and increased continuation engineering investment in our existing fuel cell products, including activities related to product cost reduction. Increased program investment includes expenditures related to the launch of our FCmove™-HD+, a fuel cell module designed for buses and medium and heavy-duty trucks, the launch of our FCgen®-HPS High-Power Density Fuel Cell Stack for light-medium-and heavy-duty vehicles, the launch of our FCwave™ Fuel Cell Module for marine applications, and on the ongoing improvement of all of our fuel cell products including our high performance fuel cell module, the FCmove™-HD, and our high performance liquid-cooled fuel cell stack, the FCgen®-LCS.

These cost increases were also due to higher overall labour costs in Canada in 2021 as a result of an approximate 7% higher Canadian dollar, relative to the U.S. dollar, and the resulting negative impact on our Canadian operating cost base in 2021 compared to 2020. These cost increases were partially offset by increased government funding recoveries primarily in Canada as a result of qualifying for certain COVID-19 government recoveries primarily in the first half of 2021. Government funding recoveries are reflected primarily as a cost offset against gross research and product development expenses.

Depreciation and amortization expense included in research and product development expense for the three months and year ended December 31, 2021, was \$1.5 million and \$4.1 million, respectively, compared to \$0.8 million and \$3.2 million, respectively, for the corresponding periods of 2020. Depreciation and amortization expense relate primarily to amortization expense on our intangible assets and depreciation expense on our research and product development facilities and equipment. The increase in 2021 is primarily as a result of increased investment in core equipment and includes amortization on acquired Arcola intangible assets.

Stock-based compensation expense included in research and product development expense for the three months and year ended December 31, 2021, was \$1.3 million and \$5.5 million, respectively, compared to \$1.4 million and \$3.3 million, respectively, for the corresponding periods of 2020. The increase in 2021 is due primarily to new equity awards granted to a wider employee base to help retain key personnel including awards granted on the acquisition of Arcola.

General and administrative expenses

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,			
General and administrative	2021	2020	\$ Change	% Change	
General and administrative expense	\$ 7,420	\$ 4,972	\$ 2,448	49%	
Less: Depreciation and amortization expense	\$ (577)	\$ (281)	\$ (296)	(105%)	
Less: Stock-based compensation expense	\$ (698)	\$ (561)	\$ (137)	(24%)	
Add: Impact of unrealized gains (losses) on foreign exchange contracts	\$ 263	\$ 324	\$ (61)	(19%)	
General and Administrative (cash operating cost)	\$ 6,408	\$ 4,454	\$ 1,954	44%	

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,			
General and administrative	2021	2020	\$ Change	% Change	
General and administrative expense	\$ 24,725	\$ 16,234	\$ 8,491	52%	
Less: Depreciation and amortization expense	\$ (1,672)	\$ (1,120)	\$ (552)	(49%)	
Less: Stock-based compensation expense	\$ (2,780)	\$ (1,807)	\$ (973)	(54%)	
Add: Impact of unrealized gains (losses) on foreign exchange contracts	\$ (519)	\$ 259	\$ (778)	(300%)	
General and Administrative (cash operating cost)	\$ 19,754	\$ 13,566	\$ 6,188	46%	

General and Administrative (cash operating cost) is a non-GAAP measure. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. General and Administrative (cash operating cost) adjusts General and administrative expense for depreciation and amortization expense, stock-based compensation expense and the impact of unrealized gains or losses on foreign exchange contracts. See the reconciliation of the adjustments to General and administrative expense in the table above.

General and administrative expenses for the three months ended December 31, 2021, were \$7.4 million, an increase of \$2.4 million, or 49%, compared to the corresponding period of 2020. Excluding depreciation and amortization expense, stock-based compensation expense, and the impact of unrealized gains (losses) on foreign exchange contracts, general and administrative cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) were \$6.4 million in the fourth quarter of 2021, an increase of \$2.0 million, or 44%, compared to the fourth quarter of 2020.

General and administrative expenses for the year ended December 31, 2021, were \$24.7 million, an increase of \$8.5 million, or 52%, compared to the corresponding period of 2020. Excluding depreciation and amortization expense, stock-based compensation expense, and the impact of unrealized gains (losses) on foreign exchange contracts, general and administrative cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) were \$19.8 million in 2021, an increase of \$6.2 million, or 46%, compared to 2020.

The respective \$2.0 million, or 44%, and \$6.2 million, or 46%, increases in general and administrative cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) in the fourth quarter and fiscal year 2021, as compared to the fourth quarter and fiscal year 2020, was due primarily to incurred COVID-19 administration costs, by higher legal and contract administration, consulting, insurance, recruiting, corporate development, and professional fees, and by higher overall labour costs in Canada in 2021 as a result of an approximate 7% higher Canadian dollar, relative to the U.S. dollar, and the resulting negative impact on our Canadian operating cost base in 2021 compared to 2020.

Depreciation and amortization expense included in general and administrative expense for the three months and year ended December 31, 2021, was \$0.6 million and \$1.7 million, respectively, compared to \$0.3 million and \$1.1 million, respectively, for the corresponding periods of 2020. Depreciation and amortization expense relate primarily to our office and information technology intangible assets including our ongoing investment in our ERP system.

Stock-based compensation expense included in general and administrative expense for the three months and year ended December 31, 2021, was \$0.7 million and \$2.8 million, respectively, compared to \$0.6 million and \$1.8 million, respectively, for the corresponding periods of 2020. The increase in 2021 is due primarily to new equity awards granted to a wider employee base to help retain key personnel.

The impact of unrealized gains (losses) on foreign exchange contracts included in general and administrative expense for the three months and year ended December 31, 2021, was (\$0.3) million and (\$0.5) million, respectively, in each of the periods, compared to \$0.3 million and \$0.3 million, respectively, for the corresponding periods of 2020. We use forward foreign exchange contracts to help manage our exposure to currency rate fluctuations. We record these contracts at their fair value as of the balance sheet date as either assets or liabilities with any changes in fair value in the period recorded in profit or loss (general and administrative expense) as these contracts are not designated or qualified under hedge accounting criteria.

Sales and marketing expenses

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,		
Sales and marketing	2021	2020	\$ Change	% Change
Sales and marketing expense	\$ 3,417	\$ 2,742	\$ 675	25%
Less: Depreciation and amortization expense	\$ (12)	\$ (14)	\$ 2	14%
Less: Stock-based compensation expense	\$ (362)	\$ (363)	\$ 1	-%
Sales and Marketing (cash operating cost)	\$ 3,043	\$ 2,365	\$ 678	29%

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,		
Sales and marketing	2021	2020	\$ Change	% Change
Sales and marketing expense	\$ 12,904	\$ 8,616	\$ 4,288	50%
Less: Depreciation and amortization expense	\$ (48)	\$ (40)	\$ (8)	(20%)
Less: Stock-based compensation expense	\$ (1,367)	\$ (1,094)	\$ (273)	(25%)
Sales and Marketing (cash operating cost)	\$ 11,489	\$ 7,482	\$ 4,007	54%

Sales and Marketing (cash operating cost) is a non-GAAP measure. We use certain Non-GAAP measures to assist in assessing our financial performance. Non-GAAP measures do not have any standardized meaning prescribed by GAAP and are therefore unlikely to be comparable to similar measures presented by other companies. Sales and Marketing (cash operating cost) adjusts Sales and marketing expense for depreciation and amortization expense and stock-based compensation expense. See the reconciliation of the adjustments to Sales and marketing expense in the table above.

Sales and marketing expenses for the three months ended December 31, 2021, were \$3.4 million, an increase of \$0.7 million, or 25%, compared to the corresponding period of 2020. Excluding stock-based compensation expense, sales and marketing cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) were \$3.0 million in the fourth quarter of 2021, an increase of \$0.7 million, or 29%, compared to the fourth quarter of 2020.

Sales and marketing expenses for the year ended December 31, 2021, were \$12.9 million, an increase of \$4.3 million, or 50%, compared to the corresponding period of 2020. Excluding stock-based compensation expense, sales and marketing cash operating costs (see

Supplemental Non-GAAP Measures and Reconciliations) were \$11.5 million in 2021, an increase of \$4.0 million, or 54%, compared to 2020.

The respective \$0.7 million, or 29%, and \$4.0 million, or 54%, increases in sales and marketing cash operating costs (see Supplemental Non-GAAP Measures and Reconciliations) in the fourth quarter and fiscal year 2021, as compared to the fourth quarter and fiscal year 2020, was driven primarily by an increase in sales activity, consulting, and marketing labour costs in Canada and Europe as a result of personnel increases to support increased sales activity, and by higher overall labour costs in Canada in 2021 as a result of an approximate 7% higher Canadian dollar, relative to the U.S. dollar, and the resulting negative impact on our Canadian operating cost base.

Stock-based compensation expense included in sales and marketing expense for the three months and year ended December 31, 2021, was \$0.4 million and \$1.4 million, respectively, compared to \$0.4 million and \$1.1 million, respectively, for the corresponding periods of 2020. The increase in 2021 is due primarily to new equity awards granted to a wider employee base to help retain key personnel.

Other expense for the three months and year ended December 31, 2021, was \$1.6 million and \$2.3 million, respectively, compared to \$0.1 million and \$0.4 million, respectively, for the corresponding periods of 2020. The following table provides a breakdown of other expense for the reported periods:

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,			
	2021	2020	\$ Change	% Change	
Impairment loss (recovery) on trade receivables	\$ 11	\$ 60	\$ (49)	(82%)	
Restructuring expense (recovery)	9	26	(17)	(65%)	
Acquisition related charges	1,580	-	1,580	100%	
Other expenses (recovery)	\$ 1,600	\$ 86	\$ 1,514	1760%	

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,			
	2021	2020	\$ Change	% Change	
Impairment loss (recovery) on trade receivables	\$ 54	\$ 310	\$ (256)	(83%)	
Restructuring expense	156	66	90	136%	
Acquisition related charges	2,115	-	2,115	100%	
Other expenses (recovery)	\$ 2,325	\$ 376	\$ 1,949	518%	

Net impairment loss (recovery) on trade receivables for the year ended December 31, 2021, were nominal, compared to \$0.3 million for the corresponding period of 2020, and are due primarily to changes in the expected credit loss ("ECL") on our financial assets measured at amortized cost which consist primarily of trade receivables and contract assets. ECLs are a probability-weighted estimate of credit losses. In the event that we are able to recover on an impaired trade receivable through legal or other means, the recovered amount is recognized in the period of recovery as a reversal of the impairment loss.

Acquisition related charges for the three months and year ended December 31, 2021, was \$1.6 million and \$2.1 million, respectively, and consist primarily of legal, advisory, and transaction related costs incurred on ongoing corporate development activity including the

successful acquisition of Arcola, the long-term investment in Forsee Power, and the long-term investment in certain hydrogen infrastructure and growth equity funds.

Finance income (loss) and other for the three months and year ended December 31, 2021, was (\$11.4) million and (\$8.8) million, respectively, compared to \$4.1 million and \$4.3 million, respectively, for the corresponding periods of 2020. The following table provides a breakdown of finance and other income (loss) for the reported periods:

	Three months ended December 31,			
	2021	2020	\$ Change	% Change
<i>(Expressed in thousands of U.S. dollars)</i>				
Employee future benefit plan expense	\$ (34)	\$ (5)	\$ (29)	(580%)
Investment and other income (loss)	1,032	339	693	204%
Mark to Market gain (loss) on financial assets	(10,288)	-	(10,288)	(100%)
Foreign exchange gain (loss)	(931)	5,303	(6,234)	(118%)
Government levies	(1,145)	(1,500)	355	24%
Finance income (loss) and other	\$ (11,366)	\$ 4,137	\$ (15,503)	(375%)

	Year ended December 31,			
	2021	2020	\$ Change	% Change
<i>(Expressed in thousands of U.S. dollars)</i>				
Employee future benefit plan expense	\$ (251)	\$ (274)	\$ 23	8%
Investment and other income (loss)	3,743	1,181	2,562	217%
Mark to Market gain (loss) on financial assets	(9,024)	-	(9,024)	(100%)
Foreign exchange gain (loss)	(1,336)	4,875	(6,211)	(150%)
Government levies	(1,945)	(1,500)	(445)	(30%)
Finance income (loss) and other	\$ (8,813)	\$ 4,282	\$ (13,095)	(306%)

Employee future benefit plan expense for the years ended December 31, 2021, and 2020, were (\$0.3) million in each of the periods, and primarily represent the excess of expected interest cost on plan obligations over the expected return on plan assets on a curtailed defined benefit pension plan for certain former United States employees.

Investment and other income for the three months and year ended December 31, 2021, was \$1.0 million and \$3.7 million, respectively, compared to \$0.3 million and \$1.2 million, respectively for the corresponding periods of 2020. Amounts were earned on our cash, cash equivalents and short-term investments and have changed relatively proportionately with the increase in our overall average monthly cash balances.

Mark to market gain (loss) on financial assets for the three months and year ended December 31, 2021, was (\$10.3) million and (\$9.0) million, respectively, and consist of changes in the fair value of certain short-term and long-term financial investments including Forsee Power and certain hydrogen infrastructure and growth equity funds. Mark to market gains and losses are also impacted by the conversion of our short-term and long-term financial assets, including Foresee Power and certain hydrogen infrastructure and growth equity funds, from their respective European Euro or Great British pound denominated investment to the U.S. dollar.

Foreign exchange gains (losses) for the three months and year ended December 31, 2021, were (\$0.9) million and (\$1.3) million, respectively, compared to \$5.3 million and \$4.9 million,

respectively, for the corresponding periods of 2020. Foreign exchange gains and losses are attributable primarily to the effect of the changes in the value of the Canadian dollar, relative to the U.S. dollar, on our Canadian dollar-denominated net monetary position. Foreign exchange gains and losses are also impacted by the conversion of Ballard Power Systems Europe A/S' assets and liabilities from the Danish Kroner to the U.S. dollar at exchange rates in effect at each reporting date are recorded in other comprehensive income (loss).

Government levies for the three months and year ended December 31, 2021, was (\$1.1) million and (\$1.9) million, respectively, compared to (\$1.5) million and (\$1.5) million, respectively, for the corresponding periods of 2020. Government levies relate primarily to withholding taxes deducted from proceeds earned on certain commercial contracts.

Finance expense for the three months and year ended December 31, 2021, was (\$0.3) million and (\$1.3) million, respectively, consistent with the corresponding periods of 2020. Finance expense represents the interest expense incurred on all of our right-of-use assets with a lease term of greater than 12-months, including our head office building, manufacturing facility, and related storage facilities in Burnaby, British Columbia, as well as similar right-of-use assets in all of our subsidiaries.

Equity in income (loss) of investment in joint venture and associates for the three months and year ended December 31, 2021, was (\$4.9) million and (\$16.1) million, respectively, compared to (\$4.3) million and (\$12.6) million, respectively, for the corresponding periods of 2020. Equity in loss of investment in joint venture and associates relates to the pickup of 49% of the net income (loss) of Weichai Ballard JV as a result of our 49% ownership position, and 10% of the net income (loss) of Synergy Ballard JVCo as a result of our 10% ownership position. Both investments in China are accounted for using the equity method of accounting.

The loss of investment in joint venture and associates in 2021 and 2020 is primarily as a result of research and product development expenses in the periods consisting primarily of amounts expended on the ongoing \$90 million technology transfer agreement with Ballard as Weichai Ballard JV continue to establish operations. Weichai Ballard JV will manufacture Ballard's next-generation LCS fuel cell stack and LCS-based power modules for bus, commercial truck, and forklift applications with exclusive rights in China.

5.5 Summary of Quarterly Results

The following table provides summary financial data for our last eight quarters:

	Quarter ended,			
	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021	Mar 31, 2021
<i>(Expressed in thousands of U.S. dollars, except per share amounts and weighted average shares outstanding which are expressed in thousands)</i>				
Revenues	\$ 36,705	\$ 25,220	\$ 24,961	\$ 17,619
Net loss from continuing operations	\$ (43,836)	\$ (30,844)	\$ (21,913)	\$ (17,802)
Net loss from continuing operations per share, basic and diluted	\$ (0.15)	\$ (0.10)	\$ (0.07)	\$ (0.06)
Weighted average common shares outstanding	297,655	297,612	297,569	288,209
	Dec 31, 2020	Sep 30, 2020	Jun 30, 2020	Mar 31, 2020
Revenues	\$ 28,589	\$ 25,624	\$ 25,783	\$ 23,882
Net loss from continuing operations	\$ (14,408)	\$ (11,212)	\$ (10,745)	\$ (13,103)
Net loss from continuing operations per share, basic and diluted	\$ (0.05)	\$ (0.05)	\$ (0.05)	\$ (0.06)
Weighted average common shares outstanding	268,735	246,059	235,765	235,330

Summary of Quarterly Results: There were no significant seasonal variations in our quarterly results. Variations in our net loss for the above periods were affected primarily by the following factors:

Revenues: Variations in fuel cell product and service revenues reflect the demand and timing of our customers' fuel cell vehicle, bus, and fuel cell product deployments as well as the demand and timing of their engineering services projects. Variations in fuel cell product and service revenues also reflect the timing of work performed and the achievements of milestones under long-term fixed price contracts. Revenues were positively impacted as of the fourth quarter of 2021 by the acquisition of Arcola on November 11, 2021.

- **Operating expenditures:** Operating expenses were negatively impacted as of the fourth quarter of 2021 by the acquisition and integration of Arcola. Operating expenses were negatively impacted in the third and fourth quarters of 2021 by acquisition related costs of (\$0.5) million and (\$1.6) million, respectively and include costs incurred for the Arcola acquisition. Operating expenses also include the impact of changes in the value of the Canadian dollar, versus the U.S. dollar, on our Canadian dollar denominated expenditures.
- **Net loss:** Net loss in the third and fourth quarters of 2021 was impacted by the above noted impact on Revenues and Operating expenditures. Net loss in the fourth quarter of 2021 was also negatively impacted by mark to market gains (losses) on financial assets of (\$10.3) million related primarily to Forsee Power and certain hydrogen infrastructure and growth equity funds.

6. CASH FLOWS, LIQUIDITY AND CAPITAL RESOURCES

6.1 Summary of Cash Flows

Cash and cash equivalents were \$1,123.9 million as of December 31, 2021, compared to \$763.4 million as of December 31, 2020. The \$360.5 million increase in cash and cash equivalents in 2021 was driven by net proceeds of \$527.3 million received from the sale of

common shares in the capital of the Company ("Common Shares") under the bought deal offering completed in February 2021 (the "2021 Offering"), and by share purchase option exercises of \$2.4 million. These 2021 cash inflows were partially offset by net cash operating losses (excluding non-cash items) of (\$68.9) million, net working capital outflows of (\$11.6) million, equity investments in Weichai Ballard JV of (\$12.4) million, purchases of property, plant and equipment and intangible assets of (\$14.7) million, initial cash acquisition investment in Arcola of (\$7.2) million, long-term financial investments of (\$51.8) million including Forsee Power and certain hydrogen infrastructure and growth equity funds, and by finance lease repayments of (\$2.8) million.

6.2 Cash Provided by (Used by) Operating Activities

	Three months ended December 31,		
	2021	2020	\$ Change
<i>(Expressed in thousands of U.S. dollars)</i>			
Cash Operating Loss	\$ (23,539)	\$ (6,690)	\$ (16,849)
Change in Working Capital:			
Trade and other receivables	(3,019)	(10,466)	7,447
Inventory	(1,052)	7,738	(8,790)
Prepaid expenses	(1,336)	(1,099)	(237)
Accounts payable	(507)	6,645	(7,152)
Deferred revenue	(924)	(1,563)	639
Warranty provision	(299)	(1,227)	928
	(7,137)	28	(7,165)
Cash Used by Operating Activities	\$ (30,676)	\$ (6,662)	\$ (24,014)

For the three months ended December 31, 2021, cash used by operating activities was (\$30.7) million compared to (\$6.7) million for the three months ended December 31, 2020. The (\$24.0) million increase in cash used by operating activities in the fourth quarter of 2021, as compared to the fourth quarter of 2020, was driven by the relative increase in cash operating losses of (\$16.8) million, and by the relative increase in working capital requirements of (\$7.2) million.

The relative (\$16.8) million increase in cash operating losses in the fourth quarter of 2021 was driven primarily by the increase in Adjusted EBITDA loss of (\$11.0) million. This net (loss) increase in the fourth quarter of 2021 was also impacted by several items included in cash operating losses but excluded from Adjusted EBITDA loss or vice-versa including: lower finance and other income (excluding mark to market fair value changes on investments) of (\$5.2) million, higher equity investment losses in joint venture and associates of \$0.5 million, and higher acquisition related costs of (\$1.6) million.

The total change in working capital of (\$7.1) million in the fourth quarter of 2021 was driven by higher accounts and contract receivables of (\$3.0) million primarily as a result of the timing of revenues and the related customer collections, by higher inventory of (\$1.1) million primarily to support expected Heavy-Duty Motive shipments in 2022 and to help mitigate ongoing COVID-19 supply chain disruptions, and by higher prepaid expenses of (\$1.3) million.

	Year ended December 31,		
	2021	2020	\$ Change
Cash Operating Loss	\$ (68,876)	\$ (25,810)	\$ (43,066)
Change in Working Capital:			
Trade and other receivables	9,640	(2,093)	11,733
Inventory	(22,996)	1,355	(24,351)
Prepaid expenses	(810)	(1,026)	216
Accounts payable	1,408	(4,238)	5,646
Deferred revenue	2,221	(10,268)	12,489
Warranty provision	(1,063)	(854)	(209)
	(11,600)	(17,124)	5,524
Cash Used by Operating Activities	\$ (80,476)	\$ (42,934)	\$ (37,542)

For the year ended December 31, 2021, cash used by operating activities was (\$80.5) million compared to (\$42.9) million for the year ended December 31, 2020. The (\$37.5) million increase by cash used in operating activities in 2021, as compared to 2020, was driven by relative increase in cash operating losses of (\$43.1) million, partially offset by the relative decrease in working capital contributions of \$5.5 million.

The relative (\$43.1) million increase in cash operating losses in 2021 was primarily driven by the increase in Adjusted EBITDA loss of (\$43.2) million. This net (loss) increase in 2021 was also impacted by several items included in cash operating losses but excluded from Adjusted EBITDA loss or vice-versa including: lower finance and other income (excluding mark to market fair value changes on investments) of (\$4.1) million, higher equity investment losses in joint venture and associates of \$3.6 million, and higher acquisition related costs of (\$2.1) million.

The total change in working capital of (\$11.6) million in 2021 was driven by higher inventory of (\$23.0) million primarily to support expected Heavy-Duty Motive shipments in 2022 and to help mitigate ongoing COVID-19 supply chain disruptions. These working capital outflows in 2021 were partially offset by lower accounts and contract receivables of \$9.6 million primarily as a result of the timing of revenues and the related customer collections, by higher deferred revenue of \$2.2 million as we received pre-payments on certain Heavy-Duty Motive and Technology Solutions contracts, and by higher accounts payable and accrued liabilities of \$1.4 million as a result of the timing of payments for inventory purchases and annual compensation awards.

6.3 Cash Provided by (Used by) Investing Activities

Investing activities resulted in net cash outflows of (\$67.4) million and (\$85.6) million, respectively, for the three months and year ended December 31, 2021, compared to net cash outflows of (\$7.8) million and (\$36.4) million, respectively, for the corresponding periods of 2020.

Investing activities in the fourth quarter of 2021 of (\$67.4) million consist primarily of our long-term investment in Forsee Power of (\$43.8) million, long-term investment in certain hydrogen infrastructure and growth equity funds of (\$8.0) million, initial cash acquisition investment in Arcola of (\$7.2) million, investments in associated companies of (\$3.3) million paid as planned for the eleventh equity contribution in our 49% investment in Weichai Ballard

JV, and by capital expenditures of (\$5.6) million incurred primarily for production and test equipment and certain intangible assets, partially offset by proceeds received on the sale of short-term investments of \$0.3 million.

Investing activities in 2021 of (\$85.6) million consist primarily of our long-term investment in Forsee Power of (\$43.8) million, long-term investment in certain hydrogen infrastructure and growth equity funds of (\$8.0) million, initial cash acquisition investment in Arcola of (\$7.2) million, investments in associated companies of (\$12.4) million paid as planned for the eighth, ninth, tenth, and eleventh equity contributions in our 49% investment in Weichai Ballard JV, by capital expenditures of (\$14.7) million incurred primarily for production and test equipment and certain intangible assets, partially offset by proceeds received on the sale of short-term investments of \$0.3 million.

6.4 Cash Provided by (Used by) Financing Activities

Financing activities resulted in net cash inflows (outflows) of (\$0.5) million and \$526.9 million, respectively, for the three months and year ended December 31, 2021, compared to net cash inflows of \$418.0 million and \$696.5 million, respectively, for the corresponding periods of 2020.

Financing activities in the fourth quarter of 2021 of (\$0.5) million consist of proceeds from the exercise of share purchase options of \$0.3 million, which were more than offset by finance lease payments of (\$0.8) million.

Financing activities in 2021 of \$526.9 consist of net proceeds from the sale of Common Shares of \$527.3 million from the 2021 Offering, proceeds from the exercise of share purchase options of \$2.4 million, partially offset by finance lease payments of (\$2.8) million.

6.5 Liquidity and Capital Resources

As of December 31, 2021, we had total liquidity of \$1,126.9 million. We measure liquidity as our net cash and short-term investment position, consisting of the sum of our cash, cash equivalents and short-term investments of \$1,126.9 million, as we have no debt.

We have a Letter of Guarantee Facility (the "LG Facility") enabling our bank to issue letters of guarantees, standby letters of credit, performance bonds, counter guarantees, counter standby letter of credit or similar credits on our behalf to from time to time up to a maximum of \$2.0 million. As of December 31, 2021, there was nil outstanding on the LG Facility. We also have a Foreign Exchange Facility (the "FX Facility") enabling us to enter into foreign exchange currency contracts to a maximum face value of \$23.7 million (approximately Canadian \$29 million) secured by a guarantee from Export Development Canada. As of December 31, 2021, we had outstanding foreign exchange currency contracts to purchase a total of Canadian \$26.5 million under the FX Facility.

Our liquidity objective is to maintain cash balances sufficient to fund at least six quarters of forecasted cash used by operating activities and expected joint venture capital contributions at all times. Our strategy to attain this objective is to continue our drive to attain profitable operations that are sustainable by executing a business plan that continues to focus on Fuel Cell Products and Services revenue growth, improving overall gross margins, maintaining discipline over Cash Operating Costs, managing working capital requirements, and securing additional financing to fund our operations as needed until we do achieve profitable operations

that are sustainable. We believe that we have adequate liquidity in cash and working capital to achieve our liquidity objective.

Failure to achieve or maintain this liquidity objective could have a material adverse effect on our financial condition and results of operations including our ability to continue as a going concern. There are also various risks and uncertainties affecting our ability to achieve this liquidity objective including, but not limited to, the market acceptance and rate of commercialization of our products, the ability to successfully execute our business plan, and general global economic conditions, certain of which are beyond our control. While we continue to make significant investments in product development and market development activities necessary to commercialize our products, make increased investments in working capital as we grow our business, and make ongoing capital contributions in support of our investment in Weichai Ballard JV and in certain hydrogen infrastructure and growth equity funds, our actual liquidity requirements will also vary and will be impacted by future acquisitions and strategic partnerships and investments, our relationships with our lead customers and strategic partners including their ability to successfully finance and fund their operations and programs and agreements with us, our success in developing new channels to market and relationships with customers, our success in generating revenue growth from near-term product, service and licensing opportunities, our success in managing our operating expense and working capital requirements, foreign exchange fluctuations, and the progress and results of our research, development and demonstration programs.

We may also choose to pursue additional liquidity through the issuance of debt or equity in private or public market financings. To enable the timely issuance of equity securities in the public market, we renewed our Base Shelf Prospectus on file with the securities regulators in Canada in March 2021. The Base Shelf Prospectus, which is effective for 25-months ending in April 2023, was filed in each of the provinces and territories of Canada, and a corresponding shelf registration statement on Form F-10 was also filed with the United States Securities and Exchange Commission. These filings will enable offerings of securities up to an aggregate initial offering price of \$1.5 billion at any time during the 25-month period that the Base Shelf Prospectus remains effective.

No assurance can be given that any such additional liquidity will be available or that, if available, it can be obtained on terms favorable to the Company. If any securities are offered under the Base Shelf Prospectus, the terms of any such securities and the intended use of the net proceeds resulting from such offering would be established at the time of any offering and would be described in a supplement to the Base Shelf Prospectus filed with applicable Canadian securities regulators and/or the SEC, respectively, at the time of such an offering.

7. OTHER FINANCIAL MATTERS

7.1 Off-Balance Sheet Arrangements and Contractual Obligations

Periodically, we use forward foreign exchange contracts to manage our exposure to currency rate fluctuations. We record these contracts at their fair value as either assets or liabilities on our balance sheet. Any changes in fair value are either (i) recorded in other comprehensive income if formally designated and qualified under hedge accounting criteria; or (ii) recorded in profit or loss (general and administrative expense) if either not designated, or not qualified, under hedge accounting criteria. As of December 31, 2021, we had outstanding foreign

exchange currency contracts to purchase a total of Canadian \$26.5 million at an average rate of 1.2632 Canadian per U.S. dollar, resulting in a nominal unrealized loss as of December 31, 2021. The outstanding foreign exchange currency contracts have not been designated under hedge accounting.

As of December 31, 2021, we did not have any other material obligations under guarantee contracts, retained or contingent interests in transferred assets, outstanding derivative instruments, or non-consolidated variable interests.

As of December 31, 2021, we had the following contractual obligations and commercial commitments (including capital contribution commitments to Weichai Ballard JV) calculated on a non-discounted basis with the exception of Finance leases:

<i>(Expressed in thousands of U.S. dollars)</i>	Contractual Obligations	Total	Payments due by period,			
			Less than one year	1-3 years	4-5 years	After 5 years
Finance leases	\$ 20,356	\$ 4,296	\$ 8,431	\$ 4,763	\$ 2,866	
Asset retirement obligations	2,025	-	2,025	-	-	
Long-term investment (HyCap)	26,062	26,062	-	-	-	
Long-term investment (Clean H2)	33,978	6,796	20,387	6,795	-	
Capital contributions to Weichai Ballard JV	9,834	9,834	-	-	-	
Total contractual obligations	\$ 92,255	\$ 46,988	\$ 30,843	\$ 11,558	\$ 2,866	

Long-term investments include an investment committing us to be a limited partner in HyCap, a newly-created hydrogen infrastructure and growth equity fund. HyCap is to invest in a combination of hydrogen infrastructure projects and investments in companies along the hydrogen value chain. We have committed to investing £25.0 million (including £5.7 million invested as of December 31, 2021) into HyCap.

Long-term investments also include an investment committing us to be a limited partner in Clean H2, another newly-created hydrogen infrastructure and growth equity fund. Clean H2 is to invest in a combination of hydrogen infrastructure projects and investments in companies along the hydrogen value chain. We have committed to investing €30.0 million (including €0.3 million invested as of December 31, 2021) into Clean H2.

In addition, we have outstanding commitments of \$22.8 million as of December 31, 2021, related primarily to purchases of property, plant, and equipment. Capital expenditures and expenditures on other intangible assets pertain to our regular operations and are expected to be funded through cash on hand.

In connection with the acquisition of intellectual property from UTC in 2014, we have a royalty obligation in certain circumstances to pay UTC a portion of any future intellectual property sale and licensing income generated from certain of our intellectual property portfolio for a period of 15-years expiring in April 2029. No royalties were paid to UTC in the three months and year ended December 31, 2021, and for the years ended December 31, 2020, 2019 and 2018.

As of December 31, 2021, we retain a previous funding obligation to pay royalties of 2% of revenues (to a maximum of Canadian \$5.4 million) on sales of certain fuel cell products for

commercial distributed utility applications. No royalties have been incurred to date as a result of this agreement.

We also retain a previous funding obligation to pay royalties of 2% of revenues (to a maximum of Canadian \$2.2 million) on sales of certain fuel cell products for commercial transit applications. No royalties have been incurred to date as a result of this agreement.

In the ordinary course of business or as required by certain acquisition or disposition agreements, we are periodically required to provide certain indemnities to other parties. As of December 31, 2021, we have not accrued any significant amount owing, or receivable, as a result of any indemnity agreements undertaken in the ordinary course of business.

7.2 Related Party Transactions

Related parties include our 49% owned equity accounted investee, Weichai Ballard JV, and our 10% owned equity accounted investee, Synergy Ballard JVCo. Transactions between us and our subsidiaries are eliminated on consolidation. For the three months and years ended December 31, 2021, and 2020, related party transactions and balances with Weichai Ballard JV and Synergy Ballard JVCo total as follows:

<i>(Expressed in thousands of U.S. dollars)</i>	Three Months Ended December 31,	
Transactions with related parties	2021	2020
Revenues	\$ 16,380	\$ 14,010
Cost of goods sold and operating expense	\$ -	\$ -

<i>(Expressed in thousands of U.S. dollars)</i>	Year Ended December 31,	
Transactions with related parties	2021	2020
Revenues	\$ 38,680	\$ 53,087
Cost of goods sold and operating expense	\$ -	\$ -

<i>(Expressed in thousands of U.S. dollars)</i>	As at Dec 31,	As at Dec 31,
Balances with related parties	2021	2020
Accounts receivable	\$ 10,893	\$ 17,564
Investments	\$ 28,982	\$ 27,561
Deferred revenue	\$ (2,746)	\$ (5,016)

We also provide key management personnel, being board directors and executive officers, certain benefits, in addition to their salaries. Key management personnel also participate in the Company's share-based compensation plans. Key management personnel compensation is summarized in note 28 to our annual consolidated financial statements for the year ended December 31, 2021.

7.3 Outstanding Share and Equity Information

As of March 11, 2022

Common share outstanding	297,809,654
Options outstanding	3,968,826
DSUs outstanding	629,360
RSUs / PSUs outstanding (subject to vesting and performance criteria)	966,220

8. USE OF PROCEEDS

8.1 Reconciliation of Use of Proceeds from Previous Financings

During 2021 and 2020, we completed the following offerings of our common shares:

- On February 23, 2021, we closed a bought deal offering of 14.87 million Common Shares at a price of \$37.00 per Common Share for gross proceeds of \$550.2 million and net proceeds of \$527.3 million (the "2021 Offering").
- On November 27, 2020, we closed a bought deal offering of 20.9 million Common Shares at a price of \$19.25 per Common Share for gross proceeds of \$402.5 million and net proceeds of \$385.8 million (the "2020 Offering").
- On September 1, 2020, we announced an at-the-market equity program to issue a total of 16.45 million Common Shares from treasury (the "\$250 million ATM Program"). The 16.45 million Common Shares issued under the \$250 million ATM Program were sold in the third and fourth quarters of 2020 at prevailing market prices at the time of sale for total gross proceeds of \$250 million and total net proceeds of \$244.1 million.
- On March 10, 2020, we announced an at-the-market equity program to allow the issuance of up to \$75 million of Common Shares from treasury (the "\$75 million ATM Program" and together with the \$250 million ATM Program, the "2020 ATM Programs"). The 8.2 million Common Shares issued under the \$75 million ATM Program were sold in the first half of 2020 at prevailing market prices at the time of sale for total gross proceeds of \$66.7 million and total net proceeds of \$64.7 million.

The net proceeds from the 2021 Offering and the 2020 Offering of \$527.3 million and \$385.8 million, respectively, were intended to be used to further strengthen the Company's financial position, thereby providing additional flexibility to fund growth strategies, including through activities such as product innovation, investments in production capacity expansion and localization, future acquisitions and strategic partnerships and investments. The net proceeds from the 2020 ATM Programs of \$308.8 million were intended to be used for general corporate purposes. Pending their use, we disclosed our intention to invest the net proceeds from the 2021 Offering and the 2020 Offering in short-term, investment grade, interest bearing instruments or to hold them as cash and cash equivalents.

The following tables sets out a comparison of the Company's disclosed expected use of net proceeds from the 2020 Offering and the 2020 ATM Programs to the actual use of such net proceeds to December 31, 2021. As of December 31, 2021, the net proceeds of \$527.3 million from the 2021 Offering and residual unused amounts from the 2020 Offering and the 2020 ATM Programs were held in interest bearing cash accounts.

2020 Offering Net Proceeds \$385.8M			
Intended Use of Net Proceeds: Further strengthen the Company's balance sheet, thereby providing additional flexibility to fund growth strategies, including through activities such as product innovation, investments in production capacity expansion and localization, future acquisitions and strategic partnerships and investments.			
Actual Use of Net Proceeds (expressed in thousands of U.S. dollars)		Variance – (Over)/Under Expenditures	Explanation of Variance
Research and Product Development (cash Operating cost) expenditures including product development of next generation fuel cell stacks and modules	\$17,153	N/A	N/A
Investments in property, plant and equipment and other intangible assets including production capacity expansion and localization	\$14,701	N/A	N/A
Arcola acquisition (initial cash costs) including related acquisition and related expenses	\$9,272	N/A	N/A
Strategic partnerships and investments including Forsee Power, H2Cap, Clean H2, and Weichai Ballard JVCo	\$64,108	N/A	N/A

2020 ATM Programs Net Proceeds \$308.8M			
Intended Use of Net Proceeds: General Corporate Purposes			
Actual Use of Net Proceeds (expressed in thousands of U.S. dollars)		Variance – (Over)/Under Expenditures	Explanation of Variance
General and Administration (cash Operating cost) expenditures	\$6,408	N/A	N/A
Sales and Marketing (cash Operating cost) expenditures	\$3,043	N/A	N/A
Working capital requirements	\$7,137	N/A	N/A

9. ARCOLA ACQUISITION

9.1 Arcola Purchase Price Allocation

On November 11, 2021, we acquired Arcola, a UK-based systems engineering company (subsequently renamed Ballard Motive Systems) specializing in hydrogen fuel cell powertrain and vehicle systems integration. We acquired 100% of Arcola for total consideration of up to \$40 million, consisting of 337,353 Common Shares with an acquisition date fair value of approximately \$6 million (nil shares issued as of December 31, 2021) that vest over a two-year period from the acquisition date, and up to \$34 million in upfront and earn-out cash consideration (net \$7.2 million paid as of December 31, 2021) based on the achievement of certain performance milestones over an up to three-year period from the acquisition date.

We've completed detailed valuation studies and prepared the preliminary purchase price allocation for Arcola using the acquisition method of accounting in accordance with *IFRS 3 Business Combinations*, with Ballard considered as the accounting acquirer and Arcola as the accounting acquiree. As the accounting acquirer, consideration paid to acquire Arcola has been allocated to the assets acquired, and the liabilities assumed, based on their fair values as of the acquisition date of November 11, 2021.

As consideration for the transaction: (i) we made initial cash payments and assumed and paid certain of Arcola's debt obligations and transaction costs on closing of \$7.5 million; (ii) will

issue 337,353 Common Shares in three future tranches at a fair value of \$18.30 per share discounted for the timing delay in receiving the shares using an Asian put option pricing model, or approximately \$4.9 million; (iii) will make future cash payments of up to \$27.0 million based on the successful attainment of numerous milestone objectives over a three-year period discounted for the estimated probability of successful occurrence and for the timing delay in receiving the cash payments using a credit adjusted risk-free rate observed for bonds of a similar duration, or approximately \$26.3 million; and (iv) an actual working capital adjustment of \$0.6 million, for total purchase consideration of \$39.2 million. In accordance with IFRS 3, the fair value of the 337,353 Common Shares has been measured for accounting purposes using the \$18.30 5-day weighted average price of the Common Shares immediately preceding the acquisition date.

<i>(Expressed in thousands of U.S. dollars)</i>	
Fair Value of Consideration	Nov-11-2021
Cash and debt repaid on closing	\$ 7,477
Deferred share consideration	4,851
Contingent cash consideration	26,258
Working capital adjustment	611
Fair Value (preliminary) of Consideration	\$ 39,197

In accordance with IFRS 3, the identifiable assets acquired, and liabilities assumed, as part of a business combination are recognized separately from goodwill at the acquisition date if they meet the definition of an asset or liability and are exchanged as part of the business combination. The identifiable assets acquired, and liabilities assumed, are then measured at their acquisition date fair values based on the contractual terms, economic conditions, Ballard's operating and accounting policies and other pertinent conditions as of the acquisition date. The fair value review of Arcola's assets and liabilities commenced with a review of the carrying amount of each respective asset and liability. The carrying amounts of all assets and liabilities were subject to due diligence procedures and included confirmation of existence and a review of potential impairment of all significant assets and a review for completeness of all liabilities. Each asset and liability was then reviewed and measured for potential fair value adjustments from carrying cost to arrive at the preliminary fair value of each asset and liability as of the acquisition date of November 11, 2021.

<i>(Expressed in thousands of U.S. dollars)</i>	
Fair Value of Arcola Assets acquired and Liabilities assumed	Nov-11-2021
Cash and cash equivalents	\$ 320
Trade and other receivables	3,112
Property, plant and equipment	190
Intangible assets	17,279
Goodwill	23,991
Accounts payable and accrued liabilities	(1,817)
Deferred income tax liability	(3,878)
Fair Value (preliminary) of Arcola Assets acquired and Liabilities assumed	\$ 39,197

The preliminary fair value of each of the acquired identifiable assets and liabilities assumed was determined as follows:

- The fair value of certain of the acquired working capital balances including trade and other receivables, and accounts payable and accrued liabilities, have been assessed at their respective carrying amounts on November 11, 2021, which is considered to approximately equate to fair value as a result of the short-term to maturity of each of these accounts.
- Acquired property, plant and equipment consist primarily of specialized manufacturing and research and development equipment, as well as miscellaneous other items, all physically located in Arcola’s operating facilities in the U.K. As there is no market-based evidence of fair value for these specialized assets that are rarely sold other than as part of a continuing business, fair value was estimated using a depreciated replacement cost approach in accordance with *IAS 16*. A depreciated replacement cost approach considers how much it would cost to reproduce an asset after adjusting for depreciation and optimization. The adjustment for depreciation takes into account the age of the asset in relation to its useful life and its residual value. The fair value of property, plant and equipment is considered to approximately equate to its carrying amount.
- Acquired identified intangible assets consist of technology (patents, know-how and in-process research and development), customer contracts and relationships, and non-compete arrangements. We have concluded that each of the identified intangible assets meet the definition of an identified intangible asset (or non-monetary asset without physical substance) under *IAS 38 Intangible Assets* as the acquired IP meets the definition of an asset and is identifiable. The fair value of all identified intangible assets includes a fair value adjustment of \$17.3 million from their original carrying amounts.

<i>(Expressed in thousands of U.S. dollars)</i>		
Fair Value of Arcola Identified Intangible Assets	Amount	Estimated Useful Life
Technology (patents, know-how and in-process research & development)	\$ 15,976	12-years
Customer contracts and relationships	1,048	7-years
Non-compete agreements	255	3-years
Fair Value (preliminary) of Identified Intangible Assets	\$ 17,279	

The preliminary fair value of acquired identified intangible assets were calculated with the assistance of an independent valuator and were determined through a variety of valuation techniques.

- The fair value of the acquired technology including patents, know-how and in-process research & development totaling \$16.0 million has been calculated using the Multi-Period Excess Earnings Method (“MPEEM”) approach which is a variant of the Income Approach. The basic principle of the MPEEM Approach is that a single asset, in isolation, is not capable of generating cash flow for an enterprise. Several assets are brought together and exploited to generate cash flow. Therefore, to determine cash flow from the exploitation of existing technology, one must deduct the related expenses incurred for the exploitation of other assets used for the generation of overall cash flow and revenues. The fair value of existing technology was estimated by discounting the net cash flow derived from the expected revenues attributable to the acquired technology.
- The fair value of the acquired customer contracts and relationships totaling \$1.0 million has also been calculated using the MPEEM approach. The fair value of existing customer contracts/relationships was estimated by discounting the net

cash flow derived from the expected revenues attributable to the acquired customer contracts/relationships.

- The fair value of the acquired non-compete covenants of \$0.3 million were calculated using the Income Approach whereby the fair value of the non-compete covenants was estimated by calculating the expected decrease or loss in forecasted cash flows if the employees compete with the target's business sans the non-compete covenants.
- The fair value of the deferred income tax liability of (\$3.9) million represents the excess of the accounting basis of the acquired intangible assets of \$17.3 million, over their tax basis of \$1.8 million, at the current U.K tax rate of 25.0%.

The remaining unallocated \$24.0 million of the total purchase price consideration of \$39.2 million has been ascribed as Goodwill. The goodwill of \$24.0 million resulting from the acquisition consists largely of the expectation that the acquisition will complement the Corporation's Fuel Cell Products and Services growth platform by delivering strategic benefits in diversification, growth, scale, and profitability.

10. ACCOUNTING MATTERS

10.1 Overview

Our consolidated financial statements are prepared in accordance with IFRS, which require us to make estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, and expenses. Actual results may differ from those estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

10.2 Critical Judgments in Applying Accounting Policies

Critical judgments that we have made in the process of applying our accounting policies and that have the most significant effect on the amounts recognized in the consolidated financial statements is limited to our assessment of our ability to continue as a going concern (See Note 2 (e) to our consolidated financial statements).

Our significant accounting policies are detailed in note 4 to our annual consolidated financial statements for the year ended December 31, 2021. Effective January 1, 2021, a number of new standards and interpretations became effective. However, these new standards and interpretations did not have a material impact on our financial statements.

10.3 Key Sources of Estimation Uncertainty

The following are key assumptions concerning the future and other key sources of estimation uncertainty that have a significant risk of resulting in a material adjustment to the reported amount of assets, liabilities, income, and expenses within the next financial year.

REVENUE RECOGNITION

Revenues are generated primarily from product sales, the license and sale of intellectual property and fundamental knowledge, and the provision of engineering services and technology transfer services. Product revenues are derived primarily from standard product sales contracts and from long-term fixed price contracts. Intellectual property and

fundamental knowledge license revenues are derived primarily from standard licensing and technology transfer agreements. Engineering service and technology transfer service revenues are derived primarily from cost-plus reimbursable contracts and from long-term fixed price contracts.

Revenue is recognized when a customer obtains control of the goods or services. Determining the timing of the transfer of control, at a point in time or over time, requires judgment.

On standard product sales contracts, revenues are recognized when customers obtain control of the product, that is when transfer of title and risks and rewards of ownership of goods have passed, and when obligation to pay is considered certain. Invoices are generated and revenue is recognized at that point in time. Provisions for warranties are made at the time of sale. Revenue recognition for standard product sales contracts does not usually involve significant estimates.

On standard licensing and technology transfer agreements, revenues are recognized on the transfer of rights to a licensee, when it is determined to be distinct from other performance obligations, and if the customer can direct the use of, and obtain substantially all of the remaining benefits from the license as it exists at the time of transfer. In other cases, the proceeds are considered to relate to the right to use the asset over the license period and the revenue is recognized over that period. If it is determined that the license is not distinct from other performance obligations, revenue is recognized over time as the customer simultaneously receives and consumes the benefit. Revenue recognition for standard license and sale agreements does not usually involve significant estimates.

On cost-plus reimbursable contracts, revenues are recognized as costs are incurred, and include applicable fees earned as services are provided. Revenue recognition for cost-plus reimbursable contracts does not usually involve significant estimates.

On long-term fixed price contracts, the customer controls all of the work in progress as the services are being provided. This is because under these contracts, the deliverables are made to a customer's specification, and if a contract is terminated by the customer, then the Company is entitled to reimbursement of the costs incurred to date plus the applicable gross margin. Therefore, revenue from these contracts and the associated costs are recognized as the costs are incurred over time. On long-term fixed price contracts, revenues are recognized over time using cumulative costs incurred to date relative to total estimated costs at completion to measure progress towards satisfying performance obligations. Generally, revenue is recognized by multiplying the expected consideration by the ratio of cumulative costs incurred to date to the sum of incurred and estimated costs for completing the performance obligation. The cumulative effect of changes to estimated revenues and estimated costs for completing a contract are recognized in the period in which the revisions are identified. If the estimated costs for completing the contract exceed the expected revenues on a contract, such loss is recognized in its entirety in the period it becomes known. Deferred revenue (i.e. contract liabilities) represents cash received from customers in excess of revenue recognized on uncompleted contracts.

- The determination of expected costs for completing a contract is based on estimates that can be affected by a variety of factors such as variances in the timeline to completion, the cost of materials, the availability and cost of labour, as well as productivity.

- The determination of potential revenues includes the contractually agreed amount and may be adjusted based on the estimate of our attainment on achieving certain defined contractual milestones. Management's estimation is required in determining the amount of consideration for which the Company expects to be entitled and in determining when a performance obligation has been met.

Estimates used to determine revenues and costs of long-term fixed price contracts involve uncertainties that ultimately depend on the outcome of future events and are periodically revised as projects progress. There is a risk that a customer may ultimately disagree with management's assessment of the progress achieved against milestones, or that our estimates of the work required to complete a contract may change.

During the three months and year ended December 31, 2021, and 2020, there were no significant adjustments to revenues relating to revenue recognized in a prior period.

ASSET IMPAIRMENT

The carrying amounts of our non-financial assets other than inventories are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the asset's recoverable amount is estimated. For goodwill and intangible assets that have indefinite useful lives, the recoverable amount is estimated at least annually.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In assessing fair value less costs to sell, the price that would be received on the sale of an asset in an orderly transaction between market participants at the measurement date is estimated. For the purposes of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other groups of assets. The allocation of goodwill to cash-generating units reflects the lowest level at which goodwill is monitored for internal reporting purposes. Many of the factors used in assessing fair value are outside the control of management and it is reasonably likely that assumptions and estimates will change from period to period. These changes may result in future impairments. For example, our revenue growth rate could be lower than projected due to economic, industry or competitive factors, or the discount rate used in our value in use model could increase due to a change in market interest rates. In addition, future goodwill impairment charges may be necessary if our market capitalization decreased due to a decline in the trading price of our common stock, which could negatively impact the fair value of our business.

An impairment loss is recognized if the carrying amount of an asset or its cash-generating unit exceeds its estimated recoverable amount. Impairment losses are recognized in net loss. Impairment losses recognized in respect of the cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the units, and then to reduce the carrying amounts of the other assets in the unit on a pro-rata basis.

As of December 31, 2021, our consolidated goodwill balance of \$64.3 million relates solely to our Fuel Cell Products and Services segment. We perform the annual review of goodwill as at

December 31 of each year, more often if events or changes in circumstances indicate that it might be impaired. Under IFRS, the annual review of goodwill requires a comparison of the carrying value of the asset to the higher of (i) value in use; and (ii) fair value less costs to sell. Value in use is defined as the present value of future cash flows expected to be derived from the asset in its current state. Our fair value less costs to sell test is in effect a modified market capitalization assessment, whereby we calculate the fair value of the Fuel Cell Products and Services segment by first calculating the value of the Company at December 31, 2021 based on the average closing share price in the month of December, add a reasonable estimated control premium to determine the Company's enterprise value on a controlling basis after adjusting for excess cash balances, deducting the fair value of long-term financial investments, and then deducting the estimated costs to sell from this enterprise value to arrive at the fair value of the Fuel Cell Products and Services segment. As a result of this assessment, we have determined that the fair value of the Fuel Cell Products and Services segment exceeds its carrying value as of December 31, 2021, indicating that no goodwill impairment charge is required for 2021.

In addition to the above goodwill impairment test, we perform a quarterly assessment of the carrying amounts of our non-financial assets (other than inventories) to determine whether there is any indication of impairment. During the year ended December 31, 2021, impairment charges of \$0.3 million were recognized on our non-financial assets (other than inventories) related primarily to impaired property, plant and equipment.

WARRANTY PROVISION

A provision for warranty costs is recorded on product sales at the time of shipment. In establishing the accrued warranty liabilities, we estimate the likelihood that products sold will experience warranty claims and the cost to resolve claims received.

In making such determinations, we use estimates based on the nature of the contract and past and projected experience with the products. Should these estimates prove to be incorrect, we may incur costs different from those provided for in our warranty provisions. During the three months and year ended December 31, 2021, we recorded provisions to accrued warranty liabilities of \$1.1 million and \$2.7 million, respectively, for new product sales, compared to \$0.7 million and \$3.1 million, respectively, for the three months and year ended December 31, 2020.

We review our warranty assumptions and make adjustments to accrued warranty liabilities quarterly based on the latest information available and to reflect the expiry of contractual obligations. Adjustments to accrued warranty liabilities are recorded in cost of product and service revenues. As a result of these reviews and the resulting adjustments, our warranty provision and cost of revenues for the three months and year ended December 31, 2021, were adjusted downwards (upwards) by \$0.2 million and (\$0.3) million, respectively, compared to adjustments downwards of \$1.2 million and \$1.4 million, respectively, for the three months and year ended December 31, 2020.

INVENTORY PROVISION

In determining the lower of cost and net realizable value of our inventory and establishing the appropriate provision for inventory obsolescence, we estimate the likelihood that inventory carrying values will be affected by changes in market pricing or demand for our

products and by changes in technology or design which could make inventory on hand obsolete or recoverable at less than cost. We perform regular reviews to assess the impact of changes in technology and design, sales trends, and other changes on the carrying value of inventory. Where we determine that such changes have occurred and will have a negative impact on the value of inventory on hand, appropriate provisions are made. If there is a subsequent increase in the value of inventory on hand, reversals of previous write-downs to net realizable value are made. Unforeseen changes in these factors could result in additional inventory provisions, or reversals of previous provisions, being required. During the three months and year ended December 31, 2021, net negative inventory adjustments of (\$0.2) million and (\$1.1) million, respectively, were recorded as a recovery (charge) to cost of product and service revenues, compared to net negative inventory adjustments of (\$0.4) million and (\$1.5) million, respectively, in the three months and year ended December 31, 2020.

FINANCIAL ASSETS INCLUDING IMPAIRMENT OF TRADE RECEIVABLES

A financial asset is classified as measured at: amortized cost; fair value through other comprehensive income ("FVOCI"); or fair value through profit or loss ("FVTPL"). The classification of financial assets is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. Derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never separated. Instead, the hybrid financial instrument as a whole is assessed for classification. Our financial assets which consist primarily of cash, cash equivalents and short term investments, trade and other receivables, and contract assets, are classified at amortized cost.

An ECL model applies to financial assets measured at amortized cost and debt investments at FVOCI, but not to investments in equity instruments. The Company's financial assets measured at amortized cost and subject to the ECL model consist primarily of trade receivables and contract assets.

In applying the ECL model, loss allowances are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from possible default events within the 12 months after the reporting date; and
- Lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument.

We have elected to measure loss allowances for trade receivables and contract assets at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, we consider reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on our historical experience and informed credit assessment and including forward-looking information.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that we expect to receive). ECLs are discounted at the effective interest rate of the financial asset. At each reporting date, we

assess whether financial assets carried at amortized cost are credit impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred. Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets. Impairment (losses) recoveries related to trade receivables and contract assets are presented separately in the statement of profit or loss. During the three months and year ended December 31, 2021, nominal net impairment (charges) on trade receivables and contract assets were recorded in other operating expenses, compared to net impairment (charges) of (\$0.1) million and (\$0.3) million, respectively, during the three months and year ended December 31, 2020. Net impairment charges in 2020 include ECLs of (\$0.3) million.

EMPLOYEE FUTURE BENEFITS

The present value of our defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that have terms to maturity approximating the terms of the related pension liability. Determination of benefit expense requires assumptions such as the discount rate to measure obligations, expected plan investment performance, expected healthcare cost trend rate, and retirement ages of employees. Actual results will differ from the recorded amounts based on these estimates and assumptions.

10.4 Recently Adopted Accounting Policy Changes

Effective January 1, 2021, a number of new standards and interpretations became effective. However, these new standards and interpretations did not have a material impact on our financial statements.

10.5 Future Accounting Policy Changes

The following is an overview of accounting standard changes that we will be required to adopt in future years. We do not expect to adopt any of these standards before their effective dates and we continue to evaluate the impact of these standards on our consolidated financial statements.

Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)

On January 23, 2020, the IASB issued amendments to *IAS 1 Presentation of Financial Statements*, to clarify the classification of liabilities as current or non-current.

For the purposes of non-current classification, the amendments removed the requirement for a right to defer settlement or roll over of a liability for at least twelve months to be unconditional. Instead, such a right must have substance and exist at the end of the reporting period. The amendments also clarify how a company classifies a liability that includes a counterparty conversion option. The amendments state that:

- settlement of a liability includes transferring a company's own equity instruments to the counterparty, and
- when classifying liabilities as current or non-current a company can ignore only those conversion options that are recognized as equity.

The amendments are effective for annual periods beginning on or after January 1, 2023. Early adoption is permitted. The amendments are subject to further developments. Certain application issues resulting from the amendments have been raised with the IFRS

Interpretations Committee, which referred them to the IASB. In November 2021, the IASB published the exposure draft Non-current Liabilities with Covenants (proposed amendments to IAS 1). The exposure draft aims to improve the information an entity provides when its right to defer settlement of a liability for at least twelve months is subject to compliance with conditions, in addition to addressing concerns about the classification of such a liability as current or non-current. The IASB proposed to defer the effective date of the 2020 amendments to no earlier than January 1, 2024. The extent of the impact of adoption of the amendments to *IAS 1* has not yet been determined.

Definition of Accounting Estimates (Amendments to IAS 8)

On February 12, 2021, the IASB issued *Definition of Accounting Estimates (Amendments to IAS 8)*.

The amendments introduce a new definition for accounting estimates, clarifying that they are monetary amounts in the financial statements that are subject to measurement uncertainty. The amendments also clarify the relationship between accounting policies and accounting estimates by specifying that a company develops an accounting estimate to achieve the objective set out by an accounting policy.

The amendments are effective for annual periods beginning on or after January 1, 2023. Early adoption is permitted. The extent of the impact of adoption of the amendments to *IAS 8* has not yet been determined.

Disclosure Initiative – Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2)

On February 12, 2021, the IASB issued *Disclosure Initiative – Accounting Policies (Amendments to IAS 1 and IFRS Practice Statement 2 Making Materiality Judgements)*.

The amendments help companies provide useful accounting policy disclosures. The key amendments include:

- requiring companies to disclose their material accounting policies rather than their significant accounting policies;
- clarifying that accounting policies related to immaterial transactions, other events or conditions are themselves immaterial and as such need not be disclosed; and
- clarifying that not all accounting policies that relate to material transactions, other events or conditions are themselves material to a company's financial statements.

The amendments are effective for annual periods beginning on or after January 1, 2023. Early adoption is permitted. The extent of the impact of adoption of the amendments to *IAS 1 and IFRS Practice Statement 2* has not yet been determined.

Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)

On May 14, 2020, the IASB issued *Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)*.

IAS 37 does not specify which costs are included as a cost of fulfilling a contract when determining whether a contract is onerous. The IASB's amendments address this issue by clarifying that the 'costs of fulfilling a contract' comprise both:

- the incremental costs – e.g. direct labour and materials; and
- an allocation of other direct costs – e.g. an allocation of the depreciation charge for an item of PPE used in fulfilling the contract.

The amendments are effective for annual periods beginning on or after January 1, 2022, and apply to contracts existing at the date when the amendments are first applied. At the date of initial application of the amendments to *IAS 37*, the cumulative effect of applying the amendments is recognized as an opening balance adjustment to retained earnings or other component of equity, as appropriate. The comparatives are not restated.

Based on the analysis completed to date of the Corporation's 'open' contracts as of December 31, 2021, on adoption of the amendments to *IAS 37* on January 1, 2022, we expect to recognize approximately \$1.2 million of additional contract costs as an opening balance adjustment to retained earnings in our first quarter of 2022 financial statements.

11. SUPPLEMENTAL NON-GAAP MEASURES AND RECONCILIATIONS

11.1 Overview

In addition to providing measures prepared in accordance with GAAP, we present certain supplemental non-GAAP measures. These measures are Cash Operating Costs (including its components of research and product development (operating cost), general and administrative (operating cost) and sales and marketing (operating cost)), EBITDA and Adjusted EBITDA, and Adjusted Net Loss. These non-GAAP measures do not have any standardized meaning prescribed by GAAP and therefore are unlikely to be comparable to similar measures presented by other companies. We believe these measures are useful in evaluating the operating performance of the Company's ongoing business. These measures should be considered in addition to, and not as a substitute for, operating expenses, net income, cash flows and other measures of financial performance and liquidity reported in accordance with GAAP. The calculation of these non-GAAP measures has been made on a consistent basis for all periods presented.

11.2 Cash Operating Costs

This supplemental non-GAAP measure is provided to assist readers in determining our operating costs on an ongoing cash basis. We believe this measure is useful in assessing performance and highlighting trends on an overall basis.

We also believe Cash Operating Costs is frequently used by securities analysts and investors when comparing our results with those of other companies. Cash Operating Costs differs from the most comparable GAAP measure, operating expenses, primarily because it does not include stock-based compensation expense, depreciation and amortization, impairment losses or recoveries on trade receivables, restructuring charges, acquisition related costs, the impact of unrealized gains and losses on foreign exchange contracts, and financing charges. The following tables show a reconciliation of operating expenses to Cash Operating Costs for the three months and year ended December 31, 2021, and 2020:

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,		
Cash Operating Costs	2021	2020	\$ Change	
Total Operating Expenses	\$ 32,307	\$ 19,559	\$ 12,748	
Stock-based compensation expense	(2,319)	(2,347)	28	
Impairment recovery (losses) on trade receivables	(11)	(60)	49	
Acquisition related costs	(1,580)	-	(1,580)	
Restructuring (charges) recovery	(9)	(26)	17	
Impact of unrealized gains (losses) on foreign exchange contracts	263	324	(61)	
Depreciation and amortization	(2,047)	(1,060)	(987)	
Cash Operating Costs	\$ 26,604	\$ 16,390	\$ 10,214	

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,		
Cash Operating Costs	2021	2020	\$ Change	
Total Operating Expenses	\$ 102,116	\$ 60,745	\$ 41,371	
Stock-based compensation expense	(9,669)	(6,228)	(3,441)	
Impairment recovery (losses) on trade receivables	(54)	(310)	256	
Acquisition related costs	(2,115)	-	(2,115)	
Restructuring (charges) recovery	(156)	(66)	(90)	
Impact of unrealized gains (losses) on foreign exchange contracts	(519)	259	(778)	
Depreciation and amortization	(5,821)	(4,371)	(1,450)	
Cash Operating Costs	\$ 83,782	\$ 50,029	\$ 33,753	

The components of Cash Operating Costs of research and product development (cash operating cost), general and administrative (cash operating cost), and sales and marketing (cash operating cost) differ from their respective most comparable GAAP measure of research and product development expense, general and administrative expense, and sales and marketing expense, primarily because they do not include stock-based compensation expense, depreciation and amortization expense, and acquisition related costs. A reconciliation of these respective operating expenses to the respective components of Cash Operating Costs for the three months and year ended December 31, 2021, and 2020 is included in Section 5.4 Operating Expenses and Other Items.

A breakdown of total stock-based compensation expense for the three months and year ended December 31, 2021, and 2020 are as follows:

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,		
Stock-based compensation expense	2021	2020	\$ Change	
Total stock-based compensation expense recorded as follows:				
Cost of goods sold	\$ -	\$ -	\$ -	
Research and product development expense	1,259	1,423	(164)	
General and administrative expense	698	561	137	
Sales and marketing expense (recovery)	362	363	(1)	
Stock-based compensation expense	\$ 2,319	\$ 2,347	\$ (28)	

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,	
Stock-based compensation expense	2021	2020	\$ Change
Total stock-based compensation expense recorded as follows:			
Cost of goods sold	\$ -	\$ -	\$ -
Research and product development expense	5,522	3,327	2,195
General and administrative expense	2,780	1,807	973
Sales and marketing expense (recovery)	1,367	1,094	273
Stock-based compensation expense	\$ 9,669	\$ 6,228	\$ 3,441

A breakdown of total depreciation and amortization expense for the three months and year ended December 31, 2021, and 2020 are as follows:

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31,	
Depreciation and amortization expense	2021	2020	\$ Change
Total depreciation and amortization expense recorded as follows:			
Cost of goods sold	\$ 1,225	\$ 708	\$ 517
Research and product development expense	1,458	765	693
General and administrative expense	577	281	296
Sales and marketing expense	12	14	(2)
Depreciation and amortization expense	\$ 3,272	\$ 1,768	\$ 1,504

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,	
Depreciation and amortization expense	2021	2020	\$ Change
Total depreciation and amortization expense recorded as follows:			
Cost of goods sold	\$ 3,931	\$ 3,034	\$ 897
Research and product development expense	4,101	3,211	890
General and administrative expense	1,672	1,120	552
Sales and marketing expense	48	40	8
Depreciation and amortization expense	\$ 9,752	\$ 7,405	\$ 2,347

11.3 EBITDA and Adjusted EBITDA

These supplemental non-GAAP measures are provided to assist readers in determining our operating performance. We believe this measure is useful in assessing performance and highlighting trends on an overall basis. We also believe EBITDA and Adjusted EBITDA are frequently used by securities analysts and investors when comparing our results with those of other companies. EBITDA differs from the most comparable GAAP measure, net loss from continuing operations, primarily because it does not include finance expense, income taxes, depreciation of property, plant and equipment, and amortization of intangible assets. Adjusted EBITDA adjusts EBITDA for stock-based compensation expense, transactional gains and losses, asset impairment charges, finance and other income, the impact of unrealized gains and losses on foreign exchange contracts, and acquisition related costs. The following tables show a reconciliation of net loss to EBITDA and Adjusted EBITDA for the three months and year ended December 31, 2021, and 2020:

<i>(Expressed in thousands of U.S. dollars)</i>		Three months ended December 31		
EBITDA and Adjusted EBITDA	2021	2020	\$ Change	
Net loss from continuing operations	\$ (43,836)	\$ (14,408)	\$ (29,428)	
Depreciation and amortization	3,272	1,768	1,504	
Finance expense	313	324	(11)	
Income taxes (recovery)	(233)	(39)	(194)	
EBITDA	\$ (40,484)	\$ (12,355)	\$ (28,129)	
Stock-based compensation expense	2,319	2,347	(28)	
Acquisition related costs	1,580	-	1,580	
Finance and other (income) loss	11,366	(4,138)	15,504	
Impairment loss on assets	-	-	-	
Impact of unrealized (gains) losses on foreign exchange contracts	(263)	(324)	61	
Adjusted EBITDA	\$ (25,482)	\$ (14,470)	\$ (11,012)	

<i>(Expressed in thousands of U.S. dollars)</i>		Year ended December 31,		
EBITDA and Adjusted EBITDA	2021	2020	\$ Change	
Net loss from continuing operations	\$ (114,397)	\$ (49,469)	\$ (64,928)	
Depreciation and amortization	9,752	7,405	2,347	
Finance expense	1,294	1,303	(9)	
Income taxes (recovery)	(216)	130	(346)	
EBITDA	\$ (103,567)	\$ (40,631)	\$ (62,936)	
Stock-based compensation expense	9,669	6,228	3,441	
Acquisition related costs	2,115	-	2,115	
Finance and other (income) loss	8,813	(4,282)	13,095	
Impairment loss on assets	263	-	263	
Impact of unrealized (gains) losses on foreign exchange contracts	519	(259)	778	
Adjusted EBITDA	\$ (82,188)	\$ (38,944)	\$ (43,244)	

11.4 Adjusted Net Loss

This supplemental non-GAAP measure is provided to assist readers in determining our financial performance. We believe this measure is useful in assessing our actual performance by adjusting our results from continuing operations for transactional gains and losses and impairment losses. Adjusted Net Loss differs from the most comparable GAAP measure, net loss from continuing operations, primarily because it does not include transactional gains and losses and asset impairment charges. There were no significant Adjusted Net Loss adjustments to net income for the three months and year ended December 31, 2021, and 2020.