UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 40-F

☐ Registration statement pursuant to Section 12 of the Securities Exchange Act of 1934

or

☒ Annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934

For the fiscal year ended: **December 31, 2021** Commission File Number: **000-53543**

Ballard Power Systems Inc.

(Exact name of registrant as specified in its charter)

British Columbia, Canada	**3620**	**Not Applicable**
(Province or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

9000 Glenlyon Parkway

Burnaby, BC

Canada V5J 5J8

(604) 454-0900

(Address and telephone number of registrant's principal executive offices)

C T Corporation System

28 Liberty St.

New York, NY 10005

(212) 894-8940

(Name, address (including zip code) and telephone number (including area code) of agent for service in the United States)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Each Class:	Trading Symbol	Name of Each Exchange On Which Registered:
Common Shares	**BLDP**	**NASDAQ Global Market**

Securities registered or to be registered pursuant to Section 12(g) of the Act: **Not applicable**

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: **Not applicable**

For annual reports, indicate by check mark the information filed with this form:

☒ Annual Information Form ☒ Audited Annual Financial Statements

Indicate the number of outstanding shares of each of the registrant's classes of capital or common stock as of the close of the period covered by the annual report: **As of December 31, 2021, there were 297,700,295 common shares outstanding.**

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or such shorter period that the Registrant was required to submit such files). ☒ Yes ☐ No

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 of the Exchange Act.

Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

This Annual Report (this "Annual Report") on Form 40-F shall be incorporated by reference into or as an exhibit to, as applicable, the following Registration Statements of the Registrant filed under the Securities Act of 1933: Form S-8 (File Nos. 333-225494, 333-161807 and 333-156553); and Form F-10 (File No. 333-238982 and 333-252890).

DOCUMENTS INCORPORATED BY REFERENCE

The following documents of Ballard Power Systems Inc. (the "Registrant" or the "Company") are filed as exhibits to this Annual Report and are hereby incorporated by reference herein:

- the Registrant's Annual Information Form for the year ended December 31, 2020;
- the Registrant's Audited Consolidated Financial Statements as at and for the years ended December 31, 2020 and 2019, including the notes thereto, together with the report of the independent registered public accounting firm thereon; and
- the Registrant's Management's Discussion and Analysis for the year ended December 31, 2020.

EXPLANATORY NOTE

The Company is a Canadian issuer eligible to file its annual report pursuant to Section 13 of the United States Securities Exchange Act of 1934, as amended (the "Exchange Act") on Form 40-F. The Company is a "foreign private issuer" as defined in Rule 3b-4 under the Exchange Act and Rule 405 under the Securities Act of 1933, as amended. Accordingly, the Company's equity securities are exempt from Sections 14(a), 14(b), 14(c), 14(f) and 16 of the Exchange Act pursuant to Rule 3a12-3.

The Company is permitted, under a multi-jurisdictional disclosure system adopted by the United States, to prepare this Annual Report on Form 40-F in accordance with Canadian disclosure requirements, which are different from those of the United States.

The Company prepares its financial statements in accordance with International Financial Reporting Standards as issued by the International Financial Accounting Boards, and they may be subject to Canadian auditing and auditor independence standards. Accordingly, the financial statements of the Company incorporated by reference in this Annual Report may not be comparable to financial statements of United States companies.

CAUTIONARY STATEMENT REGARDING FORWARD LOOKING STATEMENTS

This Annual Report contains forward-looking statements concerning anticipated developments in the operations of the Company in future periods, planned development activities, the adequacy of the Company's financial resources and other events or conditions that may occur in the future. Forward-looking statements are frequently, but not always, identified by words such as "estimate", "project", "believe", "anticipate", "intend", "expect", "plan", "predict", "may", "should", "will" and similar expressions, or by statements that events, conditions or results "will," "may," "could" or "should" occur or be achieved. Forward-looking statements are statements about the future and are inherently uncertain, and actual achievements of the Company or other future events or conditions may differ materially from those reflected in the forward-looking statements due to a variety of risks, uncertainties and other factors, including, without limitation, those described in the Annual Information Form incorporated by reference in this Annual Report.

The Company's forward-looking statements are based on the beliefs, expectations and opinions of management on the date the statements are made and the Company assumes no obligation to update such forward-looking statements in the future. For the reasons set forth above, investors should not place undue reliance on forward-looking statements.

DISCLOSURE CONTROLS AND PROCEDURES

The required disclosure is included in Management's Discussion and Analysis, which is incorporated herein by reference to Exhibit 99.2.

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The required disclosure is included in Management's Discussion and Analysis, which is incorporated herein by reference to Exhibit 99.2.

ATTESTATION REPORT OF THE REGISTERED PUBLIC ACCOUNTING FIRM

The Registrant's independent registered public accounting firm, KPMG LLP, independently assessed the effectiveness of the Registrant's internal control over financial reporting. KPMG LLP's attestation is located in the Report of Independent Registered Public Accounting Firm included in the Registrant's Audited Consolidated Financial Statements, which is incorporated herein by reference to Exhibit 99.1.

CHANGES IN INTERNAL CONTROLS OVER FINANCIAL REPORTING

During the period covered by this Annual Report, no changes occurred in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

NOTICES PURSUANT TO REGULATION BTR

There were no notices required by Rule 104 of Regulation BTR that the Company sent during the year ended December 31, 2020 concerning any equity security subject to a blackout period under Rule 101 of Regulation BTR.

AUDIT COMMITTEE AND AUDIT COMMITTEE FINANCIAL EXPERT

The Board has a separately designated standing audit committee (the "Audit Committee") established for the purpose of overseeing the accounting and financial reporting processes of the Company and audits of the financial statements of the Company in accordance with Section 3(a)(58)(A) of the Exchange Act. As of the date of this Annual Report, the Company's Audit Committee is comprised of Douglas P. Hayhurst and Janet Woodruff and James Roche is an *ex officio* member of the Audit Committee, each of whom the Board has determined is independent, as that term is defined in the listing standards of the NASDAQ Global Market ("Nasdaq") and Rule 10A-3 of the Exchange Act.

The Registrant's Board of Directors has determined that the Audit Committee has at least two members, Douglas P. Hayhurst and Janet Woodruff, who qualify as an audit committee financial expert under as defined in paragraph (8)(b) of General Instruction B of Form 40-F, and is independent, as defined in the listing standards of Nasdaq. A description of Mr. Hayhurst's and Ms. Woodruff's qualifications are included in the Annual Information Form, under the heading "Audit Committee Matters", which is incorporated herein by reference to Exhibit 99.3.

CODE OF ETHICS

The Registrant has adopted a code of ethics that applies to all members of its Board of Directors, as well as its officers and employees. A copy of the code of ethics is posted on the Registrant's Internet website at www.ballard.com, and is available in print to any person without charge, upon written request to the corporate secretary of the Registrant at the principal executive offices of the Registrant provided above. If there are any amendments to the code of ethics, the Registrant intends to provide a brief description of the amendment and a copy of the amendment via its website. No waivers of the code of ethics have been granted to any principal officer of the Registrant or any person performing similar functions during the year ended December 31, 2020.

PRINCIPAL ACCOUNTANT FEES AND SERVICES

The required disclosure is included in the Annual Information Form, under the heading "Audit Committee Matters," which is incorporated herein by reference to Exhibit 99.3.

OFF-BALANCE SHEET ARRANGEMENTS

The required disclosure is included under the heading "Off-Balance Sheet Arrangements & Contractual Obligations" in Management's Discussion and Analysis, which is incorporated herein by reference to Exhibit 99.2.

CONTRACTUAL OBLIGATIONS

The required disclosure is included under the heading “Off-Balance Sheet Arrangements & Contractual Obligations” in Management’s Discussion and Analysis, which is incorporated herein by reference to Exhibit 99.2.

NASDAQ CORPORATE GOVERNANCE

The Registrant’s common shares are listed on Nasdaq. Nasdaq Marketplace Rule 5615(a)(3) permits a foreign private issuer, such as the Registrant, to follow its home country practice in lieu of most of the requirements of the 5600 Series of the Nasdaq Marketplace Rules. For a discussion of the significant differences between our corporate governance practices and those required to be followed by U.S. domestic issuers under Nasdaq’s corporate governance requirements, please refer to our website at www.ballard.com.

UNDERTAKING

The Company undertakes to make available, in person or by telephone, representatives to respond to inquiries made by the Commission staff, and to furnish promptly, when requested to do so by the Commission staff, information relating to: the securities registered pursuant to Form 40-F; the securities in relation to which the obligation to file an annual report on Form 40-F arises; or transactions in said securities.

CONSENT TO SERVICE OF PROCESS

The Company has previously filed with the Commission a written consent to service of process on Form F-X. Any change to the name or address of the Company’s agent for service shall be communicated promptly to the Commission by amendment to the Form F-X referencing the file number of the Company.

EXHIBIT INDEX

The following documents are being filed with the Commission as exhibits to this Annual Report on Form 40-F.

Exhibit	Description
99.1	Ballard Power Systems Inc. Consolidated Financial Statements for the years ended December 31, 202 1 and 2020
99.2	Ballard Power Systems Inc. Management’s Discussion and Analysis for the year ended December 31, 202 1
99.3	Annual Information Form for Ballard Power Systems Inc. for the year ended December 31, 2021
99.4	Certifications pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
99.5	Certifications pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
99.6	Consent of KPMG LLP (PCAOB ID: 85)
101	Interactive Data File, formatted as Inline XBRL
104	Cover Page from this Annual Report on Form 40-F, formatted as Inline XBRL

SIGNATURES

Pursuant to the requirements of the Exchange Act, the Registrant certifies that it meets all of the requirements for filing on Form 40-F and has duly caused this Annual Report to be signed on its behalf by the undersigned, thereto duly authorized.

BALLARD POWER SYSTEMS INC.

Date: March 14, 2022

By: /s/ Paul Dobson

Name: Paul Dobson

Title: Senior Vice President and Chief Financial Officer

Consolidated Financial Statements
(Expressed in U.S. dollars)

BALLARD POWER SYSTEMS INC.

Years ended December 31, 2021 and 2020

MANAGEMENT'S REPORT

Management's Responsibility for the Financial Statements and Report on Internal Control over Financial Reporting

The consolidated financial statements contained in this Annual Report have been prepared by management in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board. The integrity and objectivity of the data in these consolidated financial statements are management's responsibility. Management is also responsible for all other information in the Annual Report and for ensuring that this information is consistent, where appropriate, with the information and data contained in the consolidated financial statements.

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external reporting purposes in accordance with IFRS. Internal control over financial reporting may not prevent or detect fraud or misstatements because of limitations inherent in any system of internal control. Management has assessed the effectiveness of the Corporation's internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and concluded that the Corporation's internal control over financial reporting was effective as of December 31, 2021. In addition, management maintains disclosure controls and procedures to provide reasonable assurance that material information is communicated to management and appropriately disclosed. Some of the assets and liabilities include amounts, which are based on estimates and judgments, as their final determination is dependent on future events.

The Board of Directors oversees management's responsibilities for financial reporting through the Audit Committee, which consists of eight directors who are independent and not involved in the daily operations of the Corporation. The Audit Committee meets on a regular basis with management and the external and internal auditors to discuss internal controls over the financial reporting process, auditing matters and financial reporting issues. The Audit Committee is responsible for appointing the external auditors (subject to shareholder approval), and reviewing and approving all financial disclosure contained in our public documents and related party transactions.

The external auditors, KPMG LLP, have audited the financial statements and expressed an unqualified opinion thereon. KPMG has also expressed an unqualified opinion on the effective operation of the internal controls over financial reporting as of December 31, 2021. The external auditors have full access to management and the Audit Committee with respect to their findings concerning the fairness of financial reporting and the adequacy of internal controls.

"RANDALL MACEWEN"

RANDALL MACEWEN
President and
Chief Executive Officer
March 11, 2022

"PAUL DOBSON"

PAUL DOBSON
Vice President and
Chief Financial Officer
March 11, 2022

KPMG LLP
Chartered Professional Accountants
PO Box 10426 777 Dunsmuir Street
Vancouver BC V7Y 1K23
Canada

Telephone (604) 691-3000
Fax (604) 691-3031
Internet www.kpmg.ca

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Ballard Power Systems Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of Ballard Power Systems Inc. and subsidiaries (the Corporation) as of December 31, 2021 and 2020, the related consolidated statements of loss and comprehensive income (loss), changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Corporation as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years then ended, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Corporation's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 11, 2022 expressed an unqualified opinion on the effectiveness of the Corporation's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG Canada provides services to KPMG LLP.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Estimated costs to complete engineering and technology transfer services for long-term fixed-price contracts

As discussed in Notes 4(j) and 5(a) to the consolidated financial statements, the Corporation recognizes engineering and technology transfer service revenues from long-term fixed-price contracts over time by multiplying the expected consideration from the contract by the ratio of the cost incurred to date to estimated costs to complete the contract. Engineering and technology transfer service revenues from long-term fixed-price contracts are inherently uncertain in that total revenue from these contracts is fixed while the amount recognized to a period end requires estimates of costs to complete these contracts which estimates are subject to significant variability. As discussed in Note 23 to the consolidated financial statements engineering and technology transfer service revenues from long-term fixed-price contracts totaled $39,297 thousand for the year ended December 31, 2021.

We identified the evaluation of the estimate of costs to complete engineering and technology transfer services for long-term fixed-price contracts as a critical audit matter. A higher degree of auditor judgment was required to evaluate the significant assumptions used to estimate costs to complete the contracts, including the estimated labour hours and cost of materials to complete the contracts.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of an internal control related to the Corporation's determination of estimated costs to complete long-term fixed-price contracts, including the determination the significant assumptions. For a selection of long-term fixed-price contracts we compared the Corporation's historical estimated costs to complete contracts to actual labour hours and cost of materials incurred to assess the Corporation's ability to accurately forecast. We evaluated the estimated costs to completion for a selection of customer contracts, by (1) inspecting contractual documents with customers to understand the timing of services; (2) interviewing operational personnel of the Corporation to evaluate progress to date, the estimate of costs to complete contracts, and factors impacting the estimated labour hours and cost of material to complete the contracts; (3) evaluating contract progress by inspecting correspondence between the Corporation and the customer; (4) evaluating the cost to complete the contracts for consistency with the status of delivery and the underlying contractual terms; (5) comparing the Corporation's current estimate of costs to complete the contracts to those estimated in prior periods and investigating changes during the period; and (6) comparing labour hours and cost of materials incurred subsequent to the Corporation's year-end date to assess the consistency with the estimated costs for the period.

//s// KPMG LLP

We have served as the Corporation's auditor since 1999.

Chartered Professional Accountants

Vancouver, Canada
March 11, 2022

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KPMG LLP
Chartered Professional Accountants
PO Box 10426 777 Dunsmuir Street
Vancouver BC V7Y 1K23
Canada

Telephone (604) 691-3000
Fax (604) 691-3031
Internet www.kpmg.ca

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Ballard Power Systems Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Ballard Power Systems Inc.'s and subsidiaries' (the Corporation) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated statements of financial position of the Corporation as of December 31, 2021 and 2020, the related consolidated statements of loss and comprehensive income (loss), changes in equity, and cash flows for each of the years then ended, and the related notes (collectively, the consolidated financial statements), and our report dated March 11, 2022 expressed an unqualified opinion on those consolidated financial statements.
The Corporation acquired Arcola Energy Limited during 2021, and management excluded from its assessment of the effectiveness of the Corporation's internal control over financial reporting as of December 31, 2021, Arcola Energy Limited's internal control over financial reporting associated with total assets of $44,591 thousand and total revenues of $138 thousand included in the consolidated financial statements of the Corporation as of and for the year ended December 31, 2021. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Arcola Energy Limited.

Basis for Opinion

The Corporation's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's Responsibility for the Financial Statements and Report on Internal Control over Financial Reporting" . Our responsibility is to express an opinion on the Corporation's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Corporation in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

KPMG LLP is a Canadian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity. KPMG Canada provides services to KPMG LLP.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

//**s**// **KPMG LLP**

Vancouver, Canada

March 11, 2022

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BALLARD POWER SYSTEMS INC.
Consolidated Statements of Financial Position
(Expressed in thousands of U.S. dollars)

	Note	**December 31, 2021**	December 31, 2020
Assets			
Current assets:			
Cash and cash equivalents		**$ 1,123,895**	$ 763,430
Short-term investments		**3,004**	2,000
Trade and other receivables	9	**46,395**	56,795
Inventories	10	**51,518**	28,522
Prepaid expenses and other current assets		**4,374**	3,568
Total current assets		**1,229,186**	854,315
Non-current assets:			
Property, plant and equipment	11	**56,061**	49,334
Intangible assets	12	**20,788**	3,764
Goodwill	13	**64,268**	40,277
Investments	14	**70,292**	27,566
Other long-term assets		**348**	343
Total assets		**$ 1,440,943**	$ 975,599
Liabilities and Equity			
Current liabilities:			
Trade and other payables	16	**$ 39,555**	$ 29,877
Deferred revenue	17	**12,109**	9,888
Provisions and other current liabilities	18	**28,257**	9,635
Current lease liabilities	19	**3,238**	2,691
Total current liabilities		**83,159**	52,091
Non-current liabilities:			
Non-current lease liabilities	19	**13,882**	15,182
Deferred gain on finance lease liability	19	**1,318**	1,734
Provisions and other non-current liabilities	18	**8,895**	1,764
Employee future benefits	20	**1,894**	3,941
Deferred income tax liability	7 & 27	**3,578**	—
Total liabilities		**112,726**	74,712
Equity:			
Share capital	21	**2,416,256**	1,884,735
Contributed surplus	21	**297,819**	290,761
Accumulated deficit		**(1,387,579)**	(1,275,516)
Foreign currency reserve		**1,721**	907
Total equity		**1,328,217**	900,887
Total liabilities and equity		**$ 1,440,943**	$ 975,599

See accompanying notes to consolidated financial statements.

Approved on behalf of the Board:

"Doug Hayhurst"
Director

"Jim Roche"
Director

BALLARD POWER SYSTEMS INC.
Consolidated Statements of Loss and Comprehensive Income (Loss)
For the years ended December 31

(Expressed in thousands of U.S. dollars, except per share amounts and number of shares)

	Note	2021	2020
Revenues:			
Product and service revenues	23	**$ 104,505**	$ 103,877
Cost of product and service revenues		**90,492**	82,893
Gross margin		**14,013**	20,984
Operating expenses:			
Research and product development		**62,162**	35,519
General and administrative		**24,725**	16,234
Sales and marketing		**12,904**	8,616
Other expense	25	**2,325**	376
Total operating expenses		**102,116**	60,745
Results from operating activities		**(88,103)**	(39,761)
Finance income (loss) and other	26	**(8,813)**	4,282
Finance expense	26	**(1,294)**	(1,303)
Net finance income (loss)		**(10,107)**	2,979
Equity in loss of investment in joint venture and associates	14 & 28	**(16,140)**	(12,557)
Impairment charges on property, plant and equipment	11	**(263)**	—
Loss before income taxes		**(114,613)**	(49,339)
Income tax recovery (expense)	27	**216**	(130)
Net loss from continued operations		**(114,397)**	(49,469)
Net income (loss) from discontinued operations	8	**164**	(1,908)
Net loss		**$ (114,233)**	$ (51,377)
Other comprehensive income (loss):			
Items that will not be reclassified to profit or loss:			
Actuarial gain (loss) on defined benefit plans	20	**2,170**	(289)
		2,170	(289)
Items that may be reclassified subsequently to profit or loss:			
Foreign currency translation differences		**814**	94
		814	94
Other comprehensive income (loss), net of tax		**2,984**	(195)
Total comprehensive loss		**$ (111,249)**	$ (51,572)
Basic and diluted loss per share			
Continuing operations		**$ (0.39)**	$ (0.20)
Discontinued operations		**—**	(0.01)
Loss per share		**$ (0.39)**	$ (0.21)
Weighted average number of common shares outstanding		**295,293,438**	248,481,027

See accompanying notes to consolidated financial statements.

BALLARD POWER SYSTEMS INC.
Consolidated Statements of Changes in Equity
(Expressed in thousands of U.S. dollars except number of shares)

	Number of shares	Share capital	Contributed surplus	Accumulated deficit	Foreign currency reserve	Total equity
Balance, December 31, 2019	234,514,326	$ 1,182,660	$ 290,640	$ (1,223,850)	$ 813	$ 250,263
Net loss	—	—	—	(51,377)	—	(51,377)
Equity offerings (note 21)	45,557,548	694,608	—	—	—	694,608
DSUs redeemed (note 21)	7,608	14	(78)	—	—	(64)
RSUs redeemed (note 21)	305,229	633	(3,656)	—	—	(3,023)
Options exercised (note 21)	1,693,466	6,820	(2,382)	—	—	4,438
Share-based compensation (note 21)	—	—	6,237	—	—	6,237
Other comprehensive loss:						
Defined benefit plan actuarial gain (loss)	—	—	—	(289)	—	(289)
Foreign currency translation for foreign operations	—	—	—	—	94	94
Balance, December 31, 2020	282,078,177	$ 1,884,735	$ 290,761	$ (1,275,516)	$ 907	$ 900,887
Net loss	**—**	**—**	**—**	**(114,233)**	**—**	**(114,233)**
Deferred share consideration related to acquisition (note 7)	**—**	**—**	**4,851**	**—**	**—**	**4,851**
Equity offerings (note 21)	**14,870,000**	**527,291**	**—**	**—**	**—**	**527,291**
DSUs redeemed (note 21)	**46,388**	**127**	**(1,417)**	**—**	**—**	**(1,290)**
RSUs redeemed (note 21)	**156,449**	**577**	**(4,934)**	**—**	**—**	**(4,357)**
Options exercised (note 21)	**549,281**	**3,526**	**(1,111)**	**—**	**—**	**2,415**
Share-based compensation (note 21)	**—**	**—**	**9,669**	**—**	**—**	**9,669**
Other comprehensive income (loss):						
Defined benefit plan actuarial gain (loss)	**—**	**—**	**—**	**2,170**	**—**	**2,170**
Foreign currency translation for foreign operations	**—**	**—**	**—**	**—**	**814**	**814**
Balance, December 31, 2021	**297,700,295**	**$ 2,416,256**	**$ 297,819**	**$ (1,387,579)**	**$ 1,721**	**$ 1,328,217**

See accompanying notes to consolidated financial statements.

BALLARD POWER SYSTEMS INC.
Consolidated Statements of Cash Flows
For the years ended December 31

(Expressed in thousands of U.S. dollars)

	Note	2021	2020
Cash provided by (used in):			
Operating activities:			
Net loss for the year		**$ (114,233)**	$ (51,377)
Adjustments for:			
Depreciation and amortization		**9,752**	7,558
Impairment loss on trade receivables	25	**54**	310
Unrealized gain on forward contracts		**519**	(259)
Equity in loss of investment in joint venture and associates	14 & 28	**16,140**	12,557
Net decrease (increase) in fair value of investments	14 & 31	**9,024**	—
Gain on sale of assets	8	**—**	(168)
Impairment loss on property plant and equipment	11	**263**	—
Accretion on decommissioning liabilities		**113**	76
Employee future benefits	20	**131**	164
Employee future benefits plan contributions	20	**(8)**	(908)
Share-based compensation	21	**9,669**	6,237
Deferred income tax expense (recovery)		**(300)**	—
		(68,876)	(25,810)
Changes in non-cash working capital:			
Trade and other receivables		**9,640**	(2,093)
Inventories		**(22,996)**	1,355
Prepaid expenses and other current assets		**(810)**	(1,026)
Trade and other payables		**1,408**	(4,238)
Deferred revenue		**2,221**	(10,268)
Warranty provision		**(1,063)**	(854)
		(11,600)	(17,124)
Cash used in operating activities		**(80,476)**	(42,934)
Investing activities:			
Net change in short-term investments	31	**336**	(2,000)
Acquisition of long-term investments	14 & 31	**(51,757)**	—
Additions to property, plant and equipment	11	**(13,158)**	(12,620)
Proceeds on sale of assets	8	**—**	988
Investment in other intangible assets	12	**(1,543)**	(246)
Investment in joint venture and associates	14	**(12,351)**	(22,515)
Acquisition of Arcola Energy Limited, net of cash acquired	7	**(7,157)**	—
Cash used in investing activities		**(85,630)**	(36,393)
Financing activities:			
Principal payments of lease liabilities	19	**(2,798)**	(2,517)
Net proceeds on issuance of share capital from share option exercises	21	**2,415**	4,438
Net proceeds on issuance of share capital from equity offerings	21	**527,291**	694,608
Cash provided by financing activities		**526,908**	696,529
Effect of exchange rate fluctuations on cash and cash equivalents held		**(337)**	(1,564)
Increase in cash and cash equivalents		**360,465**	615,638
Cash and cash equivalents, beginning of year		**763,430**	147,792
Cash and cash equivalents, end of year		**$ 1,123,895**	$ 763,430

Supplemental disclosure of cash flow information (note 29).
See accompanying notes to consolidated financial statements.

1. Reporting entity:

The principal business of Ballard Power Systems Inc. (the “Corporation”) is the sale and service of proton exchange membrane ("PEM") fuel cell products for the 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 licensing and sale of the Corporation’s extensive intellectual property portfolio and fundamental knowledge for a variety of fuel cell applications. A fuel cell is an environmentally clean electrochemical device that combines hydrogen fuel with oxygen (from the air) to produce electricity.

The Corporation is a company domiciled in Canada and its registered office is located at 9000 Glenlyon Parkway, Burnaby, British Columbia, Canada, V5J 5J8. The consolidated financial statements of the Corporation as at and for the years ended December 31, 2021 and 2020 comprise the Corporation and its subsidiaries (note 4(a)).

On October 14, 2020, the Corporation completed the sale of the Unmanned Aerial Vehicle ("UAV") business assets of its subsidiary, Ballard Unmanned Systems. As such, the UAV business has been classified and accounted for as a discontinued operation. The historic operating results of the UAV business for 2021 and 2020 have been removed from continued operating results and are instead presented separately in the statement of comprehensive loss as loss from discontinued operations.

2. Basis of preparation:

(a) Statement of compliance:

These consolidated financial statements of the Corporation have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”).

The consolidated financial statements were authorized for issue by the Board of Directors on March 11, 2022.

Details of the Corporation's significant accounting policies are included in note 4.

(b) Basis of measurement:

The consolidated financial statements have been prepared on the historical cost basis except for the following material items in the statement of financial position:

- Financial assets classified as measured at fair value through profit or loss (FVTPL); and
- Employee future benefits liability is recognized as the net of the present value of the defined benefit obligation, less the fair value of plan assets.

(c) Functional and presentation currency:

These consolidated financial statements are presented in U.S. dollars, which is the Corporation’s functional currency.

2. Basis of preparation (cont'd):

(d) Use of estimates:

The preparation of the consolidated financial statements in conformity with IFRS requires the Corporation's management 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 these 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.

Significant areas having estimation uncertainty include revenue recognition, asset impairment, warranty provision, inventory provision, impairment loss (recoveries) on trade receivables and employee future benefits. These estimates and judgments are discussed further in note 5.

(e) Future operations:

The Corporation is required to assess its ability to continue as a going concern or whether substantial doubt exists as to the Corporation's ability to continue as a going concern into the foreseeable future. The Corporation has forecast its cash flows for the foreseeable future and despite the ongoing volatility and uncertainties inherent in the business, the Corporation believes it has adequate liquidity in cash and working capital to finance its operations. The Corporation's ability to continue as a going concern and realize its assets and discharge its liabilities and commitments in the normal course of business is dependent upon the Corporation having adequate liquidity and achieving profitable operations that are sustainable.

The Corporation's strategy to mitigate this uncertainty is to continue its drive to attain profitable operations that are sustainable by executing a business plan that continues to focus on revenue growth, improving overall gross margins, maintaining discipline over operating expenses, managing working capital requirements, and securing additional financing to fund operations as needed until the Corporation does achieve profitable operations that are sustainable. Failure to implement this plan could have a material adverse effect on the Corporation's financial condition and or results of operations.

3. Changes in accounting policies:

The Corporation has consistently applied the accounting policies set out in note 4 to all periods presented in these consolidated financial statements.

A number of new standards and interpretations became effective from January 1, 2021 however, they did not have a material impact on the Corporation's consolidated financial statements.

4. Significant accounting policies:

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements, unless otherwise indicated.

4. Significant accounting policies (cont'd):

(a) Basis of consolidation:

The consolidated financial statements include the accounts of the Corporation and its principal subsidiaries as follows:

	Percentage ownership	
	2021	2020
Ballard Motive Solutions (Note 7)	100 %	— %
Guangzhou Ballard Power Systems Co., Ltd.	100 %	100 %
Ballard Power Systems Europe A/S	100 %	100 %
Ballard Hong Kong Ltd.	100 %	100 %
Ballard Unmanned Systems (note 8)	100 %	100 %
Ballard Services Inc.	100 %	100 %
Ballard Fuel Cell Systems Inc.	100 %	100 %
Ballard Power Corporation	100 %	100 %

Subsidiary Entities

Subsidiaries are entities controlled by the Corporation. The Corporation controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns though its power over the entity. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. Intercompany balances and transactions are eliminated in the consolidated financial statements.

(i) Ballard Motive Solutions

On November 11, 2021, the Corporation acquired Arcola Energy Limited ("Arcola"), a UK-based systems engineering company (subsequently renamed to Ballard Motive Solutions) specializing in hydrogen fuel cell powertrain and vehicle systems integration (note 7).

(ii) Guangzhou Ballard Power Systems

On January 10, 2017, the Corporation incorporated Guangzhou Ballard Power Systems Co., Ltd. ("GBPS"), a 100% wholly foreign-owned enterprise ("WFOE") in China to serve as the Corporation's operations entity for all of China.

(iii) Ballard Power Systems Europe A/S

On January 18, 2010, the Corporation acquired a 45% interest in its European subsidiary, Ballard Power Systems Europe A/S ("BPSE"). BPSE (formerly Dantherm Power A/S) has been consolidated since acquisition. In August 2010, the Corporation acquired an additional 7% interest and a further 5% interest in December 2012. On January 5, 2017, the Corporation purchased the remaining 43% interest in its subsidiary, held by Dansk Industri Invest A/S, thus resulting in the Corporation now owning 100% of BPSE. BPSE supports a growing market and customer base with sales, business development, engineering, manufacturing and service capabilities.

(iv) Ballard Hong Kong Ltd.

On July 19, 2016, the Corporation incorporated Ballard Hong Kong Ltd. (“BHKL”), a 100% owned holding company in Hong Kong, China.

4. Significant accounting policies (cont'd):

(a) Basis of consolidation (cont'd):

(v) Ballard Unmanned Systems

On October 1, 2015, the Corporation acquired Ballard Unmanned Systems (formerly Protonex Technology Corporation) prior to January 1, 2019), a designer and manufacturer of advanced power management products and portable fuel cell solutions.

On October 14, 2020, the Corporation completed an agreement to sell the remaining business assets of its subsidiary, Ballard Unmanned Systems. The entity will remain held by the Corporation (note 8).

Equity Investment Entities

The Corporation also has a non-controlling, 49% interest (2020 - 49%), in Weichai Ballard Hy-Energy Technologies Co., Ltd ("Weichai Ballard JV") and a non-controlling, 10% interest (2020 - 10%), in Guangdong Synergy Ballard Hydrogen Power Co., Ltd (“Synergy Ballard JVCo”). Both of these associated companies are accounted for using the equity method of accounting.

(i) Weichai Ballard JV

On November 13, 2018, the Corporation, through Ballard Hong Kong Ltd. ("BHKL"), entered into an agreement with Weichai Power Co., Ltd ("Weichai Power") to create a new limited liability company based in China, Weichai Ballard JV. The JV's business is to manufacture fuel cell products utilizing the Corporation's next-generation liquid-cooled fuel cell stack ("LCS") and LCS-based power modules for bus, commercial truck and forklift applications with certain exclusive rights in China. Under the agreement, Weichai is to contribute RMB 561,000,000 ($88,301,000 equivalent at December 31, 2021 exchange rate) and the Corporation is to contribute RMB 539,000,000 ($79,930,000 equivalent at December 31, 2021 exchange rate) representing 51% and 49% of the registered capital in Weichai Ballard JV, respectively. The parties will make these contributions in cash over a four year period and are not obligated to contribute any additional capital in excess of the amounts noted above.

During 2018, the Corporation made an initial capital contribution of $ 14,286,000 (RMB 98,000,000 equivalent). During 2019, the Corporation made two additional capital contributions totaling $ 20,944,000 (RMB 143,325,000 equivalent). During 2020, the Corporation made four additional capital contributions totaling $ 22,515,000 (RMB 155,575,000 equivalent). During 2021, the Corporation made four additional capital contributions totaling $12,351,000 (RMB 79,625,000 equivalent). Weichai Power and the Corporation are committed to fund pro rata shares of Weichai Ballard JV based on an agreed business plan. Weichai Power holds three of five Weichai Ballard JV board seats and the Corporation holds two, with the Corporation having certain shareholder protection provisions. Weichai Ballard JV is not controlled by the Corporation and therefore is not consolidated. The Corporation's 49% investment in Weichai Ballard JV is accounted for using the equity method of accounting.

(ii) Synergy Ballard JVCo

On September 26, 2016, the Corporation, through BHKL, entered into a joint venture agreement with Guangdong Nation Synergy Hydrogen Power Technology Co., Ltd (“Synergy”) to create a new limited liability company based in China, Synergy Ballard JVCo. Synergy Ballard JVCo's business is to manufacture fuel cell products utilizing the Corporation's 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.

4. Significant accounting policies (cont'd):

(a) Basis of consolidation (cont'd):

Equity Investment Entities (cont'd)

(ii) Synergy Ballard JVCo (cont'd)

In setting up the joint venture, as specified in the Equity Joint Venture Agreement ("EJV") dated September 26, 2016, Synergy contributed RMB 60,300,000 ($9,000,000) and the Corporation contributed RMB 6,700,000, ($971,000) in March 2017 representing 90% and 10% of the registered capital in Synergy Ballard JVCo, respectively. The parties made their contributions in cash and the Corporation is not obligated to contribute any additional capital in excess of the amounts noted above. Synergy Ballard JVCo is not controlled by the Corporation and therefore is not consolidated. The Corporation's 10% investment in Synergy Ballard JVCo is accounted for using the equity method of accounting.

(b) Foreign currency:

(i) Foreign currency transactions

Transactions in foreign currencies are translated to the respective functional currencies of the Corporation and its subsidiaries at the exchange rate in effect at the transaction date. Monetary assets and liabilities denominated in other than the functional currency are translated at the exchange rates in effect at the statement of financial position date. The resulting exchange gains and losses are recognized in earnings. Non-monetary assets and liabilities denominated in other than the functional currency that are measured at fair value are translated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items that are measured in terms of historical cost in other than the functional currency are translated using the exchange rate at the date of the transaction.

(ii) Foreign operations

The assets and liabilities of foreign operations are translated to the presentation currency using exchange rates at the reporting date. The income and expenses of foreign operations are translated to the presentation currency using exchange rates at the dates of the transactions. Foreign currency differences are recognized in other comprehensive income.

(c) Financial instruments:

(i) Financial assets

The Corporation initially recognizes loans and receivables and deposits on the date that they originated and all other financial assets on the trade date at which the Corporation becomes a party to the contractual provisions of the instrument. The Corporation derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or when it transfers substantially all the risks and rewards of ownership of the financial asset.

Financial assets are 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. The Corporation's financial assets which consist primarily of cash and cash equivalents, short-term investments, trade and other receivables, and contract assets are classified at amortized cost.

The Corporation also periodically enters into foreign exchange forward contracts to limit its exposure to foreign currency rate fluctuations. These derivatives are recognized initially at fair value and are recorded as either assets or liabilities based on their fair value. Subsequent to initial recognition, these derivatives are measured at fair value and changes to their value are recorded through profit or loss.

4. Significant accounting policies (cont'd):

(c) Financial instruments (cont'd):

(ii) Financial liabilities

Financial liabilities comprise the Corporation's trade and other payables. The financial liabilities are initially recognized on the date they are originated and are derecognized when the contractual obligations are discharged or cancelled or expire. These financial liabilities are recognized initially at fair value and subsequently are measured at amortized cost using the effective interest method, when materially different from the initial amount. Fair value is determined based on the present value of future cash flows, discounted at the market rate of interest.

(iii) Share capital

Share capital is classified as equity. Incremental costs directly attributable to the issue of shares and share options are recognized as a deduction from equity. When share capital is repurchased, the amount of the consideration paid, including directly attributable costs, is recognized as a deduction from equity. Repurchased shares are classified as treasury shares and are presented as a deduction from equity. When treasury shares are subsequently reissued, the amount received is recognized as an increase in equity, and the resulting surplus or deficit on the transaction is transferred to or from retained earnings (deficit).

(d) Inventories:

Inventories are recorded at the lower of cost and net realizable value. The cost of inventories is based on the first-in first-out principle, and includes expenditures incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes materials, labor and appropriate share of production overhead based on normal operating capacity. Costs of materials are determined on an average per unit basis.

Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and selling expenses. In establishing any impairment of inventory, management estimates the likelihood that inventory carrying values will be affected by changes in market demand, technology and design, which would impair the value of inventory on hand.

(e) Property, plant and equipment:

(i) Recognition and measurement

Items of property, plant and equipment are measured at cost less accumulated depreciation and any accumulated impairment losses. The cost of self-constructed assets includes the cost of materials, costs directly attributable to bringing the assets to a working condition for their intended use, and the costs of dismantling and removing items and restoring the site on which they are located. If significant parts of an item of property, plant and equipment have different useful lives, then they are accounted for as separate items (major components) of property, plant and equipment.

Any gain or loss on disposal of an item of property, plant and equipment is recognized in profit or loss.

(ii) Subsequent expenditures

Subsequent expenditures are capitalized only if it is probable that the future economic benefits associated with the expenditures will flow to the Corporation.

(iii) Depreciation

Depreciation is calculated to write-off the cost of items of property, plant and equipment less their estimated residual values using the straight-line method over their estimated useful lives, and is recognized in profit or loss.

4. Significant accounting policies (cont'd):

(e) Property, plant and equipment (cont'd):

(iii) Depreciation (cont'd)

The estimated useful lives of property, plant and equipment for current and comparative periods are as follows:

Computer equipment	3 to 10 years
Furniture and fixtures	5 to 10 years
Leasehold improvements	The shorter of initial term of the respective lease and estimated useful life
Production and test equipment	4 to 15 years

Leased assets are depreciated over the shorter of the lease term or their useful lives unless it is reasonably certain that the Corporation will obtain ownership by the end of the lease term.

Right-of-use asset - Property	1 to 7 years
Right-of-use asset - Office equipment	4 to 5 years
Right-of-use asset - Vehicles	1 to 5 years

Depreciation methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

(f) Leases:

IFRS 16 Leases introduced a single, on-balance sheet accounting model for lessees. As a result, the Corporation, as a lessee, has recognized right-of-use assets representing its rights to use the underlying assets, and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

At inception of a contract, the Corporation assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Corporation assesses whether:

- the contract involves the use of an identified asset - this may be specified explicitly or implicitly, and should be physically distinct or represent substantially all of the capacity of a physically distinct asset. If the supplier has a substantive substitution right, then the asset is not identified;
- the Corporation has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use; and
- the Corporation has the right to direct the use of the asset. The Corporation has this right when it has the decision-making rights that are most relevant to changing how and for what purpose the asset is used. In rare cases where all the decisions about how and for what purpose the asset is used are predetermined, the Corporation has the right to direct the use of the asset if either:
    - the Corporation has the right to operate the asset; or
    - the Corporation designed the asset in a way that predetermines how and for what purpose it will be used.

4. Significant accounting policies (cont'd):

(f) Leases (cont'd):

This policy is applied to contracts entered into, or changed, on or after January 1, 2019.

i. As a Lessee

The Corporation recognizes a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. The estimated useful lives of right-of-use assets are determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Corporation's incremental borrowing rate. Generally, the Corporation uses its incremental borrowing rate as the discount rate.

Lease payments included in the measurement of the lease liability comprise:

- Fixed payments, including in-substance fixed payments;
- Variable lease payments that depend on an index or a rate, initially measured using the index or rate at the commencement date;
- Amounts expected to be payable under a residual value guarantee; and
- The exercise price under a purchase option that the Corporation is reasonably certain to exercise, lease payments in an optional renewal period if the Corporation is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Corporation is reasonably certain not to terminate early.

The lease liability is subsequently measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Corporation's estimate of the amount expected to be payable under a residual value guarantee or if the Corporation changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Corporation presents right-of-use assets in 'Property, plant and equipment' and lease liabilities in 'Lease liability' in the statement of financial position.

The Corporation has elected not to recognize right-of-use assets and lease liabilities for short-term leases of properties, equipment and vehicles that have a lease term of 12 months or less. The Corporation has elected not to recognize right-of-use assets and lease liabilities for low value leases that have initial values of less than $5,000. The Corporation recognizes the lease payments associated with these leases as an operating expense on a straight-line basis over the lease term.

4. Significant accounting policies (cont'd):

(f) Leases (cont'd):

ii. As a Lessor

When the Corporation is an intermediate lessor, it accounts for its interests in the head lease and the sub-lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset, and makes an overall assessment of whether the lease transfers to the lessee substantially all of the risks and rewards of ownership incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Corporation considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

(g) Goodwill and intangible assets:

(i) Recognition and measurement

Goodwill	Goodwill arising on the acquisition of subsidiaries is measured at cost less accumulated impairment losses.
Research and development	Expenditure on research activities is recognized in profit or loss as incurred. Development expenditure is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Corporation intends to and has sufficient resources to complete development and to use or sell the asset. Otherwise, it is recognized in profit or loss as incurred. Subsequent to initial recognition, development expenditure is measured at cost less accumulated amortization and any accumulated impairment losses.
Intangible assets	Intangible assets, including patents, know-how, in-process research and development, trademarks and service marks, customer contracts and relationships, non-compete agreements, and software systems that are acquired or developed by the Corporation and have finite useful lives are measured at cost less accumulated amortization and any accumulated impairment losses.

(ii) Subsequent expenditure

Subsequent expenditure is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditures, including expenditures on internally generated goodwill, are recognized in profit or loss as incurred.

(iii) Amortization

Amortization is calculated to write-off the cost of intangible assets less their estimated residual values using the straight-line method over their estimated useful lives, and is recognized in profit or loss. Goodwill is not amortized.

The estimated useful lives for current and comparative periods are as follows:

Acquired patents, know-how and in-process research & development	5 to 20 years
ERP management reporting software system	5 to 10 years
Acquired customer contracts and relationships	7 to 10 years
Acquired non-compete agreements	1 to 3 years
Domain names	15 years
Acquired trademarks and service marks	15 years
Internally generated fuel cell intangible assets	3 to 5 years

Amortization methods, useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

4. Significant accounting policies (cont'd):

(h) Impairment:

(i) Financial assets

An 'expected credit loss' ("ECL") model applies to financial assets measured at amortized cost and debt investments at FVOCI, but not to investments in equity instruments. The Corporation'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.

The Corporation has 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, the Corporation considers 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 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 the Corporation expects 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.

(ii) Non-financial assets

The carrying amounts of the Corporation's 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 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. Fair value less costs to sell is defined as the estimated price that would be received on the sale of the asset in an orderly transaction between market participants at the measurement date. 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.

4. Significant accounting policies (cont'd):

(h) Impairment (cont'd):

(ii) Non-financial assets (cont'd)

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 profit or 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.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(i) Provisions:

A provision is recognized if, as a result of a past event, the Corporation has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risk specific to the liability. The unwinding of the discount is recognized as a finance expense.

Warranty provision

A provision for warranty costs is recorded on product sales at the time the sale is recognized. In establishing the warranty provision, management estimates the likelihood that products sold will experience warranty claims and the estimated cost to resolve claims received, taking into account the nature of the contract and past and projected experience with the products.

Decommissioning liabilities

Legal obligations to retire tangible long-lived assets are recorded at the net present value of the expected costs of settlement at acquisition with a corresponding increase in asset value. These include assets leased under operating leases. The liability is accreted over the life of the asset to the ultimate settlement amount and the increase in asset value is depreciated over the remaining useful life of the asset.

(j) Revenue recognition:

The Corporation generates revenues 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 services 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.

4. Significant accounting policies (cont'd):

(j) Revenue recognition (cont'd):

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.

On cost-plus reimbursable contracts, revenues are recognized as costs are incurred, and include applicable fees earned as services are provided.

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 Corporation 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. In the event that 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.

(k) Finance income and expense:

Finance income comprises interest income on funds invested, gains (losses) on the disposal of available-for-sale financial assets, foreign exchange gains (losses), and changes in the fair value of financial assets at fair value through profit or loss, pension administration expense, and employee future benefit plan expense. Interest income is recognized as it accrues in income, using the effective interest method.

Finance expense comprises interest expense on leases and the unwinding of the discount on provisions.

(l) Income taxes:

The Corporation follows the asset and liability method of accounting for income taxes. Under this method, deferred income taxes are recognized for the deferred income tax consequences attributable to differences between the financial statement carrying values of assets and liabilities and their respective income tax bases (temporary differences) and for loss carry forwards. The resulting changes in the net deferred tax asset or liability are included in income.

Deferred tax assets and liabilities are measured using enacted, or substantively enacted, tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. The effect on deferred income tax assets and liabilities, of a change in tax rates, is included in income in the period that includes the substantive enactment date. Deferred income tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

4. Significant accounting policies (cont'd):

(m) Employee benefits:

Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts.

Obligations for contributions to defined contribution pension plans are recognized as an employee benefit expense in profit or loss in the periods during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

Defined benefit plans

A defined benefit plan is a post-employment pension plan other than a defined contribution plan. The Corporation's net obligation in respect of defined benefit pension plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. Any unrecognized past service costs and the fair value of any plan assets are deducted. The discount rate is the yield at the reporting date on AA credit-rated bonds that have maturity dates approximating the terms of the Corporation's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The calculation is performed annually by a qualified actuary using the projected unit credit method.

When the calculation results in a benefit to the Corporation, the recognized asset is limited to the total of any unrecognized past service costs and the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. In order to calculate the present value of economic benefits, consideration is given to any minimum funding requirements that apply to any plan in the Corporation. An economic benefit is available to the Corporation if it is realizable during the life of the plan, or on settlement of the plan liabilities.

The Corporation recognizes all remeasurements arising from defined benefit plans, which comprise actuarial gains and losses, immediately in other comprehensive income. Remeasurements recognized in other comprehensive income are not recycled through profit or loss in subsequent periods.

Other long-term employee benefits

The Corporation's net obligation in respect of long-term employee benefits other than pension plans is the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any related assets is deducted. The discount rate is the yield at the reporting date on AA credit-rated bonds that have maturity dates approximating the terms of the Corporation's obligations. The calculation is performed using the projected unit credit method. Any actuarial gains and losses are recognized in other comprehensive income or loss in the period in which they arise.

Termination benefits

Termination benefits are recognized as an expense (restructuring expense recorded in other operating expense) when the Corporation is committed demonstrably, without realistic possibility of withdrawal, to a formal detailed plan to either terminate employment before the normal retirement date, or to provide termination benefits as a result of an offer made to encourage voluntary redundancy. Termination benefits for voluntary redundancies are recognized as an expense if the Corporation has made an offer of voluntary redundancy, it is probable that the offer will be accepted, and the number of acceptances can be estimated reliably. If benefits are payable more than 12 months after the reporting period, then they are discounted to their present value.

4. Significant accounting policies (cont'd):

(m) Employee benefits:

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under short-term cash bonus or profit sharing plans if the Corporation has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

(n) Share-based compensation plans:

The Corporation uses the fair-value based method of accounting for share-based compensation for all awards of shares, share options, restricted share units, and deferred share units granted. The resulting compensation expense, based on the fair value of the awards granted, excluding the impact of any non-market service and performance vesting conditions, is charged to income over the period that the employees unconditionally become entitled to the award, with a corresponding increase to contributed surplus.

Fair values of share options are calculated using the Black-Scholes valuation method as of the grant date and adjusted for estimated forfeitures. Restricted share units and deferred share units are valued at the fair-value price at grant date. For awards with graded vesting, the fair value of each tranche is calculated separately and recognized over its respective vesting period. Non-market vesting conditions are considered in making assumptions about the number of awards that are expected to vest. At each reporting date, the Corporation reassesses its estimates of the number of awards that are expected to vest and recognizes the impact of any revision in the income statement with a corresponding adjustment to contributed surplus.

The Corporation issues shares, share options, restricted share units, and deferred share units under its share-based compensation plans as described in note 21. Any consideration paid by employees on exercise of share options or purchase of shares, together with the amount initially recorded in contributed surplus, is credited to share capital. The redemption of restricted share units and deferred share units are non-cash transactions that are recorded in contributed surplus and share capital.

(o) Earnings (loss) per share:

Basic earnings (loss) per share is computed using the weighted average number of common shares outstanding during the period, adjusted for treasury shares. Diluted earnings per share is calculated using the treasury stock method.

Under the treasury stock method, the dilution is calculated based upon the number of common shares issued should deferred share units ("DSUs"), restricted share units ("RSUs"), and "in the money" options, if any, be exercised. When the effects of outstanding stock-based compensation arrangements would be anti-dilutive, diluted loss per share is not shown separately.

(p) Government assistance and investment tax credits:

Government assistance and investment tax credits are recorded as either a reduction of the cost of the applicable assets, or credited against the related expense incurred in the statement of comprehensive loss, as determined by the terms and conditions of the agreements under which the assistance is provided to the Corporation or the nature of the expenditures which gave rise to the credits. Government assistance and investment tax credit receivables are recorded when their receipt is reasonably assured.

4. Significant accounting policies (cont'd):

(q) Segment reporting:

An operating segment is a component of the Corporation that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Corporation's other components. Segment results include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate assets, head office expenses, and income tax assets and liabilities.

5. Critical judgments in applying accounting policies and key sources of estimation uncertainty:

Critical judgments in applying accounting policies:

Critical judgments that management has made in the process of applying the Corporation's accounting policies and that have the most significant effect on the amounts recognized in the consolidated financial statements are limited to management's assessment of the Corporation's ability to continue as a going concern (note 2(e)).

Key sources of estimation uncertainty:

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

(a) Revenue recognition:

On long-term fixed price contracts, revenues are recorded over time using costs incurred to date relative to total estimated costs at completion to measure progress towards satisfying performance obligations. 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 expected revenues and expected costs for completing a contract are recognized in the period in which the revisions are identified. If the expected costs exceed the expected revenues on a contract, such loss is recognized in its entirety in the period it becomes known.

(i) 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.

(ii) The determination of potential revenues includes the contractually agreed amount and may be adjusted based on the estimate of the Corporation's attainment on achieving certain defined contractual milestones. Management's estimation is required in determining the amount of consideration to which the Corporation 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 the Corporation's estimates of the work required to complete a contract may change.

5. Critical judgments in applying accounting policies and key sources of estimation uncertainty (cont'd):

Key sources of estimation uncertainty (cont'd):

(b) Asset impairment:

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, the revenue growth rate could be lower than projected due to economic, industry or competitive factors, or the discount rate used in the value in use model could increase due to a change in market interest rates. In addition, future goodwill impairment charges may be necessary if the market capitalization decreased due to a decline in the trading price of the Corporation’s common stock, which could negatively impact the fair value of the Corporation’s cash generating units.

(c) Warranty provision:

A provision for warranty costs is recorded on product sales at the time of shipment. In establishing the warranty provision, management estimates the likelihood that products sold will experience warranty claims and the cost to resolve claims received. In making such determinations, the Corporation uses estimates based on the nature of the contract and past and projected experience with the products. Should these estimates prove to be incorrect, the Corporation may incur costs different from those provided for in the warranty provision. Management reviews warranty assumptions and makes adjustments to the provision at each reporting date based on the latest information available, including the expiry of contractual obligations. Adjustments to the warranty provision are recorded in cost of product and service revenues.

(d) Inventory provision:

In determining the lower of cost and net realizable value of inventory and in establishing the appropriate provision for inventory obsolescence, management estimates the likelihood that inventory carrying values will be affected by changes in market pricing or demand for the products and by changes in technology or design which could make inventory on hand obsolete or recoverable at less than the recorded value. Management performs regular reviews to assess the impact of changes in technology and design, sales trends and other changes on the carrying value of inventory. Where it is determined that such changes have occurred and will have a negative impact on the value of inventory on hand, appropriate provision 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.

(e) Financial assets including impairment of trade receivables:

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

5. Critical judgments in applying accounting policies and key sources of estimation uncertainty (cont'd):

Key sources of estimation uncertainty (cont'd):

(e) Financial assets including impairment of trade receivables (cont'd):

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.

The Corporation has 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, the Corporation considers 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 the Corporation's 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 the Corporation expects to receive). ECLs are discounted at the effective interest rate of the financial asset. At each reporting date, the Corporation assesses 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 profit or loss.

(f) Employee future benefits:

The present value of the 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.

6. Recent accounting pronouncements and future accounting policy changes:

The following is an overview of accounting standard changes that the Corporation will be required to adopt in future years. The Corporation expects to adopt these standards as at their effective dates and will continue to evaluate the impact of these standards on the consolidated financial statements.

6. Recent accounting pronouncements and future accounting policy changes (cont'd):

(a) 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.

(b) 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.

(c) *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.

6. Recent accounting pronouncements and future accounting policy changes (cont'd):

(c) *Disclosure Initiative – Accounting Policies* (*Amendments to IAS 1* and *IFRS Practice Statement 2)* cont'd

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.

(d) *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, the Corporation expects to recognize approximately $ 1,200,000 of additional contract costs as an opening balance adjustment to retained earnings in the three months ended March 31, 2022 financial statements (note 18).

7. Acquisition:

On November 11, 2021, the Corporation acquired Arcola Energy Limited ("Arcola"), a UK-based systems engineering company (subsequently renamed to Ballard Motive Solutions) specializing in hydrogen fuel cell powertrain and vehicle systems integration. The Corporation acquired 100% of Arcola for total consideration of up to $ 40,000,000, including 337,353 shares of the Corporation with an acquisition date fair value of approximately $6,000,000 (nil shares issued as of December 31, 2021) that vest over a two year period from the acquisition date, and up to $34,000,000 in upfront and earn-out cash consideration (net $7,157,000 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.

The Corporation completed detailed valuation studies and prepared the preliminary purchase price allocation for Ballard Motive Solutions using the acquisition method of accounting in accordance with *IFRS 3 Business Combinations*, with the Corporation considered as the accounting acquirer and Arcola (Ballard Motive Solutions) as the accounting acquiree. As the accounting acquirer, consideration given by the Corporation to acquire Arcola (Ballard Motive Solutions) 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.

7. Acquisition (cont'd):

As consideration for the transaction: (i) the Corporation paid cash and assumed and paid certain of Arcola's (Ballard Motive Solutions) debt obligations and transaction costs on closing of $7,477,000; (ii) will issue 337,353 shares of the Corporation 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 $ 4,851,000; (iii) will make future cash payments of up to $27,000,000 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 $26,258,000; and (iv) an actual working capital adjustment of $611,000, for total purchase consideration of $ 39,197,000. In accordance with *IFRS 3*, the fair value of the 337,353 shares has been measured for accounting purposes using the $18.30 5-day weighted average price of the Corporation's shares immediately preceding the acquisition date.

The preliminary fair value of purchase consideration is as follows:

Cash and debt paid on closing	$	7,477
Deferred share consideration		4,851
Contingent cash consideration		26,258
Working capital adjustment		611
Total Fair Value (Preliminary) of Purchase 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, the Corporation's operating and accounting policies and other pertinent conditions as of the acquisition date. The fair value review of Arcola's (Ballard Motive Solutions) 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.

The preliminary fair values of assets acquired and liabilities assumed are as follows:

Cash and cash equivalents	$	320
Trade and other receivables		3,112
Property, plant & 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 Assets Acquired and Liabilities Assumed	**$**	**39,197**

7. Acquisition (cont'd):

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 (Ballard Motive Solutions) 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. The Corporation has 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 $17,279,000 from their original carrying amounts.

Identified intangible assets of $ 17,279,000 consist of the following and are being amortized based on the following useful lives:

Fair value (preliminary) of Identified Intangible Assets			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
	$	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 $ 15,976,000 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.

7. Acquisition (cont'd):

- The fair value of the acquired customer contracts and relationships totaling $ 1,048,000 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 $ 255,000 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 without the non-compete covenants.

- The fair value of the deferred income tax liability of $ 3,878,000 represents the excess of the accounting basis of the acquired intangible assets of $17,279,000 over their tax basis of $1,768,000 at the current U.K tax rate of 25.0%.

The remaining unallocated $23,991,000 of the total purchase price consideration of $ 39,197,000 has been ascribed as goodwill, which is not deductible for tax purposes. The goodwill of $23,991,000 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.

The amount of revenue and net loss attributable to Arcola (Ballard Motive Solutions) included in the consolidated statement of loss from the acquisition date of November 11, 2021 through the period ended December 31, 2021 is $138,000 and ($1,114,000), respectively.

The following table presents the unaudited pro forma results of Arcola (Ballard Motive Solutions) for the year ended December 31, 2021. The pro forma financial information is presented for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at the beginning of fiscal 2021. The pro forma financial information presented includes: amortization charges for acquired tangible and intangible assets based on the values assigned in the preliminary purchase price allocation; and income tax recovery on deferred income tax liability arising from the preliminary purchase price allocation.

Proforma Information	December 31, 2021
Revenue	4,243
Loss from operations	(7,336)
Net loss	(5,966)

Acquisition costs of $1,170,000 were incurred in 2021 as a result of this transaction, and are recognized in other operating expense.

8. Discontinued operations:

On October 14, 2020, the Corporation completed an agreement to sell the remaining UAV business assets of its subsidiary, Ballard Unmanned Systems, for gross cash proceeds of $1,000,000. Net proceeds from the sale were $988,000 after deducting for working capital adjustments and legal and other expenses, resulting in a gain on sale of these assets of $168,000.

The Ballard Unmanned Systems subsidiary has been classified and accounted for as a discontinued operation. The historic operating results of the UAV market for both 2021 and 2020 have been removed from continued operating results and are instead presented separately in the statement of comprehensive income (loss) as income (loss) from discontinued operations.

8. Discontinued operations (cont'd):

Net income (loss) from discontinued operations for the years ended December 31, 2021 and 2020 is comprised of the following **:**

		2021		2020
Product and service revenues	$	—	$	262
Cost of product and service revenues		—		223
Gross margin	$	—	$	39
Total operating income (expenses)		164		(2,115)
Finance income and other		—		—
Gain (loss) on sale of assets		—		168
Net income (loss) from discontinued operations	$	164	$	(1,908)

Net cash flows from discontinued operations for the years ended December 31, 2021 and 2020 is as follows**:**

		2021		2020
Cash used in operating activities	$	(113)	$	(1,607)
Cash provided by investing activities		—		957
Cash used in financing activities		—		(20)
Cash used in discontinued operations	$	(113)	$	(670)

9. Trade and other receivables:

		December 31, 2021		December 31, 2020
Trade accounts receivable	$	19,423	$	29,252
Other receivables		6,586		5,269
Contract assets		20,386		22,274
	$	46,395	$	56,795

Contract assets

Contract assets primarily relate to the Corporation's rights to consideration for work completed but not billed as at December 31, 2021 for engineering services and technology transfer services.

Contract assets		December 31, 2021
At January 1, 2021	$	22,274
Additions to contract assets		27,282
Invoiced during the year		(29,170)
At December 31, 2021	$	20,386

Information about the Corporation's exposure to credit and market risks, and impairment losses for trade receivables and contract assets is included in note 31.

10. Inventories:

	December 31, 2021	December 31, 2020
Raw materials and consumables	$ 22,395	$ 11,879
Work-in-progress	19,795	8,330
Finished goods	5,350	3,746
Service inventory	3,978	4,567
	$ 51,518	$ 28,522

In 2021, the amount of raw materials and consumables, finished goods and work-in-progress recognized as cost of product and service revenues amounted to $60,803,000 (2020 - $49,710,000).

In 2021, the write-down of inventories to net realizable value amounted to $ 1,246,000 (2020 - $1,888,000) and the reversal of previously recorded write-downs amounted to $136,000 (2020 - $434,000), resulting in a net write-down of $ 1,110,000 (2020 - $1,454,000). Write-downs and reversals are included in either cost of product and service revenues, or research and product development expense, depending on the nature of inventory.

11. Property, plant and equipment:

	December 31, 2021	December 31, 2020
Property, plant and equipment owned	$ 43,855	$ 36,560
Right-of-use assets	12,206	12,774
	$ 56,061	$ 49,334

Property, plant and equipment owned:

Net carrying amounts	December 31, 2021	December 31, 2020
Computer equipment	$ 1,599	$ 1,846
Furniture and fixtures	762	657
Leasehold improvements	1,518	1,558
Production and test equipment	39,976	32,499
	$ 43,855	$ 36,560

Cost	December 31, 2020	Additions	Additions through Acquisition	Impairment	Transfers	Effect of movements in exchange rates	December 31, 2021
Computer equipment	$ 6,635	$ 442	$ —	$ —	$ (225)	$ —	$ 6,852
Furniture and fixtures	1,754	164	—	—	(4)	—	1,914
Leasehold improvements	9,196	274	—	—	(18)	(2)	9,450
Production and test equipment	66,392	12,278	16	(263)	(775)	(4)	77,644
	$ 83,977	$ 13,158	$ 16	$ (263)	$ (1,022)	$ (6)	$ 95,860

During 2021, additions through acquisition of property, plant and equipment relate to the acquisition of Arcola (Ballard Motive Solutions) on November 11, 2021 (note 7).

During the year ended December 31, 2021, an impairment loss of $ 263,000 was recorded for production and test equipment that was never placed in service and was determined not required to support the Corporation's future manufacturing or testing capabilities.

11. Property, plant and equipment (cont'd):

Property, plant and equipment owned (owned):

Accumulated depreciation	December 31, 2020	Depreciation	Transfers	Effect of movements in exchange rates	December 31, 2021
Computer equipment	$ 4,789	$ 654	$ (175)	$ (15)	$ 5,253
Furniture and fixtures	1,097	63	(4)	(4)	1,152
Leasehold improvements	7,638	331	(18)	(19)	7,932
Production and test equipment	33,893	4,607	(825)	(7)	37,668
	$ 47,417	$ 5,655	$ (1,022)	$ (45)	$ 52,005

Cost	December 31, 2019	Additions	Disposals	Transfers	Effect of movements in exchange rates	December 31, 2020
Computer equipment	$ 5,733	$ 791	$ —	$ 75	$ 36	$ 6,635
Furniture and fixtures	1,098	642	—	15	(1)	1,754
Leasehold improvements	8,559	440	—	170	27	9,196
Production and test equipment	55,681	10,747	(560)	500	24	66,392
	$ 71,071	$ 12,620	$ (560)	$ 760	$ 86	$ 83,977

Accumulated depreciation	December 31, 2019	Depreciation	Disposals	Transfers	Effect of movements in exchange rates	December 31, 2020
Computer equipment	$ 4,306	$ 379	$ —	$ 75	$ 29	$ 4,789
Furniture and fixtures	1,047	25	—	15	10	1,097
Leasehold improvements	7,299	302	—	—	37	7,638
Production and test equipment	30,673	3,053	(512)	670	9	33,893
	$ 43,325	$ 3,759	$ (512)	$ 760	$ 85	$ 47,417

Right-of-use assets:

The Corporation leases certain assets under lease agreements, comprising primarily of leases of land and buildings, office equipment and vehicles (note 19).

Right-of-use assets Net carrying amounts	December 31, 2021	December 31, 2020
Property	$ 11,837	$ 12,537
Equipment	139	121
Vehicle	230	116
	$ 12,206	$ 12,774

11. Property, plant and equipment (cont'd):

Right-of-use assets (cont'd):

Cost	December 31, 2020	Additions	Additions through acquisition	Transfer	Effect of movements in exchange rates	December 31, 2021
Property	$ 24,665	$ 1,967	$ —	$ (137)	$ (68)	$ 26,427
Equipment	149	46	—	(22)	2	175
Vehicle	208	—	174	—	(10)	372
	$ 25,022	$ 2,013	$ 174	$ (159)	$ (76)	$ 26,974

During 2021, additions through acquisition of right-of-use assets relate to the acquisition of Arcola (Ballard Motive Solutions) on November 11, 2021 (note 7).

Accumulated depreciation	December 31, 2020	Depreciation	Transfer	Effect of movements in exchange rates	December 31, 2021
Property	$ 12,128	$ 2,633	$ (137)	$ (34)	$ 14,590
Equipment	28	28	(22)	2	36
Vehicle	92	54	—	(4)	142
	$ 12,248	$ 2,715	$ (159)	$ (36)	$ 14,768

Cost	December 31, 2019	Additions	De-recognition	Effect of movements in exchange rates	December 31, 2020
Property	$ 24,568	$ —	$ (46)	$ 143	$ 24,665
Equipment	84	102	(42)	5	149
Vehicle	142	54	—	12	208
	$ 24,794	$ 156	$ (88)	$ 160	$ 25,022

Accumulated depreciation	December 31, 2019	Depreciation	De-recognition	Effect of movements in exchange rates	December 31, 2020
Property	$ 9,647	$ 2,488	$ (46)	$ 39	$ 12,128
Equipment	17	25	(15)	1	28
Vehicle	40	46	—	6	92
	$ 9,704	$ 2,559	$ (61)	$ 46	$ 12,248

12. Intangible assets:

	December 31, 2021	December 31, 2020
Intellectual property acquired from UTC	$ 74	$ 522
ERP management reporting software system	3,631	3,242
Intellectual property acquired from Ballard Motive Solutions, net of amortization (note 7)	17,083	—
	$ 20,788	$ 3,764

	Cost	Accumulated amortization	Net carrying amount
At January 1, 2020	$ 60,409	$ 54,722	$ 5,687
Additions to intangible assets	246	—	246
Amortization expense	—	1,657	(1,657)
Disposals	(800)	(288)	(512)
At December 31, 2020	59,855	56,091	3,764
Acquisition of intangible assets	17,279	—	17,279
Additions to intangible assets	1,543	—	1,543
Amortization expense	—	1,798	(1,798)
At December 31, 2021	$ 78,677	$ 57,889	$ 20,788

Acquisition of intangible assets in 2021 relate to the acquisition of Arcola's (Ballard Motive Solutions) intangible assets of $ 17,279,000 (note 7). Additions to intangible assets of $1,543,000 consist primarily of a new Phase 3 of enhancements of $ 1,385,000 (2020 - $nil) and $158,000 (2020 - $246,000) of costs primarily for a Manufacturing Execution System, both of which enhance the capabilities of the ERP management reporting software system.

Amortization expense on intangible assets is allocated to research and product development expense or general and administration expense depending upon the nature of the underlying assets. In 2021, amortization of $1,798,000 (2020 - $1,657,000) was recorded.

13. Goodwill:

For the purpose of impairment testing, goodwill is allocated to the Corporation’s cash-generating units which represent the lowest level within the Corporation at which the goodwill is monitored for internal management purposes, which is not higher than the Corporation’s operating segments (note 30).

As of December 31, 2021, the aggregate carrying amount of the Corporation’s goodwill is $ 64,268,000 (2020 - $40,277,000). During the year ended December 31, 2021, the Corporation acquired goodwill of $23,991,000 as part of the acquisition of Arcola (Ballard Motive Solutions) (note 7).

The impairment testing 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.

The Corporation’s fair value less costs to sell test is a modified market capitalization assessment, whereby the fair value of the Fuel Cell Products and Services segment is determined by first calculating the value of the Corporation at December 31, 2021 based on the average closing share price in the month of December, adding a reasonable estimated control premium to determine the Corporation’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 to arrive at the fair value of the Fuel Cell Products and Services segment. Based on the fair value less costs to sell test, the Corporation has 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 ($ nil in 2020).

14. Investments:

	December 31, 2021	December 31, 2020
Investment in Weichai Ballard JV (note 4)	$ 28,982	$ 27,561
Investment in Synergy Ballard JVCo (note 4)	—	—
Investment in Forsee Power	33,335	—
Investment in HyCap Fund I SCSp	7,636	—
Investment in CleanH2 Fund	339	—
Other	—	5
	$ 70,292	$ 27,566

For the year ended December 31, 2021, the Corporation recorded $16,140,000 (2020 - $12,557,000) in equity loss of investment in JV and associates, consisting of equity loss in Weichai Ballard JV of $16,084,000 (2020 - $12,495,000) and equity loss in Synergy Ballard JVCo of $56,000 (2020 - $62,000).

Investment in Weichai Ballard JV

Investment in Weichai Ballard JV	December 31, 2021	December 31, 2020
Beginning balance	$ 27,561	$ 21,642
Capital contribution to JV	12,351	22,515
Recognition (deferral) of 49% profit on inventory not yet sold to third party, net	3,909	(5,759)
Equity in loss	(16,084)	(12,495)
Cumulative translation adjustment due to foreign exchange	1,245	1,658
Ending balance	$ 28,982	$ 27,561

Weichai Ballard JV is an associate in which the Corporation has significant influence and a 49% ownership interest. During the year ended December 31, 2021, the Corporation made committed capital contributions of $12,351,000 (RMB 79,625,000 equivalent) (2020 - $22,515,000 (RMB 155,575,000 equivalent)) to Weichai Ballard JV. At December 31, 2021, as specified in the Equity Joint Venture Agreement, the Corporation is currently committed to its last remaining capital contributions to Weichai Ballard JV of $9,834,000 (RMB 62,475,000) in 2022.

The following tables summarize the financial information of Weichai Ballard JV as included in its own financial statements as of December 31, 2021, adjusted for foreign exchange differences, the application of the Corporation's accounting policies, and the Corporation's incorporation costs.

	December 31, 2021	December 31, 2020
Percentage ownership interest (49%)		
Current assets	$ 104,907	$ 102,083
Non-current assets	2,339	178
Current liabilities	(36,385)	(26,701)
Non-current liabilities	(2,861)	(2,610)
Net assets (100%)	68,000	72,950
Corporation's share of net assets (49%)	33,320	35,746
Incorporation costs	324	324
Elimination of unrealized profit on downstream sales, net of sale to third party	(4,662)	(8,509)
Carrying amount of investment in Weichai Ballard JV	$ 28,982	$ 27,561

14. Investments (cont'd):

Investment in Weichai Ballard JV (cont'd)

	December 31, 2021	December 31, 2020
Revenue (100%)	$ 38,260	$ 15,765
Net loss (100%)	32,825	25,499
Corporation's share of net loss (49%)	$ 16,084	$ 12,495

Investment in Synergy Ballard JVCo

Investment in Synergy Ballard JVCo	December 31, 2021	December 31, 2020
Beginning balance	$ —	$ —
Recognition of 10% profit on inventory sold to third party, net	56	62
Equity in loss	(56)	(62)
Ending balance	$ —	$ —

Synergy Ballard JVCo is an associate in which the Corporation has significant influence and a 10% ownership interest. During the year ended December 31, 2021, the Corporation made committed capital contributions of $nil (2020 - $nil) to Synergy Ballard JVCo.

Investment in Forsee Power

In October 2021, the Corporation entered into a strategic partnership with Forsee Power, a leader in smart battery systems for sustainable electromobility. The strategic partnership is to develop a fully integrated fuel cell and battery solution, optimized for performance, cost, and installation for heavy-duty hydrogen mobility applications. As part of the strategic relationship, the Corporation committed to participate as a lead investor in connection with the initial public offering ("IPO") on Euronext in Paris, France, of Forsee Power. Pursuant to this commitment, the Corporation purchased 5,200,000 shares for consideration of $43,809,000 (€37,700,000) in October 2021, resulting in an ownership interest of 9.77% in Forsee Power upon completion of the IPO. The Corporation also appointed a board member to the Forsee Power board of directors.

During the year ended December 31, 2021, changes in fair value and foreign exchange adjustments totalling ($10,474,000) were recognized as an unrealized loss in the consolidated statement of loss and comprehensive income (loss) and included in finance income (loss) and other (notes 26 and 31), resulting in net fair value investment in Forsee Power of $33,335,000 as of December 31, 2021.

Investment in Hydrogen Funds

HyCap Fund

In August 2021, the Corporation entered into a Subscription Agreement pursuant to a Limited Partnership Agreement (“LPA”), committing to be a limited partner in HyCap Fund I SCSp (“HyCap”), a newly-created hydrogen infrastructure and growth equity fund. The fund will invest in a combination of hydrogen infrastructure projects and investments in companies along the hydrogen value chain. The Corporation has committed to investing £25,000,000 ($33,698,000) into this fund which will allow it to appoint two representatives to participate in the Advisory Committee. In the three months ended December 31, 2021, the Corporation made initial contributions of £5,665,000 ($7,610,000).

14. Investments (cont'd):

Investment in Hydrogen Funds (cont'd)

HyCap Fund (cont'd)

During the year ended December 31, 2021, changes in fair value and foreign exchange adjustments totalling $26,000 were recognized as an unrealized gain in the consolidated statement of loss and comprehensive income (loss) and included in finance income (loss) and other (notes 26 and 31), resulting in net fair value investment in HyCap of $7,636,000 as of December 31, 2021.

Clean H2 Infrastructure Fund

In December 2021, the Corporation entered into a Subscription Agreement pursuant to a Limited Partnership Agreement ("LPA"), committing to be a limited partner in Clean H2 Infrastructure Fund I ("Clean H2"), another newly-created hydrogen infrastructure and growth equity fund. The fund will invest in a combination of hydrogen infrastructure projects and investments in companies along the hydrogen value chain. The Corporation has committed to investing €30,000,000 ($33,978,000) into this fund which will allow it to appoint two representatives to participate in the Advisory Committee. In the three months ended December 31, 2021, the Corporation made its initial contribution of £300,000 ($337,000).

During the year ended December 31, 2021, changes in fair value and foreign exchange adjustments totalling $2,000 were recognized as an unrealized gain in the consolidated statement of loss and comprehensive income (loss) and included in finance income (loss) and other (notes 26 and 31), resulting in net fair value investment in Clean H2 of $339,000 as of December 31, 2021.

15. Bank facilities:

The Corporation has the following bank facilities available to it.

Letter of Guarantee Facility

The Corporation has an operating facility ("LG Facility"), enabling the bank to issue letters of guarantees, standby letters of credit, performance bonds, counter guarantees, counter standby letters of credit or similar credit on the Corporation's behalf from time to time up to a maximum of $2,000,000.

At December 31, 2021, $nil (2020 - $nil) was outstanding on the LG Facility.

Foreign Exchange Facility

The Corporation also has a demand revolving foreign exchange facility ("FX Facility") that allows the Corporation to purchase foreign exchange currency contracts up to a maximum face value of $23,684,000 (CDN $29,000,000) secured by a guarantee from Export Development Canada.

At December 31, 2021, the Corporation had outstanding foreign exchange currency contracts to purchase a total of CDN $ 26,500,000 (2020 – CDN $16,750,000) at an average rate of 1.26 CDN per U.S. dollar, resulting in an unrealized gain (loss) of CDN $(33,000) at December 31, 2021 (2020 – $632,000). The unrealized gain (loss) on forward foreign exchange contracts is presented in prepaid expenses and other current assets on the statement of financial position.

16. Trade and other payables:

	December 31, 2021	December 31, 2020
Trade accounts payable	$ 13,689	$ 9,070
Compensation payable	15,830	14,417
Other liabilities	9,130	5,306
Taxes payable	906	1,084
	$ 39,555	$ 29,877

17. Deferred revenue:

Deferred revenue (i.e. contract liabilities) represents cash received from customers in excess of revenue recognized on uncompleted contracts.

Deferred revenue	December 31, 2021	December 31, 2020
Beginning Balance	$ 9,888	$ 20,156
Additions to deferred revenue	23,618	43,166
Revenue recognized during the year	(21,397)	(53,434)
Ending Balance	$ 12,109	$ 9,888

18. Provisions and other liabilities:

Balance	Restructuring provision	Warranty provision	Onerous contracts	Contingent consideration	Other liabilities	Total
At January 1, 2020	$ 8	$ 10,480	$ —	$ —	$ 1,688	$ 12,176
Provisions made during the year	66	3,189	—	—	40	3,295
Provisions used/paid during the year	(65)	(2,569)	—	—	—	(2,634)
Provisions reversed/expired during the year	—	(1,486)	—	—	—	(1,486)
Effect of movements in exchange rates	1	11	—	—	36	48
At December 31, 2020	10	9,625	—	—	1,764	11,399
Provisions made during the year	131	4,102	300	26,258	109	30,900
Provisions used/paid during the year	(136)	(3,894)	—	—	—	(4,030)
Provisions reversed/expired during the year	—	(1,112)	—	—	—	(1,112)
Effect of movements in exchange rates	—	(9)	—	—	4	(5)
At December 31, 2021	$ 5	$ 8,712	$ 300	$ 26,258	$ 1,877	$ 37,152

At December 31, 2020						
Current	$ 10	$ 9,625	$ —	$ —	$ —	$ 9,635
Non-current	—	—	—	—	1,764	1,764
	$ 10	$ 9,625	$ —	$ —	$ 1,764	$ 11,399

At December 31, 2021						
Current	$ 5	$ 8,712	$ 300	$ 19,240	$ —	$ 28,257
Non-current	—	—	—	7,018	1,877	8,895
	$ 5	$ 8,712	$ 300	$ 26,258	$ 1,877	$ 37,152

18. Provisions and other liabilities (cont'd):

Restructuring provision

Restructuring charges relate to minor restructurings focused on overhead cost reductions and relate primarily to employee termination benefits. Restructuring charges are recognized in other operating expense.

Warranty provision

The Corporation recorded warranty provisions of $4,102,000 (2020 - $3,189,000), comprised of $2,711,000 (2020 - $3,098,000) related to new product sales and $1,391,000 (2020 - $91,000) related to upward warranty adjustments. This was offset by warranty expenditures of $3,894,000 (2020 - $2,569,000) and downward warranty adjustments of $1,112,000 (2020 - $1,486,000), due primarily to contractual expirations and changes in estimated and actual costs to repair. The remaining $9,000 decrease (2020 – $11,000 increase) to the warranty provision related to the effect of movements in exchange rates.

Onerous Contracts

Prior to the January 1, 2022 effective date of the *Amendments to IAS 37 (*note 6), the Corporation performed a detailed review of its contracts as of December 31, 2021, which consistent with past practice, only included incremental costs, to determine if a contract was onerous. As a result of this review, Ballard recorded an onerous contract provision of $300,000 as of December 31, 2021.

On completion of the review of contract costs in preparation for the implementation of *Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37)* and with the inclusion of other direct costs in addition to incremental costs, it was determined that on adoption of the *Amendments to IAS 37*, additional contracts are expected to be deemed onerous with a calculated additional provision of $ 1,200,000 which is expected to be recorded on January 1, 2022 against retained earnings as an opening balance adjustment. The Corporation will continue to review open contracts on a quarterly basis to determine if any ongoing or new contracts become onerous, and if any of the underlying conditions or assumptions change which would require an adjustment to the accrued provision.

Contingent Consideration

As part of the acquisition of Arcola (Ballard Motive Solutions) (note 7), total consideration includes earn-out cash consideration payable by the Corporation, based on the achievement of certain performance milestones over a three year period from the acquisition date. These future cash payments of up to $27,000,000 are contingently 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, or $26,258,000.

Cash payments of $4,800,000 were made by the Corporation in January 2022, upon successful achievement of three performance milestones.

Other liabilities: Decommissioning liabilities

A provision for decommissioning liabilities has been recorded for the Corporation's head office building in Burnaby, British Columbia and is related to estimated site restoration obligations at the end of the lease term. The Corporation has made certain modifications to the leased building to facilitate the manufacturing and testing of its fuel cell products. Consequently, the site restoration obligations relate primarily to dismantling and removing various manufacturing and test equipment and restoring the infrastructure of the leased building to its original state of when the lease was entered into.

Due to the long-term nature of the liability, the most significant uncertainty in estimating the provision is the costs that will be incurred. The Corporation has determined a range of reasonably possible outcomes of the total costs for the head office building. In determining the fair value of the decommissioning liabilities, the estimated future cash flows have been discounted at 1.25% per annum (2020 – 0.39%).

18. Provisions and other liabilities (cont'd):

Other liabilities: Decommissioning liabilities (cont'd)

The Corporation performed an assessment of the estimated cash flows required to settle the obligations for the building as of December 31, 2021. Based on the assessment, an increase of $65,000 in the provision (2020 - $nil) was recorded against decommissioning liabilities, in addition to accretion costs of $44,000 (2020 - $40,000).

The net discounted amount of estimated cash flows required to settle the obligation for the building is $ 1,877,000 (2020 -$1,764,000) which is expected to be settled at the end of the lease term in 2025.

19. Lease liability:

The Corporation leases certain assets under lease agreements. The lease liability consists primarily of leases of land and buildings, office equipment and vehicles. The leases have interest rates ranging from 2.45% to 6.85% per annum and expire between May 2022 and June 2032.

	December 31, 2021	December 31, 2020
Property	$ 3,117	$ 2,613
Equipment	38	29
Vehicle	83	49
Lease Liability, Current	$ 3,238	$ 2,691
Property	$ 13,647	$ 15,017
Equipment	105	98
Vehicle	130	67
Lease Liability, Non-current	$ 13,882	$ 15,182
Lease Liability	$ 17,120	$ 17,873

The Corporation is committed to minimum lease payments as follows:

Maturity Analysis	December 31, 2021
Less than one year	$ 4,296
Between one and five years	13,194
More than five years	2,866
Total undiscounted lease liabilities	$ 20,356

19. Lease liability (cont'd):

IFRS 16 Leases had the following impact for the years ended December 31, 2021 and 2020.

Amounts recognized in profit or loss	December 31, 2021	December 31, 2020
Interest on lease liabilities	$ 1,225	$ 1,244
Income from sub-leasing right-of-use assets	1,744	1,557
Expenses relating to short-term leases	168	120

Amounts recognized in the statement of cash flows		
Interest paid	$ 1,225	$ 1,244
Principal payments of lease liabilities	2,798	2,517
Expenses relating to short-term leases	168	120
Total cash outflow for leases	$ 4,191	$ 3,881

Deferred gains were also recorded on closing of the finance lease agreement and are amortized over the lease term. At December 31, 2021, the outstanding deferred gain was $1,318,000 (2020 – $1,734,000).

20. Employee future benefits:

	December 31, 2021	December 31, 2020
Net defined benefit pension plan liability	$ 1,814	$ 3,856
Net other post-retirement benefit plan liability	80	85
Employee future benefits	$ 1,894	$ 3,941

The Corporation maintains a defined benefit pension plan covering existing and former employees in the United States. The benefits under the pension plan are based on years of service and salary levels accrued as of December 31, 2009. In 2009, amendments were made to the defined benefit pension plan to freeze benefits accruing to employees at their respective years of service and salary levels obtained as of December 31, 2009. Certain employees in the United States are also eligible for post-retirement healthcare, life insurance, and other benefits.

The Corporation accrues the present value of its obligations under employee future benefit plans and related costs, net of the present value of plan assets.

The measurement date used to determine pension and other post-retirement benefit obligations and expense is December 31 of each year. The most recent actuarial valuation of the employee future benefit plans for funding purposes was as of January 1, 2021. The next actuarial valuation of the employee future benefit plans for funding purposes is expected to be performed as of January 1, 2022.

The Corporation expects contributions of $ nil to be paid to its defined benefit plans in 2022.

The following tables reconcile the opening balances to the closing balances for the net defined benefit liability and its components for the two plans. The expense recognized in profit or loss is recorded in finance income (loss) and other.

20. Employee future benefits (cont'd):

	Defined benefit obligation		Fair value of plan assets		Net defined benefit liability	
Defined benefit pension plan	**2021**	2020	**2021**	2020	**2021**	2020
Balance at January 1	**$ 20,203**	$ 18,272	**$ (16,347)**	$ (13,964)	**$ 3,856**	$ 4,308
Included in profit or loss						
Current service cost	**37**	36	**—**	—	**37**	36
Interest cost (income)	**476**	566	**(383)**	(440)	**93**	126
Benefits payable	**—**	—	**—**	—	**—**	—
	513	602	**(383)**	(440)	**130**	162
Included in other comprehensive income						
Remeasurements loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**56**	(150)	**—**	—	**56**	(150)
Financial assumptions	**(986)**	2,054	**—**	—	**(986)**	2,054
Experience adjustment	**92**	110	**—**	—	**92**	110
Return on plan assets excluding interest income	**—**	—	**(1,334)**	(1,733)	**(1,334)**	(1,733)
Plan expenses	**(30)**	(36)	**30**	36	**—**	—
	(868)	1,978	**(1,304)**	(1,697)	**(2,172)**	281
Other						
Contributions paid by the employer	**—**	—	**—**	(895)	**—**	(895)
Benefits paid	**(661)**	(649)	**661**	649	**—**	—
	(661)	(649)	**661**	(246)	**—**	(895)
Balance at December 31	**$ 19,187**	$ 20,203	**$ (17,373)**	$ (16,347)	**$ 1,814**	$ 3,856

	Defined benefit obligation		Fair value of plan assets		Net defined benefit liability	
Other post-retirement benefit plan	**2021**	2020	**2021**	2020	**2021**	2020
Balance at January 1	**$ 85**	$ 88	**$ —**	$ —	**$ 85**	$ 88
Included in profit or loss						
Interest cost (income)	**1**	2	**—**	—	**1**	2
	1	2	**—**	—	**1**	2
Included in other comprehensive income						
Remeasurements loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**—**	(5)	**—**	—	**—**	(5)
Financial assumptions	**(2)**	6	**—**	—	**(2)**	6
Experience adjustment	**4**	7	**—**	—	**4**	7
	2	8	**—**	—	**2**	8
Other						
Contributions paid by the employer	**—**	—	**(8)**	(13)	**(8)**	(13)
Benefits paid	**(8)**	(13)	**8**	13	**—**	—
	(8)	(13)	**—**	—	**(8)**	(13)
Balance at December 31	**$ 80**	$ 85	**$ —**	$ —	**$ 80**	$ 85

Included in other comprehensive income (loss)	December 31, 2021	December 31, 2020
Defined benefit pension plan actuarial gain (loss)	$ 2,172	$ (281)
Other post-retirement benefit plan actuarial loss	(2)	(8)
	$ 2,170	$ (289)

20. Employee future benefits (cont'd):

Pension plan assets comprise:

	2021	2020
Cash and cash equivalents	3 %	3 %
Equity securities	60 %	61 %
Debt securities	37 %	36 %
Total	100 %	100 %

The significant actuarial assumptions adopted in measuring the fair value of benefit obligations at December 31 were as follows:

	2021		2020	
	Pension plan	Other benefit plan	Pension plan	Other benefit plan
Discount rate	2.76 %	2.25 %	2.40 %	1.82 %
Rate of compensation increase	n/a	n/a	n/a	n/a

The significant actuarial assumptions adopted in determining net expense for the years ended December 31 were as follows:

	2021		2020	
	Pension plan	Other benefit plan	Pension plan	Other benefit plan
Discount rate	2.40 %	2.25 %	3.16 %	1.82 %
Rate of compensation increase	n/a	n/a	n/a	n/a

Impacts of assumed health care cost trend rates applicable to the other post-retirement benefit plan at December 31, 2021 including a one-percentage-point change in assumed health care cost trend rates would not have a material impact on the Corporation's financial statements.

21. Equity:

Share-based compensation	December 31, 2021	December 31, 2020
Option Expense	$ 6,093	$ 4,482
DSU Expense	672	314
RSU Expense	2,904	1,432
Total share-based compensation for continuing operations (per statement of loss)	$ 9,669	$ 6,228
Discontinued operations	—	9
Total share-based compensation (per statement of equity)	$ 9,669	$ 6,237

21. Equity (cont'd):

(a) Share capital:

On February 23, 2021, the Corporation completed a bought deal offering with a syndicate of financial institutions for 14,870,000 shares of the Corporation at $37.00 per share, resulting in gross offering proceeds of $ 550,190,000 and net offering proceeds of $ 527,291,000.

Shares Transacted		14,870,000
Average Share Price	$	37.00
Gross offering proceeds	$	550,190
Less: Underwriting expenses		(22,186)
Less: Other financing expenses		(713)
Net offering proceeds	$	527,291

During the year ended December 31, 2020, the Corporation entered into two at-the-market Equity Distribution Agreements, issuing 24,648,248 shares at an average price per share of $ 12.85 for gross proceeds of $ 316,673,000 and net proceeds of $ 308,826,000.

During the year ended December 31, 2020, the Corporation also completed a bought deal offering with a syndicate of underwriters of 20,909,300 shares at $ 19.25 per share, resulting in gross proceeds of $ 402,504,000 and net proceeds of $ 385,782,000.

		December 31, 2020
Net proceeds from ATM programs	$	308,826
Net proceeds from bought deal offering		385,782
Total net proceeds from equity offerings	$	694,608

During March 2021, the Corporation filed a short form base Shelf Prospectus, which provides the flexibility to make offerings of securities up to an aggregate initial offering price of $1,500,000,000 during the effective period of the Prospectus, until April 2023.

At December 31, 2021, 297,700,295 (2020 - 282,078,177) common shares were issued and outstanding.

(b) Share options:

The Corporation has options outstanding under a consolidated share option plan. All directors, officers and employees of the Corporation, and its subsidiaries, are eligible to participate in the share option plans although as a matter of policy, options are currently not issued to directors. Option exercise prices are denominated in either Canadian or U.S. dollars, depending on the residency of the recipient. Canadian dollar denominated options have been converted to U.S. dollars using the year-end exchange rate for presentation purposes.

All options have a term of seven years from the date of grant unless otherwise determined by the board of directors. One-third of the options vest and may be exercised, at the beginning of each of the second, third, and fourth years after granting.

21. Equity (cont'd):

(b) Share options (cont'd):

As at December 31, options outstanding from the consolidated share option plan were as follows:

Balance	Options for common shares	Weighted average exercise price
At January 1, 2020	4,116,149	$ 2.92
Options granted	1,834,919	12.36
Options exercised	(1,693,466)	2.77
Options forfeited	(107,963)	6.86
Options expired	—	—
At December 31, 2020	4,149,639	7.07
Options granted	540,116	21.12
Options exercised	(549,281)	4.33
Options forfeited	(98,907)	10.09
Options expired	—	—
At December 31, 2021	4,041,567	$ 9.25

The following table summarizes information about the Corporation's share options outstanding as at December 31, 2021:

	Options outstanding			Options exercisable	
Range of exercise price	Number outstanding	Weighted average remaining contractual life (years)	Weighted average exercise price	Number exercisable	Weighted average exercise price
$1.23 - $1.50	118,517	1.1	$ 1.42	118,517	$ 1.42
$2.00 - $2.36	260,507	1.6	2.17	260,507	2.17
$2.86 - $3.16	339,976	3.6	2.93	285,894	2.90
$3.21 - $4.71	1,150,704	3.9	3.46	800,235	3.53
$10.64 - $13.46	1,275,856	5.3	11.35	340,989	11.16
$15.63 - $26.13	896,007	6.0	19.18	157,651	15.83
	4,041,567	4.6	$ 9.25	1,963,793	$ 5.44

During 2021, compensation expense of $6,093,000 (2020 – $4,482,000) was recorded in net loss based on the grant date fair value of the awards recognized over the vesting period.

During 2021, 549,281 options were exercised for an equal amount of common shares for proceeds of $ 2,415,000. During 2020, 1,693,466 options were exercised for an equal amount of common shares for proceeds of $4,438,000.

During 2021, options to purchase 540,116 common shares were granted with a weighted average fair value of $ 10.76 (2020 – 1,834,919 options and $5.49 fair value). The granted options vest annually over three years.

The fair values of the options granted were determined using the Black-Scholes valuation model under the following weighted average assumptions:

	2021	2020
Expected life	4 years	4 years
Expected dividends	Nil	Nil
Expected volatility	67 %	61 %
Risk-free interest rate	1 %	1 %

21. Equity (cont'd):

(b) Share options (cont'd):

As at December 31, 2021, options to purchase 4,041,567 common shares were outstanding (2020 – 4,149,639).

(c) Share distribution plan:

The Corporation has a consolidated share distribution plan that permits the issuance of common shares for no cash consideration to employees of the Corporation to recognize their past contribution and to encourage future contribution to the Corporation. At December 31, 2021, there were 19,540,514 (2020 – 17,877,028) shares available to be issued under this plan.

During 2020 and 2021, no shares were issued under this plan and therefore no compensation expense was recorded against profit or loss.

(d) Deferred share units:

Deferred share units ("DSUs") are granted to the board of directors and executives. Eligible directors must elect to receive at least half of their annual retainers and executives may elect to receive all or part of their annual bonuses in DSUs. Each DSU is redeemable for one common share in the capital of the Corporation after the director or executive ceases to provide services to the Corporation. Shares will be issued from the Corporation's share distribution plan.

Balance	DSUs for common shares
At January 1, 2020	811,378
DSUs granted	23,809
DSUs exercised	(15,156)
At December 31, 2020	820,031
DSUs granted	35,953
DSUs exercised	(99,761)
At December 31, 2021	756,223

During 2021, compensation expense of $672,000 (2020 - $314,000) was recorded in net loss relating to 35,953 DSUs (2020 - 23,809) granted during the year.

During 2021, 99,761 DSUs (2020 – 15,156) were exercised, net of applicable taxes, which resulted in the issuance of 46,388 common shares (2020 – 7,608), resulting in an impact on equity of $1,290,000 (2020 - $64,000).

As at December 31, 2021, 756,223 deferred share units were outstanding (2020 – 820,031).

(e) Restricted share units:

Restricted share units ("RSUs") are granted to employees and executives. Each RSU is convertible into one common share. The RSUs vest after a specified number of years from the date of issuance, and under certain circumstances, are contingent on achieving specified performance criteria. A performance factor adjustment is made if there is an over-achievement (or under-achievement) of specified performance criteria, resulting in additional (or fewer) RSUs being converted.

The Corporation has two plans under which RSUs may be granted, the consolidated share distribution plan and the market purchase RSU plan. Awards under the consolidated share distribution plan are satisfied by the issuance of treasury shares on maturity.

21. Equity (cont'd):

(e) Restricted share units (cont'd):

Balance	RSUs for common shares
At January 1, 2020	1,305,265
RSUs granted	334,758
RSU performance factor adjustment	98,867
RSUs exercised	(593,025)
RSUs forfeited	(15,919)
At December 31, 2020	1,129,946
RSUs granted	195,838
RSU performance factor adjustment	(12,128)
RSUs exercised	(325,863)
RSUs forfeited	(21,573)
At December 31, 2021	966,220

During 2021, compensation expense of $2,904,000 (2020 - $1,432,000) was recorded in net loss.

During 2021, 195,838 RSUs were issued (2020 – 334,758). The fair value of RSU grants is measured based on the stock price of the shares underlying the RSU on the date of grant.

During 2021, 325,863 RSUs (2020 – 593,025) were exercised, net of applicable taxes, which resulted in the issuance of 156,449 common shares (2020 – 305,229), resulting in an impact on equity of $4,357,000 (2020 - $3,023,000).

As at December 31, 2021, 966,220 RSUs were outstanding (2020 – 1,129,946).

22. Commitments and contingencies:

The Corporation is committed to capital contributions to Weichai Ballard JV in 2022 (note 14). The Corporation is also committed to minimum lease payments (note 19).

Long-term investments include two investments committing the Corporation to be a limited partner in newly-created hydrogen infrastructure and growth equity funds (note 14). The Corporation has committed to investing £25,000,000 (including £5,665,000 invested as of December 31, 2021) into HyCap. The Corporation has committed to investing €30,000,000 (including €300,000 invested as of December 31, 2021) into Clean H2.

As at December 31, 2021, the Corporation has outstanding commitments aggregating up to a maximum of $ 22,800,000 relating primarily to purchases of property, plant and equipment.

In connection with the acquisition of intellectual property from UTC in April 2014, the Corporation retains a royalty obligation in certain circumstances to pay UTC a portion of any future intellectual property sale and licensing income generated from certain of the Corporation's intellectual property portfolio for a period of 15 years expiring in April 2029. No royalties were paid to UTC in the years ended December 31, 2021 and December 31, 2020.

The Corporation retains a previous funding obligation to pay royalties of 2% of revenues, to a maximum of $ 4,613,000 (CDN $5,351,000), on sales of certain fuel cell products for commercial distributed utility applications. As of December 31, 2021, no royalties have been incurred to date for this agreement.

The Corporation also retains a previous funding obligation to pay royalties of 2% of revenues, to a maximum of $ 1,896,000 (CDN $2,200,000), on sales of certain fuel cell products for commercial transit applications. As of December 31, 2021, no royalties have been incurred to date for this agreement.

23. Disaggregation of revenue:

The Corporation's operations and main revenue streams are the same as those described in note 4. The Corporation's revenue is derived from contracts with customers.

In the following table, revenue is disaggregated by geographical market, by market application, and by timing of revenue recognition.

	December 31, 2021	December 31, 2020
Geographical markets		
China	$ 38,818	$ 54,267
Europe	42,588	36,484
North America	20,599	9,269
Other	2,500	3,857
	$ 104,505	$ 103,877
Market application		
Heavy Duty Motive	51,663	47,688
Material Handling	8,140	5,310
Back Up Power	8,214	5,602
Technology Solutions	36,488	45,277
	$ 104,505	$ 103,877
Timing of revenue recognition		
Products transferred at a point in time	65,208	56,655
Products and services transferred over time	39,297	47,222
	$ 104,505	$ 103,877

24. Personnel expenses:

Personnel expenses are included in cost of product and service revenues, research and product development expense, general and administrative expense, sales and marketing expense, and other expense.

	December 31, 2021	December 31, 2020
Salaries and employee benefits	$ 84,555	$ 63,392
Share-based compensation (note 21)	9,669	6,228
	$ 94,224	$ 69,620

25. Other operating expense:

	December 31, 2021	December 31, 2020
Net impairment loss on trade receivables	$ 54	$ 60
Impairment loss allowance	—	250
Total impairment loss on trade receivables	54	310
Restructuring costs	156	66
Acquisition related costs (note 7)	2,115	—
	$ 2,325	$ 376

25. Other operating expense (cont'd):

For the year ended December 31, 2021, the Corporation recorded a net impairment loss on trade receivables of $ 54,000 (2020 - $60,000). The impairment loss in 2021 consists of various miscellaneous receivables no longer deemed collectible. In the event that the Corporation recovers any amounts previously recorded as impairment losses, the recovered amount will be recognized as a reversal of the impairment loss in the period of recovery.

For the year ended December 31, 2021, the Corporation recorded an impairment loss allowance of $ nil (2020 - $250,000), based on a probability-weighted estimate of credit losses. Information about the Corporation's exposure to credit and market risks, and impairment losses for trade receivables and contract assets is included in note 31.

During 2021, restructuring charges of $156,000 (2020 - $66,000) relate primarily to cost reduction initiatives.

Acquisition related costs of $2,115,000 (2020 - $nil) for the year ended December 31, 2021 consist primarily of other legal, advisory, and transaction related costs incurred on ongoing corporate development activity including the successful acquisition of Arcola (Ballard Motive Solutions), the long-term investment in Forsee Power, and the long-term investment in the HyCap and Clean H2 hydrogen infrastructure and growth equity funds.

26. Finance income and expense:

		2021		2020
Employee future benefit plan expense (note 20)	$	(131)	$	(164)
Pension administration expense		(120)		(110)
Investment income		4,043		1,436
Other income		(300)		(255)
Mark to market and foreign exchange loss on financial assets (notes 14 & 31)		(9,024)		—
Foreign exchange gain (loss)		(1,336)		4,875
Government levies		(1,945)		(1,500)
Finance income and other	$	(8,813)	$	4,282
Finance expense	$	(1,294)	$	(1,303)

27. Income taxes:

(a) Current tax expense:

The components of income tax benefit (expense) included in the determination of the profit (loss) from continuing operations comprise of:

		2021		2020
Current tax expense				
Current period income tax	$	63	$	64
Withholding tax		21		66
Total current tax expense	$	84	$	130
Deferred tax expense				
Origination and reversal of temporary differences	$	(31,581)	$	(24,578)
Adjustments for prior periods		(565)		743
Change in unrecognized deductible temporary differences		31,846		23,835
Total deferred tax expense	$	(300)	$	—
Total income tax expense (recovery) from continuing operations	$	(216)	$	130

27. Income taxes (cont'd):

The Corporation's effective income tax rate differs from the combined Canadian federal and provincial statutory income tax rate for companies. The principal factors causing the difference are as follows:

		2021		2020
Net loss before income taxes (from continuing operations)	$	(114,613)	$	(49,339)
Expected tax recovery at 27.00% (2020 – 27.00%)	$	(30,945)	$	(13,322)
Increase (reduction) in income taxes resulting from:				
Non-deductible expenses (non-taxable income)		6,330		(3,001)
Expiry of losses and ITC		64		194
Investment tax credits earned		(3,677)		(3,182)
Foreign tax rate and tax rate differences		3,341		1,668
Change in unrecognized deductible temporary differences		24,651		17,707
Other		20		66
Income taxes (recovery) from continuing operations	$	(216)	$	130

(b) Recognized deferred tax liabilities:

The components of the Corporation's deferred tax assets and liabilities as at December 31, 2021 are as follows:

		2021		2020
Deferred tax assets				
Losses from operations carried forward	$	665	$	—
Research and development tax credits		32		—
	$	697	$	—
Deferred tax liabilities				
Intangible assets	$	(4,275)		—
Deferred tax liabilities	$	(3,578)	$	—

(c) Unrecognized deferred tax asset:

At December 31, 2021, the Corporation did not recognize any deferred tax assets resulting from the following deductible temporary differences for financial statement and income tax purposes.

		2021		2020
Scientific research expenditures	$	122,742	$	110,548
Investments		9,357		—
Accrued warranty provision		—		1,619
Share issuance costs		33,100		19,765
Losses from operations carried forward		219,326		151,620
Investment tax credits		42,939		39,052
Property, plant and equipment and intangible assets		217,142		205,074
	$	644,606	$	527,678

Deferred tax assets have not been recognized in respect of these deductible temporary differences because it is not currently probable that future taxable profit will be available against which the Corporation can utilize the benefits.

27. Income taxes (cont'd):

The Corporation has available to carry forward the following as at December 31:

	2021	2020
Canadian scientific research expenditures	$ 122,742	$ 110,548
Canadian losses from operations	131,514	66,306
Canadian investment tax credits	42,939	39,052
German losses from operations for corporate tax purposes	232	457
US federal losses from operations	50,103	47,872
Denmark losses from operations	35,996	33,441
Hong Kong losses from operations	50	36
UK losses from operations	2,659,000	—
UK research and development tax credits	129,000	—

The Canadian scientific research expenditures may be carried forward indefinitely. The Canadian losses from operations may be used to offset future Canadian taxable income and expire over the period from 2031 to 2041.

The German, Hong Kong, Denmark and UK losses from operations may be used to offset future taxable income in Germany, Hong Kong, Denmark and UK for corporate tax and trade tax purposes and may be carried forward indefinitely.

The US federal losses from operations incurred prior to January 1, 2018 may be used to offset future US taxable income and expire over the period from 2021 to 2037 and may be carried forward indefinitely for losses incurred after January 1, 2018.

The Canadian investment tax credits may be used to offset future Canadian income taxes otherwise payable and expire over the period from 2021 to 2041. The UK scientific research and development tax credits may be carried forward indefinitely.

28. Related party transactions:

Related parties include shareholders with a significant ownership interest in the Corporation, including its subsidiaries and affiliates, and the Corporation's equity accounted investees: Weichai Ballard JV and Synergy Ballard JVCo (note 14).

For the year ended December 31, 2021 and 2020, related party transactions and balances with the Corporation's 49% owned equity accounted investee, Weichai Ballard JV, were as follows:

Balances with related party - Weichai Ballard JV	2021	2020
Trade and other receivables	$ 10,794	$ 17,465
Investments	28,982	27,561
Deferred revenue	2,730	4,712

Transactions during the year with related party - Weichai Ballard JV	2021	2020
Revenues	$ 35,239	$ 44,855

28. Related party transactions (cont'd):

For the year ended December 31, 2021 and 2020, related party transactions and balances with the Corporation's 10% owned equity accounted investee, Synergy Ballard JVCo, were as follows:

Balances with related party - Synergy Ballard JVCo		2021		2020
Trade and other receivables	$	99	$	99
Investments		—		—
Deferred revenue		16		304

Transactions during the year with related party - Synergy Ballard JVCo		2021		2020
Revenues	$	3,441	$	8,232

Corporation Directors and Executive Officers

The Corporation provides key management personnel, being board directors and executive officers, certain benefits, in addition to their salaries. Key management personnel also participate in the Corporation's share-based compensation plans (note 21).

In addition to cash and equity compensation, the Corporation provides the executive officers with certain personal benefits, including car allowance, medical benefit program, long and short-term disability coverage, life insurance and an annual medical, financial planning allowance and relocation allowances and services as necessary.

The employment agreements for the executive officers are substantially the same with slight variations by individual. The maximum obligation that is required to be provided in the event of termination is notice of 12 months plus one month for every year of employment completed with the Corporation (to a maximum of 24 months), or payment in lieu of such notice, consisting of the salary, bonus and other benefits that would have been earned during such notice period. If there is a change of control, and if the executive officer's employment is terminated, including a constructive dismissal, within 2 years following the date of a change of control, the executive officer is entitled to a payment equivalent to payment in lieu of a 24 month notice period. The minimum obligation that is required is limited to that required by employment standards legislation plus one day for every full month of employment since hire date, with no distinction made for a change of control situation.

Key management personnel compensation is comprised of:

		2021		2020
Salaries and employee benefits	$	3,767	$	3,021
Post-employment retirement benefits		74		62
Share-based compensation (note 21)		2,411		1,530
	$	6,252	$	4,613

29. Supplemental disclosure of cash flow information:

Non-cash financing and investing activities:		2021		2020
Compensatory shares	$	704	$	647

30. Operating segments:

The Corporation operates in a single segment, Fuel Cell Products and Services, which consists of the sale and service of PEM fuel cell products for the 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 licensing and sale of the Corporation's extensive intellectual property portfolio and fundamental knowledge for a variety of fuel cell applications.

The results of Ballard Motive Solutions from the date of acquisition on November 11, 2021 to December 31, 2021, are currently included in the Technology Solutions market.

In 2021, revenues included sales to one individual customer of $35,239,000, which exceeded 10% of total revenue. In 2020, revenues included sales to two individual customers of $44,855,000, and $15,965,000, respectively, which each exceeded 10% of total revenue.

Revenues from continuing operations by geographic area, which are attributed to countries based on customer location for the years ended December 31, are as follows:

Revenues		2021		2020
China	$	38,818	$	54,267
Germany		22,063		23,032
United States		17,536		8,010
United Kingdom		8,968		7,876
Canada		3,063		1,259
Denmark		3,026		1,171
Norway		2,521		436
Belgium		2,121		2,673
France		1,827		1,090
Japan		954		2,695
Spain		926		128
Taiwan		912		1,008
Poland		541		—
India		439		—
Ukraine		244		—
Sweden		129		—
Other countries		417		232
	$	104,505	$	103,877

Non-current assets by geographic area are as follows:

Non-current assets		December 31, 2021		December 31, 2020
Canada	$	157,805	$	88,128
China		29,009		27,577
United Kingdom		17,552		—
United States		4,121		4,107
Denmark		3,270		1,472
	$	211,757	$	121,284

31. Financial instruments:

(a) Fair value:

The Corporation's financial instruments consist of cash and cash equivalents, short-term investments, trade and other receivables, investments, and trade and other payables. The fair values of cash and cash equivalents, trade and other receivables, and trade and other payables approximate their carrying values because of the short-term nature of these instruments.

Short-term investments comprise term deposits with terms of greater than 90 days and an investment in a Danish public company held by Ballard Power Systems Europe ("BPSE"). BPSE previously held an investment of approximately $5,000 in a Danish private company, Green Hydrogen Systems A/S which recently issued an initial public offering on the Danish stock exchange in June 2021. On June 17, 2021, BPSE received 259,551 shares in the new publicly-owned investment company (after relinquishing its shares in the previous privately-held company) initially valued at $1,681,000, resulting in investment income of $ 1,676,000. While held, the fair value of this investment is re-assessed each quarter as per *IFRS 9 Financial Instruments,* with any gain (loss) recognized through finance income (loss) and other. As at December 31, 2021, there was a decrease in the fair value of the investment of $254,000 resulting in net investment income of $ 1,422,000 for the twelve months ended December 31, 2021. During the three months ended December 31, 2021, the Corporation sold 69,000 Green Hydrogen shares for net proceeds of $336,000 .

Long-term investments comprise newly-created hydrogen infrastructure and growth equity funds: HyCap Fund and Clean H2 Fund, and an investment in Forsee Power, as well as equity-accounted investments. Changes in fair value and foreign exchange adjustments are recognized as gains or losses in the consolidated statement of loss and comprehensive income (loss) and included in finance income (loss) and other (note 14). All gains or losses are unrealized. During the year ended December 31, 2021, the Corporation recognized mark to market and foreign exchange losses of $10,474,000 in its investment in Forsee Power and nominal foreign exchange gains in HyCap Fund and Clean H2 Fund.

Increase (decrease) in fair value due to MTM and foreign exchange	December 31, 2021	December 31, 2020
Short-term investment - Green Hydrogen	$ 1,422	$ —
Long-term investment - Forsee Power	(10,474)	—
Long-term investment - HyCap Fund	26	—
Long-term investment - Clean H2 Fund	2	—
Decrease in fair value of investments	$ (9,024)	$ —

Fair value measurements recognized in the statement of financial position must be categorized in accordance with the following levels:

(i) Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities;

(ii) Level 2: Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices);

(iii) Level 3: Inputs for the asset or liability that are not based on observable market data (unobservable inputs).

31. Financial instruments (cont'd):

(b) Financial risk management:

The Corporation primarily has exposure to foreign currency exchange rate risk, commodity risk, interest rate risk, and credit risk.

Foreign currency exchange rate risk

Foreign currency exchange rate risk is the risk that the fair value of deferred cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Corporation is exposed to currency risks primarily due to its holdings of Canadian dollar denominated cash equivalents and its Canadian dollar denominated purchases and accounts payable. Substantially all receivables are denominated in U.S. dollars.

Periodically, the Corporation uses foreign exchange currency contracts to manage exposure to currency rate fluctuations. These contracts are recorded at their fair value as either assets or liabilities on the statement of financial position. Any changes in fair value are either (i) recorded in the statement of comprehensive income if formally designated and qualified under hedge accounting criteria; or (ii) recorded in the statement of loss and comprehensive income (loss) if either not designated, or not qualified, under hedge accounting criteria.The outstanding foreign exchange currency contracts are not qualified under hedge accounting.

The Corporation limits its exposure to foreign currency risk by holding Canadian denominated cash and cash equivalents in amounts up to 100% of forecasted twelve month Canadian dollar net expenditures and up to 50% of the following twelve months of forecasted Canadian dollar net expenditures, thereby creating an economic hedge. Periodically, the Corporation also enters into forward foreign exchange contracts to further limit its exposure. At December 31, 2021, the Corporation held Canadian dollar denominated cash and cash equivalents of CDN $73,524,000 and outstanding forward foreign exchange contracts to buy a total of CDN $ 26,500,000 in 2021 at an average rate of CDN $1.26 to US $1.00.

The following exchange rates applied during the year ended December 31, 2021:

	$US to $1.00 CDN	$CDN to $1.00 US
January 1, 2021 Opening rate	$0.785	$1.274
December 31, 2021 Closing rate	$0.787	$1.271
Fiscal 2021 Average rate	$0.798	$1.254

Based on cash and cash equivalents and forward foreign exchange contracts held at December 31, 2021, a 10% increase in the Canadian dollar against the U.S. dollar, with all other variables held constant, would result in an increase in foreign exchange gains of approximately $7,871,000 recorded against net income.

If the Canadian dollar weakened 10% against the US dollar, there would be an equal, and opposite impact, on net income. This sensitivity analysis includes foreign currency denominated monetary items, and adjusts their translation at year-end, for a 10% change in foreign currency rates.

Commodity risk

Commodity risk is the risk of financial loss due to fluctuations in commodity prices, in particular, for the price of platinum and palladium, which are key components of the Corporation's fuel cell products. Platinum and palladium are scarce natural resources and therefore the Corporation is dependent upon a sufficient supply of these commodities. To manage its exposure to commodity price fluctuations, the Corporation may include platinum and or palladium pricing adjustments directly into certain significant customer contracts.

31. Financial instruments (cont'd):

(b) Financial risk management (cont'd):

Interest rate risk

Interest rate risk is the risk that the fair value of deferred cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Corporation is exposed to interest rate risk arising primarily from fluctuations in interest rates on its cash and cash equivalents. The Corporation limits its exposure to interest rate risk by continually monitoring and adjusting portfolio duration to align to forecasted cash requirements and anticipated changes in interest rates.

Based on cash and cash equivalents at December 31, 2021, a 1.0% decline in interest rates, with all other variables held constant, would result in a decrease in investment income of $11,239,000. If interest rates had been 1.0% higher, there would be an equal and opposite impact on net income.

Credit risk

Credit risk is the risk of financial loss to the Corporation if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Corporation's receivables from customers.

IFRS 9 Financial Instruments requires impairment losses to be recognized based on "expected losses" that will occur in the future, incorporating forward looking information relating to defaults and applies a single ECL impairment model that applies to all financial assets within scope. 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 Corporation in accordance with the contract and the cash flows that the Corporation expects to receive). Under *IFRS 9*, at each reporting date the Corporation is required to assess whether financial assets carried at amortized cost are credit-impaired.

Impairment loss on financial assets and contract assets recognized in profit and loss of $ 54,000 (2020 - $310,000) were comprised of realized impairment loss recognized during the year of $54,000 (2020 - $60,000) and an impairment loss allowance of $ nil (2020 - $250,000).

The Corporation's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, management also considers the factors that may influence the credit risk of its customer base, including the default risk associated with the industry and country in which customers operate. Details of concentration of revenue are included in note 23 and note 30.

The Corporation limits its exposure to credit risk from trade receivables and contract assets by contracting prepayments (from 50% to 100%) from certain customers.

The Corporation determines probability of default based on the following common credit risk characteristics: geographic region, age of customer relationship, and duration of remaining contract. The Corporation calculates probability of default using a forecasted default rate over the next twelve months for the automotive and manufacturing industries, ranging from 0.8% to 1.2%. The Corporation has assessed the probability of default to the higher end of the default range of 1.2% as a result of the COVID-19 pandemic. The loss given default is assumed to be 100% due to the Corporation's position as an unsecured creditor.

The movement in the allowance for impairment in respect of trade receivables and contract assets during the year was as follows.

Impairment loss allowance	December 31, 2021	December 31, 2020
Beginning balance	$ 500	$ 250
Net measurement of loss allowance	—	250
Ending balance	$ 500	$ 500

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**

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

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 FCwaveTM Modules to Norled A/S

On February 2, 2022, we announced the delivery of two, 200 kilowatt (kW) FCwaveTM 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 ClearGenTM-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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	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 FCwaveTM 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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	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 FCwaveTM 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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	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

(Expressed in thousands of U.S. dollars)	Year ended December 31,			
	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

(Expressed in thousands of U.S. dollars)	Three months ended December 31,			
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%

(Expressed in thousands of U.S. dollars)	Year ended December 31,			
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 FCwaveTM 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

(Expressed in thousands of U.S. dollars)		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%

(Expressed in thousands of U.S. dollars)		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

(Expressed in thousands of U.S. dollars)		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%

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)		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%

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)		Three months ended December 31,			
		2021	2020	$ Change	% Change
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%)

(Expressed in thousands of U.S. dollars)		Year ended December 31,			
		2021	2020	$ Change	% Change
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:

(Expressed in thousands of U.S. dollars, except per share amounts and weighted average shares outstanding which are expressed in thousands)	Quarter ended,			
	Dec 31, 2021	Sep 30, 2021	Jun 30, 2021	Mar 31, 2021
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

(Expressed in thousands of U.S. dollars)	Three months ended December 31,		
	2021	2020	$ Change
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.

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)			Payments due by period,			
Contractual Obligations		**Total**	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:

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

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

(Expressed in thousands of U.S. dollars)		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.

(Expressed in thousands of U.S. dollars) **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.

(Expressed in thousands of U.S. dollars) **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.

(Expressed in thousands of U.S. dollars) **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:

(Expressed in thousands of U.S. dollars)		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

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)		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)

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)		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

(Expressed in thousands of U.S. dollars)		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:

(Expressed in thousands of U.S. dollars)		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)

(Expressed in thousands of U.S. dollars)		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.



BALLARD POWER SYSTEMS INC.
ANNUAL INFORMATION FORM
For the year ended December 31, 2021

Dated March 14, 2022

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This Annual Information Form and the documents incorporated by reference herein contain forward-looking statements that 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. When used in this Annual Information Form, the words "estimate", "project", "believe", "anticipate", "intend", "expect", "plan", "predict", "may", "could", "should", "will", the negatives of these words or other variations thereof and comparable terminology are intended to identify forward-looking statements. Such statements include, but are not limited to, statements. 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; with respect to our objectives, goals, liquidity, sources and uses of capital, outlook, strategy, order backlog, order book of expected deliveries, future product roadmap costs and selling prices, future product sales, future production capacities and volumes, the markets for our products, expenses / costs, contributions and cash requirements to and from joint venture operations and research and development activities, as well as statements with respect to our beliefs, plans, objectives, expectations, anticipations, estimates and intentions. 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; and the general assumption that none of the risks noted in the "Risk Factors" section of this Annual Information Form will materialize.

The forward-looking statements contained in this Annual Information Form speak only as of the date of this Annual Information Form. Except as required by applicable legislation, Ballard does not undertake any obligation to release publicly any revisions to these forward-looking statements to reflect events or circumstances after the date of this Annual Information Form, including the occurrence of unanticipated events.

In this Annual Information Form, references to "Corporation", "Ballard", "we", "us" and "our" refers to Ballard Power Systems Inc. and, as applicable, its subsidiaries. All dollar amounts are in United States dollars unless otherwise indicated. Canadian dollars are indicated by the symbol "C$", and euros by the symbol "€".

Except where otherwise indicated, all information presented is as of December 31, 2021.

CORPORATE STRUCTURE

Name, Address and Incorporation

Ballard was incorporated on November 12, 2008 under the *Canada Business Corporations Act* (Canada), under the name "7076991 Canada Inc." Ballard changed its name to "Ballard Power Systems Inc." on December 31, 2008. On August 24, 2016, Ballard continued into British Columbia under the *Business Corporations Act* (British Columbia). Ballard's head office is located at 9000 Glenlyon Parkway, Burnaby, British Columbia, Canada V5J 5J8, and its registered office is located at Suite 1700, 666 Burrard Street, Vancouver, British Columbia, Canada V6C 2X8.

Previously, Ballard Power Systems Inc. was a British Columbia company incorporated on May 30, 1989. The original predecessor to Ballard was founded in 1979 under the name Ballard Research Inc. to conduct research and development on high-energy lithium batteries. In the course of investigating environmentally clean energy systems with commercial potential, we began to develop fuel cells and have been developing fuel cell products since 1983.

Our Vision, Mission, and Values

Our vision is to deliver fuel cell power for a sustainable planet. Our mission is to use our fuel cell expertise to deliver valuable and innovative solutions to our customers globally, create rewarding opportunities for our team, provide extraordinary value to our shareholders and power the hydrogen society.

Our values represent our core beliefs and underpin how we carry on our business. In addition to our value pillars of safety and innovation, we have five key cultural values:

- *Listen and Deliver* – We listen to our customers, understand their business and deliver innovative and valuable solutions for lasting partnerships;
- *Quality Always* – We deliver quality in everything we do;
- *Inspire Excellence* – We live with integrity, passion, urgency, agility and humility;
- *Row Together* – We achieve success through respect, trust and collaboration; and
- *Own It* – We step up, take ownership for our results and trust others to do the same.

Intercorporate Relationships

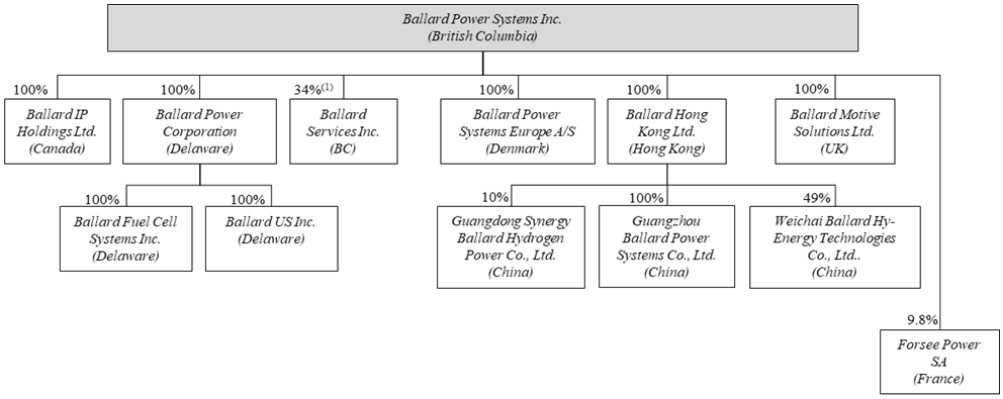
We have seven principal subsidiaries and affiliates: Ballard Fuel Cell Systems, Inc., a Delaware corporation that provides certain services to customers in the U.S. and internationally and does certain development work; Ballard Power Systems Europe A/S (formerly Dantherm Power A/S) ("**Ballard Denmark**"), a Danish corporation that provides sales, assembly, research and development, certain engineering services and after-sales service; BDF IP Holdings Ltd. ("**IP Holdings**"), a Canadian corporation that holds intellectual property assets; Ballard Services Inc., a British Columbia company that provides engineering services; Ballard US Inc ("**Ballard US**", formerly Ballard Unmanned Systems Inc.), a Delaware corporation that provides certain sales and after-sales services; Guangzhou Ballard Power Systems Co., Ltd., a Chinese wholly foreign-owned entity, that provides certain sales, quality, supply chain and after-sales services;

and Ballard Motive Solutions Ltd. ("**BMS**", formerly Arcola Energy Ltd.), a UK company specializing in hydrogen fuel cell powertrain and vehicle systems integration services.

We have a non-controlling 49% interest in Weichai Ballard Hy-Energy Technologies Co., Ltd. ("**Weichai-Ballard JV**"), located in Weifang, Shandong Province, China, with Weichai Power Co., Ltd. ("**Weichai**") holding a 51% interest. The Weichai-Ballard JV's business is to manufacture Ballard's FCgen®-LCS fuel cell stack and FCgen®LCS-based power modules for bus, commercial truck and forklift applications with exclusive rights in China.

We also have a non-controlling 10% interest in Guangdong Synergy Ballard Hydrogen Power Co., Ltd. (**Synergy-Ballard JV**"), located in Yunfu, Guangdong Province, China, with Guangdong Nation Synergy Hydrogen Power Technology Co. Ltd. ("**Nation-Synergy**") holding a 90% interest. The Synergy-Ballard JV's business is to manufacture fuel cell stacks 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 in China.

The following chart shows these principal subsidiaries and affiliates, their respective jurisdictions of incorporation and our percentage of share ownership in each of them, all as of March 14, 2022:



Notes

(1) Ballard holds all of the non-voting, participating shares of IP Holdings and 34% of the voting, non-participating shares of IP Holdings, with each of Mercedes-Benz AG and Ford Motor Company holding 33% of the voting, non-participating shares of IP Holdings.

In 2021, we acquired a non-controlling 9.77% equity interest in Forsee Power SA, a French companyspecializing in the design, development, manufacture, commercialization and financing of smart battery systems for sustainable electric transport. We also invested in two hydrogen infrastructure and growth equity funds whereby 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.

Recent History

Over the past three years, we have continued to focus on building and commercializing our proton exchange membrane ("**PEM**") fuel cell business for a variety of mobility and stationary power applications. The following are key developments during that period:

COVID-19 Response

We have established an internal task force to assess, monitor and deal with the impact of COVID-19 on our business and share information across the Company. We continue to adjust our operations and take actions to protect the health of our employees, customers, suppliers and visitors.

As the COVID-19 virus spread, we developed protocols, assessment tools and guidance documents to assist all of our manufacturing facilities, as well as engineering, R&D, sales, service and other offices. We have also disseminated health screening tools and isolation guides for our employees, instituted contact tracing for any known cases of the virus within our employee population, instituted decontamination procedures, and also acquired and installed or disseminated personal protective equipment for employees. Throughout, we have complied with orders and guidance from public health authorities in order to promote employee safety and confidence for return to work. We have developed and continue to monitor and adapt return to work protocols which address a wide range of topics such as: social distancing in our facilities; emergency management teams; personal protective equipment requirements; self-assessments and facility assessments; cleaning and disinfection protocols; and employee training and communications. To date, we have maintained our manufacturing operations without material impact on production levels.

During 2021, we continued to incur COVID-19 administration costs and experienced COVID-19 supply chain disruptions. Certain customer orders and product shipments and end customer vehicle deployments were delayed as a result. In our Technology Solutions business, there were deferrals of development work on certain of our programs as a result of ongoing work, travel and other restrictions related to COVID-19.

We continue to actively monitor the situation and adjust our plans in accordance with governmental orders and legal requirements in each of the markets in which we operate. We may take further actions with respect to production, where required by law or determined by us to be in the best interests of our employees, customers, suppliers or other applicable stakeholders.

Ballard Power Announces Acquisition of Arcola Energy

On November 11, 2021, we announced the acquisition of Arcola Energy Ltd. ("**Arcola**"), a UK-based systems engineering company with approximately 90 employees, specializing in hydrogen fuel cell powertrain and vehicle systems integration. Ballard acquired Arcola for total consideration of up to US$40 million, including 337,353 Ballard shares (with a current approximate value of US$6 million) that vest over two years, and up to US$34 million in upfront and earn-out cash consideration based on the achievement of certain performance conditions over a two-year period.

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

On October 18, 2021, we announced the signing of a Memorandum of Understanding (MOU) for a strategic partnership with Forsee Power to develop fully integrated fuel cell and battery solutions, optimized for performance, cost and installation for heavy-duty hydrogen mobility applications. 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 EMS to optimize the hybrid fuel cell and battery system architecture.

As part of the strategic relationship, in October 2021 Ballard participated as a cornerstone lead investor in Forsee Power's initial public offering on Euronext in Paris, France. We made a contribution of €37.7 million (approximately $43.8 million), resulting in an ownership interest of 9.77% in Forsee Power. In connection with our investment, Ballard has the right to appoint a nominee to the Forsee Power board of directors. Ballard appointed a nominee effective as of the closing of the initial public offering.

Ballard Power Systems and Quantron AG Announce a Strategic Partnership for the Development of Hydrogen Fuel Cell Electric Trucks

On September 7, 2021, we announced a strategic partnership with Quantron AG expected to accelerate deployment and market adoption of fuel cell technologies. Initial collaboration will focus on the integration of Ballard's FCmove™ family of heavy-duty fuel cell power modules into Quantron's electric drivetrain and vehicles, with initial deployment of fuel cell electric trucks scheduled for the second half of 2022.

Ballard and Linamar Form Strategic Alliance to Develop Fuel Cell Solutions for Light-Duty Vehicles

On May 3, 2021, we announced the formation of a strategic alliance with Linamar Corporation 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. In the initial phase of work under a Framework Agreement, a fuel cell powertrain solution will be developed, with Ballard providing the fuel cell subsystem and Linamar providing the rolling chassis, tanks, enclosures, cradles and other balance of plant needs as well as final assembly. Following successful testing of the demonstration platform, Ballard and Linamar contemplate the formation of a joint venture to sell and support powertrains with fuel cell systems and an interchangeable rolling chassis for use in a range of light-duty class 1 and 2 vehicles, including passenger cars, SUVs, light trucks and commercial vans.

Ballard Fuel Cells to Power CP Hydrogen Locomotive Program

On March 9, 2021, we announced that Canadian Pacific ("CP") will employ Ballard fuel cell modules for CP's pioneering Hydrogen Locomotive Program to develop North America's first hydrogen-powered line-haul freight locomotive by retrofitting a formerly diesel-powered locomotive with Ballard's 200 kW hydrogen fuel cell modules.

On January 19, 2022, we announced receipt of an order for six of an additional eight fuel cell modules to support CP's expansion of the Hydrogen Locomotive Program. In total, Ballard

will provide a total of 14 fuel cell modules, each module with a rated power output of 200 kW, to support this program.

Orders for Fuel Cell Modules to Power Buses

On November 4, 2021, we announced orders for a total of 40 FCmove®-HD (70kW) modules for planned deployment in hydrogen fuel cell electric buses ("**FCEBs**") across Europe in 2022. These FCEBs are planned for deployment in France, Germany and the UK.

On June 22, 2021, we announced a follow-on purchase order from New Flyer for 20 fuel cell modules to power 20 New Flyer Xcelsior® model FCEBs, planned for deployment with Alameda-Contra Costa Transit District (AC Transit) in Oakland, California.

On March 9, 2021, we announced follow-on purchase orders from Wrightbus for a total of 50 fuel cell modules to power FCEBs planned for deployment in a number of UK cities.

February 2021 Bought Deal Offering of Common Shares

On February 23, 2021, we announced the closing of a bought deal offering of 14,870,000 common shares of Ballard at a price of $37.00 per common share for gross proceeds of $550,190,000.

TD Securities Inc. and National Bank Financial Inc. acted as joint bookrunners for the offering, with a syndicate of underwriters which included BMO Nesbitt Burns Inc., CIBC World Markets Inc., Raymond James Ltd., and Cormark Securities Inc.

November 2020 Bought Deal Offering of Common Shares

On November 27, 2020, we announced the closing of a bought deal offering of 20,909,300 common shares of Ballard at a price of $19.25 per common share for gross proceeds of $402,504,025. The bought deal offering included the exercise in full by the underwriters of their over-allotment option to purchase up to an additional 2,727,300 common shares at the offering price.

National Bank Financial Inc. and Raymond James Ltd. acted as joint bookrunners for the bought deal offering, with a syndicate of underwriters which included Cormark Securities Inc. and TD Securities Inc.

Ballard and AUDI Sign Agreements Regarding Use of the High-Power Density Fuel Cell Stack for Vehicle Propulsion

On October 29, 2020, we announced that we had signed definitive agreements – in the form of an amendment to the existing Technology Development Agreement and a Patent License Agreement – with AUDI AG ("**AUDI**") expanding Ballard's right to use the FCgen®-HPS product, a high-performance, zero-emission, PEM fuel cell stack in all applications, including commercial trucks and passenger cars. The amendments allowed Audi to reduce the size of the remaining Technology Solutions program to the lower end of the range previously disclosed, and in return Ballard acquired expanded rights to use the FCgen®-HPS product, subject to certain royalty obligations.

The FCgen®-HPS fuel cell stack provides propulsion for a range of Light-, Medium- and Heavy-Duty vehicles with a high volumetric power density of 4.3 kilowatts per liter (4.3 kW/L). This marks another power density milestone for Ballard over our decades of PEM fuel cell

product innovation. The FCgen®-HPS was fully designed and developed by Ballard to stringent automotive standards in the company's Technology Solutions program with AUDI.

Ballard Sells UAV Business to Honeywell

On October 15, 2020, we announced that we had sold the Unmanned Aerial Vehicle ("**UAV**") business assets of Ballard Unmanned Systems to Honeywell International Inc. ("**Honeywell**").

All employees of Ballard Unmanned Systems transitioned to Honeywell Aerospace on the closing. Ballard and Honeywell are also committed to a long-term strategic collaboration to combine Ballard's expertise in fuel cell technology with Honeywell's leadership in aerospace and are working on agreements in respect of this intended collaboration.

In 2022, Ballard Unmanned Systems was re-named Ballard US Inc., and will provide certain sales and after-sales services for our US customers.

Ballard and MAHLE to Collaborate on Fuel Cell Propulsion Systems for Heavy- and Medium-Duty Trucks

On September 28, 2020, we announced an agreement to collaborate with MAHLE International GmbH ("**MAHLE**"), a leading international development partner and Tier 1 supplier to the commercial vehicle and automotive industry, on the development and commercialization of zero-emission fuel cell systems to provide primary propulsion power in various classes of commercial trucks. The definitive agreement defining the collaboration was entered as in October 2020.

During the initial development phase, Ballard has prime responsibility for system design and the fuel cell stack sub-system, while MAHLE's scope of responsibility includes balance-of-plant components, thermal management and power electronics for the complete fuel cell system, as well as system assembly.

MAHLE brings a number of key attributes to the collaboration, including: extensive experience within the commercial truck value chain; vast expertise in the field of peripheral fuel cell components; supply chain muscle; high-volume production expertise; long-standing relationships with certain commercial truck, and other, OEMs; after-sales service infrastructure; and a highly respected global brand.

Solaris Bus & Coach S.A. Orders

On April 27, 2020, we announced a purchase order from Solaris Bus & Coach S.A. ("**Solaris**"), a leading European bus and trolleybus manufacturer headquartered in Bolechowo, Poland, for 20 of Ballard's new 70 kW heavy-duty FCmove™-HD fuel cell modules. These modules will power 20 Solaris Urbino 12 hydrogen buses planned for deployment The Netherlands, under the Joint Initiative For Hydrogen Vehicles Across Europe ("**JIVE 2**") funding program. The buses will be operated by Connexxion, which provides transport services for South Holland province.

On March 12, 2020, we announced a purchase order from Solaris for 25 70 kW heavy-duty FCmove™-HD fuel cell modules. These 25 modules will power 15 Solaris Urbino 12

hydrogen buses planned for deployment in Cologne, Germany and 10 Urbino 12 hydrogen buses planned for deployment in Wuppertal, Germany, all under the JIVE 2 funding program.

At-The-Market Equity Distributions

On March 10, 2020, we entered into an at-the-market Equity Distribution Agreement (the **March EDA**") with BMO Capital Markets Corp. ("**BMO US**") as lead agent and CIBC World Markets Corp. ("**CIBC US**"), Cormark Securities Inc. ("**Cormark US**), and TD Securities (USA) LLC ("**TD US**") (together with BMO, the "**March Agents**"), thereby establishing an at-the-market equity program (the "**March ATM Program**").

The Company issued $66,673,000 of common shares under the March ATM Program for net proceeds of $64,867,000. The common shares were issued from treasury to the public in March and April 2020. Shares issued in April resulted from transactions initiated in the last days of March that were settled in April 2020.

The common shares sold under the March ATM Program were sold at the prevailing market price at the time of sale, when sold through the Nasdaq stock exchange ("**Nasdaq**") or any other existing trading market for the Common Shares in the United States.

On September 1, 2020, we entered into an at-the-market Equity Distribution Agreement (the **September EDA**") with BMO Nesbitt Burns Inc.., Raymond James Ltd. and TD Securities Inc., as lead Canadian agents, and CIBC World Markets Inc., Cormark Securities Inc., National Bank Financial Inc. (collectively, the "**Canadian Agents**"), and BMO US, Raymond James & Associates, Inc. and TD US, as lead US agents, and CIBC US, H.C. Wainwright & Co., LLC, Cormark Securities (USA) Limited, Lake Street Capital Markets, LLC, National Bank of Canada Financial Inc., and Roth Capital Partners (collectively, the "**US Agents**" and together with the Canadian Agents, the "**September Agents**"), thereby establishing an at-the-market equity program (the "**September ATM Program**").

The Company issued $250 million of common shares under the September ATM Program for net proceeds of approximately $245 million. The common shares were issued from treasury to the public in September and October 2020. Shares issued in October resulted from transactions initiated in the last days of September that were settled in October 2020.

The common shares sold under the September ATM Program were sold at the prevailing market price at the time of sale, when sold through the Toronto Stock Exchange (the "**TSX**"), Nasdaq, or other existing trading markets for the Common Shares in Canada and the United States.

Under the March EDA and September EDA, sales of common shares were made through "at-the-market distributions" as defined in National Instrument 44-102 – Shelf Distributions.

Ballard paid the March Agents and September Agents a commission rate of 2.0% of the aggregate gross proceeds from each sale of common shares under the March EDA and the September EDA, respectively, and provided the March Agents and September Agents with customary indemnification and contribution rights. Ballard reimbursed the March Agents and September Agents for certain specified expenses in connection with entering into the March EDA and September EDA, respectively.

Ballard Receives $19.2 Million Order from the Weichai-Ballard JV for MEAs to Power Fuel Cell Electric Vehicles in China

On December 16, 2019, we announced a purchase order from the Weichai-Ballard JV for the delivery of membrane electrode assemblies ("**MEA**") valued at $19.2 million.

Ballard and HDF Energy Sign Development Agreement for Multi-Megawatt Fuel Cell Systems

On December 9, 2019, we signed a Product Development Agreement with Hydrogène de France (**HDF Energy**") for the development and integration of a multi-megawatt ("**MW**") scale PEM fuel cell system into HDF Energy's Renewstable® power plant designed for stationary power applications.

HDF Energy's Renewstable® power plant is a multi-MW baseload system enabling large-scale storage of intermittent renewable wind or solar energy in the form of hydrogen – through the process of electrolysis – as well as electricity generation using that hydrogen feedstock together with a fuel cell system.

Subject to certain conditions, the collaboration contemplates a future technology transfer of Ballard's new MW-scale containerized PEM fuel cell system to HDF Energy with an exclusive royalty-bearing, non-transferable, multi-year global license for the manufacture and sale of MW-scale fuel cell systems for Renewstable® power plant systems. The collaboration also contemplates Ballard supplying FCgen®-LCS fuel cell stacks for these systems based on an exclusive long-term supply agreement.

The initial HDF Energy project is an installation planned in French Guiana, an overseas region of France located off the northern Atlantic coast of South America, under the Centrale Electricité de l'Ouest Guyanais ("**CEOG**") project.

The transaction remains subject to completion of definitive agreements and is reliant in part on the CEOG project, which is subject to customary conditions for multi-year programs of this scope, including but not limited to permitting and regulatory approvals, financings and project execution activities.

$44 Million Order from the Weichai-Ballard JV to Support Initial Fuel Cell Vehicle Deployments in China

On May 1, 2019, we announced that we had reached agreement with the 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 fuel cell electric vehicles ("**FCEVs**") in China. The order will have a total value of approximately $44 million to Ballard.

Once assembled by the Weichai-Ballard JV, final modules will be sold to Weichai to support initial deployments against Weichai's 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, as well as related applications engineering support, are planned for delivery in 2019 and 2020, and will be based on Ballard's FCgen®-LCS stack technology.

Strategic Collaboration with Weichai

On November 13, 2018, we closed a strategic collaboration transaction with Weichai. The strategic collaboration included an equity investment by Weichai in Ballard, formation of a joint venture company and a development program.

Weichai and Ballard established the Weichai Ballard JV on November 26, 2018 in Shandong Province to support China's fuel cell electric vehicle market. Ballard holds a 49% ownership position and Weichai holds a 51% ownership position. 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 minority shareholder protections.

The Weichai-Ballard JV is planning on manufacturing Ballard's FCgen®-LCS fuel cell stack and FCgen®-LCS-based power modules for bus, commercial truck and forklift applications with exclusive rights in China. In total, the Weichai-Ballard JV will pay Ballard $90 million under the Research and Development Agreement to develop and transfer technology to the Weichai-Ballard JV in order to enable these manufacturing activities. The Weichai-Ballard JV will purchase MEAs for FCgen®-LCS fuel cell stacks exclusively from Ballard under a long-term supply agreement. Ballard will grant the Weichai-Ballard JV a non-exclusive royalty-free licence to Ballard's background technology incorporated into the products it develops for the Weichai-Ballard JV. Ballard will also retain an exclusive right to the transferred technologies outside of China.

Weichai has indicated its intent 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 agreement between Weichai and its customers.

Ballard and Audi Sign Extension to Long-Term Program for Fuel Cell Passenger Cars

On June 11, 2018, we announced that we had signed a 3.5-year extension to our current Technology Solutions contract with AUDI, part of the Volkswagen Group, extending the HyMotion program. The amendment to the Technology Development Agreement entered into in October 2020 (and discussed above) allowed AUDI to reduce the size of the remaining Technology Solutions program to the lower end of the range previously disclosed, and in return Ballard acquired expanded rights to use the FCgen®-HPS product, subject to certain royalty obligations. The program is expected to be completed by the end of 2022.

Multi-Year Development Agreement with Siemens AG

On November 14, 2017, we announced we had entered into a Development Agreement with Siemens AG for the development of a zero-emission fuel cell engine to power Siemens' Mireo light rail train. The Development Agreement has an expected value of $9.0 million over its term. Under the terms of the Development Agreement, we will develop a 200 kW fuel cell engine for integration into Siemens' new Mireo train platform.

On July 15, 2021, we announced a purchase order for two of our 200 kW fuel cell modules from Siemens Mobility GmbH to power a 2-car Mireo Plus H passenger train through a trial operation in Bavaria, Germany. Ballard plans to deliver the modules in 2022.

Local Production of Fuel Cell Stacks in China

In 2017, the Synergy-Ballard JV, our joint venture for the production of FCveloCity®-9SSL fuel cell stacks in the City of Yunfu in Guangdong Province, commenced operations.

During the third quarter of 2019, we signed definitive agreements with the Synergy-Ballard JV amending the existing Stack Assembly License Agreement and MEA Long-Term Supply Agreement, which included a mutual release of the remaining purchase commitment under the "take or pay" MEA purchase commitment.

OUR BUSINESS

At Ballard, our vision is to deliver fuel cell power for a sustainable planet. We are recognized as a world leader in PEM fuel cell and 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 Stationary Power Generation, 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 Energy, now Ballard Motive Solutions, Ballard now offers 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 feature high fuel efficiency, low operating temperature, low noise and vibration, compact size, quick response to changes in electrical demand and modular design. Embedded in each Ballard PEM fuel cell product lies a stack of unit cells designed with Ballard's proprietary technology, which include membrane electrode assemblies, catalysts, plates, and other key components, and which 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 system integration.

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.

Strategy

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:

1. **Double down in fuel cell stack & module**: invest in leading technology and products to provide leading customer value proposition to our customers
2. **Selectively expand across value chain**: extend across the value chain to capture control points, reduce technology adoption barriers and accelerate fuel cell deployments
3. **Develop new routes to market** creatively explore partnerships to accelerate market adoption and grow volume for product sales
4. **Win in key regions:** build a competitive platform in North America, Europe and China
5. **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 the 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. Key elements of our strategy include adopting a business model in which we seek to mitigate market adoption risk and capital investment by engaging 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.

Revenues from Market 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 Stationary Power Generation, 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 of BMS from the date of acquisition on November 11, 2021 to December 31, 2021, are included in our Technology Solutions market and are expected to be recorded primarily in Heavy-Duty Motive and Technology Solutions in fiscal 2022.

The following chart shows the percentage of total revenues which arises from sales to investees and sales of products and services to other customers, for the years 2021 and 2020:

	2021	2020
Revenues from Fuel Cell Products and Services		
Percentage of total revenues	100%	100%
Portion representing sales to investees[(1)]	37.0%	51.0%
Portion representing sales to customers other than investees	63.0%	49.0%

(1) In this table, "investees" means Guangdong Synergy Ballard Hydrogen Power Co., Ltd., a joint venture formed in China of which we hold a 10% equity interest and Weichai Ballard Hy-Energy Technologies Co., Ltd., a joint venture formed in China, of which we hold a 49% equity interest.

Our Markets, Products and Services

Product & Service Overview

Ballard's product offering provides for a cost effective and flexible set of fuel cell power solutions. Ballard provides products in five distinct product classes:

a. **MEAs**: We provide our proprietary MEAs to the Synergy-Ballard JV and the Weichai-Ballard JV that use the MEAs to produce our proprietary FCveloCity®-9SSL fuel cell stacks and FCgen®-LCS fuel cell stacks, respectively.

b. **Fuel cell stacks**: We provide our proprietary FCgen® and FCveloCity® fuel cell stacks to OEM customers and system integrators that use the stacks to produce fuel cell systems for power solutions. As the fuel cell stack provider, we are the power inside the system.

c. **Fuel cell modules**: We design and build, including specifying and procuring balance of plant components, self-contained FCveloCity® and FCMove™ motive modules using our fuel cell stacks that are plug-and-play into commercial vehicle powertrains. We also design and build self-contained FCwave™ modules designed for marine applications using our FCgen®-LCS fuel cell stacks. As a fuel cell module provider, we make it easier for OEMs and system integrators to create fuel cell powertrains.

d. **Fuel cell systems**: We also build complete fuel cell systems for stationary power markets that are designed to solve certain power needs of our customers, including back-up for critical infrastructure.

e. **Energy system and powertrain integration:** We provide complete energy system (fuel cell + battery + controller + high and low voltage distribution), powertrain design and integration services, and vehicle integration services, to support our customer fuel cell vehicle development programs.

Our Technology Solutions offerings primarily involve the provision of engineering services and technology transfer, including through licensing of our intellectual property portfolio and know-how.

The following table lists the key fuel cell and non-fuel cell products we currently produce, offer for sale, have under development or are testing:

Motive Power Product Family:		
Product Name	**Application**	**Status**
FCgen®-LCS MEA	Fuel cell stacks for buses, commercial vehicles, light rail, and material handling	Sales to licensee (Weichai-Ballard JV)
FCveloCity®-9SSL MEA	Fuel cell stacks for buses, commercial vehicles, light rail, and material handling	Sales to licensee (Synergy-Ballard JV)
FCgen®-HPS stacks	Light-duty and heavy-duty commercial vehicles and passenger car	Sales to OEMs and system integrators
FCgen®-LCS stacks	Buses, commercial vehicles, light rail, and material handling	Sales to OEMs and system integrators
FCveloCity®-9SSL stacks	Buses, commercial vehicles, light rail, and material handling	Sales to OEMs and system integrators
FCgen®-1020ACS stacks	Material handling and backup power	Sales to OEMs and system integrators
FCveloCity® modules	Buses, commercial vehicles, and light rail	Sales to OEMs and system integrators
FCmove™ modules	Buses, commercial vehicles, and light rail	Sales to OEMs and system integrators
FCwave™ modules	Marine and stationary	Sales to OEMs and system integrators
A-drive energy system and powertrain products	Energy system and powertrain products for bus, truck and light rail	Sales to demonstration projects in the UK, including vehicle scope of supply

Stationary Power Product Family:		
Product Name	**Application**	**Status**
FCgen®-1020ACS	Backup power	Sales to OEMs and system integrators
FCgen®-H2PM	Backup power systems	Sales to customers
ClearGen®	Distributed generation systems	Sales to customers
FCgen®-200	Power generation	Sales to customers

Fuel Cell Products and Services

Power Products Markets

Heavy-Duty Motive

We provide fuel cell modules for public transit systems, including buses and light rail, and for commercial trucks. Fuel cell electric vehicles in these applications rely on centralized fueling depots that simplify the hydrogen infrastructure requirements and are typically government-subsidized, thus enabling the purchase of pre-commercial fleets.

We design and manufacture the fuel cell module products capable of delivering 30 kW to 200 kW of power for use in the Heavy-Duty Motive market. We supply the fuel cell modules to

hybrid drive, bus, truck, light rail and marine propulsion system OEMs and integrators that deliver zero-emission fuel cell-powered vehicles to fleet operators. The demand for zero-emission vehicles is driven in many jurisdictions by the requirement to reduce greenhouse gases and other harmful emissions.

The FCveloCity® power module platform, which was initially launched in 2015, is available in various configurations ranging in power from 30 kW to 200 kW to address different levels of battery/fuel cell hybridization and a variety of applications. In 2021, sales of the FCveloCity®-HD module were to our existing customers mainly for fuel cell electric bus applications.

In 2019, we launched our eighth-generation high-performance fuel cell module, the FCmove™-HD. The FCmove™ family of products is designed to power medium- and heavy-duty commercial vehicles such as buses and trucks. The FCmove™-HD 70kW version is being delivered to customers in China and Europe and has been integrated in vehicles. The FCmove™-HD+ 100kW version was launched in 2021 and we are starting delivery of the first modules to customers for integration into their new vehicle platforms.

In 2020, we introduced the FCwave™, a fuel cell module designed for certain marine applications. The FCwaveTM fuel cell module is a 200 kW modular unit that can be scaled in series up to the multi-megawatt (MW) power level. The FCwave™ product provides primary propulsion power for marine vessels – such as passenger and car ferries, river push boats, and fishing boats – as well as stationary electrical power to support hotel and auxiliary loads on cruise ships and other vessels while docked at port (also known as 'cold ironing'). In 2021, we have started to sell FCwave™ products for stationary and rail applications.

In 2020, Ballard-powered fuel cell electric vehicles in commercial heavy-duty and medium-duty motive applications surpassed a total of 100 million kilometers on roads around the globe during our history.

Competition

Diesel-powered buses and commercial trucks currently dominate the market today. Compressed natural gas ("**CNG**") and diesel electric hybrid powertrains are lower-emission alternatives to diesel engines but are in limited service today. Other variants available today include gasoline hybrid buses and CNG hybrid buses. Electric trolley buses provide a zero-emission alternative; however, their purchase price is high and the overhead catenary power infrastructure is expensive to maintain and is considered aesthetically undesirable in many urban centres. The recent developments in battery-powered powertrain vehicles have created a zero-emission alternative to fuel cell buses in the form of battery electric buses and commercial trucks, as well as electrified trains and battery-powered marine vessels. These battery-powered heavy-duty vehicles will continue to offer a competitive zero emission mobility solution for zero-emission mobility applications.

We believe that fuel cell electric vehicles are the best zero-emission alternative for medium-duty and heavy-duty applications in certain use cases in bus, truck, train and marine. In comparison to battery electric vehicles, we believe fuel cell electric vehicles in medium-duty and heavy-duty applications: are able to operate over a longer range and on more demanding routes; offer higher energy density to maximize payload; and are capable of refueling quickly, ensuring

the vehicle is on the road generating revenue for the fleet operator. We also believe that in certain cases hydrogen refueling infrastructure has certain scaling cost and logistics advantages compared to battery recharging for large fleets.

Companies developing fuel cell systems for heavy-duty applications include Beijing Sinohytec Co. Ltd., cellcentric GmbH & Co. KG (a joint venture of Daimler Truck AG and the Volvo Group), Cummins Inc., EKPO Fuel Cell Technologies GmbH (a joint venture of ElringKlinger and Plastic Omnium), Hyzon Fuel Cell Technologies Pte. Ltd., Hyundai Motor Company, Nikola Motor Company, Plug Power, Inc., Powercell Sweden AB, Robert Bosch GmbH, Shanghai Re-Fire Technology Co., Ltd., Symbio SAS (a joint venture of Michelin and Faurecia), Toyota Motor Corporation and Loop Energy Inc.

We believe that we are well positioned to compete with our competitors based on our talented workforce, intellectual property portfolio, technology, number of product offerings, manufacturing capabilities, vertical integration, customers, partners, brand, financial strength, and extensive operating hours in real world heavy-duty operations.

Material Handling

The material handling market includes industrial vehicles such as forklifts, automated guided vehicles and ground support equipment. Our initial focus is on battery-powered Class 1 counterbalance lift trucks, Class 2 reach trucks and Class 3 pallet forklifts. Our products for the material handling market are the FCveloCity®-9SSL stack, which is applicable to Class 1, Class 2 and Class 3 forklift truck solutions, the FCveloCity®-1020ACS stack for Class 3 material handling applications, and the FCgen®-LCS stack which is expected to be applicable to Class 1, Class 2 and Class 3 forklift truck solutions.

Ballard is currently supplying fuel cell stacks to a limited number of system integrators in North America and Europe.

Competition

Class 2 and Class 3 forklift trucks are currently dominated by battery-powered solutions, as are Class 1 forklift trucks intended for indoor applications. Internal combustion engine power is typically seen as the solution for forklift trucks in Class 1 for outdoor applications. Compared to batteries, fuel cell systems in Class 1, Class 2 and Class 3 forklift trucks can provide extended run time without frequent and lengthy battery replacement and recharging cycles. For high-throughput, multi-shift warehouse or manufacturing operations, fuel cell powered forklift trucks can provide a lower life-cycle cost when compared with battery solutions.

Plug Power is the only company currently offering a full suite of Class 1, 2 and 3 forklift solutions to the material handling market. We currently sell and supply fuel cell stacks to Plug Power on a limited basis. Plug Power has developed its own air-cooled and liquid-cooled fuel cell stacks to vertically integrate into their material handling solutions. Plug Power's own fuel cell stacks compete with our fuel cell stacks for supply in Plug Power's business. Ballard is also engaged with other companies to increase potential sales beyond Plug Power for the forklift market.

Other companies developing fuel cell systems for material handling applications include certain systems integrators, like Infintium, and certain forklift manufacturers, like Hyster-Yale, KION, and Toyota.

Advanced battery technology continues to make progress in the material handling market. However, the high up-front cost of advanced batteries continues to be a barrier to broad market adoption. Furthermore, advanced battery technologies still require significant time for recharging and, in many cases, cannot meet desired run times without requiring spare batteries and substantial space for battery charging and storage.

Stationary Power Generation

PEM fuel cell systems have market opportunities for zero emission power generation applications requiring intermittent power generation with fast response such as backup power of critical infrastructure, peak shaving, hybrid renewable off-grid sites and electric charging applications such as shore power.

The backup power market includes stationary applications for telecommunications equipment and other critical infrastructure such as data centers. We also sell fuel cell stacks to certain companies developing PEM fuel cell-based backup power systems and other stationary power systems.

We supply the backup power market through the sale of our hydrogen backup power product, the FCgen®-H2PM, manufactured by Ballard Denmark.

We provide fuel cell systems to backup critical communication infrastructure with a focus on fibre optics network backbones, critical hub sites and emergency communication networks (police, fire, ambulance and other emergency response services) in Europe with our FCgen®-H2PM product. Several Scandinavian countries have passed regulations to impose extended backup time (typically more than 12 hours) for critical infrastructure. Fuel cell technology provides an alternative power solution to ensure site power availability during unexpected and extended power outages to harden critical telecommunication networks.

We also intend to provide fuel cell power generation solutions from 200kW to multiple MW using our FCwave and ClearGen platforms. We recently announced a demonstration program for backup generation for data centers with Caterpillar at a Microsoft data center in the US.

Competition

The stationary power generation market is currently dominated by diesel generators and batteries. Advanced battery technology continues to make modest progress in the backup power generation market. However, advanced battery technologies still require lengthy recharging and, in many cases, cannot meet desired run times without requiring substantial space. We believe that PEM fuel cell products are superior to batteries in some applications, because of their ability to provide extended run time without frequent or lengthy recharging, as well as their ability to offer lower life cycle costs, given that batteries require periodic replacement.

For certain applications and markets we believe fuel cell power generators offer a value proposition against diesel generators with lower operating cost, extended run time, low emission and noise, and less risk of theft.

Hydrogen internal combustion engines (H-ICEs) and hydrogen fueled gas turbines are also being developed and could be an alternative to diesel generators. Compared with fuel cell systems, however, H-ICEs and gas turbines produce nitrous oxide emissions and are considered to be less power efficient.

Companies developing PEM fuel cell systems for stationary power generation applications include Altergy, CHEM, Plug Power, SFC Energy, and Nedstack. We seek to gain competitive advantage through fuel cell designs that provide zero emissions, superior performance, reliability, durability and cost.

Technology Solutions

This business platform was established in 2011 to leverage our expertise in fuel cell design, prototyping, manufacturing and servicing. The mandate of the Technology Solutions business platform is to help customers solve difficult technical and business challenges in their PEM fuel cell programs or address new business opportunities. We offer customized, bundled technology solutions, including specialized PEM fuel cell engineering services, access to our intellectual property portfolio and know-how, as well as the supply of technology components.

Our current Technology Solutions efforts are predominantly in support of automotive and heavy-duty motive research and product development programs. In 2021, we also executed on programs in rail, marine and stationary.

As noted in the Recent History section above, in 2018 we signed a 3.5-year extension to the then-current Technology Development Agreement with AUDI, part of the Volkswagen Group. In 2020 we amended the Technology Development Agreement with AUDI relating to certain program reductions through 2022.

In 2021, we continued to execute on the development of a 200 kW fuel cell engine zero-emission fuel cell engine to power Siemens' Mireo light rail train pursuant to the Development Agreement entered into with Siemens in 2017. We also continued the execution of the Research and Development Agreement to develop and transfer technology to the Weichai-Ballard JV in order to enable manufacturing of Ballard's FCgen®-LCS fuel cell stack and FCgen®-LCS-based power modules for bus, commercial truck and forklift applications with exclusive rights in China.

Competition

Our main competition in the automotive sector for engineering services is the automakers' 'in-house' capabilities, specialized automotive engineering companies, or fuel cell development companies, like AVL List, FEV Group GmbH, Intelligent Energy, Powercell Sweden AB, and Ricardo offer competing fuel cell development programs.

Impact of Regulations and Public Policy

In the course of carrying on our business we believe we have become aware of government regulation and public policies that may be supportive of our business, the fuel cell industry in general or zero-emission vehicles. The statements below in this section are based on our understanding of the regulations and public policies in place in the particular jurisdiction as of the date of this Annual Information Form that we believe to be correct. While we believe the

statements below in this section to be correct, regulation and public policy may change without notice and our understanding regulations and public policies may be incorrect.

Approximately 75 countries have announced targets to achieve net-zero emissions strategies for 2050 or pledged to be carbon neutral by 2050. Also, over 50 countries representing approximately 90% of global GDP have specific hydrogen strategies. The main drivers of such policies include greenhouse gas ("**GHG**") emission reduction goals, the integration of renewables, as well as the opportunity for economic growth and green recovery plans.

On November 15, 2021, President Biden signed into law the Infrastructure Investment and Jobs Act. The bill allocates over $62 billion to the Department of Energy to advance clean energy technologies, including: (1) $8 billion to support the development of at least four clean hydrogen hubs across the United States in order to further development with respect to the production, processing, delivery, storage, and end-use of clean hydrogen; and (2) $1 billion to support the demonstration, commercialization, and deployment of electrolyzer systems, in order to decrease the cost of clean hydrogen production.

The U.S. Federal Transit Agency manages the competitive Low or No Emission Vehicle Program which provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses as well as acquisition, construction, and leasing of required supporting facilities. For the U.S. Federal Government fiscal year 2021, there was $182 million funding available from the FTA for the Low or No Emission Vehicle Program (Low-No Program).

The California Air and Resource Board ("**CARB**") Low Carbon Transportation and Air Quality Improvement Program programs provide mobile source incentives to reduce GHG emissions, criteria pollutants, and air toxics through the development of advanced technology and clean transportation in California. The ICT regulation was adopted in December 2018 and requires all public transit agencies to gradually transition to a 100 percent zero-emission bus ("**ZEB**") fleet. Beginning in 2029, all new purchases by California transit agencies must be ZEBs, with a goal for full transition by 2040. In 2020, the CARB unanimously adopted the world's first zero-emission commercial truck requirement, the Advanced Clean Trucks rule. Beginning in 2024, truck manufacturers must increase their zero-emission truck sales to between 30-50 percent by 2030 and 40-75 percent by 2035 depending on the class of truck. The CARB requirements are expected to be key drivers of the growing demand in the US for fuel cell trucks and buses.

In Europe, the Fuel Cells and Hydrogen Joint Undertaking ("**FCH JU**") – a partnership of the European Commission with industry and the research community established in 2014 under the framework of the Fuel Cells and Hydrogen Joint Technology Initiative – supports research, technological development and demonstration (RTD) activities in fuel cell and hydrogen energy technologies in Europe. Yearly calls have funded multiple demonstration and deployment projects over the past six years such as JIVE with the deployment of close to 300 fuel cell electric buses (to this date more than 80% of vehicles deployed under JIVE are powered by Ballard fuel cell modules). Ballard is also participating in a number of other project consortium for marine, stationary, truck and coach projects.

In June 2020, the European Commission unveiled its hydrogen strategy and officially launched the European Clean Hydrogen Alliance, issuing its report "A Hydrogen Strategy for a

Climate-Neutral Europe", the European Commission's priority is the development of renewable hydrogen, produced primarily using wind and solar energy. However, over the medium-term other forms of low-carbon hydrogen are needed to rapidly reduce emissions and support the development of a viable market.

In 2020, multiple countries in Europe announced ambitious hydrogen strategies supported by significant funding (for example, €9 billion in Germany and €7 billion in France).

The European Commission's "Fit for 55 package, announced in July 2021, includes a number of proposals that could support growth in the European Union's hydrogen economy, as the bloc seeks to reach its climate goals. Europe has a binding legal target of a 55% GHG emissions reduction by 2030 and a goal of a net-zero economy by 2050. The revised Alternative Fuels Infrastructure Directive calls for hydrogen refueling stations at least every 150 km on highways for compressed hydrogen and every 450 km for liquid hydrogen by 2030. Furthermore, it establishes new sub-targets for the use of Renewable Fuels of Non-Biological Origin (RFNBOs) by 2030. Overall, this totals five million tonnes of green hydrogen per year for industry, alongside a further five million tonnes for transport.

In December 2021, the European Commission announced the launch of the Clean Hydrogen Partnership, which will take over the activities of existing FCH JU. The EU will support the Clean Hydrogen JU with €1 billion of funding for the period 2021-2027, complemented by at least an equivalent amount of private investment (from the private members of the partnership). The Clean Hydrogen Partnership will accelerate the development and deployment of the European value chain for clean hydrogen technologies, contributing to sustainable, decarbonised and fully integrated energy systems. Together with the Hydrogen Alliance, it will contribute to the achievement of the Union's objectives put forward in the EU hydrogen strategy for a climate-neutral Europe.

In December 2020, Canada announced its Hydrogen Strategy setting an ambitious framework to cement hydrogen as a key part of Canada's path to net-zero carbon emissions by 2050 and make Canada a global leader in hydrogen technologies. In 2021, Natural Resources Canada set up a framework for the execution of Canadian Hydrogen Strategy including development of hydrogen hubs and have released first call for proposal for production at scale of green hydrogen to be used for fuel for zero emission vehicles.

In September 2020, the Government of China announced a new 4-year policy framework replacing existing subsidy programs with awards. While previous policies in China to support zero-emission vehicle makers (sometimes referred to as new-energy vehicles) had offered subsidies on sales, the new policy framework will require local governments and companies to build a more mature supply chain and business model for the new-energy vehicle industry. The Government of China is expected to provide financial incentives to demonstration regions that meet requirements based on:

- Completeness of industry base with leading enterprises;
- Competitive hydrogen energy supply and economics;
- Prior fleet demonstration of FCEV applications; and
- Guaranteed local policy to support FCEV industry.

In 2021, the Government of China announced the first demonstration city clusters in Beijing, Shanghai and Guangdong. In early 2022, the Government of China announced Henan and Hebei as the second demonstration city clusters.

In Japan, incentives focus on fuel cell systems for residential co-generation systems and transportation. Hydrogen-related policy materials, namely, the Basic Hydrogen Strategy (December 2017), the Fifth Strategic Energy Plan (July 2018), and the Tokyo Statement (October 2018) were formulated and released. In order to ensure the achievement of the goals set forth in the Basic Hydrogen Strategy and the Fifth Strategic Energy Plan toward the realization of a hydrogen-based society, on March 12, 2019, the Council for a Strategy for Hydrogen and Fuel Cells renewed the existing Strategic Roadmap for Hydrogen and Fuel Cells. The renewed roadmap defines: (i) new targets on the specification of basic technologies and the breakdown of costs; (ii) necessary measures for achieving these goals; and (iii) that Japan will convene a working group consisting of experts to review the status of implementation in each area stipulated by the roadmap. Those targets include the deployment of 200,000 fuel cell cars by 2025 and 800,000 by 2030 along with 1,200 fuel cell buses by 2030. The Japanese Government's Hydrogen Roadmap has a goal of bringing the cost of hydrogen down to $3 per kilogram by 2030, and $2 per kilogram by 2050.

Human Resources

As of December 31, 2021, we had 1,367 employees in Canada, the United States, the European Union, the UK and China, representing such diverse disciplines as electrochemistry, polymer chemistry, chemical, mechanical, electronic and electrical engineering, manufacturing, quality, supply chain management, advanced manufacturing, marketing, sales, service, business development, legal, finance, accounting, human resources, information technology and business management. Our employees are not represented by any labour union. Each employee must agree to confidentiality provisions as part of the terms of his or her employment, and certain employees have also executed non-competition agreements with us.

Facilities

We currently have the following principal facilities: (a) a leased 116,797 ft^2 (10,850 m^2) facility in Burnaby, British Columbia that houses our corporate headquarters and our fuel cell development, manufacturing, assembly and testing activities; (b) a leased 112,000 ft^2 (10,405 m^2) facility in Burnaby that houses certain of our manufacturing facilities; and (c) a leased 4,100 ft^2 (381 m^2) facility in Hobro, Denmark that houses certain engineering, manufacturing sales and service activities. The Synergy-Ballard JV's operations in Yunfu, China occupies approximately 40,000 ft^2 (3,700 m^2) of a purpose built 120,000 ft^2 (11,000 m^2) facility dedicated to fuel cell stack and module assembly. The Weichai-Ballard JV's operations in Weifang, China are conducted in an approximately 150,000 ft^2 (14,000 m^2) facility.

As per our Quality Statement, we are committed to ensuring that each of these facilities is operated in full compliance with all applicable laws, as well as all applicable health, safety, and regulatory standards.

Manufacturing

Our PEM fuel cell products are produced in four facilities – three in Burnaby, British Columbia and one in Hobro, Denmark. Along with these facilities, the Weichai-Ballard JV, of which Ballard has a 49% interest, manufactures Ballard's FCgen®-LCS fuel cell stack and FCgen®-LCS-based power modules for bus, truck and forklift applications in Weifang, Shandong Province, China, and the Synergy-Ballard JV, of which Ballard has a 10% interest, operates an FCveloCity®-9SSL fuel cell stack assembly line in Yunfu, Guangdong Province, China. The Burnaby facilities are focused on our core fuel cell competencies, which include the production of MEAs, the production of bipolar plates, integration and testing of fuel cell stacks, assembly and testing of motive modules, assembly and testing of stationary systems, as well as support of other products required through our engineering services contracts. Ballard Denmark develops, tests, and manufactures FCwave™ marine power modules and backup power systems in Hobro, Denmark.

A part of our expansion strategy, we continue to make investments in our manufacturing processes, equipment, capabilities and business processes to increase our production.

Certain materials and components used in the production of MEAs, bipolar plates, fuel cell stacks, and balance of plant are proprietary in nature and have been developed in joint collaboration between Ballard and our key supply base. Strategic supply agreements have been executed with these suppliers to ensure security of supply, protection of our intellectual property, and adherence to our strict quality and reliability standards.

Safety

Our products are designed and manufactured with the safety of our employees, customers, and end-users in mind. All equipment and processes that are introduced into our working environment are evaluated using a rigorous Preliminary Hazard Assessment procedure to ensure they are safe to use.

In 2021, we continued to work diligently to continue to strengthen the culture of safety across our entire global footprint. We have enhanced the robustness of our safety protocols in the areas of Joint Health and Safety Committees, Management Leadership and Commitment, Hazard Identification and Control, Emergency Preparedness, Workplace Inspections, Accident Investigations, and Health and Safety Administration. Conformance to these systems is ensured through our Integrated Management System.

We also achieved our ISO 45001 – Occupational Health and Safety certification in our Burnaby facilities.

Quality

Quality is an integral part of the Ballard culture. We measure our success through the satisfaction of our customers and other quality metrics.

Our processes and systems are focused on ensuring that every product that is shipped to our customers conforms to their expectations and contractual requirements while being produced in a safe and environmentally conscious manner. We adhere to our Quality Policy Statement, which reads, "At Ballard, Quality is intrinsic to our identity. Our team is empowered to do things right – the first time – to satisfy customer needs and deliver on our promise."

We are certified to automotive standard IATF16949 while maintaining ISO9001:2015 in our Burnaby facilities. Conformance to these quality systems is ensured through our Integrated Management System. We also strive for continuous improvements in our manufacturing processes through such practices as Lean Manufacturing, 5-S and Six Sigma. The Synergy-Ballard JV in Yunfu, China and the Weichai-Ballard JV in Weifang, China each carry the IATF16949 certification.

Research and Product Development

Ballard's research activities are primarily focused on the MEA and its sub-components, aimed at improving the overall cost, performance, durability, and reliability of our products. Material development for other unit cell components, such as bipolar plates, frames, seals and adhesives, are areas of additional research focus. Product development activities have been primarily directed at stack design and module development and cost reduction. Progress is driven by leveraging stack component designs, materials, and manufacturing processes across multiple product platforms. In addition, warranty cost reduction is enabled through improved durability and reliability growth.

Intellectual Property

Ballard's technical strengths lay in our proprietary MEA design, combined with our extensive stack and system integration capabilities, which enables development of complete end-user systems that meet or exceed customer specifications, across a wide range of market applications.

Our intellectual property covers multiple aspects of our technology, including: materials and components; cell, stack and systems architecture; stack/system operation and control; and manufacturing processes. Our intellectual property portfolio is not limited to our patents and patent applications; it also includes know-how and trade secrets developed over more than 30 years of research, product development and production.

As of March 14, 2022, Ballard owns or controls through IP Holdings: 44 United States granted patents; 99 non-United States granted patents; 7 United States published patent applications; and 34 published non-United States patent applications. Our patents will expire between May 2021 and September 2041.

We hold licence rights to additional intellectual property from a number of third parties. We have a royalty-free license to approximately 1,000 issued patents and pending patent applications from Audi for bus and non-automotive applications and a royalty-bearing license for all other applications. In addition, these licences include non-exclusive, royalty-free access to all of the intellectual property rights held by NuCellSys GmbH, a Daimler subsidiary, and to all of the intellectual property rights relating to fuel cells developed by Daimler, Ford and their subsidiaries (either directly or through AFCC), including any intellectual property rights developed by them to January 31, 2013. As of March 14, 2022, of the approximately 2,000 patents and patent applications that were included in these licenses, approximately 120 of them are currently granted or pending.

Cybersecurity

Ballard is committed to maintaining strong security controls, including encryption, to protect our information and the information our customers and partners entrust to us. We maintain administrative, technical, and organizational security measures to protect information from loss, misuse, and unauthorized access or disclosure. These measures are based on industry security practices and take into account the sensitivity of the information we collect, the current state of technology, the cost effectiveness of implementation, and the scope of the data processing we engage in. To our knowledge, Ballard has not experienced an information security breach in the last three years.

Ballard implements and maintains a cybersecurity framework to manage cyber risk, control, and compliance-based activities. This framework is based on the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) 27001 standard. Ballard also maintains robust cyber insurance coverage. Ballard employees receive cybersecurity training during onboarding and on an ongoing basis.

The Audit Committee is responsible for overseeing our cybersecurity risk program and monitoring cybersecurity policies and procedures within our organization. Management briefs the Audit Committee on cybersecurity matters quarterly.

Sustainability

In 2021, we continued our “Mission Carbon Zero” initiative; a multi-year approach to evaluate and reduce the environmental impact of our organization and our products. Through this initiative we are working towards our goal of being carbon neutral by 2030.

In 2021, we offset 798 tonnes of CO2e (15% of our 2021 GHG emission) by investing in carbon offset projects with Offsetters, Canada’s leading carbon management solutions provider. Their projects are verified and validated by third parties to ensure that the emission reductions are real, additional, and permanent. The projects that we support also provide additional benefits to the communities surrounding them. They are the Great Bear Forest Carbon Project, The Southern Cardamom REDD+ Project, and the Quadra Island Forestland Conservation Project.

Our multi-year, cross-functional our “Mission Carbon Zero” initiative includes:

- A corporate emissions inventory (to evaluate and track our annual GHG footprint) for Ballard facilities in Canada and Europe, which was completed in 2018, 2019 and 2020;
- A lifecycle inventory of our fuel cell stacks and heavy-duty power modules (to measure carbon footprint from cradle to gate);
- Informing our customers about our product LCA (Life-Cycle Assessment);
- Defining long term strategies and short-term action plans to reduce and offset our emission to reach carbon neutrality; and
- Reporting on progress towards our emission reduction targets, including publishing our second ESG report in March 2021 and filed our second CDP report in July 2021. In 2021, we continued our “Mission Carbon Zero” initiative; a multi-year approach to evaluate and reduce the environmental impact of our organization and our products. Through this project we are working towards our goal of being carbon neutral by 2030.

Our multi-year, cross-functional our “Mission Carbon Zero” initiative includes:

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- A lifecycle inventory of our fuel cell stacks and heavy-duty power modules (to measure carbon footprint from cradle to gate);
- Informing our customers about our product LCA (Life-Cycle Assessment);
- Defining long term strategies and actions to reduce and offset our emission to reach carbon neutrality; and
- Reporting on progress towards our emission reduction targets, including publishing our first ESG report in March 2020 and filed our first CDP report in July 2020.

SHARE CAPITAL AND MARKET FOR SECURITIES

Our authorized share capital consists of an unlimited number of common shares and an unlimited number of preferred shares. As of March 14, 2022, our issued share capital consisted of 297,809,654 common shares. Our common shares are listed and trade on the Toronto Stock Exchange (“**TSX**”) and on the National Association of Securities Dealers Automated Quotation Global Market (“**NASDAQ**”) and trade under the symbol “BLDP” on both exchanges.

The following table shows the monthly trading activity for our common shares on the TSX and NASDAQ during 2021:

	TSX		NASDAQ	
	Price Range (C$)	**Average Daily Volume (#)**	**Price Range (US$)**	**Average Daily Volume (#)**
January	$28.80 - $47.37	1,569,422	$22.53 - $37.31	2,132,015
February	$34.63 - $52.23	2,310,298	$27.27 - $40.99	1,933,885
March	$26.79 - $37.63	1,597,191	$21.15 - $29.79	1,660,487
April	$24.41 - $31.04	1,898,496	$19.32 - $24.77	1,144,205
May	$16.83 - $24.84	1,835,703	$13.83 - $20.26	1,634,721
June	$20.36 - $23.05	1,158,188	$16.84 - $18.68	911,136
July	$19.10 - $22.60	865,751	$15.15 - $18.22	711,629
August	$18.63 - $21.26	958,542	$14.77 - $16.80	826,771
September	$17.56 - $21.45	990,418	$13.77 - $16.95	863,688
October	$16.45 - $22.43	1,208,097	$13.08 - $18.12	955,506
November	$19.38 - $24.08	1,113,686	$15.16 - $19.34	1,093,019
December	$15.31 - $18.28	1,142,984	$11.98 - $14.45	1,083,073

The holders of our common shares are entitled to one vote for each share held on all matters to be voted on by such shareholders and, subject to the rights and priorities of the holders of preferred shares, are entitled to receive such dividends as may be declared by our Board out of funds legally available therefor and, in the event of liquidation, wind-up or dissolution, to receive our remaining property, after the satisfaction of all outstanding liabilities.

Our preferred shares are issuable in series and our Board is entitled to determine the designation, preferences, rights, conditions, restrictions, limitations and prohibitions to be

attached to each series of such shares. The Board represents that it will not, without prior shareholder approval, issue or use preferred stock for any defensive or anti-takeover purpose or for the purpose of implementing any shareholder rights plan. Currently there are no preferred shares outstanding.

DIVIDEND RECORD AND POLICY

To date, we have not paid any dividends on our shares and, because it is anticipated that all available cash will be needed to implement our business plans, we have no plans to pay dividends in the immediate future.

ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTIONS ON TRANSFER

There are no securities of Ballard in escrow or subject to contractual restrictions on transfer.

DIRECTORS AND OFFICERS

Board of Directors

The following chart provides the following information as of March 14, 2022: the name and province or state of residence of each of our directors; each director's respective positions and offices held with Ballard, their principal occupation during the past five years; the period of time each has served as a director; and the number of shares and deferred share units (the "**DSUs**") beneficially owned or controlled by each of them.

<table>
<tr><td rowspan="4">Kathy Bayless

California, USA

Director since: 2021
Independent</td><td colspan="3">Principal Occupation(1): Ms. Bayless' principal occupation is corporate director. Ms. Bayless is a member of the Board and Audit Committee Chair of Veeco Instruments Inc. (electronics manufacturing equipment), and a member of the Board and Audit Committee Chair of Energous Corporation (wireless power and charging). Previously Ms. Bayless held various executive roles at public technology companies including SVP Chief Financial Officer and Treasurer at Synaptics, Incorporated as well as Komag, Incorporated. Ms. Bayless is a Certified Public Accountant in California.</td></tr>
<tr><td colspan="2">Securities Held</td><td rowspan="3"></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td></tr>
<tr><td>0</td><td>395</td></tr>
<tr><td rowspan="4">Douglas P. Hayhurst

B.C., Canada

Director since: 2012
Independent</td><td colspan="3">Principal Occupation(1): Mr. Hayhurst's principal occupation is corporate director. Previously, Mr. Hayhurst was executive Global Industry Leader with IBM Canada Business Consulting Services (consulting services) and with PricewaterhouseCoopers Management Consultants (consulting services). Prior to that, Mr. Hayhurst held various senior executive management roles with Price Waterhouse Canada including National Deputy Managing Partner (Toronto) and Managing Partner for British Columbia (Vancouver). Mr. Hayhurst received a Fellowship (FCA) from the Institutes of Chartered Accountants of British Columbia and of Ontario. He has completed the Directors Education Program of the Institute of Corporate Directors and has received his ICD.D designation.</td></tr>
<tr><td colspan="2">Securities Held</td><td></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td><td></td></tr>
<tr><td>5,000</td><td>214,594</td><td></td></tr>
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<tr>
<td>Kui (Kevin) Jiang

Shandong, China

Director since: 2019
Weichai nominee</td>
<td>Principal Occupation(1): Mr. Jiang is President of Shandong Heavy Industry Group Co., Ltd. (heavy machinery manufacturing). He is also a non-executive director of Weichai Power Co., Ltd, (diesel engine, powertrain and hydraulic products manufacturing), a non-executive director of Sinotruk (Hong Kong) Limited, (heavy-duty truck manufacturing), a supervisor of KION Group AG (intralogistics, warehouse solutions and industrial trucks), and a director of the Power Solutions International Inc. (cleantech engine and powertrain manufacturing). Previously, Mr. Jiang was deputy general manager of Shandong Bulldozer General Factory (heavy machinery manufacturing); deputy general manager of Shantui Construction Machinery Import and Export Company (heavy machinery); a director and senior officer of Shantui Engineering Machinery Co., Ltd. (heavy machinery); deputy general manager of Shandong Engineering Machinery Group Co., Ltd. (heavy machinery); executive deputy general manager and vice chairman of Weichai Group Holdings Limited, (diesel engine, powertrain and hydraulic products manufacturing); and chairman of Shanzhong Jianji Co., Ltd. (heavy machinery). He is an engineer and holds an MBA degree.

<table>
<tr><th colspan="2">Securities Held</th></tr>
<tr><th>Shares(1)
(#/% of Class)</th><th>DSUs(2)
(#/% of Class)</th></tr>
<tr><td>0</td><td>0</td></tr>
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<tr>
<td>Duy-Loan Le

Texas, USA

Director since: 2017
Independent</td>
<td>Principal Occupation(1): Ms. Le is President of DLE Management Consulting LLC (management consulting services), a position she has held since 2016. Previously, Ms. Le was an advanced technology ramp manager and a Senior Fellow at Texas Instruments Incorporated (semiconductor design and manufacturing) from 2002 to 2015; Program Manager and Fellow from 1998 to 2002; and Design Engineer and Manager from 1982 to 1998. Ms. Le is an inventor on 24 U.S. patents.

<table>
<tr><th colspan="2">Securities Held</th></tr>
<tr><th>Shares(1)
(#/% of Class)</th><th>DSUs(2)
(#/% of Class)</th></tr>
<tr><td>50,000</td><td>42,520</td></tr>
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</td>
</tr>
<tr>
<td>R. Randall (Randy) MacEwen

B.C., Canada

Director since: 2014
Non-Independent</td>
<td>Principal Occupation(1): Mr. MacEwen is President and Chief Executive Officer of Ballard, a position he has held since October 2014. Previously, Mr. MacEwen was the founder and Managing Partner at NextCleanTech LLC (consulting services) from 2010 to 2014; and President & CEO and Executive Vice President, Corporate Development at Solar Integrated Technologies, Inc. (solar) from 2006 to 2009 and 2005 to 2006, respectively. Prior to that, Mr. MacEwen was Executive Vice President, Corporate Development at Stuart Energy Systems Corporation (onsite hydrogen generation systems) from 2001 to 2005; and an associate at Torys LLP (law firm) from 1997 to 2001.

<table>
<tr><th colspan="2">Securities Held</th></tr>
<tr><th>Shares(1)
(#/% of Class)</th><th>DSUs(2)
(#/% of Class)</th></tr>
<tr><td>248,979</td><td>148,046</td></tr>
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<tr>
<td>Hubertus M. Muehlhaeuser

Switzerland

Director since: 2021
Independent</td>
<td>Principal Occupation(1): Mr. Muehlhaeuser is Chairman & CEO of Pontem Corporation (special purpose acquisition company) and Chairman of Kelvion Ltd. (heat exchangers). Previously Mr. Muehlhaeuser was CEO and Executive Director at CNH Industrial N.V. (agricultural equipment), CEO and Executive Director at Welbilt Inc. (food and beverage equipment) and Sr. Vice President and General Manager at AGCO Corporation (agricultural equipment).

<table>
<tr><th colspan="2">Securities Held</th></tr>
<tr><th>Shares(1)
(#/% of Class)</th><th>DSUs(2)
(#/% of Class)</th></tr>
<tr><td>0</td><td>1892</td></tr>
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</td>
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<tr><td rowspan="3">Marty Neese

California, USA

Director since: 2015
Independent</td><td colspan="3">Principal Occupation(1): Mr. Neeseis CEO of Verdagy Inc. (electrolysis and hydrogen production). He is also co-founder of Nuvosil AS (silicon recycling). Previously, he was Chief Operating Officer of Velodyne LiDAR, Inc. (autonomous vehicles) from February 2017 to October 2017. Prior to that, Mr. Neese was Chief Operating Officer of SunPower Corporation (solar power equipment and services) from 2008 to 2017; responsible for Global Operations at Flextronics (electronics manufacturing services) from 2007 to 2008 following its acquisition of Solectron Corporation (electronics manufacturing services) where he was Executive Vice President from 2004 to 2007.</td></tr>
<tr><td colspan="2">Securities Held</td><td rowspan="2"></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td></tr>
<tr><td>0</td><td>72,849</td></tr>
<tr><td rowspan="3">James Roche

Ontario, Canada

Director since: 2015
Independent</td><td colspan="3">Principal Occupation(1): Mr. Roche is founder, President and Chief Executive Officer of Stratford Managers Corporation (management consulting services), a position he has held since 2008. Prior to that, Mr. Roche was co-founder, President and Chief Executive Officer of Tundra Semiconductor (semiconductor component manufacturer) from 1995 to 2006 and founding member and executive at Newbridge Networks Corporation (communications equipment manufacturer) from 1986 to 1995.</td></tr>
<tr><td colspan="2">Securities Held</td><td rowspan="2"></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td></tr>
<tr><td>50,000</td><td>86,730</td></tr>
<tr><td rowspan="3">Shaojun (Sherman) Sun

Shandong, China

Director since: 2019
Weichai nominee</td><td colspan="3">Principal Occupation(1): Mr. Sun is an Executive Director and Executive President of Weichai Power Co., Ltd. (diesel engine, powertrain and hydraulic products manufacturing), a director of Weichai Group Holdings Limited and chairman of Power Solutions International Inc. (cleantech engine and powertrain manufacturing). Previously, Mr. Sun was supervisor and chief engineer at Weifang Diesel Engine Factory (diesel engine manufacturing) and director of Torch Automobile Group Co., Ltd. (heavy machinery and automotive manufacturing). He holds doctorate degree in engineering.</td></tr>
<tr><td colspan="2">Securities Held</td><td rowspan="2"></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td></tr>
<tr><td>0</td><td>0</td></tr>
<tr><td rowspan="3">Janet Woodruff

B.C., Canada

Director since: 2017
Independent</td><td colspan="3">Principal Occupation(1): Ms. Woodruff's principal occupation is corporate director. Previously, Ms. Woodruff served as acting CEO to the Transportation Investment Corporation (transportation infrastructure management) from 2014 to 2015, advisor to the board (2013-2014) and interim Chief Financial Officer (2012-2013). Prior to that, she was Vice President and Special Advisor to BC Hydro (public utility) from 2010 to 2011; Interim President (2009-2010) and Vice President, Corporate Services and Chief Financial Officer (2007-2008) of BC Transmission Corporation (electricity transmission infrastructure); and Chief Financial Officer and Vice President, Systems Development and Performance of Vancouver Coastal Health from 2003 to 2007.</td></tr>
<tr><td colspan="2">Securities Held</td><td rowspan="2"></td></tr>
<tr><td>Shares(1)
(#/% of Class)</td><td>DSUs(2)
(#/% of Class)</td></tr>
<tr><td>0</td><td>37,534</td></tr>
</table>

Notes

1. The information as to place of residence, principal occupation, business or employment of, and shares beneficially owned, or controlled or directed, directly or indirectly, by a director is not within the knowledge of our management and has been furnished by the director.
2. Rounded to the nearest whole number.

Directors are elected yearly at our annual shareholders' meeting and serve on the Board until the following annual shareholders' meeting, at which time, they either stand for re-election or leave the Board. If no meeting is held, each director serves until his or her successor is elected or appointed, unless the director resigns earlier.

The Board has formed three committees: the Audit Committee; the Commercial Committee; and the People, Corporate Governance & Compensation Committee. The Audit Committee members are Ms. Bayless, Mr. Hayhurst (chair), Mr. Roche and Ms. Woodruff. The Commercial Committee members are Ms. Le, Mr. Muehlhaeuser, Mr. Neese (chair) and Mr.

Roche. The People, Corporate Governance & Compensation Committee members are Mr. Hayhurst, Ms. Le, Mr. Muehlhaeuser, Mr. Roche and Ms. Woodruff (chair). The chair of the Board is an *ex officio* member of each committee and is entitled to vote on committee matters. Directors who are appointed by shareholders pursuant to agreements with the Corporation are not eligible to serve on board committees.

Canadian securities legislation requires disclosure if, as at the date of the AIF, or within 10 years before the date of the AIF, a director or executive officer was a director or officer of any company that became insolvent while that person was acting in that capacity, or within one year from ceasing to act in that capacity. In this regard, Mr. Roche was Chair of Aonix Advanced Materials Corp. (a private company) when a bankruptcy order was issued against it under the *Bankruptcy and Insolvency Act (Canada)* on October 13, 2017.

Conflicts of Interest

Mr. Sun and Mr. Jiang are directors and officers of Weichai or affiliates of Weichai, and as a result they may have potential material conflicts of interest with Ballard given the contractual relationships between and amongst Ballard, Weichai and the Weichai-Ballard JV as discussed above in the Recent History section and below in the Material Contracts section of this Annual Information Form.

Executive Officers

As of March 14, 2022, we had six executive officers. The name and province or state of residence of each executive officer, the offices held by each officer and each officer's principal occupation during the last five years are as follows:

Name and Province/State of Residence	Position	Principal Occupation
Robert Campbell British Columbia, Canada	Senior Vice President and Chief Commercial Officer	Senior officer of Ballard. Formerly President and CEO of SoloPower Systems, Inc. (2013 – 2017).
Kevin Colbow British Columbia, Canada	Senior Vice President and Chief Technology Officer	Executive officer of Ballard. Formerly Vice President, Technology Solutions of Ballard.
Paul Dobson British Columbia, Canada	Senior Vice President and Chief Financial Officer	Executive officer of Ballard. Formerly Interim CEO and Chief Financial Officer at Hydro One (2018 to 2019).
Linda Downs British Columbia, Canada	Senior Vice President and Chief People Officer	Executive officer of Ballard. Formerly Chief Human Resources Officer at Mundipharma (2011 to 2019).
R. Randall (Randy) MacEwen British Columbia, Canada	President and Chief Executive Officer	Executive of Ballard.
Sarbjot (Jyoti) Sidhu British Columbia, Canada	Senior Vice President, Operations	Senior officer of Ballard. Formerly Director, Quality of Ballard.

In 2013, Mr. Campbell was the President and CEO of SoloPower Systems, Inc. during a financial restructuring with its secured creditors. Mr. Campbell is expected to retire from his position in May 2022.

Shareholdings of Directors and Senior Officers

As of March 14, 2022, our directors and executive officers, as a group, beneficially owned, or controlled or directed, directly or indirectly, 481,824 of our common shares, being less than 1% of our issued and outstanding common shares, and 629,359 DSUs.

AUDIT COMMITTEE MATTERS

Audit Committee Mandate

The Audit Committee operates under a mandate that is approved by the Board and which outlines the responsibilities of the Audit Committee. A copy of the Audit Committee's mandate is attached as Appendix "A" and posted on our website. This mandate is reviewed annually and the Audit Committee's performance is assessed.

Composition of the Audit Committee

The following table sets forth the name of each of the current members of the Audit Committee, whether such member is independent, whether such member is financially literate and the relevant education and experience of such member.

Name	Independent?	Financially Literate?	Relevant Education and Experience
Kathy Bayless	Yes	Yes	Ms. Bayless is a member of the Board and Audit Committee Chair of Veeco Instruments Inc., and a member of the Board and Audit Committee of Energous Corporation. Previously Ms. Bayless held various executive roles at public technology companies including Chief Financial Officer and Treasurer at Synaptics, Incorporated and Komag, Incorporated. Ms. Bayless is a Certified Public Accountant in California.
Douglas P. Hayhurst (Chair)	Yes	Yes	Mr. Hayhurst was an executive with IBM Canada Business Consulting Services and a Partner with PricewaterhouseCoopers Management Consultants. Prior to that, Mr. Hayhurst held various senior executive management roles with Price Waterhouse including National Deputy Managing Partner (Toronto) and Managing Partner for British Columbia (Vancouver). Mr. Hayhurst received a Fellowship (FCA) from the Institutes of Chartered Accountants of British Columbia and of Ontario. He has completed the Directors Education Program of the Institute of Corporate Directors and has received his ICD.D designation.
James Roche (*ex officio*)	Yes	Yes	Corporate Director of Ballard. Mr. Roche is currently President and CEO of Stratford Managers Corporation and was a founding member and executive at Newbridge Networks Corporation. He subsequently co-founded Tundra Semiconductor Corporation, and was President and CEO of the publicly-traded company. Mr. Roche has also served as President and CEO of CMC Microsystems and ThinkRF Corp.
Janet Woodruff	Yes	Yes	Ms. Woodruff was acting CEO to the Transportation Investment Corporation from 2014 to 2015, advisor to the board (2013-2014) and interim Chief Financial Officer (2012-2013). Formerly Vice President and Special Advisor to BC Hydro from 2010 to 2011; Interim President (2009-2010) and Vice President, Corporate Services and Chief Financial Officer (2007-2008) of BC Transmission Corporation. Formerly, Chief Financial Officer and Vice President, Systems Development and Performance of Vancouver Coastal Health from 2003 to 2007.

The Audit Committee is responsible for recommending the appointment of our external auditors (for shareholder approval at our annual general meeting), monitoring the external auditors' qualifications and independence, and determining the appropriate level of remuneration for the external auditors. The external auditors report directly to the Audit Committee.

The Audit Committee also approves in advance, on a case-by-case basis, any services to be provided by the external auditors that are not related to the audit. The following table shows the costs incurred with KPMG LLP in 2021 and 2020 for audit and non-audit related work, all of which were approved by the Audit Committee:

Type of Audit Fees	2021 (C$)	2020 (C$)
Audit	$792,692	$846,131
Audit-Related Fees	Nil	Nil
Tax Fees	Nil	Nil
All Other Fees	Nil	$10,812

Audit Fees

Audit fees were for professional services rendered by KPMG LLP for the audit of the annual financial statements, quarterly reviews and services provided in connection with statutory and regulatory filings or engagements relating to prospectuses and other offering documents. A

Audit-Related Fees

Audit-related fees would be for assurance and related services reasonably related to the performance of the audit or review of financial statements or other services traditionally performed by the auditor but are not reported under the heading audit fees above. There were no fees paid to KPMG LLP that would be considered "Audit-Related Fees" in 2021 and 2020.

Tax Fees

There were no fees paid to KPMG LLP that would be considered "Tax Fees" in 2021 or 2020.

All Other Fees

All other fees to be disclosed under this category would be for products and services other than those described under the headings audit fees, audit-related fees and tax fees above. There were no fees paid to KPMG LLP that would be considered "All Other Fees" in 2021. The "All Other Fees" in 2020 consisted of the review of financial statements of a third party.

LEGAL PROCEEDINGS

From time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

The Weichai-Ballard JV is 51% owned by Weichai and as of January 31, 2022, Weichai's wholly-owned subsidiary, Weichai HK, owns approximately 15.5% of Ballard's common shares.

The Weichai-Ballard JV is intended to manufacture Ballard's FCgen®-LCS fuel cell stack and FCgen®LCS-based power modules for bus, commercial truck and forklift applications with exclusive rights in China.

As noted above, two of Ballard's directors, Mr. Jiang and Mr. Sun, are directors and officers of Weichai or affiliates of Weichai.

Except as described above, none of our insiders, directors or executive officers, nor any associate or affiliate of such persons, has had any material interest, direct or indirect, in any transaction of ours within our three most recently completed financial years, nor in any transaction or proposed transaction within our current financial year that has materially affected or would materially affect us or any of our subsidiaries.

TRANSFER AGENT AND REGISTRAR

Our transfer agent and registrar is Computershare Trust Company of Canada, 100 University Avenue, 9th Floor, Toronto, Ontario, M5J 2Y1.

MATERIAL CONTRACTS

Particulars of every contract that is material to Ballard, other than a contract entered into in the ordinary course of business that is not required to be disclosed under *National Instrument 51-102 – Continuous Disclosure Obligations*, and that was entered into within the most recently completed financial year, or before the most recently completed financial year but is still in effect, are listed below.

February 2021 Bought Deal Underwriting Agreement

On February 10, 2021, we entered into an underwriting agreement (the "**Underwriting Agreement**") with TD Securities Inc., National Bank Financial Inc. (the "**Co-Lead Underwriters**"), BMO Nesbitt Burns Inc., CIBC World Markets Inc., Raymond James Ltd. and Cormark Securities Inc. (each, including the Co-Lead Underwriters, an "**Underwriter**" and collectively the "**Underwriters**") for a bought deal offering (the "**Offering**").

Pursuant to the terms of the Underwriting Agreement, the Underwriters purchased, on a bought deal basis, 14,870,000 Common Shares for $37.00 per Common Share (the "Offering Price") for gross proceeds of $5560,190,000. Pursuant to the Offering the Common Shares were offered in each of the provinces and territories of Canada, except Quebec, and the United States.

We filed the Underwriting Agreement on SEDAR on February 10, 2021.

AUDI Patent License and Intellectual Property Exploitation Agreement

On October 29, 2020, we entered into a Patent License and Intellectual Property Exploitation Agreement (the "**License Agreement**") with AUDI expanding Ballard's right to use the FCgen®-HPS product, a high-performance, zero-emission, proton exchange membrane (PEM) fuel cell stack in all applications, including commercial trucks and passenger cars. The License Agreement modifies many of the provisions of TDA-3 related to the parties' respective intellectual property rights. Concurrently with the signing of the License Agreement Ballard and AUDI entered into an amendment to TDA-3.

Pursuant to the License Agreement AUDI grants to Ballard for use in all applications a non-exclusive, royalty-bearing license to the intellectual property developed for AUDI pursuant to TDA-3, the prior Technology Development Agreement dated as of March 1, 2013 entered into between Ballard and Volkswagen AG, as amended and assigned to AUDI, and the Transfer and License Agreement dated February 11, 2015 between Ballard and AUDI.

Pursuant to the License Agreement Ballard grants to AUDI for use in all applications a non-exclusive, royalty-bearing license to use Ballard's background and sideground intellectual property incorporated, forming a part of, or covering work or deliverables performed in connection with TDA-3.

The License Agreement established the royalty payable by each party. The term of the License Agreement continues until the last of the relevant patents to expire.

We filed the License Agreement on SEDAR on November 6, 2020.

Weichai Strategic Collaboration Transaction

On November 13, 2018, we entered into a strategic collaboration transaction with Weichai that included the following material agreements:

1. A Subscription Agreement between Weichai and Ballard dated August 29, 2018. The Subscription Agreement resulted in an equity investment in Ballard by Weichai in the amount of approximately $163.6 million, representing 19.9% of the outstanding common shares of the capital of Ballard at that time.
2. An Investor Rights Agreement between Weichai HK and Ballard dated November 13, 2018. The key terms of Investor Rights Agreement are set out in the Recent History section of this Annual Information Form.
3. A Joint Venture Agreement between Weichai and Ballard HK dated November 13, 2018. The key terms of Joint Venture Agreement are set out in the Recent History section of this Annual Information Form.

The Subscription Agreement was filed on SEDAR on September 3, 2018 and the Investor Rights Agreement and Joint Venture Agreement were filed on SEDAR on November 23, 2018.

Technology Development Agreement with Audi

On June 11, 2018, we entered into a 3.5-year extension to our current Technology Solutions contract with Audi extending the HyMotion program to August 2022. The particulars of the Technology Development Agreement are described above in this Annual Information Form.

We filed the Technology Development Agreement on SEDAR on June 21, 2018. The preceding technology development agreement and associated amending agreement with Audi and VW were filed on SEDAR on February 20, 2015 and March 15, 2013, respectively.

FCveloCity®-9SSL Fuel Cell Stack Production Operation

On July 18, 2016, we entered definitive agreements in Foshan, China with Nation-Synergy for the establishment of an FCveloCity®-9SSL fuel cell stack production operation in the City of Yunfu, in Guangdong Province. The transaction completed on October 25, 2016.

Ballard filed the 9SSL Production Line Master Agreement and form of Equity Joint Venture Agreement on SEDAR on July 27, 2016 in conjunction with the filing of a Material Change Report in respect of the transaction. On November 4, 2016, we filed the final Equity Joint Venture Agreement and Sales and Marketing Agreement in conjunction with the filing of a Material Change Report in respect of the closing of the transaction. The particulars of the 9SSL

Production Line Master Agreement, Equity Joint Venture Agreement, and Sales and Marketing Agreement are described above in the Recent History section of this Annual Information Form.

Audi IP Asset Transfer

On February 11, 2015, we entered into an agreement with Audi (the **IP Transfer and License Agreement**") under which we agreed to transfer to Audi certain of the transportation-related fuel cell intellectual property assets we previously acquired from United Technologies Corporation. These assets consist of approximately 900 patents and patent applications as well as know-how primarily related to PEM fuel cell technology.

As consideration for the patents and patent applications, Ballard received $40 million from Audi, of which $10 million was paid to UTC as a royalty under the terms of our prior acquisition from UTC. As consideration for the know-how, Ballard received $10 million from Audi on transfer thereof, of which $900,000 was paid to UTC.

In addition, we retained the sole right to use the patents, patent applications and know-how transferred to Audi for all non-automotive purposes, as well as a non-exclusive right for use in buses, and a non-exclusive right for use in certain limited pre-commercial automotive purposes, all on a royalty-free basis. We also retained the right to provide technology solutions services to other automotive OEMs.

Ballard filed the IP Transfer and License Agreement on SEDAR on February 20, 2015 in conjunction with the filing of a Material Change Report in respect of the transaction.

INTERESTS OF EXPERTS

KPMG LLP, our independent auditors, has audited our consolidated financial statements for the years ended December 31, 2021 and 2020. As at the date hereof, KPMG LLP has confirmed that they are independent with respect to the Corporation within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations and also that they are independent accountants with respect to the Corporation under all relevant U.S. professional and regulatory standards.

RISK FACTORS

An investment in our common shares involves risk. Investors should carefully consider the risks and uncertainties described below and the other information contained in, and incorporated into, this Annual Information Form, including "Management's Discussion and Analysis" and our financial statements for the year ended December 31, 2021. The risks and uncertainties described below are not the only ones 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.

We may not be able to successfully execute our business plan.

The execution of our business plan poses many challenges and is based on a number of assumptions. We may not be able to successfully execute our business plan. If we experience significant cost overruns on our programs, or if our business plan is more costly than we

anticipate, certain research and development activities may be delayed or eliminated, resulting in changes or delays to our commercialization plans, or we may be compelled to secure additional funding (which may or may not be available) to execute our business plan. We cannot predict with certainty our future revenues or results from our operations. If the assumptions on which our revenue or expenditure forecasts are based change, the benefits of our business plan may change as well. In addition, we may consider expanding our business beyond what is currently contemplated in our business plan. Depending on the financing requirements of a potential acquisition or new product opportunity, we may be required to raise additional capital through the issuance of equity or debt. If we are unable to raise additional capital on acceptable terms, we may be unable to pursue a potential acquisition or new product opportunity.

In China a significant amount of operations are conducted by joint ventures that we cannot operate solely for our benefit.

A key part of our strategy is based on the localization of stack and module production with joint venture partners, where we do not control the joint venture. We share ownership and management of the Synergy-Ballard JV and the Weichai-Ballard JV with one or more parties who may not have the same goals, strategies, priorities or resources as we do and may compete with us outside the joint venture.

Joint ventures are intended to be operated for the equal benefit of all co-owners, rather than for our exclusive benefit. Operating a business as a joint venture often requires additional organizational formalities as well as time-consuming procedures for sharing information and making decisions. If a co-owner changes or relationships deteriorate, our success in the joint venture may be materially adversely affected. In addition, because we have a minority share ownership, we have limited control over the actions of each of the Synergy-Ballard JV and the Weichai-Ballard JV. As a result, we may be unable to prevent misconduct or other violations of applicable laws by the Synergy-Ballard JV and the Weichai-Ballard JV. To the extent another party makes decisions that negatively impact the Synergy-Ballard JV or the Weichai-Ballard JV or internal control issues arise within either joint venture, we may have to take responsive or other action or we may be subject to penalties, fines or other related actions for these activities.

We are dependent on third party suppliers for the supply of key materials and components for our products and services.

We have established relationships with third party suppliers, on whom we rely to provide materials and components for our products. A supplier's failure to supply materials or components in a timely manner, or to supply materials and components that meet our quality, quantity or cost requirements, or our inability to obtain substitute sources for these materials and components in a timely manner or on terms acceptable to us, could harm our ability to manufacture our products. In addition, to the extent that our product development plans rely on development of supplied materials or components, we cannot guarantee that we will be able to leverage our relationships with suppliers to support these plans. To the extent that the processes that our suppliers use to manufacture the materials and components are proprietary, we may be unable to obtain comparable materials or components from alternative suppliers, which could adversely affect our ability to produce viable fuel cell products or significantly raise our cost of producing such products.

While supply chain disruptions that occurred globally in 2021 did not materially impact our business or operations, supply chains could be further disrupted in the future by factors beyond our control. This could include: a reduction in the supply or availability of commodities or parts required to manufacture our products; lockdowns and workforce disruptions caused by the COVID-19 pandemic; the impacts of climate change on transportation networks and suppliers manufacturing facilities; and economic sanctions or embargoes.

We are dependent upon Original Equipment Manufacturers and Systems Integrators to purchase certain of our products.

To be commercially useful, our fuel cell products must be integrated into products manufactured by Systems Integrators and OEMs. We can offer no guarantee that Systems Integrators or OEMs will manufacture appropriate, durable or safe products or, if they do manufacture such products, that they will choose to use our fuel cell products. Any integration, design, manufacturing or marketing problems encountered by Systems Integrators or OEMs could adversely affect the market for our fuel cell products and our financial results.

We, directly or through joint ventures that we are party to, sell a significant portion of our products in the Heavy-Duty Motive market in China and to relatively small System Integrator customers with limited experience developing fuel cell system products on a commercial basis. We do not know whether these customers will be able to successfully develop, manufacture or market products to their customers. In addition, our dependence on such customers in this market increases the risks of difficulties in integration, design, manufacturing or marketing of their products; and that current or future macro-economic conditions in China could negatively affect them and cause them to significantly reduce operations or file for bankruptcy.

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.

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. While we continually seeking to expand our customer base, we expect the limited number of customers will continue for the next several years. Our future success is dependent upon the continued purchases of our products by these customers. Any fluctuations in anticipated demand from these customers may negatively impact our business, financial condition and results of operations.

If we are unable to broaden our customer base and expand relationships with other potential customers, our business in the Heavy-Duty Motive market will continue to be impacted by unanticipated demand fluctuations due to our dependence on these customers. Unanticipated demand fluctuations may have a negative impact on our revenues and business, and an adverse effect on our business, financial condition and results of operations.

In addition, our dependence on a small number of customers in our Heavy-Duty Motive market exposes us to numerous other risks, including: (i) a slowdown or delay in the customers' deployment of our products could significantly reduce demand for our products as well as increase pricing pressure on our products due to increased purchasing leverage; (ii) customer-specific factors resulting in a choice to pursue an alternative technology or supplier; (iii)

reductions in a few customers' forecasts and demand could result in excess inventories; (iv) the current or future economic conditions could negatively affect our major customers and cause them to significantly reduce operations or file for bankruptcy; (v) concentration of accounts receivable credit risk, which could have a material adverse effect on our liquidity and financial condition if one of our major customers declared bankruptcy or delayed payment of their receivables; and (vi) changes in government support for zero-emission vehicles could adversely affect the end-user cost of vehicles incorporating our heavy-duty motive products.

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.

We sell most of our products in the Heavy-Duty Motive market to Chinese customers, and while we are continually seeking to expand our customer base, we expect this will continue for the foreseeable future. Any significant economic slowdown in China, change in Chinese government policies and practices around subsidies for zero-emission vehicles or hydrogen fueling infrastructure could have an adverse impact on our business, financial condition and results of operations.

In addition, macro-economic conditions, including government subsidy programs and significant volatility in China's capital markets, may adversely impact our Chinese customers' access to capital and program plans which could adversely impact our business. Furthermore, successful large-scale deployment of zero-emission vehicles will require adequate investment in hydrogen fueling infrastructure and competitive pricing of hydrogen fuel. Inadequate hydrogen fueling infrastructure and/or excessive hydrogen fuel costs could negatively impact deployment of fuel cell powered zero-emission vehicles and may negatively impact our business, financial condition and results of operations. Our performance in China is dependent on our business model of localization, including the strength and performance of our localization partners.

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 provide most of our services in the Technology Solutions market to two customers, the Volkswagen Group and the Weichai-Ballard JV, and while we are continually seeking to expand our customer base, we expect this will continue for the foreseeable future. Our future success in this market is dependent upon the continued demand by these customers and expansion of our customer base. Any decline in or loss of demand from these customers or other customers for any reason may have a negative impact on our revenues, and an adverse effect on our business, financial condition and results of operations.

In addition, our dependence on a limited number of customers in this market exposes us to numerous other risks, including: current or future economic conditions could negatively affect our major customers and cause them to significantly reduce operations or file for bankruptcy.

We could be adversely affected by risks associated with mergers and acquisitions.

We may in the future, seek to expand our business through acquisitions and investments.

Acquisitions will be in part dependent on management's ability to identify, acquire and develop suitable acquisition targets in both new and existing markets. In certain circumstances, acceptable acquisition targets might not be available. Acquisitions involve a number of risks, including: (i) the possibility that we, as successor owner, may be legally and financially responsible for liabilities of prior owners; (ii) the possibility that we may pay more than the acquired company or assets are worth; (iii) the additional expenses associated with completing an acquisition and amortizing any acquired intangible assets; (iv) the difficulty of integrating the operations and personnel of an acquired business; (v) the challenge of implementing uniform standards, controls, procedures and policies throughout an acquired business; (vi) the inability to integrate, train, retrain and motivate key personnel of an acquired business; (vii) the potential disruption of our ongoing business and the distraction of management from our day-to-day operations; and (viii) an inability to realize the full extent of, or any of, the anticipated benefits of a merger or acquisition transaction, including failure to realize projected revenue gains or achieve expected cost savings within the assumed timeframe.

The above risks and difficulties, if they materialize, could disrupt our ongoing business, distract management, result in the loss of key personnel, increase expenses and otherwise have a material adverse effect on our business, results of operations and financial performance.

We could be adversely affected by risks associated with capital investments and new business processes.

We may in the future, seek to expand our business through investments in capital equipment and new business processes.

While necessary for the growth of our business, investments in capital equipment and new business processes involve allocating resources based on future expectations that may or may not be correct. Investments in capital equipment and new business processes may not address the requirements of the targeted markets in the future and may result in lower-than-expected returns on such investments.

The above risks and difficulties, if they materialize, could disrupt our ongoing business, distract management, result in the loss of key personnel, increase expenses and otherwise have a material adverse effect on our business, results of operations and financial performance.

We could lose or fail to attract the personnel necessary to operate our business.

Our success depends in large part on our ability to attract and retain key management, engineering, scientific, marketing, manufacturing and operating personnel. As we develop additional manufacturing capabilities and expand the scope of our operations, we will require more skilled personnel. Recruiting personnel for the fuel cell industry is highly competitive. We may not be able to continue to attract and retain qualified executive, managerial and technical personnel needed for our business. Our failure to attract or retain qualified personnel could have a material adverse effect on our business.

We currently face and will continue to face significant competition, and many current and future competitors may have significantly more resources.

As fuel cell products have the potential to replace existing power products, competition for our products will come from current power technologies, from improvements to current

power technologies, and from new alternative energy technologies, including other types of fuel cells. Each of our target markets is currently serviced by existing manufacturers with existing customers and suppliers. These manufacturers use proven and widely accepted technologies such as internal combustion engines and batteries as well as coal, oil and nuclear-powered generators.

Additionally, there are competitors working on developing technologies other than PEM fuel cells (such as other types of fuel cells and advanced batteries) in each of our targeted markets. Some of these technologies are as capable of fulfilling existing and proposed regulatory requirements as the PEM fuel cell.

Within the PEM fuel cell market, we also have a large number of competitors. Across the world, corporations, national laboratories and universities are actively engaged in the development and manufacture of PEM fuel cell products and components. Each of these competitors has the potential to capture market share in each of our target markets.

Many of our competitors have substantial financial resources, customer bases, manufacturing, marketing and sales capabilities, and businesses or other resources, which give them significant competitive advantages over us.

Emerging diseases, like COVID-19, may adversely affect our operations (including our joint ventures in China), our suppliers, our customers and/or partners.

Emerging diseases, like coronavirus disease 2019 (COVID-19), and government actions to address them, may adversely affect our operations, our suppliers, our customers, or our joint ventures.

A local, regional, national or international epidemic, including the COVID-19 pandemic, may prevent, or cause delays in, acquiring components of our products, producing our products, delivering our services, completing sales of our products or services whether by direct impacts to our operations, or impacts to the operations of our suppliers, customers or to the financial markets. Our joint ventures may similarly be affected.

The COVID-19 pandemic continues to evolve rapidly including via the emergence of variants that may be able to circumvent the protections afforded by existing vaccines and/or other public health measures, and, as a result, it is difficult to accurately assess its continued magnitude, outcome and duration, but it could:

- worsen economic conditions, which could negatively impact levels of investment in fuel cell technology deployments by governments and/or our customers;
- impact our production levels, including as a result of full or partial shutdowns of our manufacturing facilities;
- impact our customers' or joint venture's production volume levels, including as a result of prolonged unscheduled facility shutdowns;
- cause potential shortages of employees to staff our facilities, or the facilities of our customers, suppliers or joint ventures;
- lead to prolonged disruptions of critical components, including because of the bankruptcy/insolvency of one or more suppliers; or

- result in governmental regulation adversely impacting our business,

all of which could have a material adverse effect on our business, financial condition and results of operations, which could be rapid and unexpected.

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.

We sell most of our products in the Material Handling market to a single customer, Plug Power, and while we are continually seeking to expand our customer base, we expect this will continue for the foreseeable future. Plug Power has developed its own fuel cell stacks to integrate into their material handling products. If Plug Power decides to solely use its own fuel cell stacks, then these fuel cell stacks may displace our fuel cell stacks. Any decline in business with this customer could have an adverse impact on our business, financial condition and results of operations. Any fluctuations in demand from this customer or other customers may negatively impact our business, financial condition and results of operations.

If we are unable to broaden our customer base and expand relationships with other potential customers, our business in this market will continue to be impacted by unanticipated demand fluctuations due to our dependence on a single customer. Unanticipated demand fluctuations can have a negative impact on our revenues and business, and an adverse effect on our business, financial condition and results of operations. In addition, our dependence on a single customer in this market exposes us to numerous other risks, including: (i) a slowdown or delay in the customer's deployment of our products could significantly reduce demand for our products as well as increase pricing pressure on our products due to increased purchasing leverage; (ii) reductions in the customer's forecasts and demand could result in excess inventories; (iii) the current or future economic conditions could negatively affect the customer and cause it to significantly reduce operations or file for bankruptcy; (iv) concentration of accounts receivable credit risk, which could have a material adverse effect on our liquidity and financial condition if the customer declared bankruptcy or delayed payment of their receivables; and (v) reductions in the customer's demand as a result of their own strategic action to dual source their supply of fuel cell stacks.

Warranty claims, product performance guarantees, or indemnification claims could negatively impact our gross margins and financial performance.

There is a risk that our warranty accrual estimates are not sufficient and we may recognize additional expenses, including those related to litigation, as a result of warranty claims in excess of our current expectations. Such warranty claims may necessitate changes to our products or manufacturing processes and/or a product recall, all of which could hurt our reputation and the reputation of our products and may have an adverse impact on our financial performance and/or on future sales. While we attempt to mitigate these risks through product development, quality assurance and customer support and service processes, there can be no assurance that these processes are adequate. Even in the absence of any warranty claims, a product deficiency such as a design or manufacturing defect could be identified, necessitating a product recall or other corrective measures, which could hurt our reputation and the reputation of our products and may have an adverse impact on our financial performance and/or on future sales.

New products may have different performance characteristics from previous products. In addition, we have limited field experience with existing commercial products from which to make our warranty accrual estimates.

Our technology and products may not meet the market requirements, including requirements relating to performance, integration and / or cost.

The market requirements for our products and, by extension, our technology changes rapidly. Our existing and planned products may not meet the market requirements for any number of characteristics, including performance, integration characteristics, cost, freeze-protection, ingress protection, and durability.

We may not be able to sell our products on a commercially viable basis on the timetable we anticipate, or at all.

We cannot guarantee that we will be able to develop commercially viable fuel cell products on the timetable we anticipate, or at all. Selling our fuel cell products on a commercially viable basis requires technological advances to improve the durability, reliability and performance of these products, and to develop commercial volume manufacturing processes for these products. It also depends upon our ability to reduce the costs of these products, since they are currently more expensive than products based on existing technologies, such as internal combustion engines and batteries. We may not be able to sufficiently reduce the cost of these products without reducing their performance, reliability and durability, which would adversely affect the willingness of consumers to buy our products. We cannot guarantee that we will be able to internally develop the technology necessary to sell our fuel cell products on a commercially viable basis or that we will be able to acquire or license the required technology from third parties.

In addition, before we release any product to market, we subject it to numerous field tests. These field tests may encounter problems and delays for a number of reasons, many of which are beyond our control. If these field tests reveal technical defects or reveal that our products do not meet performance goals, our anticipated timeline for selling our products on a commercially viable basis could be delayed, and potential purchasers may decline to purchase our products.

A mass market for our products may never develop or may take longer to develop than we anticipate.

Our fuel cell products represent emerging markets, and we do not know whether end-users will want to use them in commercial volumes. In such emerging markets, demand and market acceptance for recently introduced products and services are subject to a high level of uncertainty and risk. The development of a mass market for our fuel cell products may be affected by many factors, some of which are beyond our control, including the emergence of newer, more competitive technologies and products, the cost of fuels used by our products, regulatory requirements, consumer perceptions of the safety of our products and related fuels, and end-user reluctance to buy a new product.

If a mass market fails to develop, or develops more slowly than we anticipate, we may never achieve profitability. In addition, we cannot guarantee that we will continue to develop, manufacture or market our products if sales levels do not support the continuation of the product.

We have limited experience manufacturing fuel cell products on a commercial basis and our experience has been limited to relatively low production volumes.

To date, we have limited experience manufacturing fuel cell products on a commercial basis and our experience has been limited to relatively low production volumes. We cannot be sure that we will be able to develop efficient, low-cost, high-volume automated processes that will enable us to meet our cost goals and profitability projections. While we currently have sufficient production capacity to fulfill customer orders in the near-term, we expect that we will increase our production capacity based on market demand. We cannot be sure that we will be able to achieve any planned increases in production capacity or that unforeseen problems relating to our manufacturing processes will not occur. Even if we are successful in developing high-volume automated processes and achieving planned increases in production capacity, we cannot be sure that we will do so in time to meet our product commercialization schedule or to satisfy customer demand. If our business does not grow as quickly as anticipated, our existing and planned manufacturing facilities would, in part, represent excess capacity for which we may not recover the cost, in which case our revenues may be inadequate to support our committed costs and planned growth, and our gross margins and business strategy would be adversely affected. Any of these factors could have a material adverse effect on our business, results of operations and financial performance.

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.

Our success depends on our ability to secure international customers and receive payments from international customers and joint ventures in which we are participants.

We face numerous challenges in our international business activities, including restrictions on the conversion of currencies, restrictions on repatriation of funds, war, insurrection, civil unrest, strikes and other political risks, negotiation of contracts with government entities, unexpected changes in regulatory and other legal requirements, fluctuations in exchange rates, longer accounts receivable requirements and collections, difficulties in managing international operations, potentially adverse tax consequences, and the burdens of complying with a wide variety of international laws.

Trade disputes and trade barriers, whether tariff or non-tariff, could prevent us from selling our products in key geographical markets, make our products uncompetitive with local competitors, and prevent us from sourcing key components of our products.

We have limited experience developing and manufacturing products that meet foreign regulatory and commercial requirements in our target markets.

Any of the above factors could have a material adverse effect on our business, results of operations and financial performance.

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 information technology infrastructure and systems ("**IT Systems**"), hosted internally and outsourced, to process, transmit and store electronic data and financial information (including proprietary or confidential information), and manage business operations. Our business requires the appropriate and secure utilization of sensitive, confidential or personal data or information belonging to our employees, customers and partners. In addition, Ballard proprietary or confidential information may be stored on IT Systems of our suppliers, customers and partners. Increased global cybersecurity vulnerabilities, threats and more sophisticated and targets cyber-related attacks pose a risk to the security of Ballard's and its customers', partners', suppliers' and third-party service providers' IT Systems and the confidentiality, availability and integrity of Ballard's and its customers' and partners' data or information. We may be subject to cybersecurity risks or other breaches of our IT Systems intended to obtain unauthorized access to our information and that of our business partners, destroy data or disable, degrade or sabotage our IT Systems through the introductions of computer viruses, fraudulent emails, cyber attached and other means, and such breaches could originate from a variety of sources including our own employees or unknown third parties. While we have made investments seeking to address these threats, including monitoring of networks and systems, hiring of experts, employee training and security policies for employees, we may face difficulties in anticipating and implementing adequate preventative measures and remain potentially vulnerable. We must rely on our own safeguards as well as the safeguards put in place by our suppliers, customers and partners to mitigate the threats. Our internal systems are audited for cybersecurity vulnerabilities by third party security firms to ensure we are prepared for new and emerging threats. Our suppliers, customers and partners have varying levels of cybersecurity expertise and safeguards, most have yearly compliance audits that are available upon request.

An IT System failure or non-availability, cyber-attack or breach of systems security could disrupt our operations, cause financial loss, a loss of business opportunities, misappropriation or unauthorized release of confidential/proprietary or personal information, damage to our systems and those with whom we do business, violation of privacy laws, litigation, regulatory penalties and remediation and restoration costs, as well as increased costs to maintain our IT Systems. Cybersecurity breaches or failures of our IT Systems could have an adverse effect on our business operations, financial reporting, financial condition and results of operations, and result in reputational damage. Furthermore, given the highly evolving nature of cybersecurity threats or disruptions and their increased frequency, the impact of any future incident cannot be easily predicted or mitigated, and the costs related to such threats or disruptions may not be fully insured or indemnified by other means.

We depend on our intellectual property, and our failure to protect that intellectual property could adversely affect our expected future growth and success.

Failure to protect our existing intellectual property rights may result in the loss of our exclusivity regarding, or the right to use, our technologies. If we do not adequately ensure our freedom to use certain technology, we may have to pay others for rights to use their intellectual property, pay damages for infringement or misappropriation, or be enjoined from using such

intellectual property. We rely on patent, trade secret, trademark and copyright laws to protect our intellectual property. Some of our intellectual property is not covered by any patent or patent application, and the patents to which we currently have rights expire between 2021 and 2040. Our present or future-issued patents may not protect our technological leadership, and our patent portfolio may not continue to grow at the same rate as it has in the past. Moreover, our patent position is subject to complex factual and legal issues that may give rise to uncertainty as to the validity, scope and enforceability of a particular patent. Accordingly, there is no assurance that: (i) any of the patents owned by us or other patents that third parties license to us will not be invalidated, circumvented, challenged, rendered unenforceable or licensed to others; or (ii) any of our pending or future patent applications will be issued with the breadth of claim coverage sought by us, if issued at all. In addition, effective patent, trade secret, trademark and copyright protection may be unavailable, limited or not applied for in certain countries.

We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our strategic partners and employees. We can provide no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

Certain of our intellectual property have been licensed to us on a non-exclusive basis from third parties who may also license such intellectual property to others, including our competitors. If necessary or desirable, we may seek further licences under the patents or other intellectual property rights of others. However, we may not be able to obtain such licences or the terms of any offered licences may not be acceptable to us. The failure to obtain a licence from a third party for intellectual property we use could cause us to incur substantial liabilities and to suspend the manufacture or shipment of products or our use of processes requiring the use of such intellectual property.

We may become subject to lawsuits in which it is alleged that we have infringed the intellectual property rights of others or commence lawsuits against others who we believe are infringing upon our rights. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged product or intellectual property and diverting the efforts of our technical and management personnel, whether or not such litigation is resolved in our favour.

Global macro-economic conditions are beyond our control and may have an adverse impact on our business, our joint ventures, our key suppliers, and/or customers.

Current global economic conditions, including volatility in China and global and regional expectations with respect to the rate of inflation, may adversely affect the development of sales of our products, and thereby delay the commercialization of our products. Customers and/or suppliers may not be able to successfully execute their business plans; product development activities may be delayed or eliminated; new product introduction may be delayed or eliminated; end-user demand may decrease; and some companies may not continue to be commercially viable.

We are subject to geopolitical risk in all jurisdictions in which we operate. There are risks of political instability in several of the jurisdictions in which we operate, including, from such factors as political conflict, economic sanctions or embargoes, tariffs and corruption. Political tensions and potential conflict could contribute to global economic uncertainty and could significantly disrupt the flow of goods, services and people. Such conditions could have a destabilizing effect on our markets and/or increase the costs of conducting business in affected jurisdictions. The materialization of one or more of these risks could have an adverse effect on our business operations, financial reporting, financial condition and results of operations.

Climate change risks may adversely affect our operations, or the operations of our suppliers, customers and/or partners.

Our business interruption risk is exacerbated by an increasing number of extreme weather events related to climate change. Extreme weather events such as floods and fires caused or exacerbated by climate change could impair our ability to carry on business. For example, extreme weather events could cause catastrophic destruction to some of our or our supplier's and/or customer's facilities, which could in turn disrupt our production and/or prevent us from supplying products to our customers.

Transitioning to a lower-carbon economy creates opportunities for us and may increase demand for zero-emission products like those that we produce. However, we may also become subject to potential negative impacts of new environmental regulations, laws, and policies that could result in increased costs of carrying on our business. Our financial condition may be negatively impacted by costs associated with changes in environmental laws and regulations and regulatory enforcement.

Public policy and regulatory changes could hurt the market for our products and services.

Changes in existing government regulations and the emergence of new regulations with respect to fuel cell products may hurt the market for our products and services. Environmental laws and regulations have driven interest in fuel cells. We cannot guarantee that these laws and policies, including subsidies or incentives associated with the adoption of clean energy products, will not change. Changes in these laws and other laws and policies, or the failure of these laws and policies to become more widespread, could result in manufacturers abandoning their interest in fuel cell products or favouring alternative technologies. In addition, as fuel cell products are introduced into our target markets, governments may impose burdensome requirements and restrictions on the use of fuel cell products that could reduce or eliminate demand for some or all of our products and services.

Government budgetary constraints could reduce the demand for our products by restricting the funding available to public transportation agencies and militaries. We cannot guarantee that current government direct and indirect financial support for our products will continue.

Regulatory agencies could require us to modify or terminate existing investments, acquisitions or joint ventures and could delay or prevent future opportunities.

Our current and future investment, acquisition and joint venture opportunities are, or may be, subject to the jurisdiction of the Department of Innovation, Science and Economic Development ("ISED") under the Investment Canada Act (the "ICA"), the U.S. Federal Trade

Commission (“FTC”) and Department of Justice (“DOJ”) under the Hart-Scott-Rodino Antitrust Improvements Act of 1976 (the “HSR Act”) and related legislation and regulations, the Committee on Foreign Investment in the United States (“CFIUS”) and other similar regulatory schemes. The ICA regulates the acquisition of control of a Canadian business by a non-Canadian and requires that certain transactions be reviewed by ISED before they are permitted to close. The HSR Act regulates certain transactions that affect U.S. commerce and requires that certain transactions be reported to the FTC and DOJ before they are permitted to close. CFIUS has jurisdiction over investments in “U.S. businesses” by non-U.S. persons that involve U.S. national security concerns, which concerns may change or evolve over time in response to political, economic or other events. Unlike the ICA and the HSR Act, CFIUS may intervene in the transaction before or after the closing if the parties to a transaction do not make a voluntary or required filing with CFIUS.

Because we are a British Columbia-based company with operations and assets in the United States, Europe, the UK and China, as well as joint ventures and significant shareholders in China, from time to time we have received and responded to inquiries from these agencies. We may receive additional inquiries from, or be required to make filings with, these agencies in the future. Any of these agencies could delay or prevent us from participating in future investment, acquisition or joint venture opportunities, or could require us to take steps to address concerns identified by the regulatory agency with respect to existing investments or joint ventures. Each of these regulatory agencies has broad discretion to investigate and intervene in transactions that fall within the scope of their respective regulatory authority. In addition, CFIUS could intervene in our previously completed transactions and require us to modify or amend the terms of those transactions, or terminate or unwind all or part of the transactions, if CFIUS determines that it is necessary to address U.S. national security concerns, without regard to whether the transaction was completed and operated in accordance with applicable law. If these regulatory agencies modify, delay, prevent or terminate our participation in these investments, acquisitions and joint ventures, our results of operations or financial condition may be adversely impacted.

Exchange rate fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.

We report our financial results in United States dollars. Our operating expenditures are particularly affected by fluctuations in the exchange rate between the Canadian dollar and the United States dollar. We generate the majority of our revenues in United States dollars while the majority of our operating expenditures are incurred in Canadian dollars. As a result, any increase in the value of the Canadian dollar, relative to the United States dollar, increases the amount of reported operating expenditures in excess of any corresponding increase in revenues and gross margins. Exchange rate fluctuations are beyond our control, and the Canadian dollar may appreciate against the United States dollar in the future, which would result in higher operating expenditures and lower net income. In order to reduce the potential negative effect of a strengthening Canadian dollar, we occasionally enter into various hedging programs. Regardless, if the Canadian dollar increases in value, it will negatively affect our financial results and our competitive position compared to other fuel cell product manufacturers in jurisdictions where operating costs are lower.

Commodity price fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.

Commodity prices, in particular the price of platinum and palladium, affect our costs. Platinum and palladium are key components of our fuel cell products. Platinum and palladium are scarce natural resources and we are dependent upon a sufficient supply of these commodities. While we do not anticipate significant near or long-term shortages in the supply of platinum or palladium, such shortages could adversely affect our ability to produce commercially viable fuel cell products or significantly raise our cost of producing such products. In order to reduce the impact of platinum price fluctuations, we occasionally enter into various hedging programs. C

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.

We have a history of losses and negative cash flows and expect to incur continued losses and generate negative cash flow until we can produce sufficient revenues to cover our costs. We expect to incur continued losses and generate negative cash flow until we can produce sufficient revenues to cover our costs. Further, we are obligated to fund our pro rata share of the Weichai-Ballard JV based on an agreed business plan, and are obligated to fund HyCap and Clean H2 to our agreed upon contribution amount. We may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. There are substantial uncertainties associated with our achieving and sustaining profitability. We expect our cash reserves will be reduced due to future operating losses, working capital requirements and funding obligations to the Weichai-Ballard JV, and we cannot provide certainty as to how long our cash reserves will last or that we will be able to access additional capital if and 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.

Our business exposes us to potential product safety, product liability and similar claims that are inherent in electrical products, and in products that use hydrogen or hydrogen-rich reformate fuels. High-voltage electricity poses potential shock hazards, and hydrogen is a flammable gas and therefore a potentially dangerous fuel. Any accidents involving our products or other hydrogen-based products could materially impede widespread market acceptance and demand for our fuel cell products. Involvement in litigation could result in significant expense to us, adversely affecting the development and sales of our products, and diverting the efforts of our technical and management personnel, whether or not the litigation is resolved in our favour. In addition, we may be held responsible for damages beyond the scope of our insurance coverage. We also cannot predict whether we will be able to maintain our insurance coverage on acceptable terms.

Potential fluctuations in our financial and business results make forecasting difficult and may restrict our access to funding for our commercialization plan.

We expect our revenues and operating results to vary significantly from quarter to quarter. As a result, quarter-to-quarter comparisons of our revenues and operating results may not be meaningful. Due to the stage of development of our business, it is difficult to predict our future revenues or results of operations accurately. We are also subject to normal operating risks such as credit risks, foreign currency risks and fluctuations in commodity prices. As a result, it is possible that in one or more future quarters, our operating results may fall below the expectations of investors and securities analysts. Not meeting investor and security analyst expectations may materially and adversely impact the trading price of our common shares and restrict our ability to secure required funding to pursue our commercialization plans.

We could be liable for environmental damages resulting from our research, development or manufacturing operations.

Our business exposes us to the risk of harmful substances escaping into the environment, resulting in personal injury or loss of life, damage to or destruction of property, and natural resource damage. Depending on the nature of the claim, our current insurance policies may not adequately reimburse us for costs incurred in settling environmental damage claims, and in some instances, we may not be reimbursed at all. Our business is subject to numerous laws and regulations that govern environmental protection and human health and safety. These laws and regulations have changed frequently in the past and it is reasonable to expect additional and more stringent changes in the future. Our operations may not comply with future laws and regulations, and we may be required to make significant unanticipated capital and operating expenditures. If we fail to comply with applicable environmental laws and regulations, governmental authorities may seek to impose fines and penalties on us, or to revoke or deny the issuance or renewal of operating permits, and private parties may seek damages from us. Under those circumstances, we might be required to curtail or cease operations, conduct site remediation or other corrective action, or pay substantial damage claims.

ADDITIONAL INFORMATION

Additional information regarding Ballard may be found on SEDAR at www.sedar.com. In particular, additional information regarding directors' and officers' remuneration and indebtedness, principal holders of our securities and securities authorized for issuance under security compensation plans is contained in our information circular for our most recent annual meeting of securityholders that involved the election of directors. Additional financial information is provided in our financial statements and Management's Discussion and Analysis for the most recently completed financial year.

Copies of this Annual Information Form and the documents incorporated by reference herein, our comparative financial statements (including the auditors' report) for the year ended December 31, 2021, each interim financial statement issued after December 31, 2021, our management proxy circular and our Annual Report may be obtained upon request from our Corporate Secretary, 9000 Glenlyon Parkway, Burnaby, British Columbia, V5J 5J8, or on our website at www.ballard.com.

APPENDIX "A"

AUDIT COMMITTEE MANDATE

The Board has established an Audit Committee (the "**Committee**") to assist the Board in fulfilling its oversight responsibilities regarding the integrity of the Corporation's accounting and financial reporting, the Corporation's systems of internal controls over financial reporting, the independence and performance of the Corporation's external and internal auditors, the identification and management of the Corporation's risks, the Corporation's Whistleblower Reporting processes, the Corporation's financial policies and the review and approval of related party transactions, as further described below.

In this Mandate, the "**Corporation**" means Ballard Power Systems Inc. and a "**director**" means a member of the Corporation's board of directors (the "**Board**"). "**PCGCC**" means the Corporation's People, Corporate Governance & Compensation Committee.

Composition and Eligibility

A) The Committee will have a minimum of three members, including the chair of the Committee. Following each annual meeting of shareholders of the Corporation the Board, upon the recommendation of the PCGCC, will appoint the members of the Committee, including the Committee chair. Any member may be removed or replaced at any time by the Board and will cease to be a member upon ceasing to be a director of the Corporation. Each member will hold office until the close of the next annual meeting of shareholders of the Corporation or until the member resigns or is replaced, whichever occurs first.

B) Each member of the Committee will be an independent director as set out in applicable securities laws, rules and regulations, and standards of the stock exchanges on which the Corporation's securities are listed.

C) All members of the Committee will be financially literate, as defined in accordance with applicable securities laws, rules and regulations, and standards of the stock exchanges on which the Corporation's securities are listed.

D) At least one member of the Committee must be an audit committee "financial expert" as defined by applicable securities laws, rules and regulations.

E) Any member of the Committee who serves on more than three public company audit committees must inform the Chair of the Board, so that the Board may consider and discuss with such member any issues related to his or her effectiveness and time commitment.

Meetings & Quorum

A) The Committee will meet at least quarterly and otherwise as necessary. Any member of the Committee may request additional meetings.

B) Notice of the time and place of each meeting will be given to each member of the Committee either by telephone or other electronic means not less than 1 week before the time of the meeting. Meetings may be held at any time if all Committee members have

waived or are deemed to have waived notice of the meeting. A Committee member participating in a meeting will be deemed to have waived notice of the meeting.

C) The Board Chair will attend meetings of the Committee as an ex officio member. The Board Chair will be considered as a Committee member for purposes of establishing quorum and will be entitled to vote on matters considered at the meeting. Unless the Committee chair determines otherwise, any other directors who are not members of the Committee will not be allowed to attend meetings of the Committee.

D) The CEO, CFO, Controller and internal auditor will have direct access to the Committee and any of them may request a meeting of the Committee be called by notifying the chair of the Committee. They will receive notice of every meeting of the Committee and will normally be requested to attend, other than in cases where the Committee wishes to meet in-camera. Other executives or employees of the Corporation will attend at the request of the Committee Chair.

E) Meetings will be chaired by the Chair of the Committee, or if the Chair is absent, by a member chosen by the Committee from among themselves.

F) A majority of Committee members constitute a quorum necessary for the transaction of business at Committee meetings. A quorum once established is maintained even if members of the Committee leave the meeting prior to conclusion.

G) The Corporate Secretary or his or her nominee will act as Secretary to the Committee.

H) All decisions made by the Committee may be made at a Committee meeting or evidenced in writing and signed by all Committee members, which will be fully effective as if it had been made or passed at a Committee meeting.

I) As part of every regularly-scheduled meeting, the Committee will hold in-camera sessions with: (1) the external auditors and the internal auditors; (2) with the external auditors only; and (3) of the Committee itself, without management or management directors present. The Committee may also hold other in-camera sessions with such members of management present as the Committee deems appropriate.

J) The Committee will report to the Board on its meetings and each member of the Board will have access to the minutes of the Committee's meetings, regardless of whether the director is a member of the Committee.

Duties and Responsibilities

A) Financial Reporting Control Systems

The Committee is responsible for monitoring the quality and integrity of the Corporation's accounting and financial reporting process through discussions with management, the external auditors and the internal auditors.

In discharging this responsibility, the Committee will review:

(i) with management and the external auditors, the Company's significant accounting policies, including the impact of alternative accounting policies, and any proposed

changes thereto; and key management estimates, risks and judgments that could materially affect the financial results;

(ii) emerging accounting issues and their potential impact on the Company's financial reporting;

(iii) with management any significant changes in financial risks facing the Corporation;

(iv) management's report assessing the adequacy and effectiveness of the Corporation's disclosure controls and procedures and systems of internal control; and

(v) the evaluation by either the internal or external auditors of management's internal control systems, and management's responses to any identified deficiencies or weaknesses.

Prior to public disclosure, the Committee will review and approve (where authority has been delegated by Board to the Committee) or recommend to the Board for approval:

(i) the audited annual consolidated financial statements and unaudited interim condensed consolidated financial statements of the Corporation;

(ii) the interim and annual management's discussion and analysis of financial condition and results of operations (MD&A) of the Corporation; and

(iii) all other material financial public disclosure documents of the Company and those of its subsidiaries that are reporting issuers, including prospectuses, material press releases with financial results, the Annual Information Form and management information circular.

B) External Auditors

The external auditors will report directly to the Committee and the Committee will:

(i) recommend to the Board and the Corporation's shareholders the appointment of external auditors; determine their compensation; and monitor and evaluate their qualifications, resources, performance and independence;

(ii) oversee the work of the external auditors and review and approve the annual audit plan of the external auditors, including the scope of the audit to be performed, and performance against the audit plan;

(iii) pre-approve all audit, audit-related and non-audit services to be provided to the Corporation or any of its subsidiaries, by the external auditors (and its affiliates), in accordance with applicable securities laws, rules and regulations;

(iv) discuss with the external auditors the quality and acceptability of the Corporation's accounting policies, including:

a) all critical accounting policies and practices;

b) all alternative treatments of financial information that have been discussed with management, implications of their use and the external auditors' "preferred treatment";

c) any other material written communications between the external auditors and management;

(v) review reports of the external auditors;

(vi) review the quarterly and annual representation letters given by management to the external auditors;

(vii) at least annually, obtain and review a report by the external auditors describing:

a) the firm's internal quality-control procedures;

b) any material issues raised by the most recent internal quality control review, or peer review of the firm, or by any inquiry or investigation by governmental, regulatory or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the firm, and any steps taken to deal with such issues; and

c) all relationships between the external auditors and the Company;

(viii) annually assess and confirm the independence of the external auditors and require the external auditors to deliver an annual report to the Committee regarding its independence, and hold discussions with the external auditors as to any relationship or services that may impact their objectivity or independence;

(ix) ensure that the audit partners representing the external auditors meet the rotation requirements set out by applicable securities laws, rules and regulations, and standards of the stock exchanges on which the Corporation's securities are listed; and

(x) review and approve hiring policies regarding partners, employees and former partners and employees of current and former external auditors in accordance with applicable securities laws, rules and regulations and the Corporation's policies.

C) Monitoring Internal Auditors

The internal auditors will report quarterly to the Committee on the results of internal audit activities and will also have direct access to the chair of the Committee when the internal auditors determine it is necessary. The Committee will:

(i) annually approve the appointment of the internal auditor (or persons responsible for the function);

(ii) review the scope of responsibilities and effectiveness of the internal audit team, its reporting relationships, activities, organizational structure and resources, its independence from management and its working relationship with the external auditors;

(iii) oversee the work of the internal auditors including reviewing and approving the annual internal audit plan and updates thereto; and

(iv) review the reports of the internal auditors on the status of significant internal audit findings, recommendations and management's responses and review any other reports of the internal auditors.

D) Financial Management

The Committee will at least annually:

(i) review with management and approve, or make recommendations to the Board to approve, the Corporation's capital structure strategy; financial policies and investment policies, including debt and equity components; current and expected financial leverage, interest rate and foreign exchange exposures; taking in consideration current and future business needs (including the Annual Operating Plan), capital markets and the Corporation's credit rating; and

(ii) review compliance with financial policies.

E) Cybersecurity

The Committee will:

(i) oversee policies, procedures, plans and execution intended to provide security, confidentiality, availability and integrity of the Corporation's data, including personal information and customer and other third-party confidential information in the Corporation's possession or custody;

(ii) oversee the effectiveness of the Corporation's policies and procedures with respect to its information technology systems, including enterprise cybersecurity and privacy;

(iii) oversee policies and procedures of the Corporation in preparation for responding to any material incidents;

(iv) oversee the Corporation's compliance with applicable information security and data protection laws and industry standards, and oversee any internal audits of the Corporation's information technology systems and processes;

(v) review the Corporation's cyber insurance policies to ensure appropriate coverage;

F) Risk Management and Internal Controls

The Committee will:

(i) at least annually, review the Corporation's risk assessment and risk management policies, including the Corporation's insurance coverage, and management's compliance with them;

(ii) review with management, the external auditors and legal counsel, as necessary, any litigation, claim or other contingency, including any tax assessment, that could have a material effect upon the financial position or operating results of the Corporation

and the appropriateness of the disclosure thereof in the documents reviewed by the Committee;

(iii) review and recommend to the Board for approval of the Corporation's delegation of financial authority;

(iv) while ensuring confidentiality and anonymity, ensure management has established procedures for the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls or auditing matters or employee concerns regarding accounting or auditing matters or breaches of the Corporation's ethics policies ("Whistleblower Reporting");

(v) review quarterly reports on any Whistleblower Reporting complaints received by the Corporation;

(vi) at least annually, review management's compliance with the Corporation's ethics and Whistleblower Reporting policies;

(vii) review management's approach for safeguarding corporate assets, data and information systems, the adequacy of staffing of key financial functions (including succession plans for the Corporation's CFO and Controller) and their plans for improvements;

(viii) review the appointment of the financial senior executives of the Corporation, prior to recommendation by the PCGCC to the Board;

(ix) assist the Board with the oversight of the Corporation's compliance with applicable legal and regulatory requirements; and

(x) review other risk management matters from time to time as the Committee may consider suitable or the Board may specifically direct.

G) Related Party Transactions

A related party transaction is defined as a transaction or a series of transactions in which the Corporation or any of its subsidiaries is to be a party, which involves an amount exceeding U.S. $120,000 in aggregate and in which any of the following persons have a direct or indirect material interest:

- a director or executive officer of the Corporation;
- any nominee for election as a director of the Corporation;
- any security holder of the Corporation known by the Corporation to own (of record or beneficially) more than 5% of any class of the Corporation's voting securities; and
- any member of the immediate family of any of the foregoing persons.

In carrying out its responsibilities in reviewing and approving related party transactions, the Committee will:

(i) receive details of all related party transactions proposed by the Corporation, and actual and potential conflicts of interest relating thereto, to verify their propriety and that disclosure is appropriate;

(ii) if a valuation or fairness opinion is required by any applicable statutes or regulations, supervise the preparation of such valuation or fairness opinion; and

(iii) if approval of the Board of directors is necessary, provide a recommendation to the Board of directors with respect to the related party transaction.

H) Other

The Committee will:

(i) annually review the audit of the expense reports of the Chair of the Board of Directors and the CEO;

(ii) review the minutes of the Corporation's Disclosure Committee; and

(iii) evaluate, at least annually, the adequacy of this Mandate and the Committee's performance, and report its evaluation and any recommendations for change to the Board.

Authority

A) The Committee is authorized to request the presence, at any meeting, of senior management, legal counsel or anyone else who could contribute substantively to the subject of the meeting.

B) The Committee is empowered to investigate any activity of the Corporation and all employees are to co-operate as requested by the Committee. The Committee may retain outside advisors having special expertise to assist it in fulfilling its responsibilities, and determine the appropriate level of remuneration for such outside advisors.

C) The Committee may form and delegate authority to Committee members or subcommittees.

D) Nothing contained in the above mandate is intended to assign to the Audit Committee the Board's responsibility to ensure the Corporation's compliance with applicable laws or regulations or to expand applicable standards of liability under statutory or regulatory requirements for the directors or the members of the Audit Committee.

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, **R. Randall MacEwen,** certify that:

1. I have reviewed this annual report on Form 40-F of Ballard Power Systems Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: March 14, 2022

By: /s/ R. Randall MacEwen
Name: R. Randall MacEwen
President and Chief Executive Officer

Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, **Paul Dobson,** certify that:

1. I have reviewed this annual report on Form 40-F of Ballard Power Systems Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the issuer as of, and for, the periods presented in this report;

4. The issuer's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the issuer and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the issuer, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the issuer's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the issuer's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect the issuer's internal control over financial reporting; and

5. The issuer's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the issuer's auditors and the audit committee of the issuer's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the issuer's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the issuer's internal control over financial reporting.

Date: March 14, 2022

By: /s/ Paul Dobson
Name: Paul Dobson
Senior Vice President and Chief Financial Officer

Section 906 Certification

Certification Pursuant to
18 U.S.C. Section 1350

As Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the Annual Report on Form 40-F of Ballard Power Systems Inc., a corporation organized under the laws of British Columbia (the "Company"), for the period ending December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a) or 78o(d)); and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 14, 2022

/s/ R. Randall MacEwen

R. Randall MacEwen
President and Chief Executive Officer (principal executive officer)

Dated: March 14, 2022

/s/ Paul Dobson

Paul Dobson
Senior Vice President and Chief Financial Officer (principal financial officer)

KPMG LLP
PO Box 10426 777 Dunsmuir Street
Vancouver BC V7Y 1K23
Canada
Telephone (604) 692-3000
Fax (604) 691-3031

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Ballard Power Systems Inc.

We consent to the use of our report dated March 11, 2022, on the consolidated financial statements of Ballard Power Systems Inc. (the "Entity"), which comprise the consolidated statements of financial position as of December 31, 2021 and December 31, 2020, the related consolidated statements of loss and comprehensive income (loss), changes in equity and cash flows for each of the years in the two-year periods ended December 31, 2021, and the related notes, and our report dated March 11, 2022 on the effectiveness of the Entity's internal control over financial reporting as of December 31, 2021, each of which is included in the annual report on Form 40-F of the Entity for the fiscal year ended December 31, 2021.

We also consent to the incorporation by reference of such reports in the Registration Statements No. 333-225494, No. 333-161807 and No. 333-156553 on Form S-8 and No. 333-254584 on Form F-10 of Ballard Power Systems Inc.

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Chartered Professional Accountants

March 11, 2022
Vancouver, Canada

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