



BALLARD POWER SYSTEMS INC.  
ANNUAL INFORMATION FORM  
For the year ended December 31, 2022

Dated March 16, 2023

## TABLE OF CONTENTS

<u>CORPORATE STRUCTURE</u>	6
<u>Name, Address and Incorporation</u>	6
<u>Our Vision, Mission and Values</u>	6
<u>Intercorporate Relationships</u>	6
<u>Recent History</u>	8
<u>OUR BUSINESS</u>	18
<u>Strategy</u>	18
<u>Revenues from Market Segments</u>	20
<u>Our Markets, Products and Services</u>	20
<u>Products &amp; Service Overview</u>	20
<u>Fuel Cell Products and Services</u>	22
<u>Power Products Markets</u>	22
<u>Technology Solutions</u>	26
<u>Impact of Regulations and Public Policy</u>	27
<u>Workforce</u>	29
<u>Sustainability and ESG</u>	30
<u>Facilities</u>	31
<u>Manufacturing</u>	31
<u>Safety</u>	32
<u>Quality</u>	32
<u>Research and Product Development</u>	32
<u>Intellectual Property</u>	33
<u>Cybersecurity</u>	33
<u>SHARE CAPITAL AND MARKET FOR SECURITIES</u>	34
<u>DIVIDEND RECORD AND POLICY</u>	35
<u>ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTIONS ON TRANSFER</u>	35
<u>DIRECTORS AND OFFICERS</u>	35
<u>Board of Directors</u>	35
<u>Conflict of Interest</u>	37
<u>Executive Officers</u>	38
<u>Shareholdings of Directors and Executive Officers</u>	39
<u>AUDIT COMMITTEE MATTERS</u>	39
<u>Audit Committee Mandate</u>	39
<u>Composition of the Audit Committee</u>	39
<u>Audit Fees</u>	40
<u>Audit-Related Fees</u>	40
<u>Tax Fees</u>	40
<u>All Other Fees</u>	41
<u>LEGAL PROCEEDINGS</u>	41
<u>INTERESTS OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS</u>	41

<a href="#"><u>TRANSFER AGENT AND REGISTRAR</u></a>	<a href="#"><u>41</u></a>
<a href="#"><u>MATERIAL CONTRACTS</u></a>	<a href="#"><u>41</u></a>
<a href="#"><u>INTERESTS OF EXPERTS</u></a>	<a href="#"><u>43</u></a>
<a href="#"><u>RISK FACTORS</u></a>	<a href="#"><u>43</u></a>
<a href="#"><u>ADDITIONAL INFORMATION</u></a>	<a href="#"><u>58</u></a>
<a href="#"><u>APPENDIX "A" - AUDIT COMMITTEE MANDATE</u></a>	<a href="#"><u>59</u></a>

*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 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: challenges or delays in our technology, manufacturing and product development activities; our ability to extract value from joint venture operations; changes in the availability or price of raw materials, labour, supplies and shipping; costs of integration, and the integration failing to achieve the expected benefits of transactions; our ability to attract and retain business partners, suppliers, employees and customers; challenges or delays in our technology and product development activities; our ability to extract value from joint venture operations; changes in the availability or price of raw materials, labour, supplies and shipping; costs of integration, and the integration failing to achieve the expected benefits of the transaction; our ability to attract and retain business partners, suppliers, employees and customers; global economic trends and geopolitical risks (such as the conflict between Russia and Ukraine), 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; 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; changes in our customers’ requirements, the competitive environment and/or related market conditions; potential merger and acquisition activities, including risks related to integration, loss of key personnel and disruptions to*

*operations; warranty claims, product performance guarantees, or indemnification claims; changes in product or service pricing or cost; market developments or customer actions (including developments and actions arising from epidemics and 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; cybersecurity threat; our ability to protect our intellectual property; the severity, magnitude and duration of the on-going 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; climate risk; changing government or environmental regulations, including subsidies or incentives associated with the adoption of clean energy products, including hydrogen and fuel cells; currency fluctuations, including the magnitude of the rate of change of the Canadian dollar versus the U.S. dollar; 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; 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", "Company", "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, 2022.

## 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

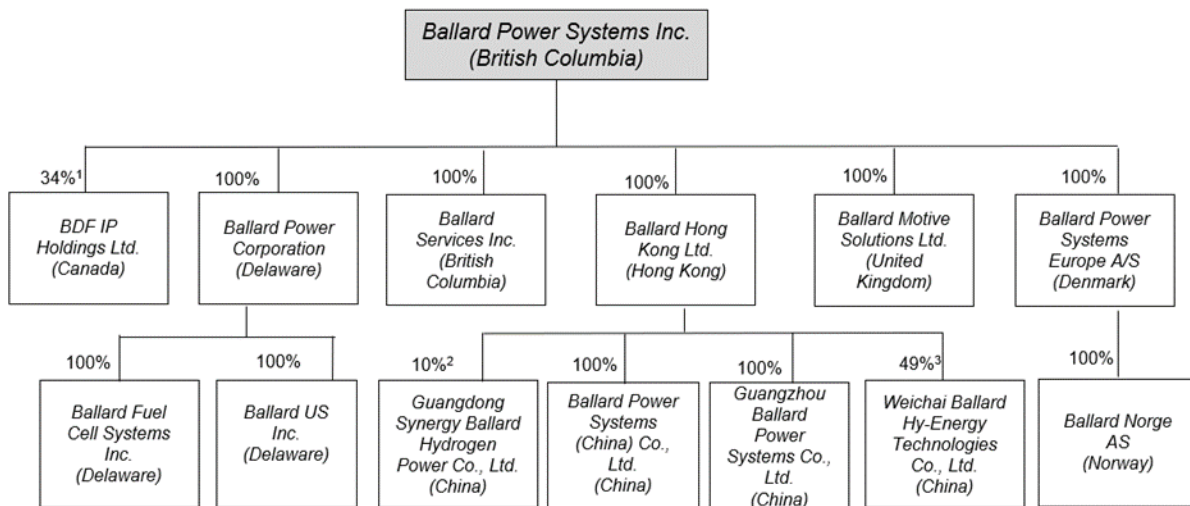
We have eleven subsidiaries and affiliates: (i) Ballard Power Corporation, a Delaware corporation that is a holding company; (ii) Ballard Fuel Cell Systems, Inc., a Delaware corporation that does certain development and manufacturing work, and provides certain services to customers; (iii) Ballard US Inc. (formerly Ballard Unmanned Systems Inc.), a Delaware corporation that is a dormant holding company; (iv) Ballard Power Systems Europe A/S (formerly Dantherm Power A/S) (“**Ballard Denmark**”), a Danish corporation that provides certain sales, assembly, manufacturing, commissioning, research and development, engineering services and after-sales service; (v) Ballard Norge AS, a Norwegian company that provides certain sales and after-sales services; (vi) BDF IP Holdings Ltd., a Canadian corporation that holds certain intellectual property assets; (vii) Ballard Services Inc., a British Columbia company that provides certain engineering services; (viii) Ballard Hong Kong Limited, a holding company

for certain assets in China; (ix) Guangzhou Ballard Power Systems Co., Ltd., a Chinese wholly foreign-owned entity, that provides certain sales, quality, supply chain and after-sales services; (x) Ballard Power Systems (China) Co. Ltd., a Chinese wholly foreign-owned entity that is a holding company; and (xi) Ballard Motive Solutions Ltd. (formerly Arcola Energy Ltd.) (“BMS”), a United Kingdom company which provides certain engineering consulting services relating to fuel cell systems and powertrain integration.

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 bipolar plates, stacks and power modules for bus, commercial truck and forklift applications with certain 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 Sino-Synergy Hydrogen Energy Technology (Jiaxing) Co., Ltd. (previously known as Guangdong Nation Synergy Hydrogen Power Technology Co. Ltd.) (“**Sino-Synergy**”) holding a 90% interest. The Synergy-Ballard JV’s business is to manufacture fuel cell products utilizing our FCvelocity®-9SSL fuel cell stack technology for use primarily in fuel cell engines assembled and sold in China.

The following chart shows these subsidiaries and affiliates, their respective jurisdictions of incorporation and our percentage of share ownership in each of them, all as of March 16, 2023:



Notes:

1. Ballard holds 100% of the non-voting, participating shares of BDF IP Holdings Ltd. and 34% of the voting, non-participating shares, along with each of Mercedes-Benz AG (33%) and Ford Motor Company (33%).
2. Ballard indirectly holds a 10% interest in Guangdong Synergy Ballard Hydrogen Power Co., Ltd. together with Sino-Synergy Hydrogen Energy Technology (Jiaxing) Co. Ltd. (90%).
3. Ballard indirectly holds a 49% interest in Weichai Ballard Hy-Energy Technologies Co., Ltd. together with Weichai Power Co., Ltd. (51%).

## 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 continue 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.

During 2022, we continued to incur COVID-19 administration costs and experienced certain COVID-19 supply chain disruptions. In our Technology Solutions business, there were deferrals of development work on certain of our programs in China 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.

### **Order from First Mode for 30 additional hydrogen fuels for diesel-free mining trucks**

On March 1, 2023, we announced a purchase order to supply First Mode with 30 hydrogen fuel cell modules – totaling 3 megawatts – to power several hybrid hydrogen and battery ultra-class mining haul trucks. This is the equivalent of approximately 4,000 horsepower.

The 30 Ballard hydrogen fuel cell modules are to be integrated into clean energy powerplants built in Seattle, Washington and installed into ultra-class haul trucks to be operated at First Mode’s Proving Grounds in Centralia, Washington. These trucks are estimated to save 2,600 tons of diesel fuel each year.

### **Order from CrossWind for Stationary Power Project**

On January 23, 2023, we announced an order for a fuel cell system to CrossWind, a joint venture between Shell and Eneco. The Ballard fuel cell system will be integrated in the Hollandse Kust Noord offshore wind project. The Hollandse Kust Noord offshore wind project, located off the coast of the Netherlands, will have a capacity of 759 MW to generate at least 3.3 TWh per year. Ballard will supply a containerized fuel cell power solution with a peak power capacity of 1 MW, with delivery expected in 2024.

### **Global manufacturing strategy update including plan to invest \$130 million in MEA manufacturing facility and R&D center in Shanghai, China**

On September 30, 2022, we announced our strategy ‘local for local’ where we plan to deepen our global manufacturing footprint in Europe, the United States, and China to support expected global market demand growth through 2030. As part of this strategy, we have entered into an investment agreement with the Government of Anting in Shanghai’s Jiading District to establish our new China headquarters, membrane electrode assembly (“MEA”) manufacturing facility, and a research and development (“R&D”) center, at a site strategically located at the Jiading Hydrogen Port, located in one of China’s leading automotive industry clusters.



Ballard plans to invest approximately \$130 million over the next three years (\$2.1 million was invested in fiscal 2022), which will enable annual production capacity at the new MEA production facility of approximately 13 million MEAs, which will supply approximately 20,000 engines. Ballard expects to be able to achieve significant capacity expansion of this facility in future phases with much lower capital requirements. The facility will also include space to assemble approximately 600 engines annually to support the production and sale of Ballard engines in the rail, marine, off-road and stationary markets in China, as well as for certain export markets.

During 2021, we completed our MEA manufacturing expansion in Canada, which is critical as the MEA is the core technology and limiting factor for Ballard's global fuel cell engine production capabilities. With the new MEA capacity coming online in China, we now expect our global MEA capacity to support total demand requirements through the second half of the decade.

This investment is expected to reduce MEA manufacturing costs, align with China's fuel cell value chain localization policy, and position Ballard more strongly in the hydrogen fuel cell demonstration cluster regions and for the post-subsidy market.

The facility is planned to be in operation in 2025 to meet expected market demand in China, including from the Weichai-Ballard JV for the bus, truck and forklift markets, as well as other opportunities in China outside the Weichai-Ballard JV scope and also to support Ballard's global development requirements.

We also expect to set up an R&D and innovation center at the same site. The center will be focused on MEA research to achieve key corporate technical advancements, support cost reduction initiatives, and engage the emerging China local supply chain for fuel cell materials and components.

We also announced the signing of a non-binding memorandum of understanding with Weichai whereby Weichai plans to make an equity investment for 2% of Ballard's new MEA manufacturing company.

### ***Ballard signs contract with Stadler to supply fuel cell engines to power first hydrogen train in United States***

On September 26, 2022, we announced an order from Stadler Rail AG (“**Stadler**”), a leading manufacturer of rolling stock, for the supply of six 100 kW FCmove™-HD+ fuel cell engines to power the first hydrogen train in the United States.

The contract to provide the hydrogen-powered train was awarded to Stadler by San Bernardino County Transportation Authority (SBCTA), with the option of additional trains in the future. The train is expected to be in service in San Bernardino, California in 2024 and is expected to seat over 100 passengers.

### ***Ballard to power India's first hydrogen trains***

On September 6, 2022, we announced a fuel cell module order from Medha Servo Drives (“**Medha**”), a leading rail system integrator, who has been contracted by Indian Railways to develop India's first hydrogen powered trains. The two retrofitted diesel-electric commuter trains will integrate 8 units of 100 kW FCmove™-HD+, Ballard's latest fuel cell technology,

which offers improved efficiency and power density than previous module generations. The contract to provide the hydrogen-powered trains was awarded to Medha as a first step in Indian Railways' path to achieve their net zero ambitions. The fuel cell modules are expected to be shipped in 2023, with trains scheduled to go into service in 2024, with potential for additional retrofits following the initial deployment.

### **Ballard partners with Wisdom Motor Company**

On May 9, 2022, we announced a strategic collaboration with Wisdom (Fujian) Motor Company Limited (“**Wisdom**”), Templewater Group (“**Templewater**”), and Bravo Transport Services Limited (“**Bravo**”) to accelerate the adoption of commercial fuel cell electric vehicles (“**FCEVs**”) in Hong Kong.

Templewater, an alternative asset management firm and parent company of Bravo, Hong Kong island's largest transit operator, together with Ballard, co-invested in a Series A funding for Wisdom, a technology company that designs and manufactures zero emission commercial vehicles. The Series A funds (including Ballard's \$10.0 million, 7% equity ownership contribution in the second quarter of 2022) will support Wisdom's organizational growth, R&D, and manufacturing platforms, including the expansion and development of its hydrogen zero emission fuel cell truck, bus, and specialty vehicle offerings for international markets.

Wisdom's hydrogen vehicle product lines are expected to exclusively deploy Ballard's world leading PEM fuel cell technology, with modules supplied by the Weichai-Ballard JV in China. Ballard intends to enter into a joint development agreement with Wisdom to advance the integration and optimization of its fuel cell electric powertrain designs and control strategies.

### **Ballard granted Type Approval by DNV for the FCwave™ marine fuel cell module**

On April 6, 2022, we announced the receipt of Europe's industry first Type Approval by DNV, one of the world's leading classification and certification bodies, for our marine fuel cell module FCwave™. The Type Approval marks an important step in commercializing Ballard's fuel cell technology for marine applications and is key to including fuel cells as part of zero-emission solutions for the marine industry. The Type Approval process is extensive, involving a series of simulations and tests which were carried out at Ballard's global Marine Center of Excellence in Hobro, Denmark, where the FCwave™ is developed and manufactured.

The International Maritime Organization has set ambitious targets to cut greenhouse gas (“**GHG**”) emissions from ships by at least 50% by 2050. The high-power FCwave™ module is a flexible solution that can support the energy needs of various vessel types as well as onshore power. The scalable 200kW power module offers a plug-and-play replacement for conventional diesel engines. The Type Approval certification confirms the design meets certain safety, functional, design and documentation requirements necessary for global marine commercialization.

### **Project 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.

On January 17, 2023, we announced the signing of an agreement to launch a pilot project to develop a hydrogen fuel cell electric truck (“FCET”) for mining logistics and transportation with Adani Enterprises Limited (“AEL”), part of the diversified Adani portfolio of companies, and Ashok Leyland.

This collaboration marks Asia’s first planned hydrogen powered mining truck. The demonstration project will be led by AEL, a company focused on both mining operations and developing green hydrogen projects for sourcing, transporting, and building out hydrogen refueling infrastructure. Ballard, an industry leading PEM fuel cell engine manufacturer, will supply the FCmove™ fuel cell engine for the hydrogen truck and Ashok Leyland, one of the largest manufacturers of buses in the world, will provide the vehicle platform and technical support. The FCET is scheduled to be launched in India in 2023.

**Ballard fuel cells installed onboard the world’s first liquid hydrogen-powered ferry**

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

**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.

**Acquisition of Arcola**

On November 11, 2021, we announced the acquisition of Arcola Energy Ltd. (“Arcola”) (now BMS), 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 an approximate valuation of US\$6 million at acquisition) 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.

During the fourth quarter of 2022, we completed a post-acquisition restructuring of the operations at BMS and recognized impairment charges on intangible assets of approximately \$13 million and restructuring related operating expenses of approximately \$5 million which included contract exit and modification costs, grant adjustment charges, personnel change costs, and legal and advisory costs, net of expected recoveries. Pursuant to this restructuring of operations, it was agreed to reduce the earn-out consideration by approximately \$10 million which resulted in a corresponding recovery on settlement of contingent consideration payable.

**Infrastructure Funds**

In 2021, we 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.

HyCap is 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 £7.2 million invested as of December 31, 2022) into HyCap.

Clean H2 is 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 €1.0 million invested as of December 31, 2022) into Clean H2.

**Ballard and Forsee Power SA (“Forsee Power”) 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 an 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 software 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.

The MOU was superseded by a Collaboration Agreement between the parties, dated December 14, 2022, pursuant to which the parties agreed to jointly approach new and existing customers with an integrated fuel cell and battery solution, integrate fuel cell and battery systems with software, develop and specific power electronics components for the integrated fuel cell and battery solution, and develop the integrated fuel cell and battery into a turn-key solution for customers.

**Ballard 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 (“**Quantron**”) 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.

On September 19, 2022, we announced a minority equity investment in Quantron. As part of Quantron’s financing round of up to 50 million Euros, Ballard’s investment proceeds (5 million Euros was contributed in the fourth quarter of 2022, resulting in an ownership interest of

1.89% in Quantron) are to be used by Quantron to develop their truck fuel cell vehicle platforms, under the terms of a Joint Development Agreement. Ballard is to be the exclusive fuel cell supplier to Quantron for these platforms.

In connection with our investment, Ballard has the right to appoint (and has appointed) a nominee to the Quantron AG board of directors.

As part of the strategic partnership, Quantron committed to purchase 140 FCmove™ modules totaling approximately 17MW, with an option to purchase an additional 50 units. The fuel cell modules are expected to be delivered in 2023 and 2024. Subsequent to the initial order, Quantron committed to purchase an additional 72 FCmove™ modules totaling approximately 3MW for delivery in 2023 and 2024. The zero-emission fuel cell electric vehicle platforms developed by Quantron are to integrate Ballard fuel cell products for various truck applications in Europe and the US.

### **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 (“**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.

On May 9, 2022, Ballard announced with Linamar the unveiling of its concept hydrogen fuel cell powered class 2 truck chassis. The technology demonstration platform was showcased at the ACT Expo displayed in a RAM 2500 truck chassis. Testing on the new platform is underway and will continue in 2023.

### **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. As of March 2023, the announced FCmove™-HD sales have been deployed in FCEBs across Europe.

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.

**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.

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

As part of the planned completion of the AUDI program, 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<sup>®</sup>-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<sup>®</sup>-HPS product, subject to certain royalty obligations.

The FCgen<sup>®</sup>-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<sup>®</sup>-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 our Unmanned Aerial Vehicle (“UAV”) business assets of Ballard Unmanned Systems Inc. to Honeywell International Inc. (“Honeywell”). All employees of Ballard Unmanned Systems Inc. transitioned to Honeywell Aerospace on the closing. In 2022, Ballard Unmanned Systems Inc. changed its name to Ballard US Inc., which is now a dormant holding company.

**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 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.

### **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 in 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.

On November 17, 2022 we announced another purchase order from Solaris for a further 25 70 kW heavy-duty FCmove™-HD fuel cell modules. These modules will be installed in Solaris' Urbino 12 hydrogen buses for deployment to Polish public transport operator MPK Poznań and are expected to be delivered in the second half of 2023. The buses are to be partially funded by the National Fund for Environmental Protection and Water Management's Green Public Transport program. MPK Poznań requires 30% of its fleet to be zero-emission by 2028. These 25 hydrogen fuel cell buses will increase its zero-emission fleet from 18% to 25%.

### **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 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.

**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 holds three of five Weichai-Ballard JV board seats and Ballard holds two, with Ballard having certain minority shareholder protections.

The Weichai-Ballard JV develops and manufactures fuel cell modules and components including Ballard's LCS bipolar plates, fuel cell stacks and FCgen<sup>®</sup>-LCS-based power modules for bus, commercial truck, and forklift applications with exclusive rights (subject to certain conditions) in China and is to pay Ballard a total of \$90 million under a Research and Development Agreement to develop and transfer technology to Weichai-Ballard JV in order to enable these manufacturing activities. Ballard retains 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<sup>®</sup>-LCS fuel cell stacks exclusively from Ballard under a long-term supply agreement.

The Weichai-Ballard JV operation, located in Weifang, Shandong Province, China, has commenced production activities of LCS bipolar plates, LCS fuel cell stacks and LCS-based modules to power bus and truck FCEVs for the China market. After recent production automation projects, the Weichai-Ballard JV is expected to have annual production capacity of 40,000 fuel cell stacks which equates to approximately 20,000 engines.

**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<sup>®</sup>-HPS product, subject to certain royalty obligations. This program has now been completed.

**Ballard Receives Orders to Power Siemens Mireo Plus H Passenger Trains and signs LOI for up to an additional 200 modules over the next six years**

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.

On September 22, 2022, we announced an order for 14 x 200 kW fuel cell modules from Siemens Mobility GmbH, to power a fleet of seven Mireo Plus H passenger trains. Delivery of the 14 fuel cell modules is expected to start in 2023 with the fleet planned to be in service in Berlin-Brandenburg region in late 2024.

In addition to the initial order of 14 fuel cell modules, Siemens Mobility also signed a letter of intent with Ballard for the supply of 200 fuel cell modules totaling 40 MW over the next six years, including a firm commitment on 100 of the fuel cell modules totaling 20MW. The modules will be used for Siemens' Mireo Plus H trains.

## **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, product and systems integration services, and related technology transfer for a variety of PEM fuel cell applications. With the acquisition of Arcola (now BMS) in 2021, Ballard now offers hydrogen fuel cell powertrain 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.

### **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. More specifically, our business plan is to leverage our core competencies of PEM fuel cell stack technology and engine development and manufacturing, our investments in advanced manufacturing and production capacity, and our product portfolio by marketing our products and services across select large and attractive addressable market applications and select geographic regions.

We typically select our target market applications based on use cases where the comparative user value proposition for PEM fuel cells powered by hydrogen are strongest – such as where operators value low emission vehicles that require high utilization, long driving range, heavy payload, fast refueling, and similar user experiences to legacy diesel vehicles – and where

the barriers to entry for hydrogen refueling infrastructure are lowest – such as use cases where fuel cell vehicles typically return to a depot or hydrogen hub for centralized refueling and don't require a distributed hydrogen refueling network. Our current target markets include certain medium- and heavy-duty mobility applications of bus, truck, rail and marine, along with certain off-road mobility and stationary power applications.

We select our target geographic markets based on a variety of factors, including addressable market sizes of the target market applications in the geographic markets, historic deployments and expected market adoption rates for hydrogen and fuel cells, supportive government policies, existing and potential partner, customer, and end user relationships, and competitive dynamics. Our current target markets are the geographic regions of China, Europe, and North America.

While we recognize addressing multiple market applications and geographic markets in parallel increases our near-term cost structure and investments, we believe offering the same core PEM fuel cell technologies and substantially similar derivative PEM fuel cell products across multiple mobility and power market applications and select geographic regions will significantly expand and strengthen our long-term business prospects by increasing volume scaling in our operations, enabling lower product and production costs for the benefit of all markets, improving our competitive positioning and market share, enabling richly diversified revenue streams and profit pools, and improving our return on investment in our technology and product development programs and our investments in manufacturing.

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 value to our customers and end users based on a total cost of ownership basis.
2. **Selectively expand across value chain:** extend across the value chain to capture control points, reduce technology adoption barriers, simplify, and optimize our customer offering, and accelerate fuel cell deployments.
3. **Develop new routes to market:** creatively explore partnerships and demonstration programs to accelerate hydrogen and fuel cell market adoption and grow volume for product sales.
4. **Win in key regions:** build a competitive platform in each of North America, Europe and China.
5. **Here for Life:** deliver a compelling environmental, social and governance (“ESG”) proposition for our stakeholders

In 2020 and 2021, we materially strengthened our financial position through equity financings, thereby providing additional flexibility to fund our growth strategy. Following these financings, given strong indicators of long-term market adoption of hydrogen and zero-emission mobility, given growing customer interest in our fuel cell products, given a growing opportunity set, and given an increasingly competitive environment, we strategically decided to significantly increase and accelerate our investments ahead of the adoption curve, including investments in our 5 key themes. As a result, we have increased and accelerated our investments in technology and product innovation, production capacity expansion and localization, strategic pricing for

select customer demonstration programs, customer experience, and corporate development investments. Our increased investments include significant investment in next generation products and technology, including our proprietary MEAs, bipolar plates, stacks, modules, and powertrain systems integration, including our acquisition of BMS; advanced manufacturing processes, technologies, equipment, and production localization activities in China, Europe, and the United States; 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 are included in our Technology Solutions and Heavy Duty Motive markets. For 2023, we anticipate reclassifying the results of our Fuel Cell Products and Services operating segment into certain power product market applications as well as the delivery of services.

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 2022 and 2021:

	2022	2021
<b>Revenues from Fuel Cell Products and Services</b>		
Percentage of total revenues	100%	100%
Portion representing sales to investees <sup>(1)</sup>	10.0%	37.0%
Portion representing sales to customers other than investees	90.0%	63.0%

Notes:

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:

1. **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<sup>®</sup>-9SSL fuel cell stacks and FCgen<sup>®</sup>-LCS fuel cell stacks, respectively.
2. **Fuel cell stacks:** We provide our proprietary FCgen<sup>®</sup> and FCveloCity<sup>®</sup> 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.

3. **Fuel cell modules:** We design and build, including specifying and procuring balance of plant components, self-contained FCveloCity<sup>®</sup> and FCmove<sup>™</sup> motive modules using our fuel cell stacks that are plug-and-play into commercial vehicle powertrains. We also design and build self-contained FCwave<sup>™</sup> modules designed for marine applications and FCrail<sup>™</sup> for rail applications. As a fuel cell module provider, we make it easier for OEMs and system integrators to create fuel cell powertrains.
4. **Fuel cell systems:** We also build complete fuel cell systems, FCgen<sup>®</sup>-H2PM and Cleargen<sup>™</sup> products, for stationary power markets that are designed to solve certain power needs of our customers, including back-up for critical infrastructure and MW distributed power generation.
5. **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.
6. **Technology Solutions:** We offer engineering services to our customers for special fuel cell product development.
7. **After Sales Services:** We offer our customers after sales services including in and out of warranty support, service contracts, spare part management, fleet monitoring and training.

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:

<b>Motive Power Product Family:</b>		
<b>Product Name</b>	<b>Application</b>	<b>Status</b>
FCgen <sup>®</sup> -LCS MEA	Fuel cell stacks for buses, commercial vehicles, light rail, and material handling	Sales to licensee (Weichai-Ballard JV)
FCveloCity <sup>®</sup> -9SSL MEA	Fuel cell stacks for buses, commercial vehicles, light rail, and material handling	Sales to licensee (Synergy-Ballard JV)
FCgen <sup>®</sup> -HPS stacks	Light-duty and heavy-duty commercial vehicles and passenger car	Sales to OEMs and system integrators
FCgen <sup>®</sup> -LCS stacks	Buses, commercial vehicles, light rail, and material handling	Sales to OEMs and system integrators
FCveloCity <sup>®</sup> -9SSL stacks	Buses, commercial vehicles, light rail, and material handling	Sales to OEMs and system integrators
FCgen <sup>®</sup> -1020ACS stacks	Material handling and backup power	Sales to OEMs and system integrators
FCveloCity <sup>®</sup> modules	Buses, commercial vehicles, and light rail	Sales to OEMs and system integrators
FCmove <sup>™</sup> modules	Buses, commercial vehicles, and light rail (legacy product range)	Sales to OEMs and system integrators
FCwave <sup>™</sup> modules	Marine, rail (freight locomotives) and stationary	Sales to OEMs and system integrators
FCrail <sup>™</sup>	Passenger rail application	Sales to OEMs and system integrators
Energy system controller and powertrain integration services	Energy system for bus and truck	Sales to demonstration projects in the UK and engineering services globally

<b>Stationary Power Product Family:</b>		
<b>Product Name</b>	<b>Application</b>	<b>Status</b>
FCgen <sup>®</sup> -1020ACS	Backup power	Sales to OEMs and system integrators
FCgen <sup>®</sup> -H2PM	Backup power systems	Sales to customers
ClearGen <sup>®</sup>	Distributed generation systems	Sales to customers and Integrators
FCgen <sup>®</sup> -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 50 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 50 kW to 100 kW to address different levels of battery/fuel cell hybridization and a variety of applications. In 2022, sales of the FCveloCity®-HD module were limited to some of 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. We presented at IAA Show in September 2022 the concept unit for FCmove™-XD (120/240kW) product which is being developed for heavy duty trucks (>19t and class 6-8).

In 2020, we introduced the FCwave™, a fuel cell module designed for certain marine applications. The FCwave™ 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 also started to sell FCwave™ products for stationary and rail applications.

Supported by Technology Solution program, we have developed for Siemens Mobility the 200kW FCrail™ product which has been integrated in the new Mireo Plus H2 regional passenger train.

By the end of 2022, fuel cell electric vehicles in commercial heavy-duty and medium-duty motive applications powered by Ballard technology surpassed an estimated total of 150 million kilometers.

## **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. (“**Plug Power**”), 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 are also seeing the emergence of product offerings for hydrogen internal combustion engines developed by companies like Cummins Inc. and J C Bamford Excavators Ltd. This technology is seen as a bridge between internal combustion engines and hydrogen mobility. Through modification of existing diesel engines, it allows the use of hydrogen as a fuel leading to CO<sub>2</sub> emission reduction. However, the fact it does not meet zero emission requirements (NO<sub>x</sub> emissions) and lower efficiency compared to fuel cells (-15%) will likely be a serious handicap for long term viability.

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<sup>®</sup>-9SSL stack, which is applicable to Class 1, Class 2 and Class 3 forklift truck solutions, the FCveloCity<sup>®</sup>-1020ACS stack for Class 3 material handling applications, and the FCgen<sup>®</sup>-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<sup>®</sup>-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<sup>®</sup>-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 infrastructure including data centres.

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 Inc. at a Microsoft data center in the US as well as distributed power generation project with HDF Energy.

### **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 Alteryx, CHEM, Plug Power, SFC Energy, Powercell, 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 2022, 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. This program has now been completed.

In 2022, 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<sup>®</sup>-LCS fuel cell stack and FCgen<sup>®</sup>-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, Bosch, 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 GHG emission reduction goals, the integration of renewables, as well as the opportunity for economic growth and green recovery plans. Interest and investment in hydrogen is increasing globally, as governments across the globe continue to adopt national hydrogen strategies. The Hydrogen Council reported in 2022 that 684 large-scale project proposals worth \$240 billion have been announced.

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.

In 2022, more than \$1.6 billion was allocated through the Federal Transit Administration's (the "FTA") Low and No Emission Grants and the Bus and Bus Facilities Grants; this funding supported investment in 150 transit fleets and facilities throughout the United States with more than 1,100 vehicles being zero-emission.

The Inflation Reduction Act was signed into law by President Biden in August 2022, and represents a \$369 billion investment in the modernization of the American energy system.

Among other things, the broad bill includes a hydrogen production tax credit (up to \$3/kg of hydrogen produced at a given facility, based on the carbon intensity of production ) It is intended to make technologies, like green hydrogen and carbon capture, profitable in large scale improving business case for hydrogen mobility and deployment of fuel cell applications.

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 transit bus 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 California for fuel cell trucks and buses.

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, decarbonized and fully integrated energy systems. Together with the Hydrogen Alliance, it will contribute to the achievement of the European Union’s objectives put forward in the EU hydrogen strategy for a climate-neutral Europe.

Within those European Union policies, hydrogen is identified as one of the key technologies to achieve decarbonization and European energy security as part of the REPowerEU plan published in 2022. The plan sets targets of 10Mt of locally produced renewable hydrogen and 10Mt of imports by 2030. In addition, through the REPowerEU plan, the European Commission allocated an additional €200 million to the Clean Hydrogen Partnership to double the number of Hydrogen Valleys in Europe by 2025. Other recent EU

legislative initiatives include the Renewable Energy Directive revision, the new Fuel EU Maritime, and the Alternative Fuel Infrastructure Regulation.

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 August 2021, the Canadian government announced the creation of the Zero Emission Transit Fund, which will allocate \$2.75 billion to ZEBs over five years with a goal of deploying 5,000 ZEBs.

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 March 2022, the National Development and Reform Commission (NDRC) and National Energy Administration (NEA) jointly released the country's first mid to long-term plan for implementing and developing hydrogen usage in China, stretching until 2035. According to the plan, the projected volume for renewable-based hydrogen is aimed to reach within the range 100,000-200,000 tons annually by 2025.

## **Workforce**

As of December 31, 2022, we had 1,296 employees in Canada, the United States, the European Union, the United Kingdom 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, people & culture, 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.

## **Sustainability and ESG**

Our strategic theme of Here for Life™ connotes our purpose to decarbonize mobility, to mitigate the existential threat of climate change, and pass on to the next generation a more livable planet. By focusing on sustainable ESG practices and transparency, Ballard strives to ensure that we, our customers, partners and suppliers continue to maximize our positive impact on the world around us.

In late 2021, we conducted our first stakeholder-informed materiality assessment and used this to drive the focus of our ESG strategy. Ballard is focused on accelerating the impact of the energy transition by delivering our fuel cell products to the market and doing so in a manner that seeks to minimize the negative impact on the environment. We are also focused on attracting, engaging and retaining the right talent, energizing our workforce through a diverse, equitable and inclusive culture, continuing our unwavering commitment to health and safety and using strong governance practice to support risk-adjusted decision making and maximize value creation.

In 2022, we continued our “Mission Carbon Zero” initiative; a multi-year approach to reduce our environmental impact and achieve carbon neutrality by 2030. Through this initiative we developed an implementation plan and roadmap identifying the material initiatives that will support a reduced carbon footprint and accelerate the avoidance of emissions as our business grows.

The Sustainability and Governance Committee (“**S&G Committee**”) of the Board has the responsibility of overseeing our environmental, health and safety performance . The S&G Committee is composed of Ballard directors and its mandate is further described in the charter of such committee, included on Ballard’s website. Certain risk mitigation strategies, such as periodic audits, employee training programs and emergency plans and procedures, are in place to minimize the environmental risks. Our climate-related disclosures are available in our CDP reports and our ESG Reports, all available on our website [www.ballard.com](http://www.ballard.com) in the “Sustainability at Ballard” section. Our governance documents and committee charters are available on Ballard’s website [www.ballard.com](http://www.ballard.com) in the “Investors” section under “Governance”.

### ***Environmental Policy***

Ballard is committed to supporting the delivery of fuel cell solutions while seeking to mitigate our negative environmental impact and ensuring compliance with applicable regulatory requirements. Consequently, we have implemented comprehensive environmental management programs with half of our operating sites (including our most material production facilities), third-party certified under ISO 14001, and plans to certify the remaining. We strive to contribute to the protection of the environment by integrating environmental priorities into our overall business plan and through the specific monitoring and measurement of such priorities against historical performance and, in some cases, specific targets.

### ***Social Policies***

Ballard maintains a (i) comprehensive Code of Ethics, (ii) a Diversity and Inclusion Policy, and (iii) a Harassment, Workplace Bullying & Anti-discrimination Policy. These policies affirm Ballard’s commitment to preventing harassment and discrimination against any employee



or applicant based on grounds of religion, race, sex, nationality, disability or any other basis protected by law, ordinance or regulation. The policies extend to recruitment, selection and compensation practices, as well as to working conditions and the work environment. Internal complaint resolution procedures have been established whereby any person covered by these policies can contact their people and culture business partner or manager who will address their complaint. We encourage our employees to report any situation that appears to involve a breach of the company's ethical or legal obligations and have engaged a third-party to receive anonymous reports or allegations of wrongdoing, and they can be contacted on a confidential basis.

## **Facilities**

We currently have facilities in Canada, Denmark, the United Kingdom, USA, and China, including the following facilities: (a) 260,024 ft<sup>2</sup> (24,157 m<sup>2</sup>) of leased facilities in Burnaby, British Columbia that house our corporate headquarters and our fuel cell development, manufacturing, assembly and testing activities; (b) 18,202 ft<sup>2</sup> (1,691 m<sup>2</sup>) of leased facilities in Hobro, Denmark that house certain engineering, manufacturing, sales and service activities; (c) 4,607 ft<sup>2</sup> (428 m<sup>2</sup>) of leased facilities in England that house certain of our office facilities; and (d) 26,000 ft<sup>2</sup> (2,415 m<sup>2</sup>) of leased facilities in Bend, Oregon that house certain of our assembly and testing facilities. The Weichai-Ballard JV's operations in Weifang, Shandong Province, China are conducted in an approximately 150,000 ft<sup>2</sup> (14,000 m<sup>2</sup>) facility. The Synergy-Ballard JV's operations in Yunfu, China occupies approximately 40,000 ft<sup>2</sup> (3,700 m<sup>2</sup>) of a purpose built 120,000 ft<sup>2</sup> (11,000 m<sup>2</sup>) facility dedicated to fuel cell stack and module assembly.

As noted in the Recent History section, Ballard plans to open a new MEA production and R&D facility in Shanghai's Jiading District.

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 five facilities – three in Burnaby, British Columbia, Canada, one in Hobro, Denmark, and one in Bend, Oregon, USA. Along with these facilities, the Weichai-Ballard JV, of which Ballard has a 49% interest, manufactures Ballard's FCgen<sup>®</sup>-LCS fuel cell stack and FCgen<sup>®</sup>-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<sup>®</sup>-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<sup>™</sup> marine power modules, FCgen<sup>®</sup> stationary power modules and backup power systems in Hobro, Denmark. The Bend facility will manufacture and test certain motive modules primarily for the US market.

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 2022, 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 Management Leadership and Commitment, Hazard Identification and Control, Training and Instruction, Emergency Preparedness, Workplace Inspections, Accident Investigations, and Health and Safety Administration. Conformance to these systems is ensured through our Integrated Management System.

We continued to meet the requirements of ISO 45001 – Occupational Health and Safety certification in certain of our Burnaby and United Kingdom 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 Weichai-Ballard JV in Weifang, Shandong Province, China and the Synergy-Ballard JV in Yunfu, China each carry the IATF16949 certification. Our Hobro facility carries the ISO9001:2015 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 16, 2023, Ballard owns or controls: 38 United States granted patents; 104 non-United States granted patents; 4 United States published patent applications; and 23 published non-United States patent applications. Our patents will expire between April 2023 and September 2040.

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 16, 2023, approximately 90 of the patents and patent applications that were included in these licenses, 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.

### 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 16, 2023, our issued share capital consisted of 298,443,438 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 2022:

	TSX		NASDAQ	
	Price Range (C\$)	Average Daily Volume (#)	Price Range (US\$)	Average Daily Volume (#)
January	\$11.39 - \$15.98	1,306,762	\$8.94 - \$12.63	1,248,414
February	\$11.28 - \$14.50	1,223,832	\$8.86 - \$11.42	1,173,693
March	\$12.36 - \$15.38	1,299,149	\$9.74 - \$12.40	1,331,931
April	\$10.65 - \$15.50	1,339,153	\$8.30 - \$11.94	966,522
May	\$7.87 - \$11.67	2,563,145	\$6.04 - \$8.35	1,311,390
June	\$7.55 - \$9.50	1,122,004	\$5.83 - \$7.57	991,261
July	\$8.21 - \$11.38	1,133,762	\$6.32 - \$8.88	1,127,878
August	\$9.45 - \$11.45	1,000,369	\$7.19 - \$8.97	836,786
September	\$8.26 - \$10.50	814,690	\$5.95 - \$8.02	745,310
October	\$6.94 - \$7.85	1,209,579	\$5.14 - \$5.73	983,805
November	\$7.35 - \$8.54	836,404	\$5.39 - \$6.43	847,444
December	\$6.09 - \$7.99	1,223,699	\$4.47 - \$5.91	876,428

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 foreseeable 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 December 31, 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 and the period of time each has served as a director.

Name and Province/ State of Residence <sup>(1)</sup>	Office <sup>(1)</sup>	Principal Occupations and Positions During the Last Five Years	Director Since
<b>Kathy Bayless</b>  California, USA	Director	Ms. Bayless' principal occupation is corporate director. Ms. Bayless is a member of the Board and Audit Committee Chair of Veeco Instruments Inc. ( <i>electronics manufacturing equipment</i> ). 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.	2021
<b>Douglas P. Hayhurst</b>  British Columbia, Canada	Director	Mr. Hayhurst's principal occupation is corporate director. Previously, Mr. Hayhurst was executive Global Industry Leader with IBM Canada Business Consulting Services ( <i>consulting services</i> ) and with PricewaterhouseCoopers Management Consultants ( <i>consulting services</i> ). 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.	2012
<b>Kui (Kevin) Jiang</b>  Shandong, China	Director	Mr. Jiang is President of Shandong Heavy Industry Group Co., Ltd. ( <i>heavy machinery manufacturing</i> ). He is also a non-executive director of Weichai Power Co., Ltd. ( <i>diesel engine, powertrain and hydraulic products manufacturing</i> ), a supervisor of KION Group AG ( <i>intralogistics, warehouse solutions and industrial trucks</i> ), and a director of Shantui Construction Machinery Co., Ltd. ( <i>heavy machinery manufacturing</i> ). Previously, Mr. Jiang was deputy general manager of Shandong Bulldozer General Factory ( <i>heavy machinery manufacturing</i> ); deputy general manager of Shantui Construction Machinery Import and Export Company ( <i>heavy machinery</i> ); a director and senior officer of Shantui Engineering Machinery Co., Ltd. ( <i>heavy machinery</i> ); deputy general manager of Shandong Engineering Machinery Group Co., Ltd. ( <i>heavy machinery</i> ); executive deputy general manager and vice chairman of Weichai Group Holdings Limited, ( <i>diesel engine manufacturing</i> ); and chairman of Shanzhong Jianji Co., Ltd. ( <i>heavy machinery</i> ). He is an engineer and holds an MBA degree.	2019
<b>Duy-Loan Le<sup>(2)</sup></b>  Texas, USA	Director	Ms. Le is President of DLE Management Consulting LLC ( <i>management consulting services</i> ), a position she has held since 2016. Previously, Ms. Le was an advanced technology ramp manager and a Senior Fellow at Texas Instruments Incorporated ( <i>semiconductor design and manufacturing</i> ) 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.	2017

Name and Province/ State of Residence <sup>(1)</sup>	Office <sup>(1)</sup>	Principal Occupations and Positions During the Last Five Years	Director Since
<b>R. Randall (Randy) MacEwen</b>  British Columbia, Canada	Director, President & Chief Executive Officer	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 ( <i>consulting services</i> ) from 2010 to 2014; and President & CEO and Executive Vice President, Corporate Development at Solar Integrated Technologies, Inc. ( <i>solar</i> ) 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 ( <i>onsite hydrogen generation systems</i> ) from 2001 to 2005; and an associate at Torys LLP ( <i>law firm</i> ) from 1997 to 2001.	2014
<b>Hubertus M. Muehlhaeuser</b>  Switzerland	Director	Mr. Muehlhaeuser is Chairman & CEO of Pontem Corporation ( <i>special purpose acquisition company</i> ) and Chairman of Kelvion Ltd. ( <i>heat exchangers</i> ). Previously Mr. Muehlhaeuser was CEO and Executive Director at CNH Industrial N.V. ( <i>agricultural equipment</i> ), CEO and Executive Director at Welbilt Inc. ( <i>food and beverage equipment</i> ) and Sr. Vice President and General Manager at AGCO Corporation ( <i>agricultural equipment</i> ).	2021
<b>Marty Neese</b>  California, USA	Director	Mr. Neese is CEO of Verdagy Inc. ( <i>electrolysis and hydrogen production</i> ). He is also co-founder of Nuvosil AS ( <i>silicon recycling</i> ). Previously, he was Chief Operating Officer of Velodyne LiDAR, Inc. ( <i>autonomous vehicles</i> ) from February 2017 to October 2017. Prior to that, Mr. Neese was Chief Operating Officer of SunPower Corporation ( <i>solar power equipment and services</i> ) from 2008 to 2017; responsible for Global Operations at Flextronics ( <i>electronics manufacturing services</i> ) from 2007 to 2008 following its acquisition of Solectron Corporation ( <i>electronics manufacturing services</i> ) where he was Executive Vice President from 2004 to 2007.	2015
<b>James Roche</b> Ontario, Canada	Director	Mr. Roche is founder, President & Chief Executive Officer of Stratford Managers Corporation ( <i>management consulting services</i> ), a position he has held since 2008. Prior to that, Mr. Roche was co-founder, President and Chief Executive Officer of Tundra Semiconductor ( <i>semiconductor component manufacturer</i> ) from 1995 to 2006 and founding member and executive at Newbridge Networks Corporation ( <i>communications equipment manufacturer</i> ) from 1986 to 1995.	2015
<b>Shaojun (Sherman) Sun</b>  Shandong, China	Director	Mr. Sun is an Executive Director and Executive President of Weichai Power Co., Ltd. ( <i>diesel engine, powertrain and hydraulic products manufacturing</i> ), a director of Weichai Group Holdings Limited ( <i>diesel engine manufacturing</i> ), Vice Chair of Power Solutions International Inc. ( <i>cleantech engine and powertrain manufacturing</i> ), and an executive director of Sinotruck (Hong Kong) Limited ( <i>heavy-duty truck manufacturing</i> ). Previously, Mr. Sun was supervisor and chief engineer at Weifang Diesel Engine Factory ( <i>diesel engine manufacturing</i> ) and director of Torch Automobile Group Co., Ltd. ( <i>heavy machinery and automotive manufacturing</i> ). He holds doctorate degree in engineering.	2019
<b>Janet Woodruff</b>  British Columbia, Canada	Director	Ms. Woodruff's principal occupation is corporate director. Previously, Ms. Woodruff served as acting CEO to the Transportation Investment Corporation ( <i>transportation infrastructure management</i> ) 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 ( <i>public utility</i> ) from 2010 to 2011; Interim President (2009-2010) and Vice President, Corporate Services and Chief Financial Officer (2007-2008) of BC Transmission Corporation ( <i>electricity transmission infrastructure</i> ); and Chief Financial Officer and Vice President, Systems Development and Performance of Vancouver Coastal Health ( <i>regional health authority</i> ) from 2003 to 2007.	2017

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. Duy-Loan Le retired from the Ballard Board of Directors effective February 28, 2023. Ms. Duy-Loan Le had been a director since 2017.

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 four committees: (i) the Audit Committee; (ii) the Commercial Committee; (iii) Sustainability & Governance Committee, and (iv) the People & Compensation Committee. The Audit Committee members are Ms. Bayless, Mr. Hayhurst (chair), Mr. Roche and Ms. Woodruff. The Commercial Committee members are Mr. Muehlhaeuser, Mr. Neese (chair) and Mr. Roche. The Sustainability & Governance Committee members are Ms. Woodruff (chair), Ms. Bayless, Mr. Neese and Mr. Roche. The People & Compensation Committee members are Mr. Hayhurst, Mr. Muehlhaeuser(chair), Mr. Roche and Ms. Woodruff. As part of our corporate governance policy, directors who are appointed by shareholders pursuant to agreements with the Corporation are not eligible to serve on board committees. As a result, Mr. Jiang and Mr. Sun do not serve on any committees as they are appointed by Weichai.

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 16, 2023, we had seven 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
Mark Biznek Florida, USA	Chief Operating Officer	Executive officer of Ballard. Formerly Chief Transformation Officer (2021 – 2023), General Manager of Marine & Electronic Solutions (2020-2021), and Vice President – Strategic Operations (2018-2020) at Kohler Power Systems.
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 Florida, USA	Senior Vice President and Chief Financial Officer	Executive officer of Ballard. Formerly Interim CEO and Chief Financial Officer at Hydro One (2018 to 2019).
Mircea Gradu British Columbia, Canada	Senior Vice President and Chief Engineering Officer	Executive officer of Ballard. Formerly Senior Vice President Automotive Programs, Product and Quality at Velodyne Lidar, Inc. (2017-2022)
R. Randall (Randy) MacEwen British Columbia, Canada	President and Chief Executive Officer	Executive of Ballard.
David Mucciacciaro Michigan, USA	Senior Vice President and Chief Commercial Officer	Executive officer of Ballard. Formerly Vice President Global Sales, Strategy and Product Line at Magna International, Magna Electronics (2018-2022)
Sarbjot (Jyoti) Sidhu British Columbia, Canada	Senior Vice President and Chief People Officer	Senior officer of Ballard. Formerly Senior Vice President, Operations of Ballard.

## Shareholdings of Directors and Executive Officers

As of March 16, 2023, our directors and executive officers, as a group, beneficially owned, or controlled or directed, directly or indirectly, 437,184 of our common shares, being less than 1% of our issued and outstanding common shares.

## 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	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.



Name	Independent?	Financially Literate?	Relevant Education and Experience
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 2022 and 2021 for audit and non-audit related work, all of which were approved by the Audit Committee:

Type of Audit Fees	2022 (C\$)	2021 (C\$)
Audit	\$913,430	\$855,287 <sup>(1)</sup>
Audit-Related Fees	Nil	Nil
Tax Fees	Nil	Nil
All Other Fees	Nil	Nil

Notes:

1. Restated 2021 for additional out-of-scope services

### 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 2022 and 2021.

### Tax Fees

There were no fees paid to KPMG LLP that would be considered "Tax Fees" in 2022 or 2021.



## **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 2022.

## **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 March 16, 2023, Weichai beneficially owns (through its wholly-owned subsidiary, Weichai Power Hong Kong International Development Co., Limited (“**Weichai HK**”)) owns approximately 15.5% of Ballard’s common shares.

The Weichai-Ballard JV has exclusive rights to manufacturer Ballard’s next generation LCS fuel cell stack and LCS-based modules for bus, commercial truck and forklift markets 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, 9<sup>th</sup> 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.

### **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<sup>®</sup>-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.

## **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, 2022 and 2021. 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, 2022. 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 Weichai-Ballard JV and the Synergy-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 as a result of the COVID-19 pandemic 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 epidemics and pandemics; the impacts of climate change on transportation networks and suppliers manufacturing facilities; and economic sanctions or embargoes.

**We are dependent upon Original Equipment Manufacturers (“OEMs”) 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 MEAs to our Chinese joint ventures for manufacturing fuel cell modules they sell to bus and truck OEMs in China. 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.

**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 are planning to establish a regional headquarters, MEA manufacturing facility and R&D center in China for the first time. We have limited experience developing and manufacturing products that meet foreign regulatory and commercial requirements in our target markets.

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.**

We face numerous challenges in our international business activities, including restrictions on the conversion of currencies; restrictions on repatriation of funds; nationalization and expropriation; war, insurrection, civil unrest, strikes and other political risks; negotiation of contracts with government entities; unexpected changes in regulatory and other legal requirements; delays or inability to obtain permits; fluctuations in exchange rates; longer accounts receivable requirements and collections; difficulties in managing international operations; potentially adverse tax consequences; and added risks and uncertainties due to different economic, cultural and political environments.

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.

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

**Certain of our customer supply agreements are subject to certain conditions or risks, including achievement of certain product performance milestones, completion of product development programs, or customer cancellation provisions.**

Certain of our customer supply agreements are subject to certain conditions or risks, including achievement of certain product performance milestones, completion of product development programs, or customer cancellation provisions, and it is likely that some future supply agreements will also be subject to similar conditions and risks. There can be no assurance that we will achieve or satisfy the conditions or that customers will not cancel their orders. In addition, our supply agreements may include various pricing structures or reduced pricing tiers based on various factors, including volumes and timing. In setting these reduced pricing tiers, we may assume certain future product cost reductions which are subject to execution risk, including future commodity costs, supply chain costs, and production costs, and we may not be successful in achieving the planned cost reductions. In such circumstances, these agreements may become future onerous contracts if our gross margins become negative, and the value of carried inventory to support product delivery under such contracts may also be adversely impacted. This could have a material and adverse effect on our business operations, financial reporting, financial condition and results of operations.

**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.**

While our operations have not been, and are unlikely to be, directly impacted by the current conflict between Ukraine and Russia, the conflict and international response has, and may continue to have, wide-ranging impacts to the global economy and markets. The duration and outcome of the conflict remains uncertain, and could continue to fuel, or exacerbate global tensions, energy and other commodity shortages, supply chain disruptions, inflationary pressures,

weakening sentiment and growth prospects, market volatility, cyberattacks, and the proliferation of sanctions and trade measures.

The implications of the conflict in Ukraine are difficult to predict with any certainty at this time and there remains uncertainty relating to the potential impact of the conflict on our business, our joint ventures, our key suppliers, and/or customers, and it could have a material and adverse effect on our business operations, financial reporting, financial condition and results of operations. Depending on the extent, duration, and severity of the conflict, it may have the effect of heightening many of the other risks described herein.

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. Tensions remain elevated between China and the U.S. and its allies over a number of issues, and the prospect of closer relations between China and Russia add further global and economic uncertainty. 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.

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 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.

**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 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 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.

**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 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.

**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 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 continued magnitude, outcome and duration of epidemics and pandemics are difficult to accurately assess, but their impacts 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 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.

**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.

**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.

Like many industries, the hydrogen and fuel cell industries use perfluoroalkyl and polyfluoroalkyl compounds (“PFAs”) in products, including materials and components of PEM fuel cells and electrolyzers. There are accelerating regulatory trends focused on reducing or eliminating the presence of PFAs in the environment. While we are working with our supply base to eliminate the use of PFAs in materials and components used in our fuel cell products, including our membrane electrode assemblies, there can be no assurance that our suppliers would be able to successfully achieve reductions of PFAs if required to comply with future regulatory requirements.

Government budgetary constraints could reduce the demand for our products by restricting the funding available for green hydrogen production and/or zero-emission products like those that we produce. 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.

**We expect our cash reserves will be reduced due to future operating losses, working capital requirements, capital expenditures, 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 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 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.

**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.

**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 reformat 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.

**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 the Canadian Securities Administrator's SEDAR website at [www.sedar.com](http://www.sedar.com) and on the United States Securities and Exchange Commission's EDGAR website at [www.sec.gov](http://www.sec.gov). 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, 2022, each interim financial statement issued after December 31, 2022, 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](http://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**”). “**SGC**” means the Corporation’s Sustainability & Governance 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 SGC, 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) 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;
- (vii) review the appointment of the financial senior executives of the Corporation, prior to recommendation by the SGC to the Board;
- (viii) assist the Board with the oversight of the Corporation's compliance with applicable legal and regulatory requirements; and
- (ix) 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.