

C0. Introduction

C0.1

**(C0.1) Give a general description and introduction to your organization.**

Ballard is recognized as a world leader in proton exchange membrane (“PEM”) fuel cell development and commercialization. Our principal business is the design, development, manufacture, sale and service of fuel cell products for a variety of applications. We 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. We provide our customers with the positive economic and environmental benefits unique to fuel cell power.

C0.2

**(C0.2) State the start and end date of the year for which you are reporting data.**

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

**(C0.3) Select the countries/areas in which you operate.**

- Canada
- China
- Denmark
- Germany
- Norway
- United Kingdom of Great Britain and Northern Ireland
- United States of America

C0.4

**(C0.4) Select the currency used for all financial information disclosed throughout your response.**

USD

C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.**

Operational control

C0.8

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	CA0585861085

C1. Governance

C1.1

**(C1.1) Is there board-level oversight of climate-related issues within your organization?**

Yes

**C1.1a**

**(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board-level committee	<p>Sustainability &amp; Governance Committee (the "Committee") assists the Board in fulfilling its oversight responsibilities regarding certain environmental, social and governance ("ESG") matters, including (i) developing and implementing the Corporation's corporate governance principles and practices; (ii) overseeing policies and practices relating to ESG and other public policy matters relevant to the Corporation; and (iii) the nomination, assessment and compensation of directors.</p> <p>Actions taken and decisions made in the reporting period include the requirement for the development of a carbon neutral by 2030 roadmap, the approval of additional internal resources to develop a carbon neutral by 2030 roadmap, approval for the addition of new internal resources to drive climate and sustainability initiatives, and the establishment of a standing committee to address climate and sustainability oversight.</p>

**C1.1b**

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding business plans Overseeing major capital expenditures, acquisitions and divestitures	<Not Applicable>	The board reviews a report from management regarding strategic risks and opportunities, including climate-related risks/opportunities on an annual basis. Government action related to climate change, such as clean energy subsidies and emissions targets, are reported on a quarterly basis.

**C1.1d**

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	No, but we plan to address this within the next two years	<Not Applicable>	Other, please specify (In Progress)	Ballard is undergoing an assessment of its competency requirements.

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Sustainability committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Environmental, Health, and Safety manager	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

CEO reports directly to the board

Sustainability Committee - We have a cross-functional team of 30+ members from all levels within the organization, from vice presidents to front line employees. The committee is focused activities on main contributors to our GHG emission at BPS (Burnaby campus) and BPSE (Hobro).

They are responsible for:

1. Evaluating our current environmental impact as an organization and for our products
2. Developing the plan and strategy with targets to reduce year after year our impact print towards a "carbon neutrality" ultimate goal
3. Reporting progress on regular basis to the executive team
4. Defining long term objectives and short term actions with associated budget to be included in our AOP every year
5. Communicating internally and externally on our sustainability efforts and get buy-in from the entire organization

Environmental, Health and Safety Director reports directly to the SVP of Operations, which reports to directly to the CEO.

### C1.3

**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

	Provide incentives for the management of climate-related issues	Comment
Row 1	No, not currently but we plan to introduce them in the next two years	Included in Ballard's 2022 Corporate Scorecard is an implementation plan in 2022 that enables Ballard to achieve carbon neutrality by 2030.

## C2. Risks and opportunities

### C2.1

**(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?**

Yes

### C2.1a

**(C2.1a) How does your organization define short-, medium- and long-term time horizons?**

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	6	
Long-term	6	10	

### C2.1b

**(C2.1b) How does your organization define substantive financial or strategic impact on your business?**

Ballard defines substantive financial or strategic impact from climate-related risks as an impact on margin targets (50-80% reduction compared to target), a material cash impact to the business (\$100M-\$250M), long-term reduction in market share or share price, or product delivery delay of 3-6 months.

Ballard has established an Enterprise Risk Management (ERM) program to evaluate and mitigate the risks associated with physical and transition climate-related risks. A risk map, considering likelihood and impact severity, is used to evaluate and prioritize the identified risks. The process involves categorizing risks according to their impact on a scale of 1 (minimal) to 5 (critical) in four categories: financial, operational, brand & reputation, and people. Risks are then rated according to their likelihood on a scale of 1 (rare) to 5 (almost certain). These two ratings are used to produce a risk score, evaluated from low (<6) to critical (≥16), with the risk response escalating depending on the severity of the score.

### C2.2

**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

**Value chain stage(s) covered**

Direct operations

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

More than once a year

**Time horizon(s) covered**

Short-term

Medium-term

Long-term

**Description of process**

Cross-organizational senior leadership teams are responsible for key risk identification and mitigation in respect of our annual operating plans. The teams meet regularly to reprioritize and reallocate resources as needed based on the current situational analysis and risk management practices embedded into our operating procedures and policies.

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**Value chain stage(s) covered**

Upstream

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

Annually

**Time horizon(s) covered**

Short-term

**Description of process**

We perform a customer level risk assessment and sensitivity analysis during the annual operating plan process. This risk assessment focuses on the potential economic impacts to the plan in the event of potential customer issues or a customer failure as well as the more general potential economic impacts to the overall operating plan.

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**Value chain stage(s) covered**

Direct operations

Upstream

Downstream

**Risk management process**

Integrated into multi-disciplinary company-wide risk management process

**Frequency of assessment**

Annually

**Time horizon(s) covered**

Short-term

Medium-term

**Description of process**

Key strategic risks and mitigations are assessed and reviewed annually with the board.

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**C2.2a**

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**(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?**

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	Regulations that support transitioning to a lower-carbon economy creates opportunities for us and may increase demand for zero-emission products like those that we produce. For example, the Regulation (EU) 2019/1242 setting CO2 emission standards for heavy-duty vehicles includes a mechanism to incentivize the uptake of zero- and low-emission vehicles, which benefits sales of our products for heavy-duty vehicle applications.
Emerging regulation	Relevant, always included	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 favoring 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.
Technology	Relevant, always included	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 and advanced batteries.
Legal	Relevant, always included	Zero-emission products like those that we produce support transitioning to a lower-carbon economy. Our business is not likely to be subject to climate-related litigation claims.
Market	Relevant, always included	Regulations that support transitioning to a lower-carbon economy creates opportunities for us and may increase demand for zero-emission products like those that we produce. 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 favoring alternative technologies.
Reputation	Relevant, always included	Ballard has a strong commitment to the environment, as our mission is to deliver fuel cell power for a sustainable planet. 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 favoring 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.
Acute physical	Relevant, always included	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.
Chronic physical	Relevant, always included	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.

**C2.3**

**(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.3a**

**(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Risk 1

**Where in the value chain does the risk driver occur?**

Upstream

**Risk type & Primary climate-related risk driver**

Market	Increased cost of raw materials
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**Primary potential financial impact**

Increased direct costs

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

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.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

US Government DOE cost targets indicate precious metals make up roughly 6% of a fuel cell module cost at high volumes. This percentage however is significantly lower today as the stack components of the module are further down their cost reduction plan path than are the system balance of plant components. The impact on profitability would be directly proportional to the magnitude of commodity price fluctuation.

**Cost of response to risk****Description of response and explanation of cost calculation**

In order to reduce the impact of platinum price fluctuations, we occasionally enter into various hedging programs. In addition technology development efforts continue in the pursuit of lower platinum requirement and / or the substitution of non-noble metal catalysts.

**Comment****Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Legal	Exposure to litigation
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**Primary potential financial impact**

Increased indirect (operating) costs

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

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.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

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.

**Cost of response to risk****Description of response and explanation of cost calculation**

Ballard is committed to improving our understanding of the climate impacts of our products and operations, reducing our corporate and product carbon footprints, reducing our waste and energy consumption and responsible production.

**Comment****Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type & Primary climate-related risk driver**

Acute physical	Storm (including blizzards, dust, and sandstorms)
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**Primary potential financial impact**

Decreased revenues due to reduced production capacity

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

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.

**Time horizon**

Medium-term

**Likelihood**

More likely than not

**Magnitude of impact**

Medium-low

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

Revenue impact would be aligned with the duration and location of the outage. Loss of a Top 10 customer production facility could reduce year total revenue in the range of 5%-10%. Shutdown of the Burnaby production facility would have a more significant impact as it would effect all customers.

**Cost of response to risk****Description of response and explanation of cost calculation**

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.

**Comment****Identifier**

Risk 4

**Where in the value chain does the risk driver occur?**

Upstream

**Risk type & Primary climate-related risk driver**

Market	Other, please specify (Supply Chain)
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**Primary potential financial impact**

Decreased revenues due to reduced production capacity

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**Company-specific description**

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. Supply chains could be further disrupted in the future by factors beyond our control including through climate change impacts on transportation networks and suppliers manufacturing facilities.

**Time horizon**

Medium-term

**Likelihood**

Unlikely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

Ballard relies on its suppliers for various materials or components. If comparable materials or components are unable to be sourced from alternative suppliers, it could adversely affect our ability to produce viable fuel cell products or significantly raise our cost of producing such products. The impact on revenue would be directly proportional to the supply gap.

**Cost of response to risk**

**Description of response and explanation of cost calculation**

Ballard mitigates this risk by maintaining its relationships with existing suppliers. As the processes that our suppliers use to manufacture specific materials and components may be proprietary, we may be unable to obtain comparable materials or components from alternative suppliers. In cases where diversification is possible, Ballard sources its materials and components from a variety of suppliers.

**Comment**

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C2.4

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**(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

C2.4a

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**(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.**

**Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Upstream

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development and/or expansion of low emission goods and services

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Changes in existing government regulations and the emergence of new regulations with respect to fuel cell products may increase the market for our products and services. Environmental laws and regulations have driven interest in fuel cells. We anticipate that these laws and policies, including subsidies or incentives associated with the adoption of clean energy products, will encourage the selection of our products. Changes in these laws and other laws and policies, and as these laws and policies become more widespread, could result in manufacturers increasing their interest in fuel cell products. In addition, as fuel cell products are introduced into our target markets, governments may impose requirements and restrictions on the use of carbon intensive products that could positively impact demand for some or all of our products and services. Government budgetary choices could increase the demand for our products by increasing the funding available to public transportation agencies and military.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

14000000

**Potential financial impact figure – maximum (currency)**

160000000

**Explanation of financial impact figure**

This is an estimate of total operating expense.

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

**Comment**

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**Identifier**

Opp2

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**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Markets

**Primary climate-related opportunity driver**

Access to new markets

**Primary potential financial impact**

Increased revenues through access to new and emerging markets

**Company-specific description**

The market requirements for our products and, by extension, our technology changes rapidly. Continuous improvements are being made for any number of characteristics, including performance, integration characteristics, cost, freeze protection, ingress protection, and durability. As our existing products evolve through continuous improvement and our planned products enter the market, we will be able to access new and emerging markets. An example of this is the various classes and uses of trucks (light, medium and heavy duty). Changing regulations also increase the requirements for zero-emission propulsion in new markets, creating demand for our products in new markets, such as marine vessels.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure****Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation****Comment****Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Resilience

**Primary climate-related opportunity driver**

Other, please specify (Green Bonds )

**Primary potential financial impact**

Increased access to capital

**Company-specific description**

We have the ability to issue Green Bonds to provide access to additional capital. A green bond is a type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental projects.

**Time horizon**

Unknown

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure****Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

**Comment**

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**Identifier**

Opp4

**Where in the value chain does the opportunity occur?**

Downstream

**Opportunity type**

Markets

**Primary climate-related opportunity driver**

Use of public-sector incentives

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Increasingly, we are seeing government intervention to encourage more electric vehicle uptake on the supply side with demand-side policies. Zero-emission vehicle mandates and incentives are driving demand and decreasing the price of vehicles.

**Time horizon**

Short-term

**Likelihood**

Very likely

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

**Comment**

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**Identifier**

Opp5

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Development of climate adaptation, resilience and insurance risk solutions

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Failure of critical infrastructure, such as the telecommunications network, can have broad-reaching consequences. Furthermore, increasing reliance infrastructure system interdependence, in combination with the effects of climate change and population growth all contribute to increasing vulnerability and exposure, and greater probability of catastrophic failures. To reduce this vulnerability, telecom companies are investing in zero-emission backup power sources to ensure network availability in the event of a natural disaster or extended power outage.

**Time horizon**

Short-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

**Comment**

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**Identifier**

Opp6

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Shift in consumer preferences

**Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

**Company-specific description**

Customers' electric vehicle preferences are shifting. The share of global customers that would consider purchasing an electric vehicle is on the rise. A recent industry report indicates that all sustainable vehicle platforms the report studied are seeing a growth in fleet use across medium- and heavy-duty fleet sectors. Furthermore, 98% of fleets surveyed expect to continue the same level or increase their use of sustainable vehicle technologies and fuels. While transit agencies are leading adopters of natural gas, BEVs, and even FCEVs, almost every medium- and heavy-duty fleet type the report assessed is using at least one of these clean technologies in growing numbers including delivery, school bus, refuse, and heavy-duty short haul fleets.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium

**Are you able to provide a potential financial impact figure?**

No, we do not have this figure

**Potential financial impact figure (currency)**

<Not Applicable>

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

**Cost to realize opportunity**

**Strategy to realize opportunity and explanation of cost calculation**

**Comment**

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C3. Business Strategy

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C3.1

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**(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

**Row 1**

**Transition plan**

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

**Publicly available transition plan**

<Not Applicable>

**Mechanism by which feedback is collected from shareholders on your transition plan**

<Not Applicable>

**Description of feedback mechanism**

<Not Applicable>

**Frequency of feedback collection**

<Not Applicable>

**Attach any relevant documents which detail your transition plan (optional)**

<Not Applicable>

**Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**

Ballard considers climate-related risks and opportunities as they impact financial and strategic business impacts, and is planning to align this assessment with a 1.5°C world within the next two years.

**Explain why climate-related risks and opportunities have not influenced your strategy**

<Not Applicable>

**C3.2**

**(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?**

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	No, but we anticipate using qualitative and/or quantitative analysis in the next two years	Lack of internal resources	Ballard plans to use climate-related scenario analysis and its potential impacts on our existing risk and opportunity assessment.

**C3.3**

**(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.**

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Ballard-powered buses, trains, trucks, and soon boats are displacing thousands of diesel and gas engines. Our products are lowering global GHG gas emissions, and increasing the livability of urban areas by helping to enable the transition to vehicles with zero tailpipe emissions.  The time horizon is up to 2030.
Supply chain and/or value chain	Yes	Design and procurement strategy is driving for longer life components which need to be replaced fewer times over the lifetime of the vehicle. Example: FCvelocity fuel cell air compressor is low cost but needs to be replaced 3 to 5 times over lifetime of vehicle, new FCmove fuel cell air compressor is more expensive to buy but does not need to be replaced over the lifetime of the vehicle and is more efficient in air flow distribution meaning we can also reduce components in the fuel cell module.  The time horizon is up to 2030.
Investment in R&D	Yes	Sustainability is a priority in product development at Ballard, just as important as performance enhancements and cost reduction. As reported in the 2020 ESG Report, the latest generation of our heavy-duty power module produces 1.2 metric tons less of GHGs than previous designs. That's roughly equivalent to driving an average passenger car 5,000 kilometers – all achieved through product design efforts.  The new design of FCmove™-HD contains 50% fewer components and less platinum, while delivering the same reliable, robust performance to power buses and trucks. Its cradle-to-gate GHGs total 5,172 kg of carbon dioxide equivalent (kgCO2e), which is 1,243 kgs CO2e less than the previous generation FCveloCity™-HD85.  The time horizon is up to 2030.
Operations	Yes	Our primary mission is to enable a worldwide reduction of dependence on high-emission diesel and gas engines. But we also need to ensure our zero-emission powertrains are developed sustainably. So we focus on our internal procedures and technologies, to minimize our GHG impacts from "cradle-to-gate".  Our corporate GHG inventory, developed annually with Offsetters Clean Technology, which helps us quantify, track and reduce the carbon footprint of our operations in Canada and Europe.  The time horizon is up to 2030.

**C3.4**

**(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.**

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues	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 HeavyDuty Motive (consisting of bus, truck, rail and marine applications), Material Handling and Backup Power, as well as the delivery of Technology Solutions. A fuel cell is an environmentally clean electrochemical device that combines hydrogen fuel with oxygen (from the air) to produce electricity. The time horizon is 10 years for planning of revenue.

**C4. Targets and performance**

**C4.1**

**(C4.1) Did you have an emissions target that was active in the reporting year?**

Intensity target

**C4.1b**

**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Year target was set**

2019

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

Scope 3

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 9: Downstream transportation and distribution

**Intensity metric**

Metric tons CO2e per unit FTE employee

**Base year**

2018

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

2.03

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

0.4

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

6.87

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

9.3

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

100

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

100

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

100

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2022

**Targeted reduction from base year (%)**

**Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]**

8.37

**% change anticipated in absolute Scope 1+2 emissions**

10

**% change anticipated in absolute Scope 3 emissions**

10

**Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)**

1.36

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

0.21

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

5.07

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

6.64

**% of target achieved relative to base year [auto-calculated]**

286.021505376344

**Target status in reporting year**

Achieved

**Is this a science-based target?**

No, but we anticipate setting one in the next 2 years

**Target ambition**

&lt;Not Applicable&gt;

**Please explain target coverage and identify any exclusions**

To hold off some of the worst climate impacts, and avoid irreversible damage to our societies, economies and the natural world, we must hold temperature rise to 1.5°C above pre-industrial levels. This requires halving greenhouse gas emissions by 2030 and hitting net-zero emissions by 2050. At Ballard we have committed to being Carbon Neutral by 2030. Our scope 2 emissions are 95% from renewable sources, ahead of the targets set by the science Based Targets initiative. We are looking at ways to reduce diesel fueled vehicles in our European operations. We participate in programs to reduce our scope two emissions including scan-energi in our Hobro location and BC Hydro in our Canadian operations to complete energy audits and devise action plans to reduce our electrical consumption.

**Plan for achieving target, and progress made to the end of the reporting year**

&lt;Not Applicable&gt;

**List the emissions reduction initiatives which contributed most to achieving this target**

Energy efficiency improvements, shipping using lower carbon intensity options (on a kg/t-km basis)

**C4.2****(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

No other climate-related targets

**C4.3****(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a****(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	2022.3
To be implemented*	0	0
Implementation commenced*	1	1252.9
Implemented*	9	1.52
Not to be implemented	0	0

**C4.3b****(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.****Initiative category & Initiative type**

Energy efficiency in buildings	Building Energy Management Systems (BEMS)
--------------------------------	-------------------------------------------

**Estimated annual CO2e savings (metric tonnes CO2e)**

0.01

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

60

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Reduce hot water tank set point to minimize overheating; upgrades to the BEMS software to improve usability.

**Initiative category & Initiative type**

Energy efficiency in buildings	Lighting
--------------------------------	----------

**Estimated annual CO2e savings (metric tonnes CO2e)**

0.74

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

5300

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Implemented campaign to turn off lighting when rooms not in use; implemented lighting on/delamp/off scheduling for plant areas that are not used 24/7.

**Initiative category & Initiative type**

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--------------------------------------------------

**Estimated annual CO2e savings (metric tonnes CO2e)**

0.77

**Scope(s) or Scope 3 category(ies) where emissions savings occur**

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

5500

**Investment required (unit currency – as specified in C0.4)**

0

**Payback period**

No payback

**Estimated lifetime of the initiative**

Ongoing

**Comment**

Lowered thermostat set point from 24C to 22C; DDC scheduling improvements for office and non-production spaces including exhaust fan scheduling and reducing HVAC set points in the plant area; implemented an air compressor set point pressure reduction and introduced a behavioral campaign to educate employees about high cost of compressed air energy; optimized chiller operations and increased the preventive maintenance to improve the chiller efficiency and reduce the kw/ton water cooled; evaluate the compressed air desiccant dryer purge air consumption.

C4.3c

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Dedicated budget for low-carbon product R&D	Ballard's Technology Solutions team provides customers with high-value services to accelerate fuel cell development and deployment efforts. From product development, to testing Services and Stations, to Licensing and Technology Transfer. We also complete systems design & Integration and Component Design & Manufacturing.
Employee engagement	Ballard has a mission carbon zero team that includes representatives from both management and employees. Their objectives are to: <ul style="list-style-type: none"> <li>-Contribute to de-carbonization of economy and COP21 objectives with zero emission power solutions</li> <li>-Generate sustainable local workplaces</li> <li>-Limit our environmental impact while delivering on our business objectives</li> <li>-Develop an environmental conscious culture</li> <li>-Contribute to the talent development within clean technology sector</li> <li>-Provide an attractive economic value proposition to our customers</li> <li>-Market potential with profitable outlook for Ballard shareholders</li> </ul>
Dedicated budget for energy efficiency	Working with BC Hydro, our scope 2 electrical utility we continue to target reducing energy usage throughout our facilities, we are committed to eliminating wasted energy, without negatively affecting our product development, testing, or manufacturing capacity.

C4.5

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

C4.5a

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The IEA Energy Technology Perspectives Clean Energy Technology Guide

**Type of product(s) or service(s)**

Road	Hydrogen fuel cell
------	--------------------

**Description of product(s) or service(s)**

Ballard's motive modules for heavy duty vehicles lead the fuel cell industry in performance, durability, life cycle cost and overall road experience. FCmove™, the latest platform for heavy duty power modules based on the FCgen®-LCS stack, is the culmination of more than 8 generations of product development at Ballard. The FCmove™ platform offer a compact, fully integrated, robust fuel cell power solution with impressive reduction in total life cycle cost. Available at 70kW and 100kW, FCmove™ products are specifically designed to meet the requirements of commercial vehicle operators.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

<Not Applicable>

**Functional unit used**

<Not Applicable>

**Reference product/service or baseline scenario used**

<Not Applicable>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

<Not Applicable>

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

<Not Applicable>

**Explain your calculation of avoided emissions, including any assumptions**

<Not Applicable>

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

100

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, an acquisition

Name of organization(s) acquired, divested from, or merged with

Arcola Energy Limited

Details of structural change(s), including completion dates

Completion in November 2021. Ballard has acquired 100% of Arcola.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because we do not have the data yet and plan to recalculate next year	The inclusion of acquisition will be recalculated in the first full fiscal year, when data becomes available.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO2e)

1277

Comment

Scope 2 (location-based)

Base year start

January 1 2018

Base year end

December 31 2018

Base year emissions (metric tons CO2e)

223

Comment

**Scope 2 (market-based)**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

187

**Comment**

**Scope 3 category 1: Purchased goods and services**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 2: Capital goods**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

1280

**Comment**

This include purchased hydrogen fuel.

**Scope 3 category 4: Upstream transportation and distribution**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

802

**Comment**

**Scope 3 category 5: Waste generated in operations**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

43

**Comment**

This includes waste & recycling, paper, and water usage.

**Scope 3 category 6: Business travel**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

1403

**Comment**

This includes air travel, hotels, and reimbursed driving.

**Scope 3 category 7: Employee commuting**

**Base year start**

January 1 2018

**Base year end**

December 31 2018

**Base year emissions (metric tons CO2e)**

790

**Comment**

**Scope 3 category 8: Upstream leased assets**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 9: Downstream transportation and distribution**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 10: Processing of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 11: Use of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 12: End of life treatment of sold products**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 13: Downstream leased assets**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 14: Franchises**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3 category 15: Investments**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

C5.3

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**(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.**

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

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C6.1

---

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

1445.6

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

C6.2

---

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

The electrical grid in British Columbia is relatively clean, since energy is mainly generated at hydroelectric facilities; therefore, the province's GHG emissions associated with electricity consumption tend to be lower than in many other jurisdictions.

C6.3

---

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

226

**Scope 2, market-based (if applicable)**

246

**Start date**

<Not Applicable>

**End date**

<Not Applicable>

**Comment**

**C6.4**

---

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

No

**C6.5**

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**(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

6.1

**Emissions calculation methodology**

Site-specific method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

This category includes purchased nitrogen. A life cycle assessment was used to calculate the emissions intensity of nitrogen using a liquid air separation and cryogenic storage & transport.

Calculation of emissions associated with additional manufactured and raw goods is in progress.

**Capital goods**

**Evaluation status**

Relevant, not yet calculated

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Calculation of emissions associated with capital goods is in progress.

**Fuel-and-energy-related activities (not included in Scope 1 or 2)**

**Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)**

2247

**Emissions calculation methodology**

Fuel-based method

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Please explain**

The total consumption of hydrogen was included in this category. Emissions were calculated using the National Renewable Energy Laboratory's emission factor based on a life cycle assessment of hydrogen production via natural gas steam reforming.

## Upstream transportation and distribution

### Evaluation status

Relevant, not yet calculated

### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Please explain

Calculation of emissions associated with capital goods is in progress.

## Waste generated in operations

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

125.6

### Emissions calculation methodology

Waste-type-specific method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

This category includes waste & recycling, paper, and water.

For waste & recycling, the UK Government GHG Conversion Factors for Company Reporting emission factor was used based on a kgCO2e per tonne of waste generated.

For paper, the Paper Calculator developed by the Environmental Paper Network was used based on a lbCO2e per tonne of paper consumed. For water, the UK

Government GHG Conversion Factors for Company Reporting emission factor was used based on a kgCO2e per m3 of water consumed.

## Business travel

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

268.5

### Emissions calculation methodology

Supplier-specific method

Average spend-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

### Please explain

This category includes air travel, hotels, reimbursed driving, and trains, buses, and ferries.

For air travel, the travel agencies provided emissions estimates; in cases where, flights were booked independently, an average spend method was used. For hotels, the

UK Government GHG Conversion Factors for Company Reporting emission factor was used based on a kgCO2e per night. For reimbursed driving, the BC Methodological

Guidance for Quantifying Greenhouse Gas Emissions emission factor was used based on a kgCO2e per vehicle kilometre traveled was used. For trains, buses, and ferries,

the UK Government GHG Conversion Factors for Company Reporting emission factor was used based on a kgCO2e per passenger kilometre.

## Employee commuting

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

790.9

### Emissions calculation methodology

Average data method

Distance-based method

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Please explain

Emission estimates were based on the results of an employee reported commuting survey based on method of transport and distance commuted.

#### Upstream leased assets

##### Evaluation status

Not relevant, explanation provided

##### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

##### Emissions calculation methodology

<Not Applicable>

##### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

##### Please explain

Ballard did not own upstream leased assets in the reporting year.

#### Downstream transportation and distribution

##### Evaluation status

Relevant, calculated

##### Emissions in reporting year (metric tons CO2e)

1542.3

##### Emissions calculation methodology

Supplier-specific method

Distance-based method

##### Percentage of emissions calculated using data obtained from suppliers or value chain partners

40

##### Please explain

The shipping weight, distance, and shipment method was used to calculate emissions. Emissions provided by the logistics provider were compared against kgCO2e per tonne-km emission factors developed for the UK Government GHG Conversion Factors for Company Reporting. The most conservative value was selected was subsequently selected for reporting.

#### Processing of sold products

##### Evaluation status

Relevant, not yet calculated

##### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

##### Emissions calculation methodology

<Not Applicable>

##### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

##### Please explain

Calculation of emissions associated with processing of sold products is in progress.

#### Use of sold products

##### Evaluation status

Relevant, not yet calculated

##### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

##### Emissions calculation methodology

<Not Applicable>

##### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

##### Please explain

Calculation of emissions associated with use of sold products is in progress.

#### End of life treatment of sold products

##### Evaluation status

Relevant, not yet calculated

##### Emissions in reporting year (metric tons CO2e)

<Not Applicable>

##### Emissions calculation methodology

<Not Applicable>

##### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

##### Please explain

Calculation of emissions associated with end of life treatment of sold products is in progress.

#### Downstream leased assets

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Ballard did not own downstream leased assets in the reporting year.

#### Franchises

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Ballard did not own franchises in the reporting year.

#### Investments

**Evaluation status**

Relevant, not yet calculated

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Calculation of emissions associated with investments is in progress.

#### Other (upstream)

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Ballard did not have any other upstream emissions in the reporting year.

#### Other (downstream)

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons CO2e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Please explain**

Ballard did not have any other downstream emissions in the reporting year.

C-CG6.6

---

(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?

	Assessment of life cycle emissions	Comment
Row 1	Yes	

C-CG6.6a

(C-CG6.6a) Provide details of how your organization assesses the life cycle emissions of its products or services.

	Products/services assessed	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
Row 1	Representative selection of products/services	Cradle-to-gate	ISO 14040 & 14044	We completed the LCA for our latest generation of heavy duty power modules: FCmove™-HD. The cradle-to-gate life cycle phases include the extraction and processing of raw materials, manufacturing and assembly of individual components, upstream transport, and manufacturing and assembly of the power module at Ballard's facilities.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

**Intensity figure**

0.000016

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

1671.6

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

104505000

**Scope 2 figure used**

Location-based

**% change from previous year**

1.2

**Direction of change**

Decreased

**Reason for change**

Scope 1 + 2 emissions decreased from 1680 tCO2e to 1671.6 tCO2e, while revenue increased from 103,877,000 USD to 104,505,000 USD. Emission reduction activities include energy efficiency improvements for building operations.

**Intensity figure**

1.53

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

1671.6

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

1094

**Scope 2 figure used**

Location-based

**% change from previous year**

20

**Direction of change**

Decreased

**Reason for change**

Scope 1 + 2 emissions decreased from 1680 tCO2e to 1671.6 tCO2e, while employee count increased. Emission reduction activities include energy efficiency improvements for building operations.

## C7. Emissions breakdowns

### C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

### C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	1343	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	56	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	29	IPCC Fifth Assessment Report (AR5 – 100 year)

### C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Canada	1296
Denmark	149.7

### C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

### C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Ballard's corporate headquarters are located in Vancouver, Canada. Inspired by our natural surroundings and the commitment of the local community to protect our environment, Ballard has made it our mission to deliver innovative clean energy solutions.	1296
Ballard Power Systems Europe A/S is recognized as one of the leading players in the commercial application of fuel cell solutions. Founded in January 2007, Ballard Power Systems Europe A/S is a wholly owned subsidiary of Ballard Power Systems Inc.	149.7

### C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Canada	196	215.6
Denmark	30	30

### C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Ballard's corporate headquarters are located in Vancouver, Canada. Inspired by our natural surroundings and the commitment of the local community to protect our environment, Ballard has made it our mission to deliver innovative clean energy solutions.	196	215.6
Ballard Power Systems Europe A/S is recognized as one of the leading players in the commercial application of fuel cell solutions. Founded in January 2007, Ballard Power Systems Europe A/S is a wholly owned subsidiary of Ballard Power Systems Inc.	30	30

C7.9

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

C7.9a

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities	50	Decreased	3.6	Energy efficiency measures including HVAC, lighting, and Buildings Management System.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	51.5	Increased	3.1	Increased production throughput and R&D activities.
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

C-CG7.10

**(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?**

Increased

C-CG7.10a

**(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.**

**Purchased goods and services**

**Direction of change**

Increased

**Primary reason for change**

Change in output

**Change in emissions in this category (metric tons CO2e)**

0.9

**% change in emissions in this category**

17

**Please explain**

Increased throughput and R&D activities.

**Fuel and energy-related activities (not included in Scopes 1 or 2)**

**Direction of change**

Increased

**Primary reason for change**

Change in output

**Change in emissions in this category (metric tons CO2e)**

396.4

**% change in emissions in this category**

21.5

**Please explain**

Increased throughput and R&D activities.

**Waste generated in operations**

**Direction of change**

Increased

**Primary reason for change**

Change in methodology

**Change in emissions in this category (metric tons CO2e)**

78.3

**% change in emissions in this category**

165

**Please explain**

Expanding calculation methodology to include additional waste-related activities.

**Business travel**

**Direction of change**

Decreased

**Primary reason for change**

Unidentified

**Change in emissions in this category (metric tons CO2e)**

4.5

**% change in emissions in this category**

1.6

**Please explain**

Variations in year-to-year travel.

**Employee commuting**

**Direction of change**

Increased

**Primary reason for change**

Other, please specify (Employee Count)

**Change in emissions in this category (metric tons CO2e)**

171.2

**% change in emissions in this category**

27.6

**Please explain**

Increase in employee count.

**Downstream transportation and distribution**

**Direction of change**

Increased

**Primary reason for change**

Change in output

**Change in emissions in this category (metric tons CO2e)**

817

**% change in emissions in this category**

112.6

**Please explain**

Increased throughput necessitated increased shipping and transport activities to deliver product to customers.

**C8. Energy**

**C8.1**

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 0% but less than or equal to 5%

**C8.2**

**(C8.2) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

**C8.2a**

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	3300	7200	10500
Consumption of purchased or acquired electricity	<Not Applicable>	19300	1100	20400
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	22600	8300	30900

**C8.2b**

**(C8.2b) Select the applications of your organization's consumption of fuel.**

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

**C8.2c**

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Sustainable biomass**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Other biomass**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

3300

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

Solid biofuel (wood chips)

**Other renewable fuels (e.g. renewable hydrogen)**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Coal**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Oil**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Gas**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

7200

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**Total fuel**

**Heating value**

HHV

**Total fuel MWh consumed by the organization**

10500

**MWh fuel consumed for self-generation of electricity**

<Not Applicable>

**MWh fuel consumed for self-generation of heat**

<Not Applicable>

**MWh fuel consumed for self-generation of steam**

<Not Applicable>

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self- cogeneration or self-trigeneration**

<Not Applicable>

**Comment**

**C8.2e**

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**(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

Default delivered electricity from the grid (e.g. standard product offering by an energy supplier) from a grid that is 95% or more low-carbon and where there is no mechanism for specifically allocating low-carbon electricity

**Energy carrier**

Electricity

**Low-carbon technology type**

Large hydropower (>25 MW)

**Country/area of low-carbon energy consumption**

Canada

**Tracking instrument used**

No instrument used

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

20200

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Canada

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

**Comment**

Energy provided by BC Hydro

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**C8.2g**

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**(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.**

**Country/area**

Canada

**Consumption of electricity (MWh)**

20200

**Consumption of heat, steam, and cooling (MWh)**

7200

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

27400

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

**Country/area**

Denmark

**Consumption of electricity (MWh)**

200

**Consumption of heat, steam, and cooling (MWh)**

3300

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

3500

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

**C-CG8.5**

**(C-CG8.5) Does your organization measure the efficiency of any of its products or services?**

	Measurement of product/service efficiency	Comment
Row 1	Yes	

**C-CG8.5a**

**(C-CG8.5a) Provide details of the metrics used to measure the efficiency of your organization's products or services.**

**Category of product or service**

Batteries (including fuel cells)

**Product or service (optional)**

Overall Fuel Cell Availability, 200 buses including two generations of the product in Europe and US.

**% of revenue from this product or service in the reporting year**

46

**Efficiency figure in the reporting year**

97.7

**Metric numerator**

Other, please specify (Days in Service)

**Metric denominator**

Other, please specify (All Calendar days)

**Comment**

**C9. Additional metrics**

**C9.1**

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

**Description**

Waste

**Metric value**

80.6

**Metric numerator**

tCo2e

**Metric denominator (intensity metric only)**

# of employees

**% change from previous year**

**Direction of change**

<Not Applicable>

**Please explain**

We are continuously improving our efforts to identify reusables and recyclables and minimize landfill waste as we grow our business.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

**(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?**

	Investment in low-carbon R&D	Comment
Row 1	Yes	Ballard continues to invest heavily in research and product development ahead of the hydrogen growth curve by advancing new technology, product innovation, and development across bus, truck, rail, and marine markets, including next-generation MEAs, plates, stacks, and modules.

C-CG9.6a

**(C-CG9.6a) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.**

**Technology area**

Hydrogen power

**Stage of development in the reporting year**

Small scale commercial deployment

**Average % of total R&D investment over the last 3 years**

41 - 60%

**R&D investment figure in the reporting year (optional)**

62162000

**Comment**

R&D investment was up year-on-year to \$62 million USD in 2020. Research and product development activities occur in Canada and Denmark and are related to our next generation fuel cell stacks and modules for bus, truck, rail and marine applications, and increased continuation engineering investment in our existing fuel cell products, including activities related to product cost reduction. Increased program investment includes expenditures related to the launch of our FCmove™-HD+, a fuel cell module designed for buses and medium and heavy-duty trucks, the launch of our FCgen®-HPS High-Power Density Fuel Cell Stack for light-medium-and heavy-duty vehicles, the launch of our FCwave™ Fuel Cell Module for marine applications, and on the ongoing improvement of all of our fuel cell products including our high performance fuel cell module, the FCmove™-HD, and our high performance liquid-cooled fuel cell stack, the FCgen®-LCS.

C10. Verification

C10.1

**(C10.1) Indicate the verification/assurance status that applies to your reported emissions.**

	Verification/assurance status
Scope 1	No third-party verification or assurance
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

C10.2

**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

No, but we are actively considering verifying within the next two years

## C11. Carbon pricing

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### C11.1

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**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

No, and we do not anticipate being regulated in the next three years

### C11.2

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**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

Yes

### C11.2a

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**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

**Credit origination or credit purchase**

Credit purchase

**Project type**

Forests

**Project identification**

We purchased from Ostrom Climate Solutions' Synergy Portfolio – which is a portfolio of projects (managed like a mutual fund) that is offered to their clients who purchase under 5000 tonnes. The three main projects in the portfolio at that time are detailed below. For CDP's purposes, we're indicating that our entire purchase went to The Great Bear Forest Carbon Project (GBFP)– as Ostrom Climate has retired the 798 tonnes in Ballard's name on the BCCarbon Registry; however, by purchasing from this portfolio, all three projects were supported. Ostrom Climate is happy to discuss any questions about their portfolio structure: [info@ostromclimate.com](mailto:info@ostromclimate.com).

GBFP is an Improved Forest Management initiative, which generates GHG reductions by protecting forests that were previously designated, sanctioned or approved for commercial logging in British Columbia. It is a landmark project for balancing human well-being and ecological integrity through carbon finance, and is the first carbon project in North America on territory with unextinguished Aboriginal rights. The First Nations own the project, and decide how funds from offsets are used. GBFP is third-party verified, and has enabled up to 1,000,000 tCO<sub>2</sub>e to be sequestered annually.

The Southern Cardamom REDD+ Project is located in one of the world's 34 biodiversity hotspots. It is a critical watershed for the Gulf of Thailand, providing fresh water to the largest contiguous mangrove forest left in the Gulf. The project area contains a mosaic of habitats from dense evergreen and pine forests on its ridge tops to lowland melaleuca wetlands, flooded grasslands, lakes, and coastal mangroves in its lowlands. The area is an important source of food, supports at least 52 species from the International Union for Conservation of Nature (IUCN) Red List of Threatened Species, and has the potential for tiger reintroduction.

Quadra Island Forestland Conservation Project reduced GHG levels by protecting 417.9 hectares of forestland previously slotted for conversion to vacation home development and continued logging activity. The specific site was chosen because it includes: Remnant Coastal Western Hemlock second-growth forests; the opportunity to establish connectivity between existing parks—which allows wildlife to safely move between them; as well as important archaeological sites and a historic Aboriginal portage route.

**Verified to which standard**

Other, please specify (BC Forest Carbon Offset Protocol (FCOP))

**Number of credits (metric tonnes CO<sub>2</sub>e)**

798

**Number of credits (metric tonnes CO<sub>2</sub>e): Risk adjusted volume**

798

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

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### C11.3

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**(C11.3) Does your organization use an internal price on carbon?**

No, but we anticipate doing so in the next two years

## C12. Engagement

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## C12.1

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### (C12.1) Do you engage with your value chain on climate-related issues?

- Yes, our suppliers
- Yes, our customers/clients
- Yes, other partners in the value chain

## C12.1a

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### (C12.1a) Provide details of your climate-related supplier engagement strategy.

#### Type of engagement

Information collection (understanding supplier behavior)

#### Details of engagement

Collect climate change and carbon information at least annually from suppliers

#### % of suppliers by number

2

#### % total procurement spend (direct and indirect)

85

#### % of supplier-related Scope 3 emissions as reported in C6.5

40

#### Rationale for the coverage of your engagement

Ballard actively collects data from our 30 key suppliers, which constitutes 85% of total procurement spend.

#### Impact of engagement, including measures of success

Information collected is incorporated into a supplier scorecard. Based on their scores, suppliers are ranked. Suppliers scoring higher on this matrix are prioritized for procurement decisions.

#### Comment

Ballard intends to increase the weighting for climate-related issues in 2022 for inclusion in the 2023 supplier scorecard.

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## C12.1b

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**(C12.1b) Give details of your climate-related engagement strategy with your customers.**

**Type of engagement & Details of engagement**

Education/information sharing	Run an engagement campaign to education customers about your climate change performance and strategy
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**% of customers by number**

100

**% of customer - related Scope 3 emissions as reported in C6.5**

22

**Please explain the rationale for selecting this group of customers and scope of engagement**

Ballard publishes our Environmental, Social and Governance (ESG) Report annually. It is available to the general public via Ballard's website. The publication of the report is announced via a press release. We also notify subscribers to our email distribution list that the report has been published. 22% refers to the percentage of customer-related Scope 3 emissions attributed to shipping products to customers. The objectives of our on-going education campaign is to raise our customer awareness about our product carbon footprint and impact of product shipment on GHG emission. We have selected customers based on volume of business (active customers) and customers with recurrent numbers of shipment.

**Impact of engagement, including measures of success**

Expected impact is a shift from product air freight request to sea freight in order to reduce level of GHG emission linked to our product shipment. Measure of success will be a reduction of % of air shipments vs sea/rail/truck shipments. Target is to reduce air shipments by 20% of our product shipment

**Type of engagement & Details of engagement**

Education/information sharing	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services
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**% of customers by number**

100

**% of customer - related Scope 3 emissions as reported in C6.5**

22

**Please explain the rationale for selecting this group of customers and scope of engagement**

Ballard published a brochure sharing the lifecycle analysis for our FCveloCity heavy-duty power module. The brochure communicated the carbon footprint of the product from cradle-to-gate. It also compared the emissions of the product versus competing technology (batteries). 22% refers to the percentage of customer-related Scope 3 emissions attributed to shipping products to customers.

**Impact of engagement, including measures of success**

The brochure is available on Ballard's website and shared with customers their request.

**C12.1d**

**(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.**

Ballard products provides our customers with a power solution for zero emission vehicles. In order to further reduce the carbon footprint of the vehicles powered by our technology we are actively working with partners in the value chain for those vehicles to be powered by low carbon hydrogen fuel and preferably with green hydrogen produced from renewable energy.

Carbon intensity of the fuel used by our technology will have the biggest impact on emission level of the vehicles.

Therefore our strategy is to partner with suppliers of low carbon intensity hydrogen.

To that objective; we are working with a number of project developers and hydrogen suppliers in order to promote the use of green hydrogen along with our technology. A good example of this approach is the H2Bus Europe consortium we are part of in Europe where we have partnered with a bus manufacturer and 2 green hydrogen providers (RYSE and EVERFUEL) to offer an packaged offer with zero emission fuel cell bus powered by Ballard and green hydrogen fuel.

**C12.2**

**(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

No, but we plan to introduce climate-related requirements within the next two years

**C12.3**

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

**Row 1**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers  
Yes, we engage indirectly through trade associations

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

No, but we plan to have one in the next two years

**Attach commitment or position statement(s)**

<Not Applicable>

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

Launched stakeholder engaged materiality assessment in late 2021 used to ensure alignment with our stakeholders on our priority ESG areas and climate change strategy.

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**C12.3a**

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

**Focus of policy, law, or regulation that may impact the climate**

Adaptation and/or resilience to climate change

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Expansion of the hydrogen economy globally, in particular, with the Hydrogen Strategy for Canada developed by Natural Resources Canada.

**Policy, law, or regulation geographic coverage**

Global

**Country/region the policy, law, or regulation applies to**

<Not Applicable>

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

Providing insight into the development of the hydrogen economy.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Focus of policy, law, or regulation that may impact the climate**

Other, please specify (Zero Emission Vehicle Mandate)

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Engagement with policy makers in Canada, US and Europe directly or through industry associations and NGO's to support zero emission vehicle mandate and emission reduction regulation.

**Policy, law, or regulation geographic coverage**

Regional

**Country/region the policy, law, or regulation applies to**

Canada  
United Kingdom of Great Britain and Northern Ireland  
United States of America  
EU28

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

We advocated and supported the following legislation: ICT (Innovative Clean Transit) and ACT (Advanced Clean Truck) regulations in California, Zero Emission Vehicle mandate in British Columbia, Truck emission regulations in the EU.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**C12.3b**

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may**

**impact the climate.**

**Trade association**

Other, please specify (Hydrogen Council)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Hydrogen has a central role in helping the world reach net-zero emissions by 2050 and limit global warming to 1.5 degrees Celsius. Hydrogen is a critical piece in decarbonizing a wide range of end uses including decarbonizing industry (e.g., as feedstock for steel and fertilizers), long-range ground mobility (e.g., as fuel in heavy-duty trucks, coaches, long-range passenger vehicles, and trains), international travel (e.g., to produce synthetic fuels for maritime vessels and aviation), heating applications (e.g., as high-grade industrial heat), and power generation (e.g., as dispatchable power generation and backup power).

As a supporting member, we participate to the development of the organizational strategy; provide input to outreach campaigns and sign support letters to legislation aligned with our position on climate change.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

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**Trade association**

Other, please specify (Canadian Urban Transit Research & Innovation Consortium (CUTRIC))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Promote clean transit solutions in Canada.

As a board member, we participate to the development of the organizational strategy; provide input to outreach campaigns and sign support letters to legislation aligned with our position on climate change.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify (Canadian Hydrogen and Fuel Cell Association (CHFCA))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Promote hydrogen and fuel cell industry which will lead to emission reduction in hard to abate sectors such as transportation - promote deployment of zero emission fuel cell vehicles.

As a board member, we participate to the development of the organizational strategy; provide input to outreach campaigns and sign support letters to legislation aligned with our position on climate change.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify (California Hydrogen Council (CHBC))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

---

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Promote hydrogen and fuel cell industry which will lead to emission reduction in hard to abate sectors such as transportation - promote deployment of zero emission fuel cell vehicles.

As a board member, we participate to the development of the organizational strategy; provide input to outreach campaigns and sign support letters to legislation aligned with our position on climate change.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

2021 Ballard\_Sustainability\_Report\_7JUN2022.pdf

**Page/Section reference**

Page 17-28

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

## C15. Biodiversity

### C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Please select	<Not Applicable>	<Not Applicable>

### C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Please select	<Not Applicable>	<Not Applicable>

### C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Please select	<Not Applicable>

## C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Please select	<Not Applicable>

## C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Please select	Please select

## C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
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## C16. Signoff

### C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

## C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Vice President & General Counsel	Other, please specify (General Counsel)

## Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms