

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 2019	December 31 2019	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

- Canada
- Denmark

C0.4

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

- USD

C1. Governance

C1.1

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

- Yes

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

C1.3

(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, and we do not plan to introduce them in the next two years	

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

C2.3

(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
--------	---------------------------------

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)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

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.

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Legal	Exposure to litigation
-------	------------------------

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

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. 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.

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)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

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

C2.4

(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

(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?

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

Opp2

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

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

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****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?

Please select

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

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes

C4. Targets and performance

C4.1

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

No target

C4.1c

(C4.1c) Explain why you did not have an emissions target, and forecast how your emissions will change over the next five years.

	Primary reason	Five-year forecast	Please explain
Row 1	We are planning to introduce a target in the next two years	We are planning to reduce our GHG emission by more than 30% in the next 5 years through a number of internal initiatives including building efficiency improvements and decarbonization of our hydrogen supply	In spite of expected business growth; internal initiatives will lower our emissions. The biggest impact is expected to come from the emission generated by hydrogen we used. We are working on reducing the carbon intensity of our hydrogen by developing local on site production from renewable electricity rather than using hydrogen produced by reformation of natural gas and trucked to our facilities.

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

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

C5. Emissions methodology

C5.2

(C5.2) 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

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)

1256.3

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

Please select

Comment

C6.3

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

Reporting year

Scope 2, location-based

207

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.5

(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

Metric tonnes CO2e

43.2

Emissions calculation methodology

Purchased CO2 (6.6tCO2e); Emissions Factor from SimaPro software, Ecolnvent database v3.5 Purchased Paper (22.1tCO2e); Emissions Factor from the Paper Calculator v3.2.1 Purchased Water (14.5tCO2e); Emissions Factor from the UK Government GHG conversion factors for company reporting - 2019 v2

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

0

Please explain

Capital goods

Evaluation status

Not evaluated

Metric tonnes 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

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

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1427.6

Emissions calculation methodology

Purchased Hydrogen: Hydrogen production from natural gas steam reforming - Emission Factor from the National Renewable Energy Laboratory

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

0

Please explain

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

521.4

Emissions calculation methodology

Shipping Emissions Factors - UK Government GHG conversion factors for company reporting - 2019 v2

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

87

Please explain

Data was not separated into upstream and downstream. Approximately 87% of data came from the shippers, the remainder was calculated based on the modes of transportation, the weights shipped, and distances travelled

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

9.2

Emissions calculation methodology

Waste Emissions Factors - UK Government GHG conversion factors for company reporting - 2019 v2

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

0

Please explain

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1557.1

Emissions calculation methodology

Air Travel (1,391.7 tCO2e) - UK Government GHG conversion factors for company reporting - 2019 v2 Reimbursed Driving (12.5 tCO2e) , Hotels (152.1 tCO2e) and Other Business Travel (0.8 tCO2e) - 2018 British Columbia Methodological Guidance for Quantifying Greenhouse Gas Emissions

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

70

Please explain

Approximately 70% of the data for business travel was obtained from the corporate travel agency. Remainder of emissions were extrapolated based on dollars spent.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

988.3

Emissions calculation methodology

Data collected from online survey. Emissions calculated using emission factors for various vehicle and fuel type. Emissions factor source - 2018 British Columbia Methodological Guidance for Quantifying Greenhouse Gas Emissions

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

0

Please explain

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Metric tonnes 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 does not have upstream leased assets.

Downstream transportation and distribution

Evaluation status

Not evaluated

Metric tonnes 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

Note that downstream shipping emissions are included with upstream shipping emissions. Data was not tracked separated for upstream and downstream transportation.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Metric tonnes 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 Products do not require downstream processing.

Use of sold products

Evaluation status

Not evaluated

Metric tonnes 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

End of life treatment of sold products

Evaluation status

Not evaluated

Metric tonnes 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

Downstream leased assets

Evaluation status

Not evaluated

Metric tonnes 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

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes 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 does not have franchises

Investments

Evaluation status

Please select

Metric tonnes 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

Other (upstream)

Evaluation status

Not evaluated

Metric tonnes 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

Other (downstream)

Evaluation status

Not evaluated

Metric tonnes 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

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

0.000014

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

1463.3

Metric denominator

unit total revenue

Metric denominator: Unit total

106300000

Scope 2 figure used

Location-based

% change from previous year

Direction of change

<Not Applicable>

Reason for change

C7. Emissions breakdowns

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?

This is our first year of reporting, so we cannot compare to last year

C8. Energy

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)	2741.6	6619.4	9361
Consumption of purchased or acquired electricity	<Not Applicable>	16419.44	98.4	16517.84
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>	19161.03	6717.8	25878.83

C12. Engagement

C12.1

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

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

C15. 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.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1		Please select

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms