



Transforming Power

Northland Power
2022 ESG Performance Index



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About this Index

Reporting Boundaries

This report contains information and data covering the calendar year ended December 31, 2022, with comparative information for the years ended December 31, 2019-2021. All Environment, Social and Governance (ESG) key performance indicators (KPIs) are measured using an operational control approach, except for specific KPIs related to health and safety, talent management and community, which are also measured for our project offices and sites. Northland Power Inc's (Northland) definition of operational control, aligned with that of the Greenhouse Gas Protocol, is operations where we have full authority to introduce and implement operating policies. Data from each site represents the entire site, not only our financial share of the operation. The information and data in this report accounts for the direct impacts of all material components of Northland's global activities, except where otherwise noted. All amounts herein are listed in Canadian dollars (CAD) unless otherwise specified.

Frameworks Used

Northland has reported in accordance with the Global Reporting Initiative (GRI) Standards for the period from January 1, 2022, to December 31, 2022. We align with global best practice standards and frameworks, including the Greenhouse Gas Protocol, the Sustainability Accounting Standards Board (SASB) and the recommendations of the Taskforce for Climate-Related Financial Disclosures (TCFD). Additionally, our ESG Framework and disclosures are aligned with the United Nations Sustainable Development Goals (UN SDGs) where relevant and appropriate for our industry and operations.

As signatories of the United Nations Global Compact (UNGC), we are committed to implementing and integrating its 10 principles in the areas of human rights, labour, environment, and anti-corruption into our strategy, culture, and everyday business practices. We have also signed on to Equal by 30 and endorse its principles.

For details on our approach to managing material KPIs see [Northland's 2022 Sustainability Report](#).

Reporting Base Year

Our base year for reporting and tracking GHG emissions-related indicators is 2020, which is when we established a consistent methodology for calculating Scope 1 and Scope 2 GHG emissions. We use 2019 for the baseline calculations of our performance against our stated GHG emissions intensity reduction.

Base Year Recalculation Policy

Under our current methodology, base year data will be restated when there has been a change in the calculation methodology, or a material change in operating assets through acquisition or divestiture. In this context, material assets are those which have a 10 per cent or greater impact on total combined Scope 1 and 2 GHG emissions.

Accessibility

This report complies with the Accessibility for Ontarians with Disabilities Act (AODA).

Assurance

Northland received independent third-party limited assurance, conducted by Ernst & Young LLP (EY), over the following material KPIs for 2022:

- Scope 1 & 2 GHG emissions¹
- Total electricity generated
- GHG emissions intensity

EY also provided limited assurance on the allocation of Northland's Green Financing proceeds in accordance with the Use of Proceeds described in Northland's Green Financing Framework. The assurance statement can be found [here](#). The external assurance engagement was managed by the Director of Global ESG Strategy and Reporting, with oversight and executive management from Northland's Chief Financial Officer.

KPIs assured to a limited level by EY are denoted with this symbol.

Significant Changes and Restatements

In 2022, we revised the methodology for calculating electricity generation in megawatt hours (MWh) to include paid curtailments reported on an accrual basis in alignment with our financial reporting. Since we use electricity generation in MWh to calculate our carbon intensity metrics year over year, these figures have also been restated for 2021 and 2020.

Related Disclosures

- [2022 Annual Information Form](#)
- [2022 Annual Report](#)
- [2022 Sustainability Report](#)
- [2023 Investor Day Presentation](#)
- [Northland's Green Financing Framework](#)
- [Northland Policies](#)



1. Scope 2 location-based emissions have been assured to a limited level by EY. Scope 2 market-based emissions are not within the scope of the engagement



Our Commitment to Sustainability & Transparency

A Letter from Pauline Alimchandani, CFO

At Northland, we strive to deliver best-in-class reporting on our sustainability impacts. We continue to enhance our reporting to showcase the progress we've made through meaningful actions and achievements over the past couple of years. Ensuring access to green capital to fund our investments is critical to delivering large-scale renewable energy projects globally and achieving our overall business objectives. We understand that now more than ever, investors, lenders, partners and stakeholders are integrating ESG information into their strategic investment decisions. We aspire to maintain accurate and transparent ESG reporting. As an independent power producer with a focus on renewable energy, we provide opportunities for our investors, partners and capital providers to invest in projects that advance the global energy transition and help build the foundation for a sustainable future. It's critical that our reporting provides necessary, detailed information to allow transparent and informed decision making.

Enhanced Reporting

We continue to refine our performance targets as we work within our new Business Unit structure. We're making tangible and meaningful progress toward our priorities, including expediting the gathering and reporting of data. We continue to align our reporting with the GRI, SASB and TCFD recommendations, but also look to stay ahead of industry best practices through continuous monitoring and evaluation of new and evolving frameworks and requirements.

Green Financings

Our Green Financing initiatives develop and invest in renewable energy infrastructure to support climate change mitigation through green energy production. We continue to find opportunities where sustainable financing instruments fit within our long-term strategy. In 2022, we executed more than CAD 3 billion of green refinancings under our Green Finance Framework.

We continue to have access to our CAD 1 billion corporate credit facility, which signed a Sustainability Linked Loan (SLL) overlay in 2021. The SLL is based on achieving defined targets around increasing our renewable generating capacity and reducing carbon emissions intensity by 2025.

We are preparing to deploy additional green and sustainable long-term instruments into our financing toolkit to advance our growth initiatives. This includes the planned use of corporate hybrid bonds, with the proceeds allocated from these issuances being directly linked to financing our renewable projects.

Delivering Value

We are very proud of our accomplishments and dedication to developing renewable energy projects globally. We endeavour to deliver best-in-class reporting based on best-in-class ESG and business practices. Earlier this year, we established a net zero initiative that aims to achieve zero emissions across our operations and value chain by 2040. Efforts will focus on reducing GHG emissions intensity from Scope 1 and 2 by 65 percent by 2030 (from a 2019 baseline) while targeting net zero over all emissions scopes by 2040. We integrate sustainability into everything we do, and remain wholly committed to making full use of the tools at our disposal to tackle the highly complex challenges of the energy transition.

We have a 35-year history of developing, owning and operating clean and green energy projects. During that time, we have developed a strong global position and built teams in key markets to support our ongoing growth and maturity. We believe that we can generate long-term shareholder value while remaining focused on our target of supporting the global need for renewable energy.

Thank you for interest in our ESG Performance Index and for your continued support of our business.

Sincerely,

Pauline Alimchandani
Chief Financial Officer

Performance Highlights

Material ESG Issue	Targets and Commitments	2022 Highlights
Climate change mitigation & emissions reduction	65% reduction of GHG emissions intensity (Scope1+2 ⁽¹⁾ tCO ₂ e/ MWh) by 2030 from 2019 baseline Net Zero across scope 1, 2 and 3 by 2040	6% reduction in GHG emissions intensity (tCO ₂ e/MWh) from 2021 32% Reduction in GHG emissions intensity (tCO ₂ e/MWh) since 2019 2.7M tonnes of avoided emissions
Green & reliable energy (energy security)	6GW of additional renewable capacity by 2030	67% gross renewable energy generation 12 countries with active development 2.6 GW net operating generating capacity 531,234 customer served through EBSA
Biodiversity & Ecosystem Management	Commitment to conservation of flora, fauna and habitats where we construct and operate our facilities Proactive management of natural resources and a commitment to reduce waste	0 significant environmental incidents 99% of water withdrawn returned to its source Ongoing biodiversity efforts and programs at most sites
Human rights & sustainable supply chain	Signatory of the UN Global Compact Commitment to aligning with the UN Guiding Principles on Business and Human Rights for our business and within our value chain	Policy commitments to upholding human rights within operations and value chain Due diligence over human rights and other material ESG issues within partnerships and value chain
Occupational health & safety	Reduction of TRIR by 10% y-o-y (internal target)	0.40 total recordable injury rate (TRIR) - down from 0.44 TRIR in 2021
Talent development & engagement	Attract and retain top talent Engage, empower and develop our people	72/100 overall employee engagement score 1,339 employees globally 82% participation score 63 hours of training per employee
Diversity, Inclusion & Belonging	30% female representation on Executive and Board of Directors 1 beyond gender diversity Board member by 2024 Signatory and supporter of Equal by 30	33% female Board members, 50% female executive officers 36% female new hires, 26% females in workforce Authenticity Glint Score: 76 Belonging Glint Score: 64 Inclusion Glint Score: 66
Community & Indigenous relations & Investment	Supporting meaningful partnerships with local and Indigenous communities Supporting programs that reflect the priorities of our local and Indigenous communities.	CAD 3.2M in community investment globally Commitment to Local and Indigenous Communities policy focused on consultation, assessment and collaboration with communities

1. Scope 2 location-based emissions

Section 1. Business Overview and Performance

Northland is an owner and operator of green electricity production infrastructure and a regulated utility. We use an operational control boundary to report electricity generation figures in accordance with the GHG Protocol and applicable standards. Gross capacity figures include Northland's wholly and non-wholly owned subsidiaries and joint ventures. Northland's regulated utility, Empresa de Energía de Boyacá (EBSA), is a distributor and retailer of electricity compensated under a regulated framework. Northland saw an overall increase in onshore production due to the August 2021 acquisition of a portfolio of renewable assets in Spain. In April 2022, Northland sold two of its efficient natural gas assets, reducing associated capacity by 230 MW. In January 2023, Northland formally commenced operating under a Business Unit structure focused by the following technologies: offshore wind, onshore renewables, efficient natural gas and utilities, and hydrogen. Increases in gross capacity under development for solar are related to the acquisition of a development portfolio in Alberta, Canada in December 2022. Refer to the [2022 AIF](#) for information on Northland's key operating facilities as of December 31, 2022, and refer to Section 9 of the [2022 MD&A](#) for additional information on key development projects.

Table 1: Gross energy capacity and electricity distributed

	Unit	2022	2021	% Change	2020	2019
Revenues⁽¹⁾	\$000 CAD	2,460,086	2,104,917	17%	2,072,650	1,671,331
Adjusted EBITDA	\$000 CAD	1,398,176	1,137,004	23%	1,170,097	984,736
IF-EU-000.D Total electricity generated^{(2) (3)}	GWh	10,139	8,757	16%	9,454	9,060
Efficient natural gas	GWh	3,308	3,066	8%	3,546	3,787
Offshore wind	GWh	4,486	4,088	10%	4,544	3,876
Onshore renewables	GWh	2,345	1,603	46%	1,364	1,397
IF-EU-000.D Renewable electricity generated	Percentage	67	65	3%	63	58
IF-EU-000.D Electricity generated in regulated markets⁽⁴⁾	Percentage	30	33	-9%	33	≠
GRI 102-7 Gross installed capacity⁽⁵⁾	MW	3,026	3,240	-7%	2,681	2,429
Offshore wind	MW	1,184	1,184	0%	1,184	932
Efficient natural gas ⁽⁶⁾	MW	743	973	-24%	973	973
Onshore wind	MW	837	837	0%	394	394
Solar ⁽⁷⁾	MW	262	246	7%	130	130
GRI 102-7 Gross capacity under construction	MW	350	366	-4%	130	399
Onshore wind	MW	220	220	0%	0	0
Solar	MW	130	146	-11%	130	130
GRI 102-7 Gross capacity in development⁽⁸⁾	MW	13,042	8,147	60%	≠	≠
Solar	MW	1,750	130	1246%	≠	≠
Onshore wind	MW	0	100	-100%	≠	≠
Battery Energy Storage	MW	250				
Offshore wind	MW	11,042	7,917	39%	≠	≠
IF-EU-000.B Electricity distributed by regulated utility^{(9) (10)}	MWh	755,624	769,020	-1.7%	760,099	N/A
IF-EU-000.A Customers served by regulated utility⁽¹¹⁾	Number	531,234	516,638	2.8%	503,009	N/A

1. Revenues include sales and finance lease income

2. 2020 and 2021 generation numbers have been restated to align with Northland Financial reporting disclosures which are captured on an accrual basis and include paid curtailments.

3. Includes GWh both produced and attributed to paid curtailments as well as pre-completion production for Deutsche Bucht in 2019, and Helios Solar park in 2022

4. Northland operates in two regulated markets, Quebec and Saskatchewan, in Canada

5. Represents gross operational power generation capacity after COD is reached

6. Gross capacity from natural gas fired generation decreased in 2022 due to the sale of Northland's Kingston and Iroquois falls facilities in April

7. Solar includes our 50 MW Concentrated Solar facility, Lebrija, in Spain

8. Development pipeline of capitalized and identified growth disclosed for the first time in 2021. Capitalized and identified growth projects included.

9. Northland completed the acquisition of Colombian regulated utility EBSA on January 14, 2020

10. Total electricity delivered to residential, commercial, industrial, wholesale and other customers made up of public sector, public lighting and non-regulated customers

11. Total residential, commercial, industrial and other customers served, made up of public sector, public lighting and non-regulated customers

Section 2. Sustainable and Green Financings

In 2021, Northland published its inaugural Green Financing Framework (the “Framework”) and received a second-party opinion from Sustainalytics. Our Green Financings, in accordance with this Framework, align with the Green Bond Principles (2021)¹, the Green Loan Principles (2020)² and the EU taxonomy. The aim of aligning with the EU taxonomy is to make a substantial contribution towards climate change mitigation efforts through the development, construction and operation of solar PV, onshore wind and offshore wind projects. Additionally, in alignment with the criteria set out in the EU taxonomy, we are committed to supporting climate change mitigation and to the Do No Significant Harm principle in all other EU taxonomy categories. In 2022, our Green Financings supported offshore wind, onshore wind and solar PV projects to support climate change mitigation efforts on a global scale. These projects were assessed by Northland’s ESG Steering Committee under the Green Financing eligibility criteria set out in the Framework. EY provided limited assurance on the allocation of Green Financing proceeds in accordance with the Use of Proceeds described in the Framework (see [assurance statement](#)). In addition to these Green Financings, Northland maintains a Sustainability Linked Loan overlay that was introduced in 2021 and is based on achieving defined targets around increasing our renewable generating capacity and reducing GHG emissions intensity.

Table 2: Allocation of green financing proceeds in 2022

Project / Financing	Type of Financing	Use of Proceeds	Jurisdiction	Total Financing in Millions of CAD	2022 Allocated Proceeds in Millions of CAD ⁽³⁾ <input checked="" type="checkbox"/>	Total Allocated Proceeds in Millions of CAD ⁽⁹⁾ <input checked="" type="checkbox"/>	Impact Metrics
New York Wind⁽⁴⁾	Construction loan of USD 184M ⁽⁵⁾	Capital expenditures associated with the development and construction of onshore wind in New York State	United States	249	111	249	219.30 MW (Ball Hill Wind, 107.5 MW and Bluestone Wind, 111.8 MW) gross onshore wind capacity
New York Wind	Tax Equity Bridge loan of USD 145M ⁽⁵⁾		United States	196	86	86	
Helios	Construction loan of COP 35B ⁽⁶⁾	Capital expenditures associated with the development and construction of a solar PV plant in Colombia	Colombia	10	3	10	16 MW gross solar PV capacity
Gemini⁽⁴⁾	Term loan of EUR 1,609M ⁽⁷⁾	Refinancing in an offshore wind project in the Netherlands	Netherlands	2,329	2,329	2,329	600 MW of gross offshore wind capacity
Spain⁽⁴⁾	Term loan of EUR 537M ⁽⁷⁾⁽⁸⁾	Refinancing in a portfolio of onshore wind and solar PV in Spain	Spain	777	777	777	550 MW gross onshore wind and solar PV capacity

1. The Green Bond Principles are administered by the International Capital Markets Association (ICMA), “The Green Bond Principles (GBP) 2021”, published on June 10, 2021
2. The Green Loan Principles are administered by the Loan Syndications and Trading Association, published in May 2020
3. Allocated proceeds at a project financing level refers to funds drawn on within the year under review for project use. These include associated financing fees as these are considered part of project costs

4. Reflects financing available for each project after loan resizing
5. As at December 31, 2022 FX rate used to convert USD amounts to CAD amounts
6. As at December 31, 2022 FX rate used to convert COP amounts to CAD amounts
7. As at December 31, 2022 FX rate used to convert EUR amounts to CAD amounts
8. Northland secured a loan of EUR 613M to refinance current loans for Northland’s Spain portfolio of assets. The portion for our concentrated solar facility in Spain is not included in this figure. The excluded portion was calculated using the concentrated solar facility’s projected pro rata share of the project’s EBITDA
9. This column includes allocated proceeds from the year-ended December 31, 2022, as well as December 31, 2021 which was assured to a limited level by EY in the prior year

Section 3. Emissions

Northland measures and monitors impacts related to power generation from efficient natural gas and renewable sources. We use an operational control boundary to report on GHG emissions for our global operating facilities and offices, following the GHG Protocol Corporate Accounting and Reporting Standard, Scope 2 Guidance, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, TCFD recommendations and applicable reporting standards. In 2022, Northland saw an increase in absolute Scope 1 emissions due to increased generation from our Thorold Generating Station in Ontario, Canada. Additionally, there was an increase in offshore wind-associated emissions due to maintenance activities at Nordsee One. However, the overall intensity was reduced due to increased generation at our offshore wind facilities in the North Sea (compared to 2021), as well as a full year of generation from our portfolio of Spanish onshore renewable assets. There were no material changes to office or line-loss-related emissions and our Scope 2 emissions remained consistent. Due to greater mobility and return to in office work in 2022, emissions from business travel and employee commuting increased. Due to greater maintenance activities and better tracking, there was an increase in waste-related CO₂ emissions in 2022. However, due to minimal active construction and increased natural gas usage, Scope 3 emissions remained consistent overall.

Table 3 . GHG Emissions by Scope and GHG Emissions Intensity

		Unit	2022	2021	% Change	2020 ⁽¹⁾	2019 ⁽²⁾
IF-EU-110a.1, GRI 305-1	Scope 1 (direct) GHG emissions⁽³⁾	tCO ₂ e	1,285,034 ✓	1,183,719 ✓	9%	1,369,083	1,686,511
GRI 305-1	Biogenic emissions ⁽⁴⁾	tCO ₂ e	N/A	73,162	N/A	142,454	≠
IF-EU-110a.1	Emissions-limiting regulations	Percentage	98.5	98.4	0%	98.6	≠
IF-EU-110a.1	Emissions-reporting regulations	Percentage	97.5	97.3	0%	97.6	≠
	Associated with generation	tCO ₂ e	1,265,689	1,182,552	7%	1,328,680	≠
	Scope 1 emissions by Business Unit⁽⁵⁾						≠
	Onshore Renewables	tCO ₂ e	2,053	2,065	-1%	343	≠
	Offshore Wind	tCO ₂ e	15,799	13,835	14%	16,284	≠
	Efficient Natural Gas and Utilities	tCO ₂ e	1,267,183	1,167,703	9%	1,352,381	≠
GRI 305-2	Scope 2 (indirect) GHG emissions⁽⁶⁾	tCO ₂ e	27,609	28,302	-2%	19,208	≠
	Location-based ⁽⁷⁾	tCO ₂ e	27,609	28,302	-2%	19,208	≠
	Market-based ⁽⁸⁾	tCO ₂ e	28,536	28,944	-1%	19,208	≠
GRI 305-3	Scope 3 (other indirect) GHG emissions⁽⁹⁾	tCO ₂ e	319,370	309,015	3%	386,798	1,000
	Purchased good & services ⁽¹⁰⁾	tCO ₂ e	47,809	47,597	0%	39,629	≠
	Capital goods ⁽¹¹⁾	tCO ₂ e	10,465	9,933	5%	27,169	≠
	Upstream fuel & energy activities ⁽¹²⁾	tCO ₂ e	259,109	251,076	3%	317,540	≠
	Waste generated in operations ⁽¹³⁾	tCO ₂ e	189	107	77%	1,670	≠
	Business travel ^{(14) (15)}	tCO ₂ e	1,488	265	462%	284	1,000
	Employee commuting ⁽¹⁶⁾	tCO ₂ e	312	37	743%	506	≠
	Avoided GHG emissions	tCO ₂ e	2,723,028	2,149,584	27%	1,319,001	≠
GRI 305-4	GHG emissions (Scope 1 & 2 emissions) intensity by generation⁽¹⁷⁾	tCO ₂ e/MWh	0.129 ✓	0.138 ✓	-6%	0.147	0.190
	GHG emissions (Scope 1 & 2) intensity by revenue	tCO ₂ e/\$MCAD	53	58	-7%	67	101
	GHG emissions (Scope 1, 2 & 3) intensity by generation	tCO ₂ e/MWh	0.161	0.174	-7%	0.188	≠

- In 2020, Scope 1 and Scope 2 emissions were [assured to a limited level by GHD](#). In 2021, Scope 1 & 2 emissions were [assured to a limited level by EY](#).
- Our Scope 1 emissions from 2019 were verified under the regulatory requirements for Ontario and Canada.
- Direct GHG emissions calculations use fuel combustion emission factors and AR5-100 year GWP values, except for CO₂ emissions from natural gas-fired facilities, which are calculated by mass balance. Emission factors are sourced from Canada's Greenhouse Gas Reporting Program, Canada NIR, the U.S. EPA and the GHG Protocol.
- Biogenic emissions are calculated using dry volume emission factors on the dry volume of waste wood used as biomass for energy generation. Biomass electricity production was discontinued in 2021.
- Emissions associated with corporate offices are not included in these figures.
- Emissions from purchased heat are calculated as Scope 2 GHG emissions for 2022. In 2021, emissions from purchased heat were calculated as Scope 1 GHG emissions.
- Location-based emissions are calculated using national grid emissions factors sourced from the Carbon Footprint or grid operators for some jurisdictions.
- Market-based emissions are calculated using national residual mix emissions factors for specific geographic regions, where available, sourced from GHG Protocol, Carbon Footprint, Climate registry and ECSIM.
- The categories reported are material Scope 3 categories for the 2022 reporting year.
- Represents emissions from extraction, production, and transportation. A spend-based approach was used to calculate emissions using US (USEEIO) models, excluding emissions associated with construction of new generating assets.
- Emissions for the construction of new generating assets were calculated using the life-time emissions of the assets and the EPC criteria for onshore wind, solar and offshore wind where applicable.
- Includes upstream emissions of fossil fuels and generation emissions from electricity consumed at Northland. Emissions were calculated using fuel consumption data from purchase records and published fuel production upstream emission factors. Country-specific fuel emissions data was used where available. Emissions for upstream electricity consumption were calculated using electricity consumption data from facilities and offices and country-specific grid emission factors, where available.
- Emissions for waste generation in Northland's operations were calculated using actual waste data when available or estimated waste generation rates based on employee headcounts.
- Business travel emissions were estimated using spend data for business travel categories using USEEIO models and where available GHG emissions from travel data provided by our travel agents.
- Business travel emissions decreased in 2020 and 2021 due to the COVID-19 Pandemic. In 2022, business travel resumed post-pandemic which resulted in increased emissions. In 2019, the carbon offset program was implemented for corporate travel, balancing just over 1,000 tonnes of CO₂ equivalents.
- Employee commuting emissions were calculated based on average commuting data for countries and major cities national census data, where available. Compared to number of days spent in the office based on Northland's hybrid work model and employee headcount. Employee commuting increased post Pandemic.
- Emissions intensities for 2020 and 2021 have been recalculated using restated generation numbers. 2021 restated numbers have been assured to a limited level by EY.

Section 3. Emissions

Northland measures and monitors impacts related to its energy use and overall environmental footprint. We use an operational control boundary for calculating and reporting energy consumption within the organization and GHG and other air emissions for Northland's global operating facilities and offices. Data collection, consolidation and reporting follows the GHG Protocol Corporate Accounting and Reporting Standard, Scope 2 Guidance, and applicable standards. Due to the closure of our biomass facility and move to dispatchable contracts at our Kirkland Lake, efficient natural gas site in Ontario, Canada in July 2021, NO_x, PM₁₀ and Pb emissions decreased. This resulted in a greater proportion of emissions in or near areas of dense population (associated with our Thorold efficient natural gas site).

Table 4. Energy consumption and GHG and other air emissions

	Unit	2022	2021	% Change	2020	2019	
GRI 302-1	Total energy consumption	GJ	25,472,506	24,178,314	5%	28,879,654	28,759,088
	Total fuel consumption (non-renewable) ⁽¹⁾	GJ	25,286,213	23,131,426	9%	26,869,034	≠
	Total fuel consumption (renewable) ⁽²⁾	GJ	-	871,970	-100%	1,869,633	≠
	Electricity consumption (renewable + non-renewable) ⁽³⁾	GJ	186,293	174,917	7%	140,987	≠
	Third-party heating purchased ⁽⁴⁾	GJ	2,602	3,329	-22%	≠	≠
	Electricity consumed from renewable sources⁽⁵⁾	Percentage	6	4	50%	0	≠
GRI 305-1	Total Scope 1 by greenhouse gas⁽⁷⁾						
	Carbon Dioxide (CO ₂) emissions	Tonnes	1,266,806	1,164,480	9%	1,348,387	≠
		tCO ₂ e	1,266,806	1,164,480	9%	1,348,387	≠
	Methane (CH ₄) emissions	Tonnes	326	303	8%	355	≠
		tCO ₂ e	9,137	8,479	8%	9,936	≠
	Nitrous Oxide (N ₂ O) emissions	Tonnes	33	33	0%	41	≠
		tCO ₂ e	8,738	8,779	0%	10,865	≠
	Sulfur hexafluoride (SF ₆) emissions	Tonnes	0.02	0.08	-81%	0	≠
		tCO ₂ e	353	1,981	-82%	0	≠
IF-EU120a.1, GRI 305-7	Volatile Organic Compound (VOC) emissions	Tonnes	211	201	5%	228	211
	Nitrogen Oxides (NO_x) emissions⁽⁶⁾	Tonnes	1,081	1,663	-35%	2,182	2,021
	Emissions in or near areas of dense population ⁽⁸⁾	Percentage	16%	5%	223%	4%	≠
	Sulfur Oxides (SO_x) emissions⁽⁶⁾	Tonnes	112	98	14%	16	9
	Emissions in or near areas of dense population ⁽⁸⁾	Percentage	2%	2%	16%	9%	≠
	Particulate Matters (PM₁₀) emissions⁽⁶⁾	Tonnes	32	56	-44%	100	104
	Emissions in or near areas of dense population ⁽⁸⁾	Percentage	21%	7%	195%	4%	≠
	Lead (Pb) emissions	Tonnes	0.01	0.02	-51%	0.05	≠
	Emissions in or near areas of dense population ⁽⁸⁾	Percentage	25%	6%	318%	3%	≠
	Mercury (Hg) emissions⁽⁶⁾	Tonnes	0.01	0.01	7%	0.01	≠
	Emissions in or near areas of dense population ⁽⁸⁾	Percentage	26%	17%	54%	15%	≠

1. Represents consumption of energy from fossil fuels, including diesel, propane and natural gas used in stationary equipment, as well as diesel, gasoline, and A-1 jet-fuel used for mobile equipment and vehicles. Consumption data is sourced from invoices when available, otherwise consumption is based on estimates based on fuel tank measurements or estimates based on kilometres travelled for some vehicles
2. Represents consumption of energy from renewable fuels (biomass, wind, solar). Biomass, consisting of waste wood from local lumber yards, was the primary source of Northland's renewable fuel consumption until July 2021 when the biomass generating facility at our Kirkland Lake site was closed
3. Represents electricity purchased from the grid as well as through renewable or green energy contracts. Electricity consumption is based on invoices, except for at locations where invoice data is not available. In these cases, electricity consumption is estimated based on square footage occupied and consumption records from our Toronto Head Office
4. Represents heating purchased from a natural gas or district heating system. Natural gas consumption for heating at some offices is estimated based on consumption records from our Toronto Head Office due to unavailable invoice data at those locations

5. Represents the percentage of electricity purchased that is covered by a renewable energy contract
6. Stationary fuel consumption emission factors are from the US EPA (AP-42) and mobile fuel consumption emission factors are from the European Monitoring and Evaluation Program (EMEP) and the European Environment Agency (EEA) 2016 Guidebook
7. We use AR5-100 year GWP values to calculate t CO₂ equivalents. CO₂ emissions from natural gas-fired facilities are calculated using mass balance. Emission factors are sourced from Canada's Greenhouse Gas Reporting Program, Canada NIR, the U.S. EPA and the GHG Protocol
8. Calculation is based on SASB IF-EU120a.1 definition of "area of dense population" and facilities that are within 49 kilometres of area of dense population

Section 4. Environmental Management

Northland tracks its environmental impact, as well as compliance with international laws and regulations for all operations. This includes our regulated utility, and projects under construction over which we have operational control. We report water withdrawal, consumption and discharge related to operational processes at our efficient natural gas and concentrated solar facilities. In 2022, there were no instances of non-compliance with water quantity and/or quality permits, standards, and regulations. Waste management data is collected from facility managers and site supervisors based on invoices and/or manifests received from third-party contractors. In some cases, waste from major maintenance outages managed by contracted companies may not be recorded in Northland's inventory. Some amounts reported for non-hazardous waste are estimated based on waste disposal bin size, estimated waste volume and contractor pick-up frequencies. Water withdrawn and discharged increased in 2022 due to heightened demand for electricity generated at our efficient natural gas plant. In 2022, we included third-party water data from our concentrated solar site in Spain resulting in an increase in third-party water withdrawn and consumed.

Table 5: Environmental Compliance, Water and Waste Management

		Unit	2022	2021	% Change	2020	2019
GRI 306-3	Significant spills^{(1) (2) (3)}	Number	0	0	0%	0	1
RR-ST-150a2	Number and aggregate quantity of reportable spills, quantity recovered ⁽⁴⁾	Number	0	0	0%	0	0
GRI 307-1	Significant fines⁽⁵⁾ and non-monetary sanctions for non-compliance with environmental laws and/or regulations⁽⁶⁾	Number	0	0	0%	0	0
IF-EU-140a.1.(1), GRI 303-3	Total water withdrawn	Mega-litres	116,639	82,559	41%	82,506	83,549
	by source: surface water	Mega-litres	115,425	82,510	40%	82,457	83,499
	by source: third-party water	Mega-litres	424	200	112%	49	50
IF-EU-140a.1.(1)	in regions with high or extremely high baseline water stress ⁽⁷⁾	Percentage	0	0	0%	0	0
GRI 303-4	Total water discharged	Mega-litres	115,460	81,753	41%	81,462	81,872
	by destination: surface water	Mega-litres	115,425	81,713	41%	81,418	81,829
	by destination: third-party water	Mega-litres	36	50	-28%	44	43
	Total water returned⁽⁸⁾	Percentage	99	99	0%	99	98
IF-EU-140a.1.(2), GRI 303-5	Total water consumed	Mega-litres	1,173	957	23%	≠	≠
IF-EU-140a.1.(2)	in regions with high or extremely high baseline water stress ⁽⁷⁾	Percentage	32	16	100%	0	0
GRI 306-3	Total waste generated	Kilograms	2,130	20,881	-90%	≠	≠
	Hazardous waste generated ⁽⁹⁾	Kilograms	388	253	53%	120	≠
	Hazardous waste recycled or prepared for reuse ⁽¹⁰⁾	Kilograms	266	≠ ⁽¹¹⁾		≠	≠
	Non-hazardous waste generated ⁽¹²⁾	Kilograms	1,743	20,251	-91%	≠	≠
	Non-hazardous waste recycled or prepared for reuse	Kilograms	726	≠ ⁽¹¹⁾		≠	≠

1. In 2022, there were minor reportable spills at our European offshore wind farms that had no lasting impact to the site or surroundings and no remediation action was required
2. In 2021, there were minor reportable spills at our New York Wind construction sites and European offshore wind farms that had no lasting impact to the site or surroundings and no remediation action was required
3. In 2019, 4000 L of oil were released to a garage area and outside the plant. Site personnel responded quickly, building a containment berm that prevented impact to nearby land and waterways
4. Reportable spills at our solar PV sites are those included in Northland's financial statements due to resulting liabilities within the reporting year, or where there are exceedances per environmental permitting requirements
5. Significant fines are fines or penalties resulting from violations that occurred during the reporting year that are greater than the equivalent of USD 10,000 in the reporting currency (CAD)
6. In 2020, Northland paid a penalty of CAD 343,750 associated with a charge from the Ministry of Natural Resources related to silt discharge in 2015 due to construction activities at four Ontario solar facilities. This incident has been fully addressed by Northland with no further issues since 2015

7. Total water consumed in a high-stress region as identified by WRI's Aqueduct Water Risk Atlas. In 2022, 376 ML of third-party water was consumed at our Lebrija concentrated solar site. The annual amount reported is within the permitted concessioned water amount from the community irrigation system
8. Percentage of water returned is calculated as the total water discharged (back to source) divided by the total water withdrawn
9. Hazardous waste is defined by applicable regulations in the reporting jurisdiction
10. Waste is reported as recycled when the contracted waste management company has a waste recycling program in place to process the waste
11. Northland recycled a total of 377 tonnes of waste in 2021. This included both hazardous and non-hazardous waste
12. Non-hazardous wastewater is excluded from calculations where national legislation does not require it to be reported under total waste

Section 4. Environmental Management

Northland carefully considers threatened plant and animal species with habitats in our areas of operations through community relations, comprehensive environmental assessments and ongoing monitoring, while complying with all local regulatory requirements. We use strategic planning for project development and operations, and incorporate identification and assessment of risks, using a precautionary approach to develop action plans in response to any identified risks. Our sites have monitoring plans in place that address impacts on plants, animals, and their habitats. Additionally, there are employee-led conservation, restoration and biodiversity initiatives at our operations around the globe. We adhere to all environmental permitting requirements for the management of plants and animals and their habitats in our areas of operation. In 2022, there were no project delays related to ecological impacts.

Table 6: Biodiversity management and ecological impacts

	Unit	Total	Canada	The North Sea	Spain	Colombia
Sites used for operational activities^{(1) (2)}	Number	56	23	3	28	2
Sites used for operational activities managed in, or adjacent to, protected areas or areas of high biodiversity value outside protected areas⁽²⁾	Number	0	0	0	0	0
Significant impacts of activities, products and services on biodiversity	Description	<p>The biggest impacts of our activities happen during the construction phase of our projects⁽³⁾. We manage these impacts by planning for permits and compliance, conducting impact assessments, identifying avoidance opportunities, and developing mitigation, restoration and/or remediation programs, including incorporating remediation costs in our project planning. See our 2022 Sustainability Report for more information on how we protect ecosystems and support biodiversity in our areas of operations⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾.</p>				

1. Data associated with operational activities is initially identified from the commercial operations data (COD) of a site
2. Our sites in operation cover an area of approximately 2,431,578 hectares. None of these sites are currently in areas within or in close proximity to critical biodiversity
3. In 2022, we had two projects under construction in New York State in the U.S.
4. In Canada, we have three ongoing initiatives that support local biodiversity, including protecting bats and raptors through an acoustic system at a wind park, maintaining apiaries and local pollinator wildflowers at our solar parks, and revitalizing land into a community greenspace with habitats for local wildlife at an efficient natural gas plant
5. In the North Sea, one of our offshore wind parks is involved in an oyster reef restoration project to support underwater ecosystems. Past measures to protect underwater sea life during construction of our offshore wind parks included deployment of multi-level noise mitigation measures, such as a hydro sound damper and a double big bubble curtain
6. In Spain, we engage in sustainable vegetation management at our solar parks and mitigate impacts to water ecosystem services at our wind parks by reusing and recycling water
7. In Colombia, we prevent and manage impacts through engineering design and carry out conservation and reforestation activities that consider the unique ecosystem needs and microclimates of the areas where we build and operate



Section 5. People

In 2022, Northland continued to grow its employee base to support its strategic global development opportunities. We report on all direct employees at our projects and operations worldwide. Northland and EBSA's employee-related data are based on records from their respective enterprise management systems. Employee turnover rates are calculated as the number of regular and unionized employees who left the company during the reporting year relative to the number of regular and unionized employees as at December 31 of the reporting year. Note that due to the sale of two of Northland's efficient natural gas assets in April 2022, the number of full-time employees was reduced, these employee headcount numbers were not included in our turnover calculations. Northland provides access to a range of non-occupational medical and healthcare services and programs for all global employees and their dependent family members. Please see our [2021 Sustainability Report](#) for more detailed information about employee benefits.

Table 7: Talent management

	Unit	2022	2021	% Change	2020	2019	
GRI 2-7	Total employees⁽¹⁾	Number	1,339	1,186	13%	1,104	425
GRI 102-8	Full-time	Number	1,296	1,176	10%	1,093	415
	Part-time	Number	43	10	330%	11	15
GRI 2-30	Employees covered by collective bargaining agreements	Percentage	41	47	-13%	56	8
	Full-time employees by region⁽²⁾						
	Canada	Number	302	277	9%	272	254
	Colombia	Number	565	558	1%	573	N/A
	Germany	Number	169	150	13%	124	118
	The Netherlands	Number	26	22	18%	12	12
	Mexico	Number	21	20	5%	34	15
	Taiwan	Number	104	69	51%	N/A	N/A
	Spain	Number	21	19	11%	N/A	N/A
	Other ⁽³⁾	Number	88	61	44%	78	16
	New employee hires	Number	264	171	54%	190	138
	Female ⁽⁴⁾	Percentage	36	33	9%	24 ⁽⁵⁾	21
GRI 401-1	Total employee turnover	Number	148	98	51%	55	≠
	Employee turnover rate ⁽⁵⁾	Percentage	12	8	50%	5	≠
GRI 401-3	Employees on parental leave⁽⁶⁾	Number	29	33	-12%	≠	≠
	Female parental leave rate ⁽⁷⁾	Percentage	34	27	26%	≠	≠
GRI 404-1,2	Investment in training and education⁽⁸⁾	\$000 CAD	2,055	2,064	0%	636	610
	Total hours of training	Hours	85,466	93,903	-9%	37,241	≠
	Hours of training per employee per year ⁽⁹⁾	Hours	63	79	-20%	34	≠
GRI 404-3	Percentage of employees receiving regular performance and career development reviews⁽¹⁰⁾	Description	In 2022, 100% of Northland employees and 89% of EBSA employees received performance reviews.				
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Description	Benefits across our global operations include: <ul style="list-style-type: none"> • Private and public life and health care insurance coverage globally, including long and short-term disability. Insurance coverage is reviewed annually to ensure market competitiveness • Parental leave in accordance with local entitlements plus an additional top-up for a pre-defined period during leave • Matched contributions towards retirement saving programs for employees who elect to have payroll deductions 				

1. Employee numbers include permanent and non-permanent employees based on total headcount as at December 31, 2022. In 2022 there were 43 non-permanent employees in the organization.
 2. Part-time employees by region for 2022 are as follows: Canada (18), Germany (9) and the Netherlands (10), Mexico (1), Taiwan (2) and United Kingdom (3)
 3. Other employees for 2022 includes United Kingdom (28), United States (19), Japan (14), South Korea (19) and Poland (8). For 2021 other includes United Kingdom, USA, Japan, South Korea and Poland. For 2020 and 2019 other includes Japan, Poland, South Korea, Spain, Taiwan, United Kingdom and USA
 4. In 2022 64% of new employee hires are male
 5. Out of the 190 new hires in 2020, 44 or 23% were undeclared

6. Northland defines "Parental Leave" as any leave related to the addition of a new child to the family. Of the 29 employees who took parental leave, 22 returned within the reporting year
 7. Calculated as a percentage of total employees who took parental leave. In 2022 66% of total employees on parental leave were male
 8. The aggregate spending reported is based on invoices from individual trainings and courses taken by employees supported by Northland, as well as fees paid to services providers for specialized Northland group training
 9. Hours per employee are calculated using total employee headcount and includes all sites, corporate offices and development offices. Where detailed hourly breakdowns are not available, we estimate total hours based on a CAD 100/hour rate based on corporate and operational averages and descriptions
 10. Fixed-term, temporary, student and intern employees are not included in the performance review process

Section 5. People

In 2022, Northland conducted its second-annual engagement survey through Glint, a third-party employee engagement platform. The survey was shared with our global talent team including all permanent employees or those on a long-term or fixed-term contract. It consisted of 20 survey items and three open-ended questions. In total, 82 per cent of our people across the globe responded to the survey and the company achieved an overall engagement score of 72, down from 75 in 2021. Our 2022 global engagement survey included specific questions to measure our people’s perception of diversity, inclusion and belonging at Northland. The results from 2021 and 2022 assisted in informing the recent organizational restructure (more details in the [2022 Sustainability Report](#)).

Table 8: Employee Engagement

		Unit	2022	2021	% Change	2020 ⁽²⁾
GRI 401-2	Overall engagement (How happy are you working at Northland?) ⁽¹⁾	Number	72	75	-4%	≠
GRI 404-1-3	Authenticity (I feel comfortable being myself at work.)	Number	76	78	-3%	≠
	Belonging (I feel a sense of belonging at Northland.)	Number	64	69	-7%	≠
	Culture (Northland has a great culture.)	Number	62	66	-6%	≠
	Inclusion (Leaders at Northland value different perspectives.)	Number	66	66	0%	≠

1. Survey scores do not represent employees from EBSA and Gemini Wind Park, who did not participate in the engagement survey
2. Northland began conducting annual Glint engagement surveys in 2021



Section 5. People

Northland is committed to fostering an inclusive environment across the organization, where everyone is empowered to do their best work, all differences are welcome, practices are equitable, and everyone experiences a sense of belonging. Northland tracks gender metrics for use in labour and insurance records and gender figures reported in this table are not self-identified for Senior Management, Directors, Managers and Individual Contributors. An inaugural voluntary and anonymous survey was sent to the Board and Executives to capture diversity in 2021. This survey was completed by Executives again in 2022 to capture organizational changes. Questions in the survey were related to how individuals perceived themselves and definitions for the terms used were included. Given the small number and limited responses answers were kept to key categories identifying the diversity of the organization. Other categories are summarized in the methodology and definitions.

Table 9: Diversity of employees and governance bodies

		Category	Unit	2022	2021	Change %	2020
GRI 405-1.b	Senior management ⁽⁹⁾	Female ⁽¹⁾	Percentage	35	29	22%	≠
		<30	Percentage	0	0	0%	≠
		30-50	Percentage	47	42	12%	≠
		>50	Percentage	53	59	-10%	≠
GRI 405-1.b	Directors ⁽⁹⁾	Female ⁽¹⁾	Percentage	20	18	11%	≠
		<30	Percentage	5	0		0
		30-50	Percentage	69	68	1%	74
		>50	Percentage	26	32	-18%	26
GRI 405-1.b	Managers	Female ⁽¹⁾	Percentage	29	30	-2%	≠
		<30	Percentage	6	8	-22%	7
		30-50	Percentage	66	70	-6%	72
		>50	Percentage	28	22	26%	21
GRI 405-1.b	Individual contributors	Female ⁽¹⁾	Percentage	25	23	9%	≠
		<30	Percentage	23	21	10%	22
		30-50	Percentage	49	49	1%	54
		>50	Percentage	28	30	-8%	21
GRI 102-22	Board of Directors ^{(7) (8)}	Gender identity ⁽²⁾ - Woman	Percentage	33	44	0%	33
GRI 405-1.a.		Sexual orientation ⁽³⁾ - Other	Percentage	0	0	0%	≠
		Indigenous ⁽⁴⁾ - Yes	Percentage	0	0	0%	≠
		Ethnic or visible minorities ⁽⁵⁾ - Yes	Percentage	0	0	0%	≠
		Disability ⁽⁶⁾ - Yes	Percentage	0	0	0%	≠
GRI 102-22	Executives	Gender identity ⁽²⁾ - Woman	Percentage	50	50	-11%	37
GRI 405-1.a.		Sexual orientation ⁽³⁾ - Other	Percentage	0	0	0%	≠
		Indigenous Identity ⁽⁴⁾ - Yes	Percentage	0	0	0%	≠
		Ethnic or visible minorities ⁽⁵⁾ -Yes	Percentage	20	17	-35%	≠
		Disability ⁽⁶⁾ - Yes	Percentage	0	0	0%	≠

1. Male distribution accounts for the remaining % beyond female representation
2. Options provided but not selected for Gender identity included Gender Fluid, Non-binary, Trans man, Trans woman, Two-spirit, I don't identify with the options provided, and I prefer not to answer. In 2022, 67% of the Board identified as male and 50% of executives officers identified as male
3. Options provided but not selected for Sexual Orientation included Asexual, Bisexual, Gay, Lesbian, Pansexual, Queer, Two-spirit, I don't identify with the options provided, and I prefer not to answer. In 2022, every Board member and Executive Officer identified as heterosexual
4. For the purposes of this survey, indigenous identity refers to, within the Canadian context, First Nations (North American Indian), Metis or Inuk (Inuit). In 2022, every Board member and Executive Officer identified as not Indigenous
5. For Ethnic minority we used the definitions of ethnic groups and ethnic minorities provided by the International Labour Organization (ILO) and the definitions of visible minority from the Canadian Employment Equity Act. In 2022, 100% of Board members and 80% of Executives identified as not an ethnic or visible minority
6. The definition of Disability was taken from the Accessible Canada Act. 100% of the Board and Executives identified as not having a disability
7. We did not include age for our Board of Directors as this data is publicly available in our 2023 Management Information Circular
8. The Board of Director voluntary and anonymous survey results from 2021 were reused for 2022. The Directors remained the same in 2022, with one director departing mid-year whom had not been replaced as at December 31, 2022
9. Senior management is defined as executive officers, executive vice-presidents and vice-president employees. Directors include directors and senior directors across the organization

Section 6. Occupational Health and Safety

Northland's approach to occupational health and safety is outlined in our 2022 Sustainability Report and our [Global Health and Safety Policy](#). We track, monitor and report on occupational health and safety data for employees at our offices, and for employees and contractors at our operating facilities and project sites. All incidents are reported through monthly global health and safety performance reports. Information gathered from incident investigations is used to identify and share lessons learned, discover trends and improve standards, systems and practices. Only work-related incidents arising out of, or in the course of, work and only work-related injuries or illnesses arising from exposure to hazards at work are included in this disclosure. Northland collects and consolidates data using common metrics for all locations so that our numbers can be readily tracked, trended and compared. In some cases, an office, facility or project site may track two sets of numbers: one aligned with local regulations and another to meet corporate reporting standards, since reporting definitions from local regulators could vary across jurisdictions.

Table 10: Occupational Health and Safety performance

	Unit	2022	2021	% Change	2020	2019	
GRI 403-9	Total hours worked (all sites)⁽¹⁾⁽²⁾⁽³⁾	Hours	7,473,580	4,062,211	84%	3,439,945	922,584
GRI 403-9	Total recordable work-related injuries^{(4) (5) (6)}	Number	14	9	56%	13	0
	Own employees	Number	3	3	0%	≠	≠
	Contractors' employees	Number	11	6	83%	≠	≠
	Total lost time injuries (LTI)⁽⁴⁾⁽⁷⁾	Number	9	6	50%	7	0
	Own employees	Number	3	2	50%	≠	≠
	Contractors' employees	Number	6	4	50%	≠	≠
GRI 403-9	Total Recordable Incident Rate (TRIR)⁽³⁾⁽⁴⁾⁽⁸⁾	Rate	0.40	0.44	-9%	0.76⁽⁹⁾	≠
	Lost-Time Injury Frequency Rate (LTIFR)⁽⁴⁾⁽⁸⁾	Rate	0.27	0.30	-10%	0.41⁽⁹⁾	0.00⁽⁸⁾
GRI 403-9	Number of fatalities resulting from a work-related injury	Number	0	0	0%	0	0
	Own employees	Number	0	0	0%	≠	≠
	Contractors' employees	Number	0	0	0%	≠	≠
GRI 403-9	Number of high-consequence work-related injuries⁽¹⁰⁾	Number	1	0	100%	0	0
	Own employees	Number	1	0	0%	≠	≠
	Contractors' employees	Number	0	0	-38%	≠	≠
	Total health and safety training hours delivered^{(11) (12)}	Hours	23,627	38,044		13,608	≠

- Total hours worked are calculated based on the number of FTEs per month and on standard industry working hours per week
- The methodology used to measure total hours worked was changed in 2022 to include contractor hours worked
- 2020 hours worked and TRIR were assured to a limited level by GHD, see [assurance statement](#). 2021 hours worked and TRIR were assured to a limited level by EY, see [assurance statement](#)
- Overall the number of incidents increased, but our incident rates decreased in 2022. Although we had more contractors and employees working at our global sites and offices, we had a stronger health and safety management and monitoring plan in place. For more information see our [2022 Sustainability Report](#)
- Recordable injuries are work-related injuries or ill health that result in any of the following: death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness; or significant injury or ill health diagnosed by a physician or other licensed healthcare professional

- Common types of injuries include slips, trips and falls, and bruises, cuts, and bone fractures arising from driving and contact with equipment
- Lost-time injuries are defined as injuries that prevent a worker from returning to their next scheduled workday or shift. Occurrences, not total numbers of days missed, are accounted for in this disclosure
- Rates are calculated as incidents per 200,000 hours worked
- TRIR and LTIFR increased in 2020 due to growth in the organization (e.g. acquisitions, increase in construction projects), which increased the risk of incidents occurring
- Life-changing or high-consequence incidents are work-related injuries from which a worker cannot, or is not expected to, recover to pre-injury health status within six months
- Includes employee and contractor training hours, which are calculated based on the number of participants per session and the duration of that training session
- Training includes topics related to specific work-related hazards, hazardous activities and hazardous situations, and also included hours attended for health and safety related conferences

Section 7. Community

Northland's Community and Indigenous Relations Policy and commitments focus on developing strong relationships with community stakeholders, which is fundamental to how we do business. Northland creates and distributes significant economic value to our stakeholders and in the communities where we operate. The direct value we deliver comes in the form of salaries and wages, payments for goods and services, through investment in local communities and dividends to our shareholders. Northland also provides indirect economic benefits through payments in taxes to governments as well as through our supply chain activities. Northland's total community investments amount includes Northland's wholly and non-wholly owned subsidiaries and joint ventures. Northland reports 50% of the total community investment from joint ventures. In 2022, Northland continued to support communities where we operate, including at our development and construction projects, our operating facilities and our offices through donations, sponsorships, community agreement programs and where possible, volunteering.

Table 11: Socioeconomic impact and community investment

	Unit	2022	2021	% Change	2020	2019	
GRI 413-1	Operations with implemented local community engagement, impact assessments, and/or development programs	Percentage	100%	100%	0%	100%	≠
GRI 413-2	Operations with significant actual and potential negative impacts⁽¹⁾ on local communities	Number	0	0	0	0	≠
GRI 201-1	Direct economic value generated and distributed⁽²⁾						
	Revenues ⁽³⁾	\$000 CAD	2,460,086	2,104,917	17%	2,072,650	1,671,331
	Operating costs ⁽⁴⁾	\$000 CAD	706,384	609,073	16%	571,538	377,093
	Employee wages and benefits ⁽⁵⁾	\$000 CAD	122,603	117,362	4%	114,407 ⁽⁶⁾	73,875
	Payments to capital providers ⁽⁷⁾	\$000 CAD	638,209	562,763	13%	683,614	619,854
	Payments to governments ⁽⁸⁾	\$000 CAD	203,376	84,410	141%	85,737	44,545
	Community investments ⁽⁹⁾	\$000 CAD	3,195	2,735	17%	1,116	964
	Donations and sponsorships ⁽¹⁰⁾	Percentage	28	25	12%	≠	≠
	Community contribution agreements ⁽¹¹⁾	Percentage	72	75	-4%	≠	≠
	Total economic value distributed	\$000 CAD	1,673,872	1,376,343	22%	1,456,412	1,116,331
	Net economic value retained⁽¹²⁾	\$000 CAD	786,214	728,574	8%	616,238	555,000
GRI 203-1	Development prospecting expenses⁽¹³⁾	\$000 CAD	53,560	57,207	-6%	47,571	24,073
	North America	\$000 CAD	17,812	14,768	21%	9,678	3,444
	Latin America	\$000 CAD	1,633	2,897	-44%	1,035	2,749
	Europe	\$000 CAD	17,103	17,327	-1%	5,976	4,661
	Asia	\$000 CAD	17,013	22,215	-23%	30,882	13,219
GRI 203-1	Construction and capital expenditures⁽¹⁴⁾	\$000 CAD	637,366	542,056	18%	37,590	766,038
	North America	\$000 CAD	332,567	317,758	5%	12,822	5,718
	Latin America	\$000 CAD	43,160	67,439	-36%	407	36,932
	Europe	\$000 CAD	45,207	108,302	-58%	0	723,388
	Asia ⁽¹⁵⁾	\$000 CAD	216,432	48,557	346%	24,361	≠

1. An operation with significant impacts is one that has a higher than average potential of negative impacts, or actual negative impacts, on the social, economic or environmental well-being of local communities
2. Reporting for economic metrics is aligned with Northland's consolidated financial statements
3. Revenues include sales and finance lease income
4. Operating costs include cost of sales, plant operating costs and general and administrative costs
5. Employee wages and benefits included payroll costs, including, but not limited to, employer-paid benefit premiums, employer-matched savings contributions and allowances
6. Northland completed the acquisition of Colombian regulated utility EBSA on January 14, 2020
7. Payments to capital providers include payments for interest and dividends to common shareholders, preferred shareholder and non-controlling interest partners, disclosed on a cash basis
8. Payments to governments is limited to current-year tax expenses recognized on an accrual basis. In 2022, higher power prices resulted in higher revenues and higher taxes
9. Includes donation, sponsorship or community contribution agreement spending done to support local communities at our operations and construction sites, or to support causes where Northland does business
10. Donations are defined in our Community Investment Policy
11. Community Contributions Agreements are committed investments agreed upon through a formal agreement; these may be in place during initial development and construction or throughout the life of the operation to support meeting the needs of the community
12. Represents economic value generated minus economic value distributed
13. Growth Expenditures include project-related expenses incurred pre-financial close (Pre-FC) and prior to capitalization of costs of our development activities and projects in each region, as well as development overhead expenses related to specific projects including the use of consultants, IT and payroll for employees working on these projects or for our regional development offices
14. Capital expenditures include all construction-in-progress property, plant and equipment costs as well as costs associated with capitalized expenses for our joint venture development projects
15. In 2022, additional investments were made in our Hai Long project (JV) as it advanced towards construction

Section 7. Community

Northland's regulated utility, EBSA, supplies electricity to the Department of Boyacá in Colombia. EBSA has two key business segments for distribution and commercialization, operating as a distribution company to transfer electricity for its commercialization business and on behalf of commercialization businesses owned by other companies. As a distributor of essential services, tracking the accessibility and affordability of electricity delivered is of utmost importance. In 2022, 10.39% of EBSA's customers were categorised as vulnerable customers⁽¹⁾. The energy distributed by EBSA is primarily from hydropower plants or other renewable energy sources. Boyacá is not a renewable portfolio standards market. However, according to *Resolution MME 40715 2019*, approved by Colombia's Ministry of Energy and Mines, all power companies operating in the wholesale energy market must ensure that at least 10% of the power they distribute is from renewable sources (wind and solar in particular). To comply with this regulation, EBSA has participated in energy auctions and has secured enough renewable energy to meet this target. EBSA's asset management system is ISO55001 certified.

Table 12: Grid resiliency and energy affordability within the service territory

		Unit	2022	2021	% Change	2020
IF-EU-000.A	Total customers served^{(2) (3)}	Number	531,234	516,638	3%	503,009
	Residential customers	Number	482,273	469,459	3%	457,198
	Commercial customers	Number	40,699	39,017	4%	37,795
	Industrial customers	Number	3,110	3,044	2%	2,915
IF-EU-000.B	Total electricity delivered	MWh	755,624	769,020	-2%	760,099
	Residential customers	MWh	392,660	423,576	-7%	419,687
	Commercial customers	MWh	162,329	148,669	9%	131,105
	Industrial customers	MWh	85,487	74,945	14%	68,335
	Wholesale customers ⁽⁴⁾	MWh	62,818	9,230	581%	28,794
	All other customers ⁽⁵⁾	MWh	115,148	112,600	2%	112,178
IF-EU-000.C	Length of transmission and distribution lines⁽⁶⁾⁽⁷⁾	Kilometres	31,863	31,387	2%	30,696
IF-EU-000.E	Total wholesale electricity purchased	MWh	936,950	907,100	3%	875,800
IF-EU-240a.1	Average rates^{(8) (9)}					
	Average retail electric rate for residential customers	kWh \$CAD	0.19	0.20	-5%	0.19
	Average retail electric rate for commercial customers	kWh \$CAD	0.17	0.18	-6%	0.17
	Average retail electric rate for industrial customers	kWh \$CAD	0.17	0.18	-6%	0.17
IF-EU-240a.2	Typical monthly electricity bill for residential customers					
	Typical monthly electric bill for residential customers for the first 500 kWh of electricity delivered	\$CAD	18.27	19.41	-6%	19.68
	Typical monthly electric bill for residential customers for the first 1,000 kWh of electricity delivered	\$CAD	21.54	20.41	6%	20.56
IF-EU-240a.3	Number of residential customer electric disconnections for non-payment	Number	57,571	57,525	0%	26,238
	Residential customers reconnected within 30 days of disconnection	Percentage	100	100	0%	100
IF-EU-550a.1	Number of incidents of non-compliance with physical standards or regulations	Number	0	0	0%	0
	Number of incidents of non-compliance with cybersecurity standards or regulations	Number	0	0	0%	0
IF-EU-550a.2	System Average Interruption Duration Index (SAIDI)⁽¹⁰⁾	Minutes	5.40	5.84	-8%	6.19
	System Average Interruption Frequency Index (SAIFI)	SAIFI	6.07	7.42	-18%	7.75
	Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	CAIDI	0.89	0.79	13%	0.83

1. EBSA defines vulnerable customers as those customers that are located in areas classified by the Ministry of Mines and Energy as "Special Areas" in less developed rural areas
2. The total includes public sector (government), public lighting and non-regulated customers
3. The number of customers served for each category corresponds to the number of meters billed for each category
4. In 2022, more MWh of electricity were traded in the wholesale market as contracted with the market agent and more electricity was sold on the spot market
5. Includes public sector, public lighting and non-regulated customers

6. The length of transmission and distribution lines is calculated on a circuit kilometre basis
7. 2020 and 2021 have been restated to reflect updates to internal measurement process
8. All CAD amounts are converted from COP using the December 31, 2022 closing rate
9. Rates reported are an average of rates by voltage level for each customer type. Electricity rates for 2020 - 2022 reflect measures implemented by the Government of Colombia to help manage economic impacts of COVID-19
10. EBSA's reliability indicators are calculated by EBSA's operations department in accordance with applicable national measurements and standards

Section 8. Memberships and Associations

As a global company, Northland works together with local governments, communities, and associations where available to connect with peers, service providers and off-takers to support the growth of renewable energy globally.

Table 13: Memberships and Associations

Northland is a member of the following associations:

<p>North America</p>	<ul style="list-style-type: none"> • Alliance for Clean Energy New York, Inc. • Association of Power Producers of Ontario (APPRO) • Canada-Germany Chamber of Commerce • Canadian Council for Aboriginal Business • Canadian Renewable Energy Association • Energy Storage Canada • Ontario Energy Association (OEA) • Ontario Water Power Association • Marine Renewables Canada 	<p>Europe</p>	<ul style="list-style-type: none"> • Canada-Spain Chamber of Commerce • Federal Association of Wind Farm Operators Offshore eV (BWO) • G+ Offshore Wind Association • International Marine Contractors Association (IMCA) • Offshore Wind Foundation • ORE Catapult UK • Polish Wind Energy Association • RenewableUK • Scottish Renewables • Wind Europe ASBL
<p>Latin America</p>	<ul style="list-style-type: none"> • Asociación Colombiana de Distribuidores de Energía Eléctrica (ASOCODIS) • Asociación de Comercializadores de Energía • Asociación Nacional de Empresas de Servicios Públicos y Comunicaciones (ANDESCO) • Cámara Colombiana de la Construcción (CAMACOL) • Canadian Chamber of Commerce in Mexico • Comité Asesor de Comercialización (CAC) • Comité Colombiano de la CIER (COCIER) • Consejo Nacional de Operación del Sector Eléctrico (CNO) • Corporación Red Local Pacto Global en Colombia 	<p>Asia</p>	<ul style="list-style-type: none"> • Canadian Chamber of Commerce in Korea (CanCham Korea) • Energy Transition Forum • European Chamber of Commerce Low Carbon Initiative (LCI) • Japan Wind Power Association • Jeonnam Wind Energy Industry Association • Korea Wind Energy Industry Association • SEMI Offshore Wind Committee • Taiwan Offshore Wind Industry Association • Taiwan Renewable Energy Alliance
<p>International</p>	<p>World Forum Offshore Wind</p>		



Section 9. Climate Scenario Analysis

Northland conducted an external climate change scenario analysis in 2021 to identify physical and transition risks and opportunities, and to assess business resiliency. The analysis complemented existing work using internal scenario analysis for our long-term-outlook, to determine possible financial business impacts under a below 2°C scenario, as well as impacts on asset performance and financial returns under a high-warming scenario. The analysis identified physical risks using Intergovernmental Panel on Climate Change (IPCC) models aligned with high-warming and below 2°C transition scenarios to assess the impacts of high heat, high winds, floods and freeze-thaw cycles on asset operational performance, as well as the risk of potential damage and impacts to corporate offices. The analysis also identified transition risks and opportunities associated with the impact of a low-carbon transition on the demand for, and price of, Northland-generated energy and utility assets, as well as the impact of carbon pricing. The analysis found that Northland has significant potential upside from a low-carbon transition, with limited (albeit measurable) risks from physical climate change.

Table 14: Scenarios considered

	High-Warming ⁽¹⁾	Below 2°C ⁽²⁾
External Scenario Used⁽³⁾	Aligns with a high-warming pathway (RCP8.5) where GHG emissions and concentrations in the atmosphere increase unmitigated, leading to an estimated 4.3°C temperature increase by 2100 compared to pre-industrial temperatures.	Aligns with a pathway where actions help limit temperature increases to below 2°C, and help the planet reach net zero CO ₂ emissions, by 2050 compared to pre-industrial temperatures.

Scenario considerations	Opportunities and risk	Impact area	Measurement used
Transition Impacts⁽⁴⁾⁽⁵⁾	Changes in pricing Changes in demand Carbon pricing Changes in pricing Economic electrification	Changes in pricing Changes in demand Carbon pricing Changes in pricing Economic electrification	Wholesale electricity price (\$/MWh) Secondary energy provided by natural gas (MWh) Carbon price (\$/tCO ₂ e) End-user electricity price (\$/MWh) Share of final energy delivered by electricity (%)
Physical impacts⁽⁶⁾⁽⁷⁾	Temperature rise Very hot days Flooding Cloud cover Heavy winds Ice days	Revenue Revenue Revenue, Operational Expenditures Revenue, Operational Expenditures Operational Expenditures Revenue	# of days above 25°C # of days above 30°C water depth at 1-in-50,100,1000-year flood events # of days with high precipitation wind speeds at 1-in-50,100,1000-year storm events # of days below 0°C

1. There is limited to no further action from governments, business, and society to reduce carbon emissions leading to severe climate change
2. Sufficient action is taken by all actors to achieve a low-carbon transition, and a global target of below 2°C is achieved by 2050. These actions reduce, but do not eliminate, the the physical impacts of climate change
3. Both scenarios consider the impacts of external forces on Northland's business model and asset performance and integrity and Northland's existing assets and confirmed development pipeline

4. Modelled transition impacts build on data from the qualitative assessment
5. Model and calculation sources include: Network for Greening the Financial System (NGFS), Canada's Energy Regulator, historical demand from Northland reporting, IESO, SaskPower, Northland project sheets, Northland Annual Reports, Regie de l'énergie, discussions with Northland, demand analysis, ECCC, OECD, The Guardian, Science Direct
6. Modelled physical climate impacts build on data from the qualitative assessment
7. Model and calculation sources include: IPCC, Copernicus climate database, [Gonzalez-Diaz et al \(2017\)](#), Northland project sheets, facility capacity, demand analysis, discussions with Northland, Northland insurance documents, [FEMA study](#), facility insurance values, [Pfenninger et al, 2013](#), Tanaka, [University of Sao Paulo, 2019](#), Bonkaneyet al, [Journal of Renewable Energy, 2017](#), [Case study of an Australian solar farm](#), Rose et al., [PNAS, 2012](#), Gao and Hu, [PNAS, 2021](#), [Bartos et al \(2016\)](#)

Appendix A - GRI Index

Standard	Indicator	Reference(s)
2-1	Legal name Nature of ownership and legal form and location of headquarters Location of operations	Northland Power Inc. 2022 Annual Information Form , page 2 2022 Annual Report , pages 8,9
2-2	Entities included in its sustainability reporting Differences between the list of entities included in its financial reporting and the list included in its sustainability reporting Approach used for consolidating the information	2022 Annual Report , pages 16,17; 2022 Annual Information Form , page 2 Northland's sustainability reporting includes the same entities as for its financial reporting. 2022 ESG Performance Index , page 3
2-3	Reporting period, frequency and contact point for questions about the report or reported information Reporting period for financial reporting Publication date of the report or reported information	2022 ESG Performance Index , page 3, 26 2022 Sustainability Report , page 2, 56 2022 Annual Report , page 12 May 9, 2023
2-4	Restatements of information, reasons and effects	2022 ESG Performance Index , page 3 2022 Sustainability Report , page 3
2-5	External assurance and role of highest governance body and senior executives Link to Statement	2022 ESG Performance Index , page 3 2022 Sustainability Report , page 3 Ernst & Young Verification Statement
2-6	Sector in which organization is active Describe organization's value chain, including services and markets served, its supply chain, and entities downstream for the organization and its activities Other relevant business relationships Significant changes compared to previous reporting period	Annual Information Form , page 3 Annual Information Form , pages 3,4 2022 Sustainability Report , page 6
2-7	Employees	2022 ESG Performance Index , page 12
2-8	Workers who are not employees whose work is controlled by the organization	We do not currently disclose detailed information about workers who are not employees.
2-9	Governance structure, including committees of the highest governance body; composition of the highest governance body and its committees Committees of the highest governance body that are responsible for decision making on and overseeing the management of the organization's impacts on the economy, environment, and people	Northland Power Website: List of Executive Team and Board of Directors , 2022 Annual Information Form , page 40-43 ; Management Information Circular (April 10, 2023), pages 8,9,18-29 Management Information Circular (April 10, 2023), pages 31-32; 2022 Sustainability Report , page 12
2-10	Nomination and selection of the highest governance body	Management Information Circular (April 10, 2023), pages 31,35-37; Press Release: Board Diversity
2-11	Chair of the highest governance body	2021 Annual Information Form , page X; Management Information Circular (April 10, 2023), page 2
2-12	Role of the highest governance body in overseeing the management of impacts	2022 Sustainability Report , page 13
2-13	Delegation of responsibility for managing impacts	2022 Sustainability Report , page 13
2-14	Role of the highest governance body in sustainability reporting	2022 Sustainability Report , page 13
2-15	Conflicts of interest	Management Information Circular (April 10, 2023), pages 34,35
2-16	Communication of critical concerns	2022 Sustainability Report , pages 13,28, Whistleblower Policy
2-17	Collective knowledge of the highest governance body	Management Information Circular (April 10, 2023), pages 19-30

Appendix A - GRI Index

Standard	Indicator	Reference(s)
2-18	Evaluation of the performance of the highest governance body	Management Information Circular (April 10, 2023), pages 28,29
2-19	Remuneration policies	Management Information Circular (April 10, 2023), pages 9,39-42
2-20	Process to determine remuneration	Management Information Circular (April 10, 2023), page 38
2-21	Annual total compensation ratio	We do not currently calculate the total annual compensation ratio
2-22	Statement on sustainable development strategy	UN Global Compact Letter of Commitment
2-23	Policy commitments	Code of Conduct and Business Ethics; Supplier and Partner Code of Conduct; 2022 Sustainability Report , pages 9,29
2-24	Embedding policy commitments	Supplier and Partner Code of Conduct; 2022 Sustainability Report , pages 9,13; UN Global Compact
2-25	Processes to remediate negative impacts	2022 Sustainability Report , page 28; Whistleblower Policy
2-26	Mechanisms for seeking advice and raising concerns	Code of Conduct and Business Ethics; Whistleblower Policy
2-27	Compliance with laws and regulations	There were no significant instances of non-compliance with laws and regulations and no fines were paid during the reporting period.
2-28	Membership associations	2022 ESG Performance Index , page 18
2-29	Approach to stakeholder engagement	2022 Sustainability Report , pages 12,50-51
2-30	Collective bargaining agreements	2023 ESG Performance Index , page 12
3-1	Process to determine material topics	2022 Sustainability Report , page 8
3-2	List of material topics	2022 Sustainability Report , page 8
3-3	Management of material topics	2022 Sustainability Report , pages 9,13,19-24,26,28-29,33,36-39,46-47,50-52
201-1	Direct economic value generated and distributed	2022 ESG Performance Index , page 16
201-2	Financial implications and other risks and opportunities due to climate change	2022 ESG Performance Index , page 19; 2022 Sustainability Report , pages 16-25
203-1	Infrastructure investments and services supported	2022 ESG Performance Index , page 16
205-2	Communication and training about anti-corruption policies and procedures	2022 Sustainability Report , pages 27-28
205-3	Confirmed incidents of corruption and actions taken	No confirmed incidents during the reporting period.
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	No reported legal actions during the reporting period.
302-1	Energy consumption within the organization	2022 ESG Performance Index , page 9
303-1	Interactions with water as a shared resource	2021 ESG Performance Index , page 19
303-2	Management of water discharge-related impacts	2021 ESG Performance Index , page 19
303-3	Water withdrawal	2022 ESG Performance Index , page 10
303-4	Water discharge	2022 ESG Performance Index , page 10
303-5	Water consumption	2022 ESG Performance Index , page 10
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	2022 ESG Performance Index , page 11
304-2	Significant impacts of activities, products, and services on biodiversity	2022 ESG Performance Index , page 11

Appendix A - GRI Index

Standard	Indicator	Reference(s)
305-1	Direct (Scope 1) GHG emissions	2022 ESG Performance Index , page 8
305-2	Energy indirect (Scope 2) GHG emissions	2022 ESG Performance Index , page 8
305-3	Other indirect (Scope 3) GHG emissions	2022 ESG Performance Index , page 8
305-4	GHG emissions intensity	2022 ESG Performance Index , page 8
305-5	Reduction of GHG emissions	2022 Sustainability Report , pages 19, 43-45
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	2022 ESG Performance Index , page 9
306-3	Significant spills	2022 ESG Performance Index , page 10
306-3 (2020)	Waste generated	2022 ESG Performance Index , page 10
307-1	Non-compliance with environmental laws and regulations	2022 ESG Performance Index , page 10
401-1	New employee hires and employee turnover	2022 ESG Performance Index , page 12
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	2022 ESG Performance Index , page 12
401-3	Parental leave	2022 ESG Performance Index , page 12
403-1	Occupational health and safety management system	2022 ESG Performance Index , page 15 2022 Sustainability Report , pages 36-37
403-2	Hazard Identification, risk assessment, and incident investigation	2022 Sustainability Report , pages 26,36
403-3	Occupational health services	2022 Sustainability Report , pages 36-37
403-4	Worker participation, consultation, and communication on occupational health and safety	2022 Sustainability Report , pages 13, 37
403-5	Worker training on occupational health and safety	2022 Sustainability Report , pages 36
403-6	Promotion of worker health	2022 Sustainability Report , page 38
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Supplier and Partner Code of Conduct
403-9	Work-related injuries	2022 ESG Performance Index , page 15
403-10	Work-related ill health	2022 ESG Performance Index , page 15
404-1	Average hours of training per year per employee	2022 ESG Performance Index , page 12
404-2	Programs for upgrading employee skills and transition assistance programs	2022 ESG Performance Index , page 12; 2022 Sustainability Report , pages 33-34
404-3	Percentage of employees receiving regular performance and career development reviews	2022 ESG Performance Index , page 12
405-1	Diversity of governance bodies and employees	2022 ESG Performance Index , page 14
406-1	Incidents of discrimination and corrective actions taken	2022 Sustainability Report , page 28
408-1	Operations and suppliers at significant risk for incidents of child labour	2022 Sustainability Report , page 28
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	2022 Sustainability Report , pages 28-29
411-1	Incidents of violations involving rights of indigenous peoples	2022 Sustainability Report , pages 28
412-1	Operations that have been subject to human rights reviews or impact assessments	2022 Sustainability Report , pages 28
412-2	Employee training on human rights policies or procedures	2022 Sustainability Report , pages 28
413-1	Operations with local community engagement, impact assessments, and development programs	2022 ESG Performance Index , page 16
413-2	Operations with significant actual and potential negative impacts on local communities	2022 ESG Performance Index , page 16

Appendix B - SASB Index

Standard	Indicator	Reference(s)
IF-EU-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	2022 ESG Performance Index , page 8
IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	2022 ESG Performance Index , page 8 2022 Sustainability Report , pages 18-25, 42-44
F-EU-110a.4	(1) Number of customers served in markets subject to renewable portfolio standards (RPS) and (2) percentage fulfillment of RPS target by market	2022 ESG Performance Index , page 17
IF-EU-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) particulate matter (PM10), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	2022 ESG Performance Index , page 9
IF-EU-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	2022 ESG Performance Index , page 10
IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards, and regulations	2022 ESG Performance Index , page 10
IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	2021 ESG Performance Index , page 19
IF-EU-240a.1	Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	2022 ESG Performance Index , page 17
IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	2022 ESG Performance Index , page 17
IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	2022 ESG Performance Index , page 17
IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	2022 ESG Performance Index , page 17
IF-EU-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate 2021 ESG Performance Index	2022 ESG Performance Index , page 17
IF-EU-550a.1	Number of incidents of non-compliance with physical and/or cybersecurity standards or regulations	2022 ESG Performance Index , page 17
IF-EU-550a.2	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days 2022	2022 ESG Performance Index , page 17
IF-EU-000.A	Number of: (1) residential, (2) commercial, and (3) industrial customers served	2022 ESG Performance Index , page 17
IF-EU-000.B	Total electricity delivered to: (1) residential, (2) commercial, (3) industrial, (4) all other retail customers, and (5) wholesale customers	2022 ESG Performance Index , page 17
IF-EU-000.C	Length of transmission and distribution lines	2022 ESG Performance Index , page 17
IF-EU-000.D	Total electricity generated, percentage by major energy source, percentage in regulated markets	2022 ESG Performance Index , page 6
IF-EU-000.E	Total wholesale electricity purchased	2022 ESG Performance Index , page 17
RR-ST-150a.2	Number and aggregate quantity of reportable spills, quantity recovered	2022 ESG Performance Index , page 10
RR-ST-160a.1	Number and duration of project delays related to ecological impacts	2022 ESG Performance Index , page 10
SASB RR-ST-160a.2	Description of efforts in solar energy system project development to address community and ecological impacts	2022 Sustainability Report , pages 46-47, 50-51
RR-WT-410a.3	Description of efforts to address ecological and community impacts of wind energy production through turbine design	2022 Sustainability Report , pages 46-47

Appendix C - TCFD Reporting Index

Section	Disclosure Recommendation	Reference(s)
Governance	a. Describe the boards' oversight of climate-related risks and opportunities	<ul style="list-style-type: none"> • 2022 Sustainability Report, page 13 • Management Information Circular (May 25, 2022), page 32
	b. Describe management's role in assessing and managing climate related risks and opportunities	
Strategy	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<ul style="list-style-type: none"> • 2022 Sustainability Report, pages 16-25 • 2022 Annual Report - Section 12, pages 49,50
	b. Describe the impact of climate related risks and opportunities on the organization's business, strategy and financial planning	<ul style="list-style-type: none"> • 2022 Annual Information Form, page 32
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios.	Northland conducted long-term scenario analysis, including a high-warming and below 2°C scenario. See 2022 Sustainability Report , pages 16-25 and 2022 ESG Performance Index , page 19
Risk Management	a. Describe the organization's processes for identifying and assessing climate-related risks.	<ul style="list-style-type: none"> • 2022 Sustainability Report, pages 16-18, 26 • 2022 Sustainability Report, pages 16-18,20,22,24,26
	b. Describe the organization's processes for managing climate-related risks.	
	c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organizations overall risk management	<ul style="list-style-type: none"> • 2022 Annual Report - Section 12- page 50 • 2022 Annual Information Form, page 32 • 2022 Sustainability Report, pages 13,26
Metrics & Targets	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	<ul style="list-style-type: none"> • ESG Performance Index, pages 8-9,19
	b. Disclose Scope 1, Scope 2 and Scope 3 GHG emissions and the related risks.	<ul style="list-style-type: none"> • 2022 Sustainability Report, pages 18-19,42-43



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