

ESG Performance Index 2023



Algonquin



2023 Algonquin¹ environmental, social and governance (ESG) performance index² – summary

Environment		2023	2022	2021
Greenhouse Gas (GHG) emissions (Mt CO ₂ e) ³	Scope 1	2,081,332	2,350,050	2,093,050
	Scope 2	88,737	89,200	97,106
	Intensity (Mt CO ₂ e/\$USD revenue)	0.0008	0.0009	0.0010
Energy consumption intensity	Power generation assets (MWh consumed/MWh generated)	0.72	0.79	0.88
	Algonquin/Liberty (MWh consumed/\$USD revenue)	0.0039	0.0042	0.0047
	Regulated business (MWh consumed/active customer connections)	7.99	8.94	8.87
Water measurement (thousand m ³)	Water delivered	156,848	157,545	106,737
	Water sourced	207,481	204,397	145,248
	Water discharge	80,322	80,357	73,652
Social		2023	2022	2021
Total number of employees		3,964	3,859	3,464
Female representation	Board	50.0%	44.4%	37.5%
	Executive Team	28.6%	44.4%	40.0%
	Leadership roles (Senior Manager and above) – Canada and U.S. only	32.2%	31.0%	30.0%
	Workforce – Canada and U.S. only	33.3%	33.4%	32.9%
Health & safety	Employee fatalities from work-related injury	0	0	0
	Lost Time Injury Rate (LTIFR) – Canada and U.S. only	0.03	0.03	0.00
	Recordable Injury Rate (RIR) – Canada and U.S. only	0.81	0.52	0.56
Electricity grid reliability	System Average Interruption Duration Index (SAIDI) (minutes)	160.01	138.00	187.36
	System Average Interruption Frequency Index (SAIFI) (rate)	1.21	1.13	1.30
Governance		2023	2022	2021
Incidents of corruption		0	0	0
Legal actions for anti-competitive practices		1	1	0
Violations involving rights of Indigenous peoples		0	0	0
Substantiated complaints received regarding customer privacy – U.S. only		0	0	0

¹ Algonquin Power & Utilities Corp., (“Algonquin” or “AQN”) is the parent company of Liberty. AQN’s Renewable Energy Group and Regulated Services Business Group are collectively known as Liberty.

² Scope of disclosure: Unless explicitly noted, annual data herein is presented for the fiscal year beginning on January 1 and ending on December 31 of the specified year, and data reflecting a specific point in time is given as at December 31 of the specified year. Unless explicitly noted, all relevant metrics include Suralis in Chile and BELCO in Bermuda (Bermuda’s ReGen operations are not included in the index). Unless explicitly noted, all relevant metrics are provided for operationally-controlled assets only, and data is provided on a 100% basis for each such asset.

³ Greenhouse gases included in calculations: CO₂, CH₄, N₂O, and SF₆. Global Warming Potentials (100-year time horizon) published in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report are used in the emissions calculation for the 2023 reporting year. Global Warming Potentials (100-year time horizon) published in the IPCC Fourth Assessment Report were used in the emissions calculation for the 2021 and 2022 reporting years. All emission figures are in metric tons CO₂e (Mt CO₂e). 2021 and 2022 GHG emissions have been recalculated following AQN’s GHG Base Year Recalculation Policy, to incorporate the updated methodology to quantify fugitive methane emissions from AQN’s wastewater treatment facilities in the U.S. and Chile. Previously published emission figures (2017–2022) will differ. See footnotes 22 and 26 for additional details.

2023 Algonquin ESG performance index – operational metrics

Total customer connections⁴

	2023
Electricity	309,000
Natural gas	375,000
Water and wastewater	572,000
Total	1,256,000

Energy delivered to our customers

Electricity (GWh) – Regulated (retail)	6,562
Electricity (GWh) – Unregulated (contractual agreements)	7,669
Total electricity (GWh)	14,231
Total electricity (PJ)	51.2
Natural gas (PJ)	41.2
Total (PJ)	92.4

Water and wastewater services provided to our customers

Water provided (thousand m ³)	156,848
Wastewater treated (thousand m ³)	12,681

Electricity generation capacity (MW)⁵

Natural gas ⁶	1,496
Heavy fuel oil	140
Hydroelectric	132
Solar	458
Wind	2,901
Total	5,126
Renewable energy total	3,490
Renewable energy portfolio	68%

4 Total customer connections represents the sum of all active and vacant customer connections.

5 MW capacity is based on installed generator nameplate capacity. Facilities that are not operationally controlled by AQN are excluded.

6 Includes 100% nameplate capacity of the State Line natural gas generation facility.

Operational metrics (continued)

Electricity generated (GWh)

	2023
Natural gas	3,821
Heavy fuel oil	540
Wind	8,497
Hydroelectric	615
Solar	661
	Total
	14,133
	Renewable energy total
	9,773
	Renewable energy portfolio
	69%

Customer satisfaction

J.D. Power CSAT Score ⁷	650
------------------------------------	-----

Energy reliability – U.S. and Bermuda

SAIDI (minutes)	160.01
SAIFI (rate)	1.21
CAIDI (Customer Average Interruption Duration Index) – inclusive of major events days (minutes)	132.53

Electricity distribution

Length of distribution lines (miles)	13,517
--------------------------------------	--------

Natural gas distribution

Length of distribution lines (miles)	8,482
Leakage rate in distribution infrastructure (% of gas throughput)	2.08%

Water distribution mains

Length of water distribution mains (miles)	6,941
--	-------

Cybersecurity – U.S. only

Substantiated complaints received concerning breaches of customer privacy	0
Identified leaks, thefts, or losses of customer data	0

Community engagement

Operations with local community engagement	100%
Liberty days used (hours volunteered by employees) – Canada and U.S. only	11,155

⁷ Algonquin's J.D. Power Customer Satisfaction (CSAT) score is calculated internally based on J.D. Power CSAT scores for each of Algonquin's individual utilities in Canada and the U.S. Scores are consolidated into an enterprise-wide value based on a customer connection weighting.

Workforce and social indicators

Health and safety

Employee work-related injury

		2023
Fatalities from work-related injury		0
Recordable injuries		28
RIR – Canada and U.S. only		0.81
Work-related injuries included	The primary work-related injuries identified for employees in 2023 are muscle strains, cuts, and abrasions to the hands.	
High-consequence work-related injuries		0
LTIFR – Canada and U.S. only		0.03
Near Miss Frequency Rate (NMFR)		7.16
Work-related hazards posing high-consequence injury risk	Identified through job safety analysis and pre-job inspections, primary high-consequence work-related injuries include electrical shocks, falls from heights, and struck against injuries. High-consequence work-related injuries included in this reporting period are potential for electric shock or burn and manual work with ergonomic stressors.	
Injury elimination/mitigation strategy	Hazards are managed through heiarchies of control, engineering efforts, and detailed job safety procedures.	
Total hours worked by AQN/Liberty employees		7,656,471

Employee work-related ill health

Fatalities from work-related ill health		0
Recordable work-related ill health cases		0
Work-related hazards posing ill health risks	Identified through job safety analysis and pre-job inspections, primary work-related hazards posing ill-health risks include soft muscle injury and chemical exposure. Zero work-related ill health injuries were reported in 2023.	
Injury elimination/mitigation strategy	Hazards and their associated risks are managed through the principle of hierarchies of control: 1) elimination, 2) substitution, 3) engineering controls, 4) administrative controls, and 5) personal protective equipment.	

Employees covered by an environmental, health, and safety (EHS) management system

Employees covered by EHS system	100%
Employees covered by internally audited EHS system	100%

Employee demographics

By age group – Canada and U.S. only

		2023
Age ranges	< 30 years	12.9%
	30–50 years	55.5%
	> 50 years	31.6%

Average age (years) – Canada and U.S. only

Female employees	42
Male employees	42
All employees	42

Gender and employment categories – Canada and U.S. only

Employee function by gender	Office	Female	38.5%
		Male	61.5%
	Field	Female	33.3%
		Male	66.7%
Employee level by gender	Senior management ⁸	Female	25.4%
		Male	74.6%
	Middle management ⁹	Female	32.8%
		Male	67.2%
	All other employees – excluding middle management and above	Female	33.5%
		Male	66.5%

Age and employment categories – Canada and U.S. only

Employee function by age	Office	< 30 years	14.7%
		30–50 years	58.0%
		> 50 years	27.3%
	Field	< 30 years	15.5%
		30–50 years	54.8%
		> 50 years	29.7%

⁸ "Senior management" refers to employees in the following job levels: Vice-Presidents (VPs) and above.

⁹ "Middle management" refers to employees in the following job levels: Directors and Senior Directors.

Age and employment categories – Canada and U.S. only (continued)

			2023
Employee function by gender	Senior management	< 30 years	0.0%
		30–50 years	32.8%
		> 50 years	67.2%
	Middle management	< 30 years	0.0%
		30–50 years	55.7%
		> 50 years	44.3%
	All other employees – excluding middle management and above	< 30 years	14.0%
		30–50 years	56.0%
		> 50 years	30.0%

Collective bargaining agreement coverage – Canada and U.S. only

Percentage of employees who are salaried	71%
Percentage of employees covered by collective bargaining agreements	29%

Gender and self-identification – Canada and U.S. only

Women	33.3%
Men	66.7%
Self-identified minorities	14.9%
Self-identified veterans	3.1%
Self-identified employees with disability	0.4%

Female representation – Canada and U.S. only¹⁰

All management positions	32.8%
Junior management positions	33.8%
Middle management positions	32.8%
Senior management positions	25.4%
Revenue-generating positions	37.0%
STEM-related positions	35.5%

¹⁰ All management refers to employees with the job level of Manager and above. Junior management refers to employees with the job level of Manager and Senior Manager. Middle management refers to employees with the job level of Director and Senior Director. Senior management refers to employees with the job level of VPs and above. Revenue-generating positions include positions in the business development group.

Employee demographics (continued)

Leadership roles (senior manager and above) – Canada and U.S. only

	2023
Women	32.2%
Men	67.8%
Self-identified minorities	14.4%

Executive team

Members	7
Women	28.6%
Men	71.4%
Self-identified minorities	0.0%

Self-identification of employees working in the U.S.

Percentage of employees working in the U.S.	61.7%	
Share of racial, ethnic, and indigenous self-identifications	Asian	1.8%
	Black or African American	3.7%
	Hispanic or Latino	7.4%
	Caucasian	77.7%
	Indigenous or Native	1.1%
	Other	8.4%

Employee pay ratios – Canada and U.S. only

Pay ratio of CEO total compensation to median employee compensation ¹¹	Canada	43.29
	U.S.	37.75
Total compensation ratio (highest paid to median) by region ¹²	Canada	17.96
	U.S.	5.48
Total compensation growth ratio (highest paid to median) by region ¹²	Canada	0.45
	U.S.	0.80

¹¹ CEO compensation used in the calculation includes Base Salary (BS), Short-Term Incentive Pay (STIP), Long-Term Incentive Pay (LTIP), cash allowance for business use vehicle, and compensatory change (pension) for the reporting year. Median employee compensation includes salaries, wages, bonuses, incentives, benefits, and any other forms of remuneration where applicable. The calculation has included all employees, including senior executives but excluding the CEO.

¹² Metrics exclude the CEO. Total employee compensation includes BS, STIP, LTIP, and Burden Rate. Note: AQN's executive team is included under Canadian operations.

Employee demographics (continued)

Employee average total compensation by level and function – Canada and U.S. only

		2023
Equal pay ratio (female/male) by level	Senior management	1.06
	Middle management	1.02
	All other employees – excluding middle management and above	0.80
Equal pay ratio (female/male) by function	Office	0.77
	Field	0.84
Equal pay ratio (female/male) by region	Canada	0.82
	U.S.	0.82

Employee attraction and retention

Hiring rates – Canada and U.S. only

Percentage of open positions filled by internal candidates	35.0%
Total number of employee hires	581

Turnover rates – Canada and U.S. only

Total employee turnover rate	0.14
Volunteer employee turnover rate	0.10

Parental leave – Canada and U.S. only

Employees entitled to parental leave	Female	1,237
	Male	2,421
Employees that took parental leave	Female	36
	Male	62
Employees that took parental leave and returned	Female	24
	Male	58
Return to work rate	Female	0.67
	Male	0.94
Parental leave retention rate	Female	0.64
	Male	0.89

Employee attraction and retention (continued)

Defined benefit plan – Canada and U.S. only

		2023
Salary contributed by employee/employer	Employee	DCPP = 1.71% 401(k) = 8.61%
	Employer	DCPP = 7.13% 401(k) = 4.37% Pension = 5.3%
Level of participation in retirement plans		Benefit Eligible Employees: DCPP = 100% 401(k) = 78% Pension = 100%
Defined benefits plan and other retirement plans	<ul style="list-style-type: none"> - Plan's liabilities are met by organization's general resources - Separate fund exists to pay for the plan's pension liabilities - Scheme's liabilities are 100% covered, estimated on actuarial basis calculated annually 	

Employee engagement – Canada, U.S. and Bermuda

Employee engagement score	67%
Employee participation rate	73%

Learning and development

Training – Canada and U.S. only

Average training by gender (hours)	Female	13.1
	Male	11.8
Average training by level (hours)	Senior management	5.0
	Middle management	19.5
Average training by job function (hours)	Office	11.4
	Field	12.4
Average training per employee (hours)		14.4
Average amount spent per employee on training (\$USD/employee)		\$231
Amount invested in employee training (\$USD) ¹³		\$710,086

Performance reviews

Percentage of employees who received performance review – Canada and U.S. only ¹⁴	100%
--	------

¹³ This includes training costs managed through the talent development team, which are related to, among other things, training licenses, facilitation, the learning management system platform, coaching and venues. The amount does not include internal labour costs for employees developing or delivering training.

¹⁴ This metric only includes non-union employees.

Non-Discrimination

Discrimination incidents¹⁵

	2023
Number of incidents of discrimination	1
Number of incidents reviewed by Algonquin	1
Number of incidents no longer subject to action	1

Remediation plans implemented and/or being implemented:
All actions that were recommended were completed.

Governance and policy

Board of directors¹⁶

Experience and background

Independent directors	7
Average tenure (years)	6.3
Directors with operational experience	3
Directors with governance and risk management experience	5
Directors with senior executive experience	7
Total Board members	8

Demographics

By gender	Female	50%
	Male	50%
By age	< 30 years	0%
	30–50 years	13%
	> 50 years	88%

Compliance

Indigenous relations

Violations involving rights of Indigenous peoples ¹⁷	0
---	---

¹⁵ This is for Canada, U.S., and Bermuda only.

¹⁶ As of December 31, 2023.

¹⁷ This metric was gathered using the ethics hotline reporting data.

Compliance (continued)

Anti-corruption

	2023
Operations assessed for corruption-related risks – government relations, conflicts of interest, and foreign interests	100%
Board of directors who received anti-corruption communications and policy training	100%
Employees who received anti-corruption communications and policy training – Canada, U.S., and Bermuda	100%
Incidents of corruption and actions taken	0
Percentage of employees who completed annual Code of Business Conduct and Ethics training – Canada and U.S. only ¹⁸	100%
Number of times Ethics Reporting Line was used	26

Anti-competitive behaviour

Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1
---	---

Social and economic compliance

Total value of significant fines (\$USD millions)	\$0
Number of non-monetary sanctions	0

¹⁸ This reflects completion based on the 2023 annual Code of Conduct training campaign. Employees hired after the training campaign are not included in this metric.

Environment

Greenhouse gas (GHG) emissions (Mt CO₂e)^{19,20,21,22}

Scope 1 emissions ²³	2023
Power generation – thermal ²⁴	1,978,101
Power generation – renewable ²⁵	498
Utilities – electric	8,771
Utilities – natural gas	74,528
Utilities – water/wastewater ²⁶	13,883
Renewable natural gas (RNG) facilities ²⁷	5,405
Other uncategorized ²⁸	147
Total Scope 1 emissions	2,081,332

- 19 Greenhouse gases included in calculations: CO₂, CH₄, N₂O, and SF₆. Global Warming Potentials (100-year time horizon) published in the IPCC Fifth Assessment Report are used in the emissions calculation for the 2023 reporting year. Global Warming Potentials (100-year time horizon) published in the IPCC Fourth Assessment Report were used in the emissions calculation for the 2021 and 2022 reporting years. All emission figures are in metric tons CO₂e (Mt CO₂e). 2023 Scope 1 and 2 emissions by gas type: CO₂: 2,087,681 Mt CO₂e, CH₄: 76,595 Mt CO₂e, N₂O: 2,666 Mt CO₂e, and SF₆: 3,127 Mt CO₂e.
- 20 GHG emissions are calculated following the Greenhouse Gas Protocol Corporate Standard (GHG Protocol) and Corporate Value Chain (Scope 3) Account and Reporting Standard. Emission factors for fuel and electricity consumption related emission sources are sourced from best-practice references such as the Canadian National Inventory Report (NIR, published in 2023), USEPA's GHG Emission Factors Hub (published in 2023), IEA's Emissions Factors Database (published in 2023), and UK DEFRA's GHG Conversion Factors (published in 2023). Regarding emission factors for grid electricity, U.S. facilities use 2021 eGRID factors published by USEPA in 2023, Chile facilities use 2021 factors published by IEA in 2023, and Canadian facilities use 2020 factors published in the 2023 NIR. In addition, AQN has unique emission sources that are specific to the type of the utilities. Specifically, for fugitive SF₆ emissions released from electric power systems, emissions are tracked and calculated in general accordance with the methodology outlined in the USEPA 40 CFR 98 Subpart DD (Electrical Transmission and Distribution Equipment Use). Fugitive CH₄ emissions from natural gas distribution mains and services are quantified following the methodology outlined in the USEPA 40 CFR 98 Subpart W (Petroleum and Natural Gas System). As for fugitive CH₄ emissions from wastewater treatment facilities, emissions are quantified using a methodology derived from Volume 5 Chapter 6 of the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the Inventory of US Greenhouse Gas Emissions and Sinks (1990–2021). Lastly, emissions associated with electricity loss from the electric distribution systems are quantified using state-level average grid loss factors with data published from the US Energy Information Administration.
- 21 GHG emissions are consolidated through an operational-control approach.
- 22 The year of 2017 was chosen as the base year for AQN's Scope 1 and 2 emissions. This was the year that AQN completed the acquisition of the Empire District Electric Company, which was a significant expansion of AQN's regulated utility and generation footprint in the U.S. A base year for the Scope 3 emissions has not been established, as the company has not yet developed a Scope 3 reduction target. Base year and historical year GHG emissions have been recalculated following AQN's GHG Base Year Recalculation Policy, to incorporate the updated methodology to quantify fugitive methane emissions from AQN's wastewater treatment facilities in the U.S. and Chile. A baseline recalculation is required when the following conditions are met: the facilities in operation in the reporting year changed from those in the base year in a non-organic way; changes in calculation methods, data monitoring, emissions factors and other assumptions have taken place; errors have been discovered in calculation methods and assumptions; operational boundaries have been modified in comparison to the base year; and the cumulative effect of expected changes from the base year recalculation exceed 5% of base year emissions. The recalculated Scope 1 and 2 emissions in 2017 are 3,609,004 Mt CO₂e and 88,248 Mt CO₂e, respectively.
- 23 Immaterial sources include fugitive emissions – leakage of refrigerants used in buildings and release of CO₂ from fire extinguishers.
- 24 This category includes AQN's thermal power generation facilities in the U.S. and Bermuda.
- 25 This category includes AQN's wind, solar, and hydroelectric power generation facilities that were fully operating in 2023 from both regulated and non-regulated businesses.
- 26 Historically, a more conservative approach was used to quantify fugitive methane emissions from wastewater treatment facilities, by assuming that all AQN's wastewater treatment facilities use anaerobic processes. It has now been confirmed that AQN's wastewater treatment facilities are primarily using aerobic processes. As such, a new quantification methodology has been developed to quantify associated fugitive methane emissions. Base year and historical year emissions have also been adjusted to reflect the methodology change.
- 27 This category includes AQN's RNG facilities in Wisconsin, U.S.
- 28 This category includes all other sites that are not included in above categories, such as some office buildings.

Greenhouse gas (GHG) emissions (Mt CO₂e)(continued)

Scope 2 emissions²⁹

Power generation – thermal	534
Power generation – renewable	3,934
Utilities – electric	17,106
Utilities – natural gas	1,642
Utilities – water/wastewater	64,273
RNG facilities	1,190
Other uncategorized	58
Total Scope 2 emissions	88,737

Scope 1 and Scope 2 emissions and emission intensities

Total Scope 1 + 2 emissions	2,170,069
Total emissions from power generation (Mt CO ₂ e)	1,983,067
Emission intensity – power generation (Mt CO ₂ e from power generation/MWh power generation)	0.1438
Emission intensity – revenue (Mt CO ₂ e/\$USD revenue)	0.0008
GHG reduction below 2017 baseline	-41.31%

Scope 3 emissions^{30,31}

Category 3 – Fuel and energy related activities (not included under Scope 1 and 2) ³²	1,051,669
Category 11 – Use of sold product ³³	2,073,422
Category 15 – Investments ³⁴	1,668,464

29 Scope 2 emission figures are location-based. Market-based emissions are equal to location-based emissions because there are no contractual instruments used in the calculation of Scope 2 emissions.

30 100% of emissions for Categories 3, 11, and 15 are calculated using actual data, obtained either through AQN's internal tracking system, or from suppliers or other value chain partners.

31 Based on AQN's preliminary evaluation, emissions from the other 12 Scope 3 categories collectively contribute to less than 10% of AQN's total Scope 3 emissions. In addition, given that the quantification methodology is not yet fully developed, it is decided that emissions from these 12 categories are not included in the ESG Performance Index.

32 This category includes emissions from the following subcategories: 1) upstream generation emissions of distributed electricity, 2) upstream production & transmission emissions of distributed gas, 3) upstream emissions of purchased and consumed fuels, 4) upstream emissions of purchased and consumed electricity, and 5) Transmission & Distribution loss emissions of purchased and consumed electricity. Emissions were calculated by applying appropriate upstream emission factors sourced from various jurisdictions, such as the UK DEFRA and USEPA, to the amount of fuels and electricity that AQN consumed and delivered.

33 This was calculated by applying the natural gas combustion emission factor sourced from USEPA's GHG Emission Factors Hub (published in 2023) to the total amount of natural gas that was delivered to industrial, commercial, and residential customers in the 2023 reporting year.

34 Investment emissions were calculated by applying AQN's percentage ownership to a facility's total gross Scope 1 and 2 emissions. The reported emissions include emissions from a 7.52% and 12.0% ownership in the Plum Point and Iatan coal power plants respectively, and approximately 42–44% ownership interest (specifically, 42.15% in 2023, 42.90% in 2022, and 43.60% in 2021) in Atlantica Sustainable Infrastructure PLC.

Other emissions (Mt)

Other emissions from electricity generation (Mt) – U.S. facilities only

	2023
NO _x emissions	418
SO _x emissions	8.6
Mercury emissions	0.000041
Particulate matter emissions	60.1
Lead emissions	0.00010
Persistent organic pollutants	0.00000
Volatile organic compounds	18.8
Hazardous air pollutants	12.0
Ozone-depleting substances	0.00000

Energy consumption and generation capacity

Internal energy consumption (MWh)

Non-renewable sources	Gasoline/petrol	29,569
	Diesel	129,104
	Liquified petroleum gas (LPG)	2,165
	Natural gas	8,864,645
	Fuel oil	1,247,292
Electricity consumption		185,776
	Total internal energy consumption (MWh)	10,458,551
Electricity generated and sold		14,133,090
Energy consumption intensity	Power generation assets (MWh consumed/MWh generated)	0.72
	Algonquin/Liberty (MWh consumed/\$USD revenue)	0.0039
	Regulated business (MWh consumed/Active customer connections)	7.99

Energy consumption and generation capacity (continued)

Generation capacity

		2023
Non-renewable	Natural gas	1,496
	Heavy fuel oil	140
Renewable	Hydroelectric	132
	Solar	458
	Wind	2,901
	Total generation capacity (MW)	5,126
Non-renewable	Natural gas	29%
	Heavy fuel oil	3%
Renewable	Hydroelectric	3%
	Solar	9%
	Wind	57%
	Total renewable generation capacity (%)	68%

Water and effluents

Water sourced

Water sourced by source type (thousand m ³)	Withdrawal from surface water	29,277
	Withdrawal from ground water	158,248
	Withdrawal from third-party water	19,949
	Other source, including recycled water and harvested rainwater	8
	Total water sourced	207,481
Water sourced from water stressed regions by source type (thousand m ³) ³⁵	Surface water	0
	Ground water	84,891
	Third-party water	12,056
	Other source	0
	Total water sourced from water stressed regions	96,947

³⁵ This includes high (baseline water stress level: 40–80%) and extremely high (baseline water stress level: >80%) water stress regions, as determined by the World Resources Institute (WRI) Aqueduct Water Risk Atlas. Due to that New York Water data cannot be broken down by site, to be conservative, all of New York Water data are included in the high water stress metrics.

Water and effluents (continued)

Water discharge³⁶

		2023
Water discharge by source (thousand m ³)	Surface water	52,573
	Ground water	176
	Ocean and seawater ³⁷	26,399
	Third-party water	1,174
	Total water discharge	80,322

Water discharge in water stressed regions by source (thousand m ³)	Surface water	3,265
	Ground water	25
	Ocean and seawater	0
	Third-party water	318
	Total water discharge from water stressed regions	3,608

Water recharged to aquifers

Water recharged to aquifers (thousand m ³)	Goodyear	3,236
	Gold Canyon	699
	Total water recharged	3,936

Water consumption

Total water consumption (thousand m ³)	47,579
Total water consumption in water stressed regions (thousand m ³)	19,219

³⁶ This does not include water recharged to the aquifer from AQN's Goodyear and Gold Canyon facilities in Arizona.

³⁷ Seawater discharge was from Suralis' operations.

Waste

Waste generation (Mt)

		2023
Waste generated	Hazardous waste	14,583
	Non-hazardous waste	17,057
	Total waste generated	31,640

Waste diverted (Mt)

Hazardous waste diverted by recovery type – offsite	Recycling	7,819
	Other – recovery (including energy recovery) and composting	1,180
	Total hazardous waste diverted	8,999

Non-hazardous waste diverted by recovery type – offsite	Recycling	1,691
	Other – recovery (including energy recovery) and composting	565
	Total non-hazardous waste diverted	2,256

Waste directed to disposal (Mt)

Hazardous waste disposed by disposal operation – offsite	Incineration	4
	Landfilling	5,580
	Total hazardous waste disposed	5,584

Non-hazardous waste disposed by disposal operation – offsite	Incineration	6
	Landfilling	14,795
	Total non-hazardous waste disposed	14,801

Biodiversity

Species impact

		2023
Land developed for pollinators ³⁸	Acres	122
IUCN Red List species and national conservation list species with habitats in areas affected by operations	Critical endangered	4
	Endangered	36
	Vulnerable	25
	Near threatened	9
	Least concern	14

Fleet and compliance

Fleet

Percentage of vehicle fleet using low emission fuel – U.S. only	62%
Electric ports installed for employee vehicles – Canada, U.S., and Bermuda only ³⁹	177
Percentage of employees with access to electric vehicle charging at office – Canada, U.S., and Bermuda only	65%

Compliance with environmental laws and regulations

Number of violations with environmental laws and regulations	12
Monetary value of environmental fines (\$USD millions)	\$0
Environmental liability accrued at year end (\$USD millions)	\$0

³⁸ This includes sites that AQN does not own but have been seeded and dedicated as areas for pollinator habitat.

³⁹ This includes all charging ports located on Liberty properties including those also accessible for public use.

2023 Algonquin ESG performance index – country breakdown

Economic value

Economic value generated and distributed (\$USD millions)		Canada	U.S.	Bermuda	Chile	AQN
Economic value generated – revenue		\$182	\$2,423	\$263	\$120	\$2,988
Economic value distributed						
	Operation costs	\$69	\$1,337	\$150	\$51	\$1,607
	Employee wages and benefits	\$22	\$222	\$52	\$18	\$313
	Payments to providers of capital	\$48	\$632	\$10	\$10	\$699
	Payments to government	\$3.21	\$1.27	\$0.00	\$2.69	\$7.17
	Community investment	\$0.11	\$1.47	\$0.00	\$0.00	\$1.58
Total economic value retained		\$40	\$230	\$50	\$39	\$359

Workforce and social indicators

Employee demographics

By employment contract		Canada	U.S.	Bermuda	Chile	AQN
Permanent employees	Female	272	751	65	103	1,191
	Male	410	1,669	222	424	2,725
Temporary employees	Female	11	14	1	0	26
	Male	11	10	1	0	22
Total Algonquin/Liberty employees	Female	283	765	66	103	1,217
	Male	421	1,679	223	424	2,747
	Total	704	2,444	289	527	3,964

By employment type		Canada	U.S.	Bermuda	Chile	AQN
Full-time employees	Female	282	758	65	103	1,208
	Male	416	1,674	222	424	2,736
Part-time employees	Female	1	6	1	0	8
	Male	3	5	0	0	8
Casual employees	Female	0	1	0	0	1
	Male	2	0	1	0	3

Workforce and social indicators (continued)

Employee pay ratio

Ratios of entry level wage to local minimum wage – by region and gender		Canada	U.S.	Bermuda	Chile	AQN
	Female	1.67	1.78	– ⁴⁰	1.25	–
	Male	1.83	1.97	– ⁴⁰	1.19	–

Employee attraction and retention

Employee hires		Canada	U.S.	Bermuda	Chile	AQN
Employees hired by age	< 30 years	103	131	3	28	265
	30–50 years	84	185	14	64	347
	> 50 years	12	66	3	6	87
Employees hired by gender	Female	78	133	8	20	239
	Male	121	249	12	78	460

Employee turnover		Canada	U.S.	Bermuda	Chile	AQN
Employee turnover by age	< 30 years	84	149	0	1	234
	30–50 years	62	119	10	14	205
	> 50 years	29	90	4	4	127
Employee turnover by gender	Female	68	110	7	6	191
	Male	107	248	7	13	375

Governance and policy

Political spending		Canada	U.S.	Bermuda	Chile	AQN
Amount spent on lobbying (\$USD)		\$0	\$1,166,400	\$0	\$81,289	\$1,247,689
Amount spent on trade associations (\$USD)		\$85,549	\$1,393,914	\$0	\$61,836	\$1,541,300

⁴⁰ Bermuda is unable to provide the Ratio of Entry Level Wage to Local Minimum Wage due to limitations in their payroll system capabilities.