

# Shaping Our Common Future

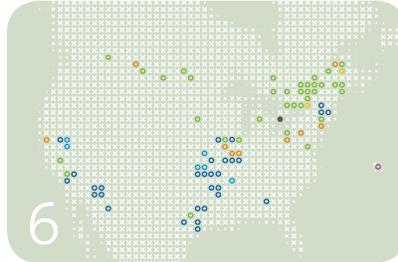
**2019 SUSTAINABILITY REPORT TO OUR KEY STAKEHOLDERS**



# Shaping Our Common Future



Message From the CEO



Business Snapshot



Sustainability: It's in Our Nature



2023 Sustainability Goals



Environmental Stewardship



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Forward-Looking Statements and Forward-Looking Information\*



Appendix A: Sustainability Accounting Standards Board (SASB) Table



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\* This report contains forward-looking statements which are based on certain factors and assumptions and expectations and subject to certain risks which could cause actual performance and results to differ materially. For more information on forward-looking statements and information, please refer to "Forward-Looking Statements and Forward-Looking Information" in this report (page 39).

# Message From the CEO

*Sustaining Energy and Water for Life* is our purpose, and we recognize it as a shared responsibility. A commitment to our common future drives us to make sustainability part of everything we are, inspire smarter use of the earth's resources, and activate opportunities for positive social and environmental impact.

From our start 30 years ago building renewable energy run-of-river hydroelectric generating stations, sustainability has been at the heart of our company and fundamental to the way we do business. We have always focused on achieving excellence in the development and delivery of renewable energy resources and sustainably run utility services while positively impacting the lives of our employees, customers, and members of our communities. We're proud of what we've accomplished so far and invigorated by how much there is yet to do.

One of the most significant risks that the world faces today is climate change. Disruptors involved with the transition to a low-carbon economy present significant risks, but also compelling opportunities for a company like ours.

## **SUSTAINABILITY EMBEDDED IN OUR BUSINESS STRATEGY**

We have a strong sustainability story to tell. This year, we have taken significant steps to become more transparent and deliberate in the communication of our sustainability commitment to our key stakeholders. With the establishment of our Office of Sustainability in 2019, we tasked our Chief Governance Officer with accountability to lead our sustainability team in developing and managing our sustainability plan and initiatives.

In acknowledgment of the importance of the United Nations *Sustainable Development Goals* (SDGs),

we set out to understand where and how our business could most meaningfully contribute. We've identified the SDGs which we felt were most relevant to our company throughout this report, and we will continue to reflect on how to proactively impact these goals in the future.

During 2019, with the support of external experts and input from several of our key investors, our leadership team identified the environmental, social, and governance (ESG) factors which are most significant to our business. Not surprisingly, through this activity, climate change was identified as a significant factor.

In addition, we were pleased to have our first Green Bond offering in 2019 and we look forward to providing additional opportunities for ESG investing in the future.

In founding this organization 30 years ago, we did not foresee our company being a champion in the fight against climate change. However, our strategy to decarbonize our asset portfolio, and in turn participate in decarbonization of the communities we serve and in which many of our employees live, provides us with a clear path towards a common sustainable future. We also acknowledge the climate-change related risks inherent in our physical operations. In this report, we demonstrate our continued investment in the reliability and safety of our assets – another of our significant factors.



**Ian Robertson**  
Chief Executive Officer

Finally, we recognize that the transition to a low-carbon economy, and building a leadership team and workforce with the necessary skills to navigate to the new economy, requires a focus on building an inclusive and diverse corporate culture, a strong strategy for talent attraction and retention, and, perhaps most importantly, continued efforts to ensure the safety of our employees. These are some of the key factors that we have identified and addressed in our sustainability plan and initiatives. How we perform in relation to these factors will ultimately determine our success in delivering top-quartile customer service and our continuing efforts to positively impact the affordability of the services we provide to our customers.

We understand that our customers have evolving options for the energy and water services providers they choose. That's why aligning our business to meet future customer expectations is fundamental to our continued growth. This report tells the stories of our commitment to address our selected list of seven ESG factors today and what we will be doing into the future.

### **TRANSITIONING TO A LOW-CARBON ECONOMY**

A commitment to sustainability underpins our strategy to continue growing our business through the acquisition of additional regulated utilities in both North America and internationally, as well as expansion of our renewables portfolio.

The global transition to a low-carbon economy presents exciting business opportunities, as evidenced by the increasing desire for development and delivery of renewable energy to replace fossil-based generation sources and to decarbonize existing products and services in the energy and water sectors.

We support the global goal of limiting planetary temperature rise to less than 2 degrees Celsius this century, and we will reduce the impact of climate change through the deployment of emerging technologies and business models that will decarbonize our energy portfolio and that of the communities where we operate.

Reducing our reliance on fossil-based energy sources by pursuing sustainable alternatives is the strategy we've established to take action against climate change. By reducing the carbon content of the products we deliver to our customers, growing our renewables portfolio, and decreasing the internal carbon intensity of our operations, we are sustaining energy and water for life.

We are taking action today. This is demonstrated by the goals we have set for our business to reduce CO<sub>2</sub> equivalent (CO<sub>2</sub>e) emissions by one million metric tons from 2017 levels and adding 2,000 MW of new renewables capacity by 2023. Among our top initiatives for achieving decarbonization is our *Customer Savings Plan* program being put into action in our regulated utility business in the U.S. Midwest. Following regulatory approvals, we have moved forward

to build 600 MW of new wind generation capacity. This program will deliver significant customer savings gained from cost-effective renewable generation and facilitate the closure of an existing coal generation plant in our Central Region regulated utility.

We see the acquisition of new assets, which perhaps have a larger carbon footprint, as an opportunity to execute on our "win-win-win" decarbonization strategy – lower costs for customers through cost-effective renewable energy, excellent business opportunity for our investors, and delivery on our commitment to sustainability for the planet. Our 2017 acquisition of The Empire District Electric Company is a perfect example of such an opportunity.

Although our carbon emission profile may vary significantly over time due to acquisitions, our commitment to climate

action will ultimately lead to baseline decreases in those emissions as we execute on our growth strategy, continue the build out of additional renewable generation capacity, and drive further operational improvements throughout the business.

### **GROWING OUR PORTFOLIO OF WATER SOLUTIONS**

More than 164,000 of our customers count on us for safe and reliable drinking water and wastewater services. It is our duty to meet those needs while maintaining healthy water ecosystems and employing best practices in efficiency, conservation, re-use, and recycling of water.

We will achieve this by reducing the environmental impact of the use of freshwater resources through encouraging efficient use and re-use of water resources, deploying new technologies that reduce the demand for freshwater resources and the carbon intensity of providing those resources, and upgrading infrastructure to continue providing safe and reliable drinking water to the communities we serve.

With our water utilities constituting an essential part of our business, we intend to continue expanding our water infrastructure and services to include desalination projects that help mitigate the depletion of fresh groundwater. This report discusses the water solution activities we are involved in through our North American business as well as our equity interest in Atlantica Yield plc.

### **DELIVERING CLEAN AND AFFORDABLE ENERGY TO THE COMMUNITIES WHERE WE OPERATE**

Our "think global, act local" business model addresses our factor of customer experience and affordability, and positions us to foster constructive and mutually beneficial relationships with local suppliers, vendors, contractors, regulators, and the communities we serve. We will measure our customer experience performance against our goal to achieve top-quartile ratings through the *J.D. Power Customer Satisfaction Survey*. By continuously identifying capital

**“A commitment to sustainability underpins our strategy to continue growing our business through the acquisition of additional regulated utilities in both North America and internationally, as well as expansion of our renewables portfolio.”**

and operational efficiency opportunities that drive lower customer costs, we deliver more affordable utility services. Our goal to add 2,000 MW of additional low-cost renewable generation capacity into our supply mix also plays a significant role in saving our customers money while satisfying the need to decarbonize our energy portfolio and the energy we supply to our customers.

Investing in infrastructure technology and operating our business as efficiently as possible also helps us to reduce our operating costs, which transfers to customer savings. Ensuring the reliability and safety of our assets will help us deliver value to our customers and communities as we navigate the evolving landscape of customer expectations and the risks associated with climate change.

This report shares several stories of what we're doing to bring our local business model to life and examples of how we're improving our operations and infrastructure to address our ESG factors.

#### **EMPOWERING OUR PEOPLE AND CHAMPIONING EQUALITY**

Talent attraction and retention, employee safety, and our corporate culture are significant factors to our business. Having an engaged, high-performing, and talented team of employees is one of the critical assets that will lead our company through the transition to a low-carbon economy. We pay close attention to the well-being of our employees and are dedicated to the education, development, and empowerment of our workforce through good health and wellness and a positive safety culture.

We also recognize the powerful impact of diversity and inclusion on business success, and are committed to continuing the development of an organizational culture that champions equality to build a more just society. By fostering a supportive work culture and business practices free from barriers and biases, we aim to inspire collaboration, creativity, and innovative thinking by retaining and attracting employees with diverse backgrounds, abilities, and viewpoints. As a primary focus for our business over the past several years, this report highlights several aspects of the activities we've initiated since 2016 to continually build a more diverse and inclusive workplace.

#### **LOOKING FORWARD**

Our sustainability plan and the actions we take towards reaching our sustainable future will continue to evolve in a way that is aligned with our commitment to good governance as an essential element in our pursuit of positive and balanced outcomes for our business, workforce, shareholders, and communities. In this regard, our sustainability plan involves the integration of sustainability into our business strategies, practices, and processes by engaging our Board and senior executives in all aspects of sustainability, including the development of proactive compliance, performance measurement, and disclosure practices.

Our 2019 report focuses on the priority areas of our business as identified by our key stakeholders. We chose to consider elements of both the *Global Reporting Index (GRI)* framework and guidance for our ESG metrics from the *Sustainability Accounting Standards Board (SASB)* for the three main areas of our business (Electric Utilities and Power Generators, Gas Utilities and Distributors, and Water Utilities and Services). With the foresight to deepen understanding of our ESG factors, and further improve the quality and transparency of our climate-related financial disclosures, we have already begun preparing our 2020 disclosure in line with the *Task Force on Climate-related Financial Disclosures (TCFD)* recommendations.

In closing, I'd like to recognize all of our employees who are committed to driving our sustainable business strategy through global and local initiatives. Together, we are excited to embrace new opportunities to help build more sustainable communities and continue doing well by doing good.

Yours sincerely,



**Ian Robertson**  
Chief Executive Officer

“We see the acquisition of new assets, which perhaps have a larger carbon footprint, as an opportunity to execute on our “win-win-win” decarbonization strategy – lower costs for customers through cost-effective renewable energy, excellent business opportunity for our investors, and delivery on our commitment to sustainability for the planet. Our 2017 acquisition of The Empire District Electric Company is a perfect example of such an opportunity.”

# Business Snapshot as of December 31, 2018

At Algonquin Power & Utilities Corp. (Algonquin), we focus on providing clean, safe, and sustainable energy and water services to nearly 800,000 North American customers, while delivering strong earnings, cash flow, and dividend growth via operational excellence, strategic growth, and accretive acquisitions.

Through our two business groups – Liberty Power and Liberty Utilities – we own and operate a diversified portfolio of North American rate-regulated and non-regulated electricity, natural gas, and water services businesses.

We develop, own, and operate sustainable assets built for the long term. Since our inception in 1988, our operations have grown to include more than 70 electrical generation, transmission, and distribution facilities in Canada,

the United States, and internationally, supported by more than 2,200 skilled and motivated employees, each of whom plays a vital role in our success.

With our robust, diversified, and growing presence in communities across the U.S., Canada, and internationally, we are continually demonstrating our unique “Think global, act local” business model.

## Summary of Operations

Data provided as of December 31, 2018.

Liberty Utilities	Utilities (#)	Customers (000s)	Gross revenues (\$U.S. millions)
Electric utilities	3	266	\$831.2
Natural gas utilities	8	338	\$395.5
Water and wastewater utilities	27	164	\$128.4
<b>Total</b>	<b>38</b>	<b>768</b>	<b>\$1,355.1</b>

Liberty Power <sup>1</sup>	Facilities (#)	Capacity (MW)	Gross revenues (\$U.S. millions)
Generating capacity	36	1,488	\$235.4

Electricity generation capacity (MW) <sup>2</sup>	Liberty Power	Liberty Utilities	Total
<b>Renewable energy</b>			
Wind	1,127	–	1,127
Solar	115	50	165
Hydroelectric	119	16	135
<b>Total</b>	<b>1,361</b>	<b>66</b>	<b>1,427</b>

<b>Thermal</b>			
Natural gas	127	1,370	1,497
Coal <sup>3</sup>	–	213	213
<b>Total</b>	<b>127</b>	<b>1,583</b>	<b>1,710</b>
<b>Grand total</b>	<b>1,488</b>	<b>1,649</b>	<b>3,137</b>

Notes:

1. Excludes \$11 million of Renewable Energy Credits revenue.
2. Electricity generation capacity relates to the gross nameplate generating capacity of the power facilities owned and managed by Algonquin.
3. Coal capacity total represents the Asbury facility, and does not include minority, non-controlling equity interests in Iatan and Plum Point.



Operations reach 2 countries, 24 states and provinces



Indirect interests in energy/water assets in 7 additional countries



Total assets \$9.4 billion



773,980 solar panels



Solar, wind, and hydroelectric generation in North America

1.4 GW



578 owned and operated wind turbines

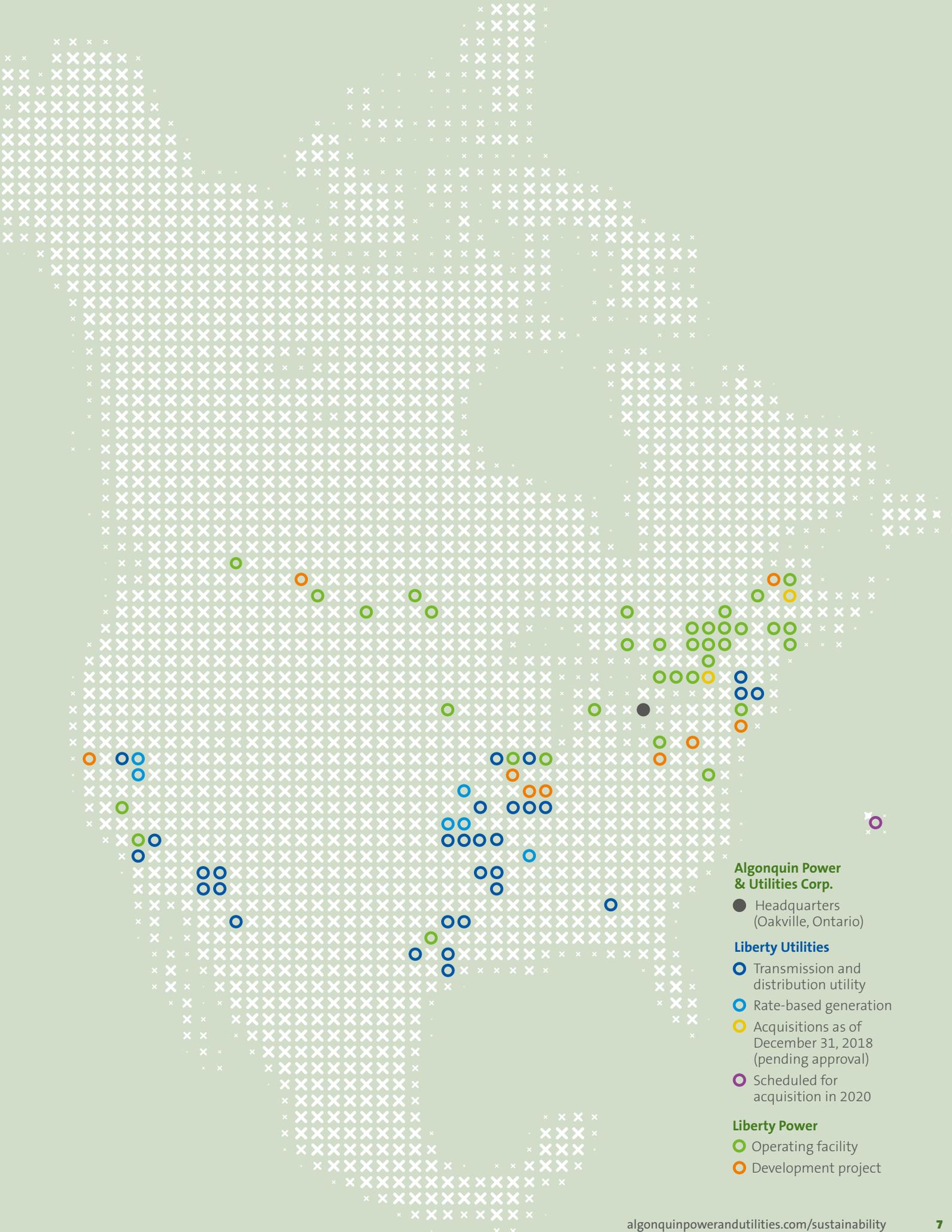


2,277 employees



768,000 customers

\* All monetary amounts are in U.S. dollars, except where otherwise noted.



**Algonquin Power & Utilities Corp.**

● Headquarters (Oakville, Ontario)

**Liberty Utilities**

- Transmission and distribution utility
- Rate-based generation
- Acquisitions as of December 31, 2018 (pending approval)
- Scheduled for acquisition in 2020

**Liberty Power**

- Operating facility
- Development project

# Sustainability: It's in Our Nature

The elements critical to the long-term success of any enterprise are loyal and valued customers, an engaged and talented team of employees, and a committed, long-standing investor group. At Algonquin, we believe that a commitment to sustainability woven through our business proposition will deliver all three.

Sustainability is, and always has been, the foundation of our growth strategy and a guiding principle governing how we plan, evaluate, and conduct our business. Being equally committed to the creation of social and environmental value, as we are to generating economic profit provides the opportunity for customers to patronize, employees to work for, and investors to fund, a safe, reliable, and agile international organization.

Today, “doing the right thing” is simply not enough. We have to measure our sustainability efforts, perform against them, and communicate our results. Reporting on relevant environmental, social, and governance metrics provides a way to demonstrate how we are making positive change.

In 2019,  
Corporate Knights  
ranked Algonquin as

**#3 Best 50  
Corporate  
Citizens**

in Canada  
(up from #8 in 2018)



## Continuing on Our Path

The next step in our journey to increase the transparency of our sustainability story began with establishing our Office of Sustainability. Supported by a team of senior executives, the development of our program was undertaken by a cross-functional working group including individuals who represent our corporate strategy, enterprise risk management, human resources, environmental, health and safety, asset operations, performance measurement, communications, and customer experience functions within our organization.

This group's mandate is to ensure that the opportunities and risks relating to sustainability (environmental, social, and governance) identified as relevant to our business are considered and addressed as core components of the strategy and business processes of the organization, and to implement practices and programs that support the achievement of our mission.

Our sustainability planning process examined several ESG reporting methodologies and tools in consideration of defining our framework for organizing and communicating our plans and measures. Our sustainability reporting strategy is influenced by SASB as the primary guide for our assessment and disclosure practices as well as the GRI framework. Additionally, in developing our sustainability plan, the UN SDGs have also been reviewed and referenced where applicable. Our path forward includes a commitment to incorporate the TCFD recommendations, with our first-phase TCFD disclosure to be published in 2020. Where we have identified alignment to the SASB and GRI frameworks, we have cross-referenced to the applicable information in Appendix A: SASB Table (page 40) and Appendix B: GRI Content Index (page 44) to this report.

This *Sustainability Report* sets out our commitments to sustaining energy and water for life by communicating our strategies, initiatives, and goals relating to the three elements of sustainability: the environment; the social matters important to our strategy and our relationship with our key stakeholder groups including employees, customers and the communities in which we operate and serve; and, the governance framework under which we operate. Through the stories of the programs, initiatives, and projects we're undertaking to implement our sustainability plan, this report also serves to illustrate the various ways in which we operationalize our sustainability commitments.

### Organizational Purpose

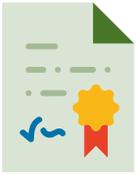
*Sustaining Energy  
and Water for Life*

### Our Mission

*Provide sustainable, clean  
energy and water solutions  
that create better everyday lives  
and inspire our communities.*

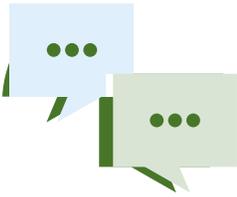
11-year  
legacy responder to the  
Climate  
Disclosure  
Project





### POLICY

In 2018, we published our *Sustainability Policy* (page 55). Our policy aligns with the six selected United Nations *Sustainable Development Goals* (UN SDGs) that are most relevant to us and sets forth our commitments to a sustainable energy and water future.



### CONSULTING STAKEHOLDERS

During 2019, we undertook internal and external consultations to identify and define the sustainability issues most likely to have an impact on our business. Externally, we engaged some of our key investors to help us consider the ESG factors that are most important to our business. Please see pages 12 and 13 for a summary of our stakeholder engagement activities.



### SUSTAINABILITY REPORTING

The voluntary sustainability reporting landscape is evolving rapidly. We aim to actively engage with our key stakeholders in an enhanced ESG dialogue and work to achieve further transparency as we address risks and create opportunities for progress.

We recognize that transparent and objective reporting is a key requirement in demonstrating our commitment to sustainability to our investors, our customers, and our employees. The alignment of our ESG goals with our corporate strategy ensures consistency between our words and our actions.



### OPERATIONALIZING SUSTAINABILITY

Our sustainability plan is based on an ESG framework aligned with factors significant to our business and the commitments set out in our *Sustainability Policy*. We have defined specific strategic objectives relating to our ESG factors and the enterprise initiatives that will help us to achieve these objectives.

While we have proudly proclaimed our key ESG goals, we will continue to refine and develop appropriate performance indicators to measure our progress towards these goals and a more sustainable future.



### REPORTING FRAMEWORK

Throughout this *Sustainability Report*, you'll find that we have highlighted several metrics that we believe are most relevant to our stakeholders and demonstrate our commitments to sustainability. Our report framework has been developed to suit the interests of a broad group of our stakeholders. In considering our audiences, we have chosen to include guidance for our ESG metrics from the SASB framework and elements of the *GRI Standards*.

Appendix A (page 40) of this report includes a SASB cross-reference table, Appendix B (page 44) provides a table of ESG information mapped to GRI, and Appendix C (page 49) contains additional relevant operational information.



### GHG INVENTORY CALCULATIONS

For over ten years, we have prepared annual GHG inventory calculations for our two North American business units – Liberty Power (renewable and thermal power generation plants) and Liberty Utilities (electric and natural gas and water distribution utilities and water treatment facilities, plus electricity generation assets).

As part of our effort to better understand and disclose our climate change risks and opportunities, and set meaningful targets, in 2019 we engaged with a sustainability consulting firm, with expertise in standards-based carbon accounting, to review our GHG inventory calculations and reporting.

Stationary fuel combustions from thermal power plants, which accounts for over 95 per cent of our total annual GHG emissions, are currently our largest emission sources. Most of these emissions are measured data, collected by Continuous Emissions Monitoring systems (CEMs), and not calculated using emission factors.



### Our Key ESG Factors

Based on our stakeholder engagement activities, we have identified seven key ESG factors we consider important to our business.

- Climate change
- Culture
- Talent attraction and retention
- Transition to a low-carbon economy, and succession of talent to a leadership team and workforce with the necessary skills to navigate to the new economy
- Safety of employees
- Reliability and safety of assets (including cyber security risk management)
- Customer experience and affordability

Our external consultant has verified these emission numbers and confirmed that there are no material issues with the calculation methodologies.

When calculating our GHG emissions, we use an operational control-based approach, reporting emissions for locations and activities where our organization has the full authority to introduce and implement our operating policies.



### BASE YEAR AND RECALCULATIONS

Our growth strategy has the effect of changing our asset profile from time to time due to acquisitions, divestments, mergers, or other operating changes. These changes can alter our emissions profile significantly (for example, the 2017 purchase of The Empire District Electric Company's coal-fired power plant significantly increased our total emissions), which makes meaningful comparisons to historical emissions levels difficult. To maintain consistency over time, we have designated 2017 as our base year for establishing an initial emissions reduction target.

Base-year emissions data may need to be recalculated to reflect changes to our future business structure. Therefore, we are developing a base-year recalculation policy to help us determine when the base year's emissions would need recalculation to maintain a fair year-over-year comparison.



### ABOUT THIS REPORT

We are committed to telling our sustainability story through an annual sustainability report moving forward. Our 2019 Sustainability Report provides data over a three-year period ending December 31, 2018. We have elected to continue our reporting with 2017 serving as our base year for carbon emissions. Data for 2016 has been included in this report to illustrate the significance of our acquisition of The Empire District Electric Company on January 1, 2017. All monetary amounts are in U.S. dollars, except where otherwise noted.

## OUR EMISSIONS PROFILE

### Total GHG Emissions

Kilotonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e)

2016	401
2017 <sup>1</sup>	3,220
2018	2,881

### GHG Emissions (Coal, oil, diesel, natural gas)

Kilotonnes of CO<sub>2</sub>e

SCOPE 1: GHG EMISSIONS PRODUCED DIRECTLY FROM SOURCES THAT ARE OWNED OR CONTROLLED BY ALGONQUIN

2016	273
2017 <sup>1</sup>	3,084
2018	2,743

### Percentage of Total GHG Emissions Covered Under Reporting Regulations

2016	97.44%
2017	99.76%
2018	99.72%

### GHG Emission Intensity for Power Generation

Metric tons of CO<sub>2</sub>e/MWh

2016	0.0789*
2017 <sup>1</sup>	0.3296*
2018	0.2821*

Note:

- Comparative figures between 2016 and 2017 may have material differences as a result of the acquisition of The Empire District Electric Company in 2017.
- \* Represents a number that has been updated or corrected since first publication.

# Consulting Our Stakeholders



## EMPLOYEES

- Annual *Employee Engagement Survey*
- Annual executive visits
- Employee Ethics Hotline
- Individual development planning
- Lean In Circles program and resource groups
- Ombudsperson Service
- Quarterly town halls
- Questionnaires
- Regular online surveys and polls
- Training
- Union relations and consultations

## COMMUNITIES

- Charitable activities
- Community consultation meetings
- Community events
- Community partnerships and sponsorships
- Community partnership survey
- Education and outreach programs
- Educational institutions
- Landowner dinners and information sessions
- Local Chambers of Commerce
- Local media outlets
- Military events and organizations
- Rotary Clubs



## INVESTORS AND ANALYSTS

- Annual Investor Day events in both Toronto and New York City
- Quarterly earnings calls
- Scheduled visits with investors
- Sustainability Day event
- Third-party interviews with an external ESG consultant



## CUSTOMERS

- Annual *J.D. Power Customer Satisfaction Survey*
- Call centers
- Community education programs
- Conservation and outreach programs
- Regular email communications
- Focus groups
- Local customer walk-in centers
- Local media outlets
- Participation in and sponsorship of local events, teams, and charitable foundations
- Social media



## GOVERNMENT AND REGULATORY BODIES

- Building local relationships
- Participation in industry associations and advisory groups
- Proactive self reporting
- Regular outreach

# Seven Key ESG Factors Relevant to Our Stakeholders

Key ESG Factors		Customers	Employees	Investors	Communities	Government and Regulatory Bodies
	<b>CLIMATE CHANGE</b> (pages 16 – 18)	●	●	●	●	●
	<b>CULTURE</b> (pages 22 – 35)	●	●	●	●	
	<b>TALENT ATTRACTION AND RETENTION</b> (pages 29 – 35)		●	●	●	
	<b>TRANSITION TO A LOW-CARBON ECONOMY, AND SUCCESSION OF TALENT TO A LEADERSHIP TEAM AND WORKFORCE WITH THE NECESSARY SKILLS TO NAVIGATE TO THE NEW ECONOMY</b> Message From the CEO (pages 3 – 5)	●	●	●	●	●
	<b>SAFETY OF EMPLOYEES</b> (pages 34, 35 and 38)		●	●		●
	<b>RELIABILITY AND SAFETY OF OUR ASSETS</b> Including cyber security risk management (pages 27, 28 and 38)	●	●	●	●	●
	<b>CUSTOMER EXPERIENCE AND AFFORDABILITY</b> (pages 22 – 24, 27 and 28)	●	●	●	●	●



## Our Commitments

The UN SDGs promoted by the United Nations is a global set of goals, targets, and indicators that United Nations member states (and, increasingly, businesses) use to frame agendas and policies surrounding development. Our core sustainability commitments align with the six UN SDGs which touch areas in which we feel our businesses could make the greatest impact.

### OUR COMMITMENTS

### OUR INITIATIVES



**Support the global goal of limiting planetary temperature rise of less than 2 degrees Celsius this century and reduce the impact of climate change by deploying emerging technologies and business models to decarbonize our energy portfolio.**

- Reducing the carbon content of the products we deliver to our customers
- Growing our renewables portfolio
- Reducing the internal carbon intensity of our operations



**Provide safe and reliable drinking water and wastewater services while maintaining healthy water ecosystems by employing best practices in efficiency, conservation, re-use, and recycling of water.**

- Encouraging efficient use and re-use of water resources
- Deploying new technologies that reduce the demand for freshwater resources and the carbon intensity of providing those resources
- Upgrading infrastructure to provide safe and reliable drinking water



**Create and support resilient communities through dialogue and collaboration, and seek partnerships with local suppliers, vendors, and contractors who align with our values and principles.**

- Fostering constructive and supportive relationships with the communities we serve
- Striving to provide a top-quartile customer service experience
- Actively engaging with supply chain partners to operationalize our sustainability plan



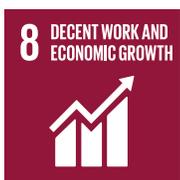
**Deliver cost-effective and reliable utility services.**

- Incorporating low-cost renewable energy into our supply mix
- Investing in infrastructure to reduce operating costs
- Operating our business efficiently



**Champion equality to build a more just society.**

- Creating and fostering employee resource groups to encourage positive diversity and inclusion outcomes
- Committing to gender balance on boards and in senior leadership
- Removing unconscious bias from our processes and systems



**Educate, develop, and empower a high-performing workforce through good health and wellness, and a positive safety culture.**

- Attracting and developing world-class talent
- Driving top-quartile employee engagement
- Achieving our “Drive to Zero” safety culture

**Practice good governance as an essential element of our pursuit of positive and balanced outcomes for our business, workforce, shareholders, and communities.**

- Engaging Board and senior executives in sustainability
- Developing a positive compliance culture
- Adopting TCFD recommendations into our business

# 2023 Sustainability Goals

## Environment



Target of  
**75%**  
renewable generation



Reduce  
GHG emissions by  
**one million  
metric tons**  
from 2017 levels



Add  
**2,000 MW**  
of renewables  
between 2019 – 2023

## Social



Exceed  
**30% women**  
in leadership roles



Achieve  
**top-quartile**  
customer service



Achieve  
**top-quartile**  
employee engagement

## Governance



Embed  
**sustainability**  
into our compensation model



Build a  
**robust  
compliance  
framework**



Publish  
**TCFD-aligned  
disclosure**  
starting in 2020

# Our Journey of Environmental Stewardship: Making Positive Impacts on Climate Change

## 2023 Sustainability Goals



Target of  
75%  
renewable  
generation



Reduce  
GHG emissions by  
one million  
metric tons  
from 2017 levels



Add  
2,000 MW  
of renewables  
between 2019 – 2023



## CLIMATE ACTION

We support the global goal of limiting planetary temperature rise to less than 2 degrees Celsius this century, and we will reduce the impact of climate change through the deployment of emerging technologies and business models to decarbonize our energy portfolio.

Reducing our reliance on fossil-based energy sources by pursuing sustainable alternatives is the strategy we've established to take action against the impacts of climate change. By reducing the carbon content of the products we deliver to our customers, growing our renewables portfolio, and decreasing the internal carbon intensity of our operations, we are sustaining energy and water for life.

By recognizing that climate change presents a critical opportunity for action, we are focusing on a series of initiatives to make positive change.



## Removing One Million Metric Tons of GHG Emissions

The Asbury Power Plant has been providing safe, reliable, and economical energy to our Missouri customers for over 40 years. The plant utilizes the latest environmental controls to reduce emissions, including a selective catalytic reduction system, scrubber, baghouse, and powder-activated carbon injection system. However, as a critical component in our short-term plan to decarbonize our energy portfolio, we have committed to closing the legacy coal-fired generation plant by 2023. The closure will reduce our GHG emissions by approximately one million metric tons of CO<sub>2</sub>e, which represents Asbury's average annual emissions in 2017 and 2018 – the two full calendar years that we have owned the facility.

In 2018, there were 32 employees working at the Asbury plant. We are committed to responsibly transitioning the plant's staff to new positions within our organization.



## Greening the Fleet

Our power generation business focuses on the increasing opportunities to economically build and operate renewable energy generation capacity. As the most recent step in our plan to create new wind generation capacity, we have received the final certificates allowing for the build out of 600 MW of new wind generation in the U.S. Midwest. Once these wind farms, collectively referred to as the *Customer Savings Plan*, are fully operational, they are expected to generate customer savings of approximately \$169 million over 20 years or roughly \$300 million over 30 years.

Saving customers **\$300 million** over 30 years

Including these *Customer Savings Plan* projects, our Greening the Fleet initiative continues to demonstrate our ongoing commitment to providing our customers with new, clean, cost-effective, and sustainable supplies of energy.

From 2017-2018, Algonquin reduced GHG emissions from fossil fuel based electricity generation by **11%**

From 2017-2018, Algonquin reduced gross GHG emissions by **10.5%\***

\* Total GHG emissions from all operationally controlled assets.

## Generating Portfolio Mix

Year	Renewable	Natural Gas	Coal
2016	90%	10%	0%
2017	43%	50%	7%
2018	45%	48%	7%

## Reducing the Carbon Content of Our Natural Gas Supplies

We are actively pursuing opportunities to incorporate renewable natural gas into the supply mix for our gas distribution utilities. This will directly reduce the emissions intensity of the energy we supply to our natural gas customers. As a mandate of our international business development team, our commitment to the build out of renewable assets includes the exploration of opportunities to replace conventional natural gas with additional renewable sources. In future sustainability reports, we will continue to report on our progress with developing sources of natural gas.

7,504 miles  
of gas distribution lines

In 2018, Algonquin  
replaced 51.6 miles  
of natural gas pipeline  
to reduce methane gas emissions

## Fueling Our Future

By transitioning our operational vehicle fleet to electric vehicles (EVs) and compressed natural gas (CNG), and adding fueling and charging stations throughout our service territories, we are leaving a greener footprint in the communities we serve.

EVs have zero to near-zero emissions. As the transportation sector accounts for more than a quarter of annual U.S. GHG emissions, electrification presents a huge opportunity to achieve national clean air and climate goals.

In addition to the environmental benefits, driving EVs is economical.

Based on national average residential electricity prices, “fueling” an EV is equivalent to paying about \$1.25 per gallon of gasoline. Furthermore, EVs have lower maintenance requirements than their gasoline-powered counterparts.

Natural gas vehicles are some of the cleanest vehicles on the market. They produce 20 to 30 per cent fewer greenhouse gases than gasoline or diesel-powered vehicles. Also, since CNG engines generate less motor residue and build up, using CNG extends the life of fleet vehicles, which helps to lower our operating costs.

28% of  
Algonquin  
fleet vehicles  
were low or  
no-emission  
vehicles in 2018

Partnering with  
companies to  
install  
EV charging  
stations

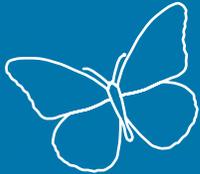
In 2018, approximately  
70 Algonquin  
fleet vehicles  
were CNG capable

In 2018, Algonquin used  
11,657  
gas gallon  
equivalent  
of CNG



## Protecting Biodiversity

Land use is important as we transition to a low-carbon economy, continue to develop our renewables portfolio, and operate our utility businesses. As part of our commitment to making a positive environmental impact, we look for new ways to be effective in protecting wildlife and their habitats. We're proud of the steps we're taking to provide solutions that help protect species populations as we continue to grow our business.



### GIVING POLLINATORS THE RIGHT-OF-WAY

Pollinators across North America are in trouble, with honeybees and monarch butterflies experiencing drastic declines in population over the past 20 years. As many factors have contributed to their decline, no single solution will fix the problem. However, we know that increasing the availability of nectar and pollen by providing more flowering plants and trees, will help improve their health and numbers.

By operating on tracts of mostly undeveloped land that include transmission line rights-of-ways, utilities are uniquely positioned to boost the health of pollinators. In 2018, we began implementing pollinator protection projects as part of our sustainability efforts.

Providing 20 acres of land and 2,000 sq. ft. of garden for pollinators



### NESTING WITH BIRDS OF PREY

Ospreys, a species of concern in Missouri, typically build their nests near bodies of water, in large trees, and on artificial structures such as electric utility poles. Pairs return to the same nesting site each year, usually in March.

In February 2015, our line crews in Missouri moved a dangerously positioned osprey nest from an electric transmission tower to a newly built nesting box. By relocating the nest, crews increased the likelihood the pair would adopt the new nesting site. A live Internet feed, from an "osprey cam" that was placed at the site for the viewing enjoyment of the community, has confirmed that the birds have accepted their alternative accommodations. Based on the success of the pilot project, we have installed nesting boxes at other locations with similar nesting issues.

In 2018, we had 10 osprey nesting boxes installed throughout our utility service territories and 14 active falcon boxes in Missouri that house 28 individual falcons.

Installing nesting boxes for 10 pairs of ospreys and 14 pairs of falcons



### TO THE BAT CAVE

We have officially become the proud owner of a bat cave near Buffalo, Missouri. We purchased the cave to help preserve gray bat populations by protecting a colony of bats located near one of the wind farms we're developing. The 20 acres we now own formerly served as a limestone quarry. However, when the quarry stopped operating, the pit flooded, and a colony of bats moved into the mineshafts. Radar readings showed anywhere from 15,000 – 20,000 bats living there.

Purchasing the land not only helps to conserve the bat colony, we will also use the property to benefit the surrounding community. Plans include planting wildflowers that control invasive plant species and noxious weeds, as well as attract more insects – a food source for the bats. Also, we are examining other ways to provide community benefits such as the development of pedestrian and bicycle trails.

Providing a home for 15,000 – 20,000 gray bats



## HEALTHY WATER ECOSYSTEMS

We are committed to providing safe and reliable drinking water and wastewater services while maintaining healthy water ecosystems by employing best practices in efficiency, conservation, re-use, and recycling of water.

We will achieve this by reducing the environmental impact of the use of freshwater resources through encouraging efficient use and re-use of water resources, deploying new technologies that reduce the demand for freshwater resources and the carbon intensity of delivering those resources, and upgrading infrastructure to provide safe and reliable drinking water to the communities we serve.

164,000+  
water and  
wastewater  
customers

2,368 miles  
of water  
distribution  
mains

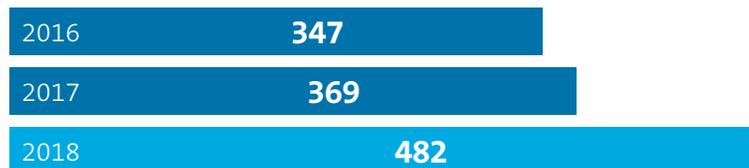
### Increasing Reliability in Southern California

We live in and support the communities we serve, and deliver safe and reliable water services with care and integrity. Our customers' issues are our issues – our front-line employees live them every day. We pump, treat, and deliver potable water to homes, schools, hospitals, and businesses in Arizona, California, Texas, Missouri, Illinois, and Arkansas.

In February of 2018, we were proud to activate a new groundwater well in Compton, Los Angeles, California. This increased water supply reliability for community residents and reduced their dependency on costly purchased water from outside of the service territory. Groundwater is controlled locally, thereby limiting the involvement of outside agencies and making groundwater a preferred source for residents. The new well produces as much as 2,500 gallons of water per minute for the Compton community.

The Compton groundwater improvement project echoes our commitment to upgrading our infrastructure to ensure the continued delivery of safe and reliable drinking water to our customers.

### Volume of Recycled Water Delivered (million gallons)



### Cash for Grass

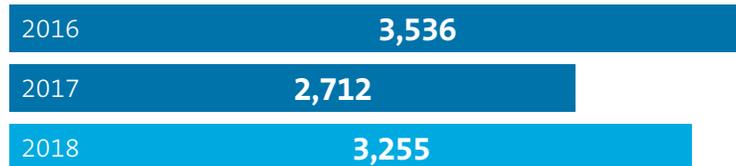
At Algonquin, we run and partner in several water conservation initiatives in our water utility service territories. Each location offers programs to educate and encourage customers to be more efficient in their water use.

One program that has been very successful and received national attention is the Cash for Grass program run in Apple Valley, California. Customers are being offered cash incentives to remove or reduce their lawn areas or plant less water-intensive native plant species. This program is estimated to reduce annual water use by as much as 236 million gallons.

Water use in  
California is being  
reduced by  
236  
million  
gallons/year



## Electric Utility – Total Water Withdrawn (million gallons)



## Water Utility – Total Water Withdrawn (million gallons)



## Percentage of All Water Withdrawn in Regions with High or Extremely High Baseline Water Stress



### Investment in Desalination

In November 2017, we announced our push beyond North America for the first time, launching a joint venture development company known as AAGES with Spain’s Abengoa while also acquiring Abengoa’s stake in Atlantica Yield plc.

Atlantica Yield is contracted for 17 years on its Skikda desalination plant in Algeria, which produces 100,000 m<sup>3</sup> of desalinated water for off-takers L’Algérienne Des Eaux (ADE), the national water company, and Sonatrach, the state-owned hydrocarbons operation. Atlantica’s other desalination contract is for Algeria’s Honaine facility, providing for 200,000 m<sup>3</sup> over 21 years to the same off-takers.

Atlantica Yield also owns 11 solar plants, as well as wind and other renewable power generation facilities and transmission lines. We benefit from having an experienced international operator for new projects developed by AAGES, as well as an interest in an attractively-priced portfolio of high-quality global operating assets that are accretive to our earnings and cash flow per share.

### Aquifer Replenishment

The Liberty Aquifer Replenishment Facility (LARF) is a water recharge project resulting from a 100-year partnership between our subsidiary company, Liberty Utilities, and the Central Arizona Groundwater Replenishment District (CAGRDR), and is the State’s first public-private reclaimed water recharge facility.

The LARF was designed to beneficially reuse over five million gallons of water per day of highly treated (A+ effluent) water. The LARF receives A+ effluent from Liberty Utilities’ Palm Valley Water Reclamation Facility and recharges it into basins that then percolates it into the ground on our 51-acre site located near the Luke Air Force Base. The primary goal for Liberty and CAGRDR was to enhance water sustainability through the reuse of high-quality effluent water stored underground for future use in times of drought. The direct impact of aquifer recharge will be a gradual rise in the water table that had been declining for years.

The effluent replenishment facility is expected to recharge at least 78 billion gallons of water into the west valley aquifer over the next century, thus helping Liberty Utilities and the surrounding communities it serves to be more resilient and sustainable in times of drought.

Impacting the recharge of **78 billion gallons of water** in Arizona over the next 100 years

Our LARF project received the **2017 Project of the Year award** from the WaterReuse Association

# Our Commitment to People and Culture: Engaging in Safety, Equity, and Resilience

## 2023 Sustainability Goals



Exceed  
30% women  
in leadership roles



Achieve  
top-quartile  
customer service



Achieve  
top-quartile  
employee  
engagement



## LOCAL, RESPONSIVE, AND CARING

Through dialogue and collaboration, we endeavour to create and support resilient communities. We demonstrate a local, responsive, and caring relationship with our customers, communities, and regulators by fostering constructive and supportive relationships with the communities we serve and striving to provide a top-quartile customer service experience.

In addition, we seek partnerships with local suppliers, vendors, and contractors who have values and principles that align with ours. By actively engaging with our supply chain partners to operationalize our sustainability plan, we ensure that our suppliers have values comparable to ours and operate in compliance with all applicable laws and regulations.

We care about our customers' experience and the quality of local service we deliver. By investing in our communities for the long term, we'll grow together.



## Employees Living and Active in Their Local Communities

Our business model is based on ensuring that employees in roles that interact with local stakeholders are situated in areas where those stakeholders reside. This approach includes functions that interact directly with customers, regulators, and employees. As well, employees are encouraged to live in the service territories they serve.

To support this close connection to our communities, in some cases incentives are provided to employees who reside in, and are customers within, the service territories in which they work. Local utility employees are also encouraged to actively participate in their communities through community organizations and service clubs such as local Chambers of Commerce, Rotary Clubs, and similar organizations.

### Liberty Days

We strongly encourage our employees to get involved in community events and activities. The Liberty Days program was designed to reinforce our company's commitment to community support and improvement by providing employees with time dedicated to taking part in volunteer activities.

Each year, employees are invited to spend up to three paid days during regular working hours volunteering in their community, taking part in activities that reflect the company's goals and brand. In addition, employees may choose to volunteer their time after business hours on behalf of the company or at company-sponsored events, and may be credited with Liberty Days for their efforts.





\$2.5 million  
in charitable  
donations  
from 2016-2018

### Commitment to Community

We believe our role extends beyond our workday and into the fabric of our communities. Our company investments, community partnerships, and employee giving help to make lives better every day. Many of our employees volunteer with local charities – whether coaching a youth sport or teaching an adult to read, they are interacting with our customers. Our goal is to support programs directly related to our business objectives at a local level. Although we support and partner with national organizations such as the United Way, we choose to participate in programs that resonate with the communities we serve.

As we continue to grow and increase our community reach, we are developing a formalized community giving policy and program that will help us to exceed our current charitable donations of approximately \$1 million per year, while ensuring that our contributions remain local and relevant to our customers and employees.

### Community-aligned Project Development

We focus on forming meaningful and long-term relationships over the course of developing and operating our renewable energy and infrastructure projects. Our project teams work hard to ensure that close stakeholder engagement is maintained during all project phases, from the time of project inception through the course of its long-term operation.

The community and stakeholder outreach events we hold, such as town halls and landowner dinners, support our ability to build relationships while providing ongoing updates, information, and dialogue regarding project performance and related operations issues that may impact their community.

In many cases, as part of the development of projects, long-term community benefit agreements are put in place. In 2018, we made payments of approximately \$17 million under community contribution agreements, land rentals, or municipal taxes that support local communities where we operate our businesses and facilities.

\$17 million  
in payments under  
community contribution  
agreements, land rentals,  
or municipal taxes in 2018





Making significant investments in business system upgrades

### Striving to Provide Top-quartile Customer Service

Providing industry-leading customer service demands that we measure our performance using a world-class benchmark. As acknowledged industry experts, the J.D. Power organization provides us with comprehensive customer satisfaction and operational performance metrics that help us prioritize actions which directly contribute to improved customer experience.

J.D. Power asserts that each of their success factors has specific attributes that influence the customer experience. The relative importance of each factor in relation to overall customer satisfaction is weighted using J.D. Power's proprietary index methodology. The output of our customer satisfaction performance is an overall satisfaction index score that ranges from 100 to 1,000 points. We are focused on using the insights into our customer's priorities to help us shape our areas of focus for improvement.

A key factor in utilizing J.D. Power to measure our customer satisfaction is that we have the opportunity to measure performance quarterly, across all of our commodities and regions, against other geographically proximate top-performing utilities. To support our efforts of continuous improvement, we have committed to becoming recognized as a top-quartile customer service performer by J.D. Power.



### Customer First Program

A key component of our strategy to improve customer satisfaction is the roll-out of our Customer First initiative, a significant multi-year project that involves the enterprise-wide implementation of new business systems to enable new online customer functionality and service capabilities for our regulated utility business. In turn, this will support improved operational efficiency. Our J.D. Power survey results have highlighted that providing this functionality will improve our customers' experience.

## Emergency Preparedness

We have invested significant resources into our emergency preparedness practices over the past several years because we believe that comprehensive emergency management is built on proactive and integrated planning, training, exercising, communications, response mechanisms, and recovery practices which are consistent across our enterprise.

Our emergency and risk management teams are equipped with a playbook that identifies response scenarios for all hazard situations, and training to prepare us to react quickly, effectively, and more safely for our customers, employees, contractors, and the public.

In 2018, we conducted crisis media relations training with our emergency and executive management teams. In partnership with an external crisis management firm, we also held internal stakeholder workshops to address key crisis scenarios and develop communications plans related to each. In addition, we procured an incident response system to help us better manage notification to our customers, communities, first responders, and employees in the event of an emergency.

## Supplier Partnerships

We are committed to promoting diversity and economic development in the communities we serve. One way of demonstrating this is by doing business with vendors owned by LGBTQIA, minorities, service-disabled veterans, and women. We recognize that creating an inclusive environment for all suppliers is vitally important to the overall success of our company and we seek partnerships with local suppliers, vendors, and contractors who align with our values and principles.

Creating a competitive procurement process, that provides opportunities to the greatest extent possible for sub-contractors and businesses that have a diverse workforce, strongly encourages our prime contractors

and major suppliers to support inclusivity. We believe that excellence in supplier diversity will lead to excellence in supply chain management and will advance our financial and operational goals while providing opportunities for success to a broad and diverse range of businesses in the communities we serve.

In 2018, we released our *Supplier Code of Conduct* to actively engage with supply chain partners and further operationalize our sustainability plan. Our 2023 objective is to have implemented a robust enterprise-wide supplier diversity program that supports the principles outlined in our *Supplier Code of Conduct*.





## MODERNIZED AND AFFORDABLE ENERGY

Our regulated utility subsidiary, Liberty Utilities, sets state regulator-approved customer rates that reflect the cost to provide customer care, emergency and outage services, maintain and improve infrastructure, and recover operating costs. Prices also reflect the value and obligation of safely and reliably serving our customers.

We are committed to delivering cost-effective and reliable utility services by identifying capital and operational efficiency opportunities that drive lower customer costs. We achieve this by adding more low-cost renewable energy into our supply mix, investing in infrastructure technology to reduce our operating costs, and operating our business as efficiently as possible.

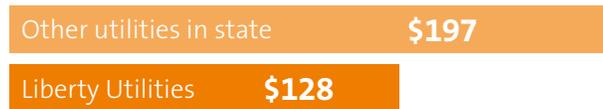
Ensuring the reliability and safety of our assets while providing affordable utility services will help us deliver value to our customers and communities as we navigate the evolving landscape of customer expectations.



Investing \$2.1 billion in regulated utility upgrades

### 2018 Electricity Rates vs. Neighboring Utilities<sup>1</sup>

#### CALIFORNIA



#### NEW HAMPSHIRE



#### MISSOURI



### 2018 Natural Gas Rates vs. Neighboring Utilities<sup>1</sup>

#### GEORGIA



#### NEW HAMPSHIRE



#### MASSACHUSETTS



#### MISSOURI



Notes:

1. Rate comparison as of December 4, 2018.

## Grid Modernization

Like most industries affected by social and technological changes, the utility industry is undergoing rapid change and disruption. Our communities and customers are growing, demanding more in terms of flexibility, reliability, and resiliency from utility service providers – and everyone wants these things at a highly competitive rate. With respect to our electric utilities, by modernizing our power grids and looking at new ways of storing energy, we can give our customers exactly what they want.

Behind-the-meter storage allows customers the flexibility to manage energy purchases with a battery connected directly to their premises, downstream of the utility electric meter. This battery can charge itself during the night when electricity costs are lowest. Energy stored in the battery can then be used by the customer to reduce electricity purchased during the day when rates are higher. This helps reduce customer energy costs. In a similar way, microgrids (a small collection of customers sharing a battery) can help more extensive operations maximize availability and reduce costs.

Communities across North America have embarked on Smart City campaigns where they invest in “smarter” infrastructure to attract more businesses to drive economic growth. We are focused on delivering new and better ways to serve the energy needs of these customers so we can be part of the solution. Currently, we have two microgrid pilot projects underway, as well as a behind-the-meter battery storage pilot. We know these technologies are going to be an essential part of our service mix in the future, and we’re excited with the opportunity to better understand how to maximize the value they bring.

Investing  
\$630 million  
in grid  
modernization  
projects



## 100% Renewable Energy in California

We provide electricity distribution services to business and residential customers in portions of seven California counties in the Lake Tahoe area. A commitment to offering our customers 100 per cent renewable power will be realized by adjusting our supply mix to include low-cost renewable and battery resources.

In 2016, we broke ground on the Luning solar facility in Nevada, which is connected to our service territory in California. This 50 MW project involved the construction of a 120 kV transmission line, approximately 1.6 miles long, from the solar facility to Nevada Energy’s existing Table Mountain Substation within our service territory.

Prior to the Luning project, our California operations were meeting 100 per cent of its energy requirements through wholesale power purchase agreements. With the new solar facility, we meet 25 per cent of the energy needs using utility-owned, renewable generation, and our customers will benefit from increased affordability, reliability, and a reduction in GHG emissions.

## Operational Excellence

Operational excellence is about focusing on and improving our day-to-day service delivery in key areas that are important to our stakeholders. This includes the relentless pursuit of safety, improving our business processes and systems, building our capabilities around how we manage our assets over their lifespan, training our teams to build our competence, and continuously looking for ways to improve what we do and how we do it.

For example, our generation teams are focused on maximizing the output from each energy source. For a traditional thermal plant, we work hard to optimize the facility to deliver maximum efficiency at a stable production. For hydro, wind, and solar facilities, we follow a dynamic process based on managing the natural variability in environmental conditions and challenging electricity market fluctuations.

We recently began work to determine an algorithm that identifies the optimal timing frequency to clean our solar panels. With more than 700,000 solar panels in use throughout our business, cleaning them is an expensive activity. But, because clean panels generate energy more reliably, it’s vital to the efficiency of our business that we determine the most productive times of the year to maintain them.



## CHAMPIONING EQUALITY

We recognize the powerful impact of diversity and inclusion on business success. By fostering a supportive work culture and business practices which are free from barriers and bias, we attract employees with diverse backgrounds, abilities, and viewpoints to inspire collaboration, creativity, and innovative thinking.

Through celebrating and valuing our differences, we will build a sustainable future for our employees, our communities, and our customers. We are committed to further development of an organizational culture that champions equality to build a more just society. We will continue to develop a diverse and inclusive workplace through fostering employee resource groups that encourage positive diversity and inclusion outcomes, committing to gender balance on boards and in senior leadership, and providing focus to removing unconscious bias from our processes and systems.



### Diversity and Inclusion Council

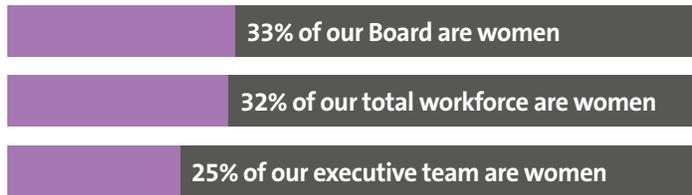
Comprised of representatives from across our business, the Diversity and Inclusion Council was formed in 2018 to play a leadership role in our commitment to diversity and inclusion. To provide informed, authentic leadership for cultural equity and promote diversity and inclusion in the workplace, the Council reviews, addresses, and advises on measures, policies and practices, education, prioritization, and talent acquisition, while ensuring we continue to position diversity and inclusion as connected to our organizational purpose, mission, and business strategy.

Our Board implemented a diversity policy in 2017

## Gender Equality

The promotion of gender diversity in the workplace is a critical component of our strategy to be an employer of choice. We believe that an environment that promotes diversity positively impacts our ability to attract and retain top-notch talent. We've adopted several initiatives and sustainability goals to measure our progress in increasing diversity.

When utilizing internal and external recruiters, we require that recruiters provide gender-diverse shortlisted candidates for all senior roles. To encourage more diverse candidates, in 2018, we undertook an audit and refreshment of job descriptions to remove unconscious bias and support gender neutrality. Additionally, each year gender diversity is considered as part of the executive succession planning process to ensure the development of women for leadership roles.



\* Percentages as of December 31, 2018.

## Promoting Women in Leadership

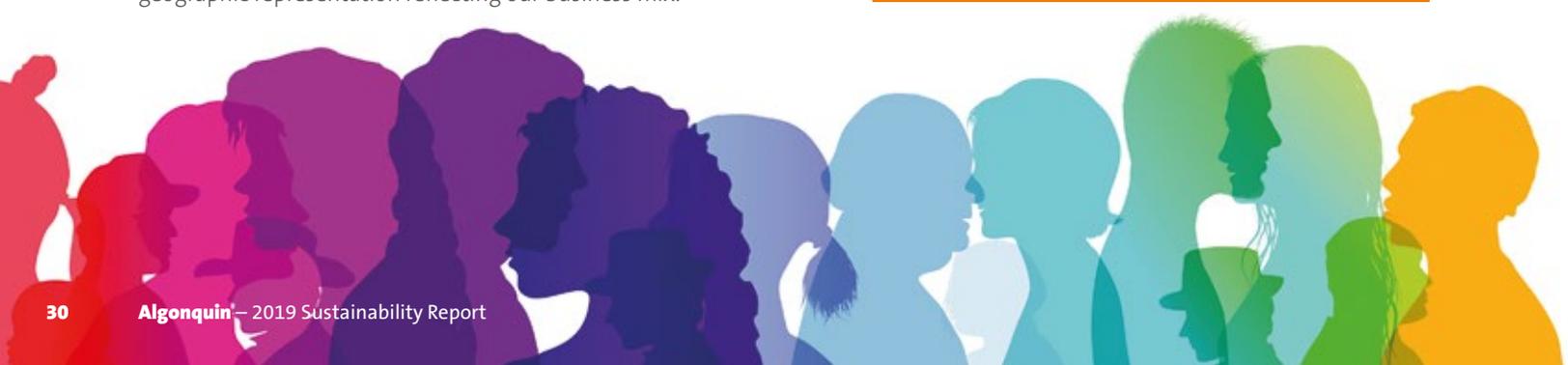
We recognize the benefits of promoting diversity, both within Algonquin and our subsidiaries, and at the Board of Directors level. We believe that a board and organization with a diverse mix of experience, backgrounds, gender, age, and geographic expertise, representing the locations where we do business, have a positive impact on governance.

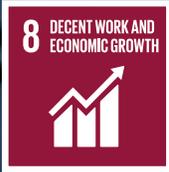
In 2013, our Board of Directors determined that it would be appropriate to increase Board diversity both in terms of gender and regional knowledge. The Board retained the services of a global search firm and required the search firm to develop a list of potential Board candidates that included women and individuals with U.S. regulated utility expertise. As a result of this initiative, we were successful in increasing Board diversity by adding four U.S.-based Board members, including three highly qualified women. The Board has also considered diversity in the composition of its committees. In 2018, 50 per cent of Board committee chairs were women and all of our Board committees included female Board members and geographic representation reflecting our business mix.



### Lean In

Lean In Circles are small groups of women that meet regularly to support each other. The goal is to give participants the benefit of peer counseling and to help them reach their goals, whatever their aspirations might be. We have our very own Lean In program across the organization. There are seven active circles across our U.S. offices and one at our head office in Canada. Our goal to create new employee resource groups includes delivering a support package that helps enable all offices to host their own Lean In Circles.





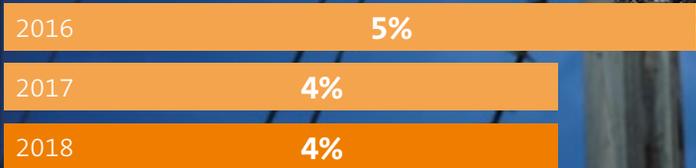
## EMPOWERING OUR PEOPLE

We pay close attention to the well-being of our employees and are dedicated to the education, development, and empowerment of a high-performing workforce through promoting good health and wellness, and a positive safety culture. Attracting and developing world-class talent, driving top-quartile employee engagement, and achieving our “Drive to Zero” safety culture is being put into action by engaging employees to ensure they are healthy and qualified to safely do their job.

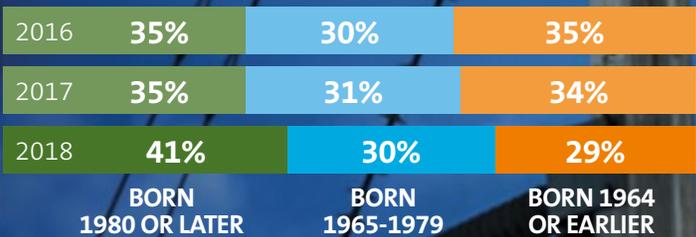
Talent attraction, development, retention, and succession are the pillars around which we focus our employee lifecycle. We know that the competition for talent is real, and an organization is only as good as their workforce. At Algonquin, our workforce is our family and we work together to make positive impacts for generations to come.



### Employee Voluntary Turnover



### Workforce Age Demographics



Average age of workforce = 45 years old



Over \$1.8 million invested in employee training in 2018

## Future-proofing Our Workforce

Workforce planning is a vital factor contributing to organizational performance. Several of the factors identified as crucial to our business center around it: culture; talent attraction and retention; transition and succession; and the safety of our employees.

Our workforce planning strategy is aligned with our business plan and focused on our future staffing needs, managing organizational culture, and anticipating and mitigating risks. Our employee development programs are unique

and offer challenging and interesting work and learning opportunities for all levels of employees. To ensure inclusivity, each employee, with the help of their leader, creates and manages their *Individual Development Plan*. The plan includes active development goals centered on learning styles and our key business objectives.

To facilitate a leadership culture, we offer several events, programs, and challenges aimed at supporting the development of current and future leaders of our company.



### ACHIEVEMENT FUND

Supporting employee education is a strategic investment in the future. The *Achievement Fund* policy is an employer-offered benefit which encourages employees to expand their knowledge and skills by providing them with learning opportunities that will enhance their job performance and benefit both them and our organization. The program offers employees financial assistance of \$4,000 per year (to a \$30,000-lifetime maximum) to successfully obtain both professional and personal development on their own time through external, government recognized educational institutions.



### INTERCONNECT

We strongly believe that when employees understand areas in the company outside of their profession or discipline, it makes them more knowledgeable and more effective in their roles overall. That's why we launched the Interconnect program. The program provides learning opportunities during the workday where employees gain greater knowledge regarding different roles outside of their department (e.g., office staff with field personnel). Interconnects are also an opportunity for management to visit with front-line staff to better understand the priorities, successes, and suggestions for improvements needed across our organization.



### APPLIED LEARNING PROJECTS

The Applied Learning Projects (ALP) are a team-based learning program focused on a business challenge or industry disruptor. The ALP helps employees and their teammates think broadly about industry topics and learn about our business while engaging and working with individuals they might not otherwise regularly encounter. Each ALP is a journey of collaboration, researching, learning, and creating relationships across the business.



### LEADERSHIP SUMMIT

Every year, we host a Leadership Summit event where over 200 leaders from across North America come together for two days of learning, team building, and strategic alignment. The summit activities include facilitated workshops, speeches from subject matter experts, ALP presentations, and a keynote address from our CEO.

1,716  
Interconnect  
experiences  
since 2017

## You Said, We Did

The year-over-year improvement to our *Employee Engagement Survey* score is clear evidence that we're committed to putting actions in place to continue our growth as a top employer. In 2018, our employee engagement was above the North American utilities' average.

Each year, we communicate the importance of the survey to all employees. We use the feedback from survey results to take action and make changes according to what's most important to our employees. The engagement survey awareness campaign we annually conduct demonstrates concrete examples of how we are listening and responding to all employee feedback.



### YOU SAID...

Employees wanted to be appropriately and consistently recognized for their hard work and contributions to the company.

### ...WE DID

In response, we launched the Tell Me Something Good program across our organization. It enables employees and managers to recognize their peers and thank them for their efforts. We also refined our Performance Management criteria to provide greater flexibility in recognizing employee contributions.



### YOU SAID...

Employees wanted an effective process to help identify development needs.

### ...WE DID

The *Individual Development Plan* process was launched to encourage employees and their supervisors to have ongoing development conversations and create robust employee development plans.



### YOU SAID...

Employees wanted to work for an inclusive employer who accepts diversity and supports their health and well-being.

### ...WE DID

We adopted the Lean In Circle program to support gender equality; launched a *Flex-time, Flex-place Policy* enhancing the flexibility of working hours and location; and increased our relationships with charitable organizations, becoming even more involved in supporting the communities where we live and work.

Examples of employee feedback and how, as an organization, we've responded shows employees that their opinions matter and we are listening.

Above industry average employee engagement scores in 2018

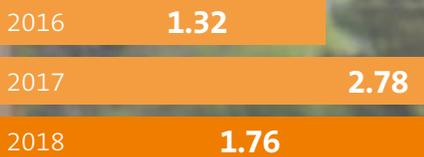
## SAFETY CULTURE

Across our organization, health and safety is a fundamental part of our culture. Our goal is always zero injuries. In our pursuit of that goal, it's imperative that safety awareness is woven into our daily activities and that every employee believes that all injuries are preventable.

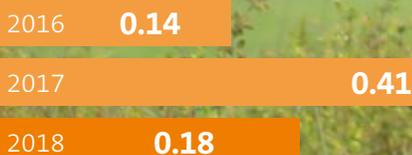
Our safety culture continues to be aligned with the *Dupont-Bradley Curve* safety concept, which is a measurement and development tool that helps companies benchmark their journey toward world-class safety culture and performance. Under this model, organizations move from a reactive “accidents will happen” approach to a team-based, interdependent approach where employees believe “all accidents are preventable” and “zero injuries” is an attainable and sustainable objective.

### Recordable Incident Rate

(per 200,000 hours worked)



### Lost Time Injury Frequency Rate



Zero  
fatalities  
in 2016, 2017 and 2018

\* Information provided represents Liberty Utilities, Liberty Power, and Algonquin Power & Utilities Corp.

## A Focus and Commitment to Our Safety Strategy and Programs Sustain Our Safety Plan

Some of the safety initiatives we have undertaken to build our safety culture include:



### ANNUAL SAFETY LEADERSHIP SYMPOSIUMS

Once a year, each of our locations holds a safety symposium event to reinforce our safety culture. Topics are designed to shed light on the key issues that affect our employees and how they can apply information, learnings, and techniques in their everyday work and home lives.



### SAFESTART

A safer workplace begins with stronger personal awareness. SafeStart makes safety personal by offering practical techniques to keep workers alert to risk all day, every day. SafeStart's safety and human error reduction training is used by all of our offices and worksites to cut down on common states and errors that could lead to injuries and fatalities. We feel that SafeStart training supports a workplace with safer people, greater compliance, and an exceptional safety culture.



### SMITH SYSTEM

The Smith System has been selected for training all employees to make better decisions when behind the wheel. The program is helping drivers make positive changes to their behavior and increase awareness while driving. This has led to a significant return on investment in terms of crash and injury reduction, maintenance and fuel savings, higher employee satisfaction, and, most importantly, lives saved. All employees must participate in the first Smith System training module. Employees who drive vehicles on behalf of the company receive a more intensive training package.



### SAFETY EXCELLENCE – ROOTED IN SUSTAINABILITY

Sustained safety improvement requires changing the behavior of executives, managers, supervisors, and front-line employees in core areas: actions related to hazard identification and remediation, modifying incentive systems so they don't encourage under-reporting, developing near miss and safety concern reporting systems that genuinely support reporting, and encouraging behaviors related to following rules and procedures.



### PREDICTIVE-BASED SAFETY

With the use of technology, we have more access to ground-breaking safety technology than ever. Upgrading our processes to predictive-based safety, through the use of improved technology and real-time data analysis, will help us to be better equipped to act on safety analytics. Ideally, using leading and lagging indicators, paired with the power of modern analytics, will help us to recognize further patterns that identify where the next incident, near miss, or critical failure could occur.

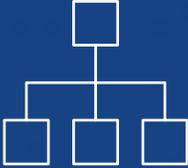


# Sustainability Governance: Building Our Organizational Capabilities and Accountabilities

## 2023 Sustainability Goals



Embed  
sustainability  
into our compensation model



Build a robust  
compliance  
framework



Publish  
TCFD-aligned  
disclosure  
starting in 2020



Our commitment to sustainability includes our belief that practicing good governance is an essential element of our pursuit of positive and balanced outcomes for our business, workforce, shareholders, and communities. In this regard, our sustainability plan involves incorporating and integrating sustainability into our business strategies, practices, processes, and compensation models by engaging our Board and senior executives in sustainability, building a robust compliance framework, and adopting TCFD-aligned disclosures into our business.



## Enterprise Risk Management

Our governance around risk management is rooted in our strong Board oversight, and our *Enterprise Risk Management* policy and framework that is embedded across the business. We use a common framework and language across the company to talk about risk, potential likelihood and impacts, and actions and controls to mitigate risks. Our risk-management activities span day-to-day operations, strategy development, and due diligence for new acquisitions and assets. Most of the business risks we manage are actually sustainability-related risks.

In 2018, our risk-management program was awarded “Best Practices in Enterprise Risk Management” by the Governance Professionals of Canada.



### Building Effective Governance Practices for the Long Term

An essential component of our ability to successfully develop, implement, and maintain a leading sustainability program is the establishment of appropriate, flexible, and effective governance processes and systems to ensure proper data collection, measurement of our progress, and accountability for long-term performance. Our governance practices center on providing guidance on corporate sustainability priorities, equipping our businesses with the tools and the performance measures to ensure the mitigation of ESG risks, and supporting the achievement of our sustainability objectives. In-depth analysis of the potential risks and opportunities related to our changing climate will take place through our pursuit of the TCFD recommendations.



### ESG Activation

Board engagement in overseeing matters related to sustainability is embedded in the mandate of our Corporate Governance Committee, as well as the mandate of the Board Risk Committee for risks associated with environment, social, and governance. Leadership engagement is formalized through the assignment of the responsibility for sustainability strategy development to senior executives. These steps ensure that sustainability matters are represented in executive and strategy discussions, and that progress against established sustainability priorities is regularly communicated to the Corporate Governance Committee. Incorporation of sustainability-related risks is already present and embedded in our enterprise risk management framework, and will continue to develop with the addition of TCFD-aligned disclosure activities.

**78%** of the Board of Directors are independent



### Alignment with Management Compensation

Sustainability performance is an essential component of our leadership compensation practices. Our *Corporate Scorecard*, which impacts annual bonuses for a broad group of senior management, including the Algonquin CEO and executive team, has included sustainability performance metrics for several years.

ESG-related metrics within the scorecard include customer satisfaction, compliance performance, safety results, employee engagement, system reliability, and growth in renewable energy capacity. As we continue to establish new enterprise-wide sustainability goals relating to renewable generation mix, carbon intensity, community engagement, our workforce, and other vital factors, the Human Resources and Compensation Committee of our Board will continue to assess the sustainability metrics that will be considered for inclusion in future scorecards.

## Increasing Cyber Security in the Workplace

The Internet and the Internet of Things (IoT) are amazing accomplishments in the technology revolution that have undoubtedly made our lives easier. However, the benefits are accompanied by risks to our people and our assets. To manage these increased risks, we deploy industry-standard technology controls such as firewalls and anti-malware solutions. Also, we have published a cyber security policy and annually train our employees on how to detect and respond to common threats.

Understanding that our employees are our strongest control in protecting our information and technology assets, our approach emphasizes personal accountability and how to prevent cyber breaches. We accomplish this through cyber security awareness messaging using various employee communications channels, required training modules, and random cyber security awareness assessments.



## Compliance and Ethics

A positive compliance culture leads to a workplace where every employee feels they can bring their best self to work, feel valued, and can effectively do their job. Our policies are put in place to ensure everyone has the information they need and can abide by consistent rules and practices. Sometimes, navigating these policies isn't always easy or clear. For that reason, we created a program of services and information resources to help our employees when they have questions and, even more importantly, to address potential problems before they become more significant challenges. *Code of Business Conduct and Ethics* training along with online training for other key compliance policies is completed by employees on an annual basis.

99.7%  
employee  
completion  
of annual *Code of  
Business Conduct and  
Ethics* training in 2018

**Our Compliance and Ethics program is built on the following employee resources:**



### EMAIL

Dedicated compliance team and email address employees can use to ask compliance and policy-related questions.



### CIVILITY POLICY

Outlines our expectations on treating all employees with respect and dignity, without fear of reprisal.



### OMBUDSPERSON

Our Employee Support Line provides independent third-party advice that complements the support leaders and HR typically provide if employees are experiencing difficulty in the workplace.



### ETHICS HOTLINE

Provides employees with an anonymous means to report suspected breaches of our *Code of Business Conduct and Ethics*.

# Forward-Looking Statements and Forward-Looking Information

This report may contain statements that constitute “forward-looking information” within the meaning of applicable securities laws in each of the provinces of Canada and the respective policies, regulations and rules under such laws or “forward-looking statements” within the meaning of the *U.S. Private Securities Litigation Reform Act of 1995* (collectively, “forward-looking information”). The words “anticipates”, “believes”, “budget”, “could”, “estimates”, “expects”, “forecasts”, “intends”, “may”, “might”, “plans”, “projects”, “schedule”, “should”, “will”, “would” and similar expressions are often intended to identify forward-looking information, although not all forward-looking information contains these identifying words. Specific forward-looking information in this report includes, but is not limited to, statements relating to: expected future growth; ongoing and planned projects and initiatives including grid modernization and the Liberty Aquifer Replenishment Facility; expectations regarding generation availability, capacity and production; strategy and goals, including related to reducing greenhouse gas emissions and increasing renewable generation; community investment and engagement efforts; customer savings; continued commitment to maintaining healthy water ecosystems; the proposed Canadian campus and veteran’s program; diversity and inclusion efforts; sustainability governance; and the potential impacts of climate change. All forward-looking information is given pursuant to the “safe harbor” provisions of applicable securities legislation.

The forecasts and projections that make up the forward-looking information contained herein are based on certain factors or assumptions which include, but are not limited to: the receipt of applicable regulatory approvals and requested rate decisions; the absence of any material equipment breakdown or failure; availability of financing on commercially reasonable terms; the absence of a severe and prolonged downturn in general economic, credit, social and market conditions; the successful and timely development and construction of new projects; the continuation of observed weather patterns and trends; the continued competitiveness of electricity pricing; the absence of a material change in political conditions or public policies and directions by governments; the ability to obtain and maintain licenses and permits; favourable relations with external stakeholders; the viability, financial and otherwise, of community engagement efforts and sustainability projects; the reliability of scientific evidence upon which sustainability efforts are based; and the availability of diverse suppliers and qualified personnel to satisfy continued diversity and inclusion efforts.

The forward-looking information contained herein is subject to risks, uncertainties and other factors that could cause actual results to differ materially from historical results or results anticipated by the forward-looking information. Factors which could cause results or events to differ materially from current expectations include, but are not limited to: changes in general economic, credit, social and market conditions; changes in customer energy usage patterns and energy demand; changes related to the anticipated effects of global climate change; advancements in environmental science; the development of new sustainable technologies; the incurrence of environmental liabilities; natural disasters and other catastrophic events; seasonal fluctuations and variability in weather conditions and natural resource availability; reductions in demand for electricity, gas and water; fluctuations in commodity prices; an increase in financing costs or limits on access to credit and capital markets; failure to maintain required regulatory authorizations; failure to comply with and/or changes to environmental laws, regulations and other standards; failure to identify attractive acquisition or development candidates necessary to pursue the Corporation’s growth strategy; and the loss of key customers.

There may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Some of these and other factors are discussed in more detail under the heading “Enterprise Risk Factors” in the Corporation’s most recent annual information form and under the heading “Enterprise Risk Management” in the Corporation’s most recent management discussion and analysis.

Forward-looking information contained herein is made as of the date of this report and based on the plans, beliefs, estimates, projections, expectations, opinions and assumptions of management on the date hereof. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such forward-looking information. Accordingly, readers should not place undue reliance on forward-looking information. While subsequent events and developments may cause the Corporation’s views to change, the Corporation disclaims any obligation to update any forward-looking information or to explain any material difference between subsequent actual events and such forward-looking information, except to the extent required by law. All forward-looking information contained herein is qualified by these cautionary statements.

## Appendix A:

# Sustainability Accounting Standards Board (SASB) Table

The Sustainability Accounting Standards Board's (SASB) mission is to establish industry-specific disclosure standards across environmental, social, and governance (ESG) topics that facilitate communication between companies and investors about financially material, decision-useful information. The nature of our business directs us to consult the Infrastructure Sectors of: Electric Utilities and Power Generators; Gas Utilities and Distributors; and Water Utilities and Services.

The following tables contain those topics we have identified as key issues. As we continue to assess our ESG data, we may choose to include additional SASB metrics in future reports. Unless otherwise stated, data relates only to the sector of our business indicated in the following chart headings.

## Electric Utilities and Power Generators

As of December 31

Topic	Metric	Measures	Unit of Measure	Codified Metric Code	2016	2017	2018
Greenhouse Gas Emissions and Energy Resource Planning	Gross global scope of emissions	Gross global emissions	Metric tons (t), CO <sub>2</sub> e	IF-EU-110a.1	289,465.22	3,092,440.45	2,751,186.64
		Emissions percentage covered under emissions-limiting regulations <sup>1</sup>	Percentage	IF-EU-110a.1	78.81	10.18	3.95
		Emissions percentage covered under emissions reporting regulations	Percentage	IF-EU-110a.1	97.29	99.76	99.72
	GHG <sup>2</sup>	GHG emissions associated with power deliveries	Metric tons (t), CO <sub>2</sub> e	IF-EU-110a.2	Not assessed	Not assessed	Not assessed
	Discussion of long-term and short-term strategy or plan to manage scope	Emissions, emissions reduction targets, and an analysis of performance against those targets	n/a	IF-EU-110a.3	Message From the CEO (pages 3-5)		
			n/a	IF-EU-110a.3	Our Journey of Environmental Stewardship: Making Positive Impacts on Climate Change (pages 16-18)		
	Renewable Portfolio Standards (RPS)	Number of customers served in markets subject to RPS	Number of Customers	IF-EU-110a.4	91,991	92,360	92,941
		Percentage fulfillment of RPS target by market	Percentage	IF-EU-110a.4	100	100	100
Air Quality	Air emissions of pollutants	NO <sub>x</sub> (excluding N <sub>2</sub> O)	Metric tons (t)	IF-EU-120a.1	36	1,360	1,274
			Percentage	IF-EU-120a.1	100	100	100
		SO <sub>x</sub>	Metric tons (t)	IF-EU-120a.1	1	918	754
			Percentage	IF-EU-120a.1	100	100	100
		Particulate matter (PM <sub>10</sub> )	Metric tons (t)	IF-EU-120a.1	18	171	167
			Percentage	IF-EU-120a.1	100	100	100
		Lead (Pb)	Metric tons (t)	IF-EU-120a.1	0	0	0
			Percentage	IF-EU-120a.1	0	0	0
		Mercury (Hg)	Metric tons (t)	IF-EU-120a.1	0	0	0
			Percentage	IF-EU-120a.1	0	0	0

## Electric Utilities and Power Generators (continued)

As of December 31

Topic	Metric	Measures	Unit of Measure	Codified Metric Code	2016	2017	2018
Water Management	Total Water	Total water withdrawn	Thousand cubic meters (m <sup>3</sup> )	IF-EU-140a.1	13,384.26	10,265.53	12,319.90
		Withdrawn percentage in regions with high or extremely high baseline water stress	Percentage	IF-EU-140a.1	1.35	2.01	1.75
Coal Ash Management	Amount of coal combustion residuals (CCR)	Generated	Metric tons (t)	IF-EU-150a.1	37,929	36,215	31,189
		Recycled	Percentage	IF-EU-150a.1	48	43	46
Energy Affordability	Average retail electric rate for:	Residential customers	\$/kWh	IF-EU-240a.1	0.15	0.14	0.14
		Commercial and industrial customers	\$/kWh	IF-EU-240a.1	0.10	0.10	0.10
Workforce Health and Safety <sup>3</sup>	Total recordable incident rate (TRIR)		Rate	IF-EU-320a.1	1.32	2.78	1.76
	Fatality rate		Rate	IF-EU-320a.1	0	0	0
	Near miss frequency rate (NMFR)		Rate	IF-EU-320a.1	51.18	30.43	23.85
End-Use Efficiency and Demand	Percentage of electric utility revenues from rate structures that are decoupled <sup>4</sup>		Percentage	IF-EU-420a.1	54.58	10.29	10.19
	Customer electricity savings from efficiency measures, by market <sup>5</sup>		Megawatt hours (MWh)	IF-EU-420a.3	8,628	6,710	8,146
Nuclear Safety and Emergency Management	Total number of nuclear power units, broken down by U.S. Nuclear Regulatory Commission (NRC) Action Matrix Column		Number	IF-EU-540a.1	0	0	0
Grid Resiliency	Number of incidents of non-compliance with physical and/or cyber security standards or regulations		Number	IF-EU-550a.1	0	2	3
	System Average Interruption Duration Index (SAIDI)		Minutes	IF-EU-550a.2	127.30	140.68	109.84
	System Average Interruption Frequency Index (SAIFI)		Minutes	IF-EU-550a.2	1.07	1.15	1.03
	Customer Average Interruption Duration Index (CAIDI), inclusive of major event days <sup>6</sup>		Number	IF-EU-550a.2	119.20	122.35	106.67

### Notes:

1. Emissions-limiting regulations include the California Cap-and-Trade Program and the Regional Greenhouse Gas Initiative Program
2. We will be calculating future GHG emissions associated with power deliveries
3. Relates to the company as a whole.
4. Percentage of decoupled revenue reduced in 2017 as a result of the acquisition of The Empire District Electric Company. The percentage is expected to increase in the near future. Calculated as net revenue from electric utilities that are decoupled divided by net revenue from all electric utilities.
5. Relates to Liberty Utilities (Granite State Electric) Corp, Liberty Utilities (Energy North Natural Gas) Corp. and Liberty Utilities (New England Natural Gas Company) Corp.
6. CAIDI excludes major events and is calculated as SAIDI/SAIFI.

## Gas Utilities and Distributors

As of December 31

Topic	Metric	Measures	Unit of Measure	Codified Metric Code	2016	2017	2018
Energy Affordability	Average retail gas rate for:	Residential customers	\$/MMBTU	IF-GU-240a.1	11.78	12.62	12.11
		Commercial and industrial customers			7.79	8.92	9.73
		Transportation services			1.61	1.50	1.52
End-Use Efficiency	Percentage of gas utility revenues from rate structures that are decoupled <sup>1</sup>		Percentage	IF-GU-420a.1	45.29%	42.77%	40.51%
	Customer gas savings from efficiency measures by market <sup>2</sup>		Million British Thermal Units (MMBtu)	IF-GU-420a.2	142,725	141,716	179,235
Integrity of Gas Delivery Infrastructure	Number of:	Reportable pipeline incidents	Number	IF-GU-540a.1	0	0	0
		Corrective Action Orders (CAO)	Number	IF-GU-540a.1	0	0	0
		Notices of Probable Violation (NOPV)	Number	IF-GU-540a.1	6	18	5
	Percentage of distribution pipeline that is:	Cast and/or wrought iron	Percentage by length	IF-GU-540a.2	3.5*	3.1*	2.8*
		Unprotected steel	Percentage by length		2.5*	2.3*	1.9*
Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions			n/a	IF-GU-540a.4	Reducing the Carbon Content of Our Natural Gas Supplies (page 18)		

### Notes:

1. Calculated as net revenue from gas utilities that are decoupled divided by total net revenue from all gas utilities.
  2. Relates to Liberty Utilities (Granite State Electric) Corp, Liberty Utilities (Energy North Natural Gas) Corp. and Liberty Utilities (New England Natural Gas Company) Corp.
- \* Represents a number that has been updated or corrected since first publication.

## Water Utilities and Services

As of December 31

Topic	Metric	Measures	Unit of Measure	Codified Metric Code	2016	2017	2018
Energy Management	Total energy consumed		Gigajoules (GJ)	IF-WU-130a.1	87,856	73,178	75,284
	Percentage grid electricity		Percentage	IF-WU-130a.1	93	90	94
Distribution Network Efficiency	Water main replacement rate <sup>1</sup>		Rate	IF-WU-140a.1	0.56	0.50	0.74
	Volume of non-revenue real water losses		Thousand cubic meters (m <sup>3</sup> )	IF-WU-140a.2	7,116.68	7,721.75	7,314.77
Water Affordability and Access	Average retail water rate <sup>2</sup> for:	Residential customers	\$/100 cubic feet (CCF)	IF-WU-240a.1	3.61	3.82	3.47
		Commercial and industrial customers	\$/100 cubic feet (CCF)	IF-WU-240a.1	2.90	3.17	3.51
End-Use Efficiency	Customer water savings from efficiency measures, by market <sup>3</sup>		Cubic meters (m <sup>3</sup> )	IF-WU-420a.2	28,165	21,683	37,280
Water Supply Resilience	Total water sourced from regions with high or extremely high baseline water stress		n/a	IF-WU-440a.1	Percentage of All Water Withdrawn in Regions with High or Extremely High Baseline Water Stress (page 21)		
	Volume of recycled water delivered to customers		Thousand cubic meters (m <sup>3</sup> )	IF-WU-440a.2	1,313.28	1,397.12	1,822.84
	Discussion of strategies to manage risks associated with the quality and availability of water resources		n/a	IF-WU-440a.3	Healthy Water Ecosystems (pages 20-21)		
Network Resiliency and Impacts of Climate Change	Wastewater treatment capacity located in 100-year flood zones		Cubic meters (m <sup>3</sup> ) per day	IF-WU-450a.1	94.635	94.635	94.635
	Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure		n/a	IF-WU-450a.4	Message From the CEO (pages 3-5)		
			n/a	IF-WU-450a.4	Healthy Water Ecosystems (pages 20-21)		

### Notes:

- Excludes Texas and Arizona sites.
- Numbers shown as based on water usage rate. Total average water rate/CCF, inclusive of fixed charges is:

	2016	2017	2018
Residential	\$4.53	\$4.71	\$4.32
Commercial/industrial	\$3.27	\$3.60	\$3.98

- Relates to Liberty Utilities (Granite State Electric) Corp, Liberty Utilities (Energy North Natural Gas) Corp. and Liberty Utilities (New England Natural Gas Company) Corp.

## Appendix B:

# Global Reporting Initiative Content Index

The *GRI Standards* are the first global standards for sustainability reporting. They feature a modular, interrelated structure, and represent the global best practice for reporting on a range of economic, environmental, and social impacts.

The following tables contain cross-references to content in our *2019 Sustainability Report* and other Algonquin disclosures that align with parts of the GRI framework. As we continue to assess our ESG data, we may choose to include additional data in our GRI content index in future reports.

### Reports Referenced:

S *Algonquin's 2019 Sustainability Report* (published November 7, 2019)

M *Algonquin's 2019 Management Information Circular* (published May 7, 2019)

R *Algonquin's 2018 Annual Report* (published May 7, 2019)

A *Algonquin's 2018 Annual Information Form* (published Feb 28, 2019)

W *Algonquin's Corporate Website* – [www.algonquinpowerandutilities.com](http://www.algonquinpowerandutilities.com)

UNIVERSAL STANDARDS		Report / Page / Section Name
<b>Organizational Profile</b>		
102-1	Name of the organization	S 6-7 – <a href="#">Business Snapshot</a> ; A 1.1 – <a href="#">Name, Address, Incorporation</a>
102-2	Activities, brands, products, services	S 6-7 – <a href="#">Business Snapshot</a> ; A 2 – <a href="#">General Development of the Business</a>
102-3	Location of headquarters	S 6-7 – <a href="#">Business Snapshot</a> ; A 1.1 – <a href="#">Name, Address, Incorporation</a>
102-4	Location of operations	S 6-7 – <a href="#">Business Snapshot</a>
102-5	Ownership and legal form	S 6-7 – <a href="#">Business Snapshot</a> ; A 1.2 – <a href="#">Intercorporate Relationships</a>
102-6	Markets served	S 6-7 – <a href="#">Business Snapshot</a> ; S 49 - <a href="#">Operational Metrics/Operations</a> ; A 3 – <a href="#">Description of the Business</a>
102-7	Scale of the organization	S 6-7 – <a href="#">Business Snapshot</a> ; A 3 – <a href="#">Description of the Business</a>
102-8	Information on employees and other workers	S 6-7 – <a href="#">Business Snapshot</a> ; S 22-25 – <a href="#">Social</a> ; S 29-35 – <a href="#">Social</a> ; S 49-50 – <a href="#">Operational Metrics/Operations</a> ; S 51 – <a href="#">Operational Metrics/Workforce</a>
102-9	Supply chain	S 26 – <a href="#">Supplier Partnerships</a> ; A 3 – <a href="#">Description of the Business</a> ; W – <a href="#">Supplier Code of Conduct</a>
<b>Strategy and Analysis</b>		
102-14	Strategy statement from senior decision maker	S 3-5 – <a href="#">Message From the CEO</a>
102-15	Key impacts, risks, and opportunities	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Our Key ESG Factors</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a>
<b>Ethics and Integrity</b>		
102-16	Values, principles, standards, and norms of behavior	W – <a href="#">Investor Centre/Other Documents</a> ; M 39 – <a href="#">Corporate and Board Policies</a>
102-17	Mechanisms for advice and concerns about ethics	S 38 – <a href="#">Compliance and Ethics</a> ; W – <a href="#">Investor Centre/Other Documents</a> ; M 39 – <a href="#">Corporate and Board Policies</a> ; W – <a href="#">Ethics Reporting Policy</a>

UNIVERSAL STANDARDS (continued)		Report / Page / Section Name
<b>Governance</b>		
102-18	Governance structure	S 9 – <a href="#">Continuing on Our Path</a> ; S 37 – <a href="#">ESG Activation</a> ; M 28 – <a href="#">Corporate Governance Practices</a>
102-19	Delegating authority	S 9 – <a href="#">Continuing on Our Path</a> ; S 37 – <a href="#">ESG Activation</a> ; M 35 – <a href="#">Committees of the Board of Directors</a> ; M 38 – <a href="#">Position Descriptions</a> ; W – <a href="#">Documents, Other – Mandates</a>
102-20	Executive level responsibility for economic, environmental, and social topics	S 9 – <a href="#">Continuing on Our Path</a> ; S 37 – <a href="#">ESG Activation</a> ; M 57 – <a href="#">Corporate Scorecard and Results</a>
102-21	Consulting stakeholders on economic, environmental, and social topics	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Consulting Stakeholders</a> ; S 10-11 – <a href="#">GHG Inventory Calculations</a> ; S 12 – <a href="#">Consulting Our Stakeholders</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a> ; S 25 – <a href="#">Striving to Provide Top-quartile Customer Service</a> ; S 33 – <a href="#">You Said, We Did</a>
102-22	Composition of the highest governance body and its committees	M 28 – <a href="#">Corporate Governance Practices</a>
102-23	Chair of the highest governance body	M 24 – <a href="#">Director Profiles / Kenneth Moore</a> ; W – <a href="#">Position Description, Chair of the Board</a>
102-24	Nominating and selecting the highest governance body	M 19 – <a href="#">Director Nominees</a>
102-25	Conflicts of interest	W – <a href="#">Code of Business Conduct and Ethics</a> ; M 53 – <a href="#">Risk Management and Compensation</a>
102-26	Role of the highest governance body in setting purpose, values, and strategy	S 9 – <a href="#">Continuing on Our Path</a> ; S 37 – <a href="#">ESG Activation</a> ; M 28 – <a href="#">Corporate Governance Practices</a>
102-27	Collective knowledge of the highest governance body	M 19 – <a href="#">Director Nominees</a>
102-28	Evaluating the highest governance body performance	M 28 – <a href="#">Corporate Governance Practices</a>
102-29	Identifying and managing economic, environmental, and social impacts	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Our Key ESG Factors</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a>
102-32	Highest governance body's role in sustainability reporting	S 9 – <a href="#">Continuing on Our Path</a> ; S 37 – <a href="#">ESG Activation</a>
102-33	Communicating critical concerns	S 38 – <a href="#">Compliance and Ethics</a> ; S 26 – <a href="#">Emergency Preparedness</a>
102-35	Remuneration policies	S 37 – <a href="#">Alignment With Management Compensation</a> ; M 46 – <a href="#">Executive Compensation</a>
102-36	Process for determining remuneration	S 37 – <a href="#">Alignment With Management Compensation</a> ; M 46 – <a href="#">Executive Compensation</a>
102-37	Stakeholders involvement in remuneration	S 37 – <a href="#">Alignment With Management Compensation</a> ; M 46 – <a href="#">Executive Compensation</a>
<b>Stakeholder Engagement</b>		
102-43	Approach to stakeholder engagement	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Consulting Stakeholders</a> ; S 10-11 – <a href="#">GHG Inventory Calculations</a> ; S 12 – <a href="#">Consulting Our Stakeholders</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a> ; S 25 – <a href="#">Striving to Provide Top-quartile Customer Service</a> ; S 33 – <a href="#">You Said, We Did</a>

UNIVERSAL STANDARDS (continued)		Report / Page / Section Name
<b>Reporting Practices</b>		
102-46	Defining report content and topic boundaries	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Operationalizing Sustainability</a> ; S 10 – <a href="#">Our Key ESG Factors</a> ; S 10 – <a href="#">Reporting Framework</a> ; S 10-11 – <a href="#">GHG Inventory Calculations</a> ; S 11 – <a href="#">Base Year Recalculations</a> ; S 11 – <a href="#">About This Report</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a>
102-47	List of material topics	S 3-5 – <a href="#">Message From the CEO</a> ; S 10 – <a href="#">Our Key ESG Factors</a> ; S 13 – <a href="#">Seven Key ESG Factors Relevant to Our Stakeholders</a>
102-49	Changes in reporting	S 3-5 – <a href="#">Message From the CEO</a> ; S 11 – <a href="#">About This Report</a>
102-50	Reporting period	S 3-5 – <a href="#">Message From the CEO</a> ; S 11 – <a href="#">About This Report</a>
102-51	Date of most recent report	S 2 – <a href="#">Table of Contents</a>
102-52	Reporting cycle	S 3-5 – <a href="#">Message From the CEO</a> ; S 11 – <a href="#">About This Report</a>
102-53	Contact point for questions regarding the report	S – <a href="#">Back Cover</a>
102-55	GRI content index	S 44-48 – <a href="#">Global Reporting Initiative Content Index</a>

ECONOMIC STANDARDS		Report / Section / Section Name
<b>Economic Performance</b>		
201-1	Direct economic value generated and distributed	R 5 – <a href="#">Operating Results</a>
201-2	Financial implications and other risks and opportunities due to climate change	S 3-5 – <a href="#">Message From the CEO</a>
<b>Indirect Economic Impacts</b>		
203-1	Infrastructure investments and services supported	S 3-5 – <a href="#">Message From the CEO</a> ; W – <a href="#">2018 Investor Day Presentation</a>
203-2	Significant indirect economic impacts	S 3-5 – <a href="#">Message From the CEO</a>
<b>Anti-Corruption</b>		
205-2	Communication and training about anti-corruption policies and procedures	S 38 – <a href="#">Compliance and Ethics</a>
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	W – <a href="#">Code of Business Conduct and Ethics</a>

ENVIRONMENTAL STANDARDS		Report / Section / Section Name
<b>Biodiversity</b>		
304-2	Significant impacts of activities, products, and services on biodiversity	S 19 – <a href="#">Protecting Biodiversity</a>
<b>Emissions</b>		
305-1	Scope 1 Emissions	S 11 – <a href="#">Our Emissions Profile</a> ; S 53 – <a href="#">Operational Metrics/Environment</a>
305-2	Scope 2 Emissions	S 11 – <a href="#">Our Emissions Profile</a> ; S 53 – <a href="#">Operational Metrics/Environment</a>
305-4	Emissions intensity	S 11 – <a href="#">Our Emissions Profile</a> ; S 53 – <a href="#">Operational Metrics/Environment</a>
305-5	Reduction in GHG emissions	S 17 – <a href="#">Reduction in GHG emissions from 2017 to 2018</a>
305-7	Nitrogen oxides (NO <sub>x</sub> ), Sulphur oxides (SO <sub>x</sub> ), and other significant air emissions	S 40 – <a href="#">SASB Table/Air Quality</a>
<b>Water and Effluents</b>		
	Interactions with water as a shared resource	S 20-21 – <a href="#">Healthy Water Ecosystems</a>
	Water withdrawal	S 20-21 – <a href="#">Healthy Water Ecosystems</a>
	Significant impacts of activities, products, and services on biodiversity	S 19 – <a href="#">Protecting Biodiversity</a>
	Habitats restored or protected	S 19 – <a href="#">Protecting Biodiversity</a>
<b>Environmental Compliance</b>		
307-1	Non-compliance with environmental laws and regulations	W – <a href="#">Code of Business Conduct and Ethics</a> ; W – <a href="#">Supplier Code of Conduct</a>

SOCIAL STANDARDS		Report / Section / Section Name
<b>Employment</b>		
401-1	New employee hires and employee turnover	S 31 – <a href="#">Empowering our People</a>
<b>Occupational Health and Safety</b>		
403-2	Types of injury, occupational diseases, lost days, and absenteeism, and work-related fatalities	S 34 – <a href="#">Safety Culture</a> ; W – <a href="#">Health and Safety Charter</a>
403-5	Worker training on occupational health and safety	S 35 – <a href="#">Safety Culture</a> ; W – <a href="#">Health and Safety Charter</a>
403-6	Promotion of worker health	S 34-35 – <a href="#">Safety Culture</a> ; W – <a href="#">Health and Safety Charter</a>
403-9	Work-related injuries	S 34-35 – <a href="#">Safety Culture</a> ; S 52 – <a href="#">Operational Metrics/Safety and Reliability</a>
<b>Training and Education</b>		
404-2	Programs for upgrading employee skills and transition assistance programs	S 32 – <a href="#">Future-proofing our Workforce</a>
<b>Diversity and Equal Opportunity</b>		
405-1	Diversity of governance bodies and employees	S 29-30 – <a href="#">Championing Equality</a> ; S 51 – <a href="#">Operational Metrics/Workforce</a> ; M 28 – <a href="#">Corporate Governance Practices</a> ; W – <a href="#">Diversity Policy</a>
<b>Non-Discrimination</b>		
406-1	Incidents of discrimination and corrective actions taken	S 38 – <a href="#">Compliance and Ethics</a>
<b>Child Labour</b>		
408-1	Operations and suppliers at significant risk for child labour	W – <a href="#">Supplier Code of Conduct</a>
<b>Human Rights Assessment</b>		
412-2	Employee training on human rights policies or procedures	S 38 – <a href="#">Compliance and Ethics</a>
<b>Local Communities</b>		
413-1	Operations with local community engagement, impact assessments, and development programs	S 22-26 – <a href="#">Local, Responsive, and Caring</a>
<b>Public Policy</b>		
415-1	Political contributions	W – <a href="#">Code of Business Conduct and Ethics</a>
<b>Customer Health and Safety</b>		
416-2	Incidents of non-compliance concerning the health and safety impacts of products or services	W – <a href="#">Code of Business Conduct and Ethics</a>

## Appendix C: Operational Metrics

We assess our performance at many levels to support continual improvement in all areas of our business. As part of our commitment to transparently communicate our performance, we have developed a set of operational metrics we feel contribute value in assessing our ESG data.

The following tables contain operations, workforce, governance, safety and reliability, and environment metrics that align with the topics we consider significant factors

to our business. We have obtained third-party assurance for the emissions data included in this table in order to align with the verification of other emissions data calculations included in our *2019 Sustainability Report*.

As we continue to assess our ESG data, we may choose to include additional metrics to our Operational Metrics tables.

### Operations

	2016	2017	2018
<b>Utility customers (in thousands)</b>			
Electricity	93	265	266
Natural gas	293	337	338
Water and wastewater	178	160	164
<b>Total</b>	<b>565</b>	<b>762</b>	<b>768</b>
<b>Energy delivered to our customers</b>			
Electricity (in GWh) – Liberty Utilities (retail)	1,462	5,843	6,524
Electricity (in GWh) – Liberty Power <sup>1</sup> (contractual agreements)	3,504	4,543	4,656
Electricity (in GWh)	<b>Total (in GWh)</b>	<b>10,386</b>	<b>11,180</b>
Electricity (in PJ)	<b>Total (in PJ)</b>	<b>37.39</b>	<b>40.25</b>
Natural gas (in PJ)	<b>28.18</b>	<b>31.96</b>	<b>36.5</b>
	<b>Total (in PJ)</b>	<b>46.06</b>	<b>76.75</b>
<b>Water and wastewater services provided to our customers</b>			
Wastewater treated (millions of gallons)	2,231	2,226	2,282
Water provided (millions of gallons)	17,936	16,905	15,823
<b>Electricity generation capacity (in MW)<sup>2</sup></b>			
Coal	0	213	213
Wind	1,052	1,052	1,127
Natural gas/ thermal	127	1,497	1,497
Hydroelectric	123	138	135
Solar	30	90	165
	<b>Total (in MW)</b>	<b>2,990</b>	<b>3,137</b>
Renewable energy total (in MW)	1,205	1,281	1,427
Renewable energy portfolio <sup>3</sup>	%	90	45

## Operations (continued)

	2016	2017	2018
<b>Net electricity generated (in GWh)<sup>4</sup></b>			
Coal	0	987	841
Wind	2,583	3,660	3,623
Natural gas/thermal	254	3,901 <sup>*</sup>	4,380 <sup>*</sup>
Hydroelectric	605	624	586
Solar	61	208	324
	<b>Total (in GWh)</b>	<b>9,380<sup>*</sup></b>	<b>9,754<sup>*</sup></b>
Renewable energy generation	<b>GWh</b>	<b>4,492</b>	<b>4,532</b>
Renewable energy generation	<b>%</b>	<b>48<sup>*</sup></b>	<b>46<sup>*</sup></b>
<b>Electricity purchased by Algonquin and resold for customer use (in GWh)</b>			
From renewables (wind, solar, hydro) <sup>5</sup>	0	801	760
From the grid, mixed sources	1,046	4,964	5,412
	<b>Total (in GWh)</b>	<b>5,765</b>	<b>6,172</b>

### Notes:

Comparative figures between 2016 and 2017 may have material differences as a result of the acquisition of The Empire District Electric Company in 2017.

1. The Liberty Power Business Group generates and sells electrical energy produced by its diverse portfolio of non-regulated renewable power generation and clean power generation facilities located across North America. At the end of 2018, approximately 86% of its output is sold pursuant to long term contractual agreements.
2. Electricity generation capacity relates to generating assets the Company owns and manages.
3. The percentage of renewable energy generation decreased in 2017, when The Empire District Electric Company, which owned coal facilities, was acquired. The company is in the process of phasing out its coal generation and replacing it with wind generation.
4. Net Electricity Generation relates to generating assets the Company owns and manages. It excludes Iatan and Plum Point, which are not company managed.
5. These amounts relate to wind Power Purchase Agreements held by The Empire District Electric Company. It excludes solar generation from Luning Energy LLC which is company owned.

\* Represents a number that has been updated or corrected since first publication.

# Workforce

	2016	2017	2018
<b>Algonquin Power Utilities Corp. employees</b>	1,490	2,241	2,277
<b>Employees by generation</b>			
Generation Z	0.5%	0.4%	1.1%
Millennials	34.0%	33.8%	39.1%
Generation X	30.0%	30.5%	30.2%
Baby boomers	35.0%	34.9%	29.4%
Silent generation	0.5%	0.4%	0.2%
<b>Employees by union / salaried</b>			
Salaried	75%	67%	69%
Unionized	25%	33%	31%
<b>Average age of workforce (years)</b>			
All employees	45	45	45
Male employees	46	45	45
Female employees	44	45	44
<b>Workplace diversity and inclusion</b>			
Women in workforce	32.14%	31.15%	32.00%
Self-identified as veterans	1.44%	1.33%	1.89%
Self-identified as minorities	0.01%	0.13%	6.67%
Self-identified minorities in leadership role	0.41%	0.68%	4.76%
Women in the top 10% of salaries	21.62%	22.00%	29.67%
<b>Leadership</b>			
Employees in leadership roles (men, women, and minorities)	6.89%	6.07%	6.45%
Women in leadership roles	21.98%	25.19%	30.61%
Women versus men in leadership team (average pay)	88.69%	94.39%	98.75%
Women versus men in front line team (average pay)	68.28%	62.76%	62.84%
<b>Executive</b>			
Executive Team members	8	8	8
Women on Executive Team	12.5%	12.5%	25%
Average pay of women versus men in executive team (excluding CEO)	76.84%	86.54%	90.63%

## Governance

	2016	2017	2018
<b>Board composition</b>			
Independent directors (#)	7	7	7
Average tenure (in years)	5.2	5.8	6.8
Directors with utility/energy experience (#)	6	6	6
Directors with governance and risk management experience (#)	7	7	8
Directors with senior executive experience (#)	6	6	6
Female directors (#)	3	3	3
<b>Total Board Members (#)</b>	<b>9</b>	<b>9</b>	<b>9</b>

## Safety and Reliability

<b>Employees</b>			
Recordable Injury Rate (RIR) <sup>6</sup>	1.32	2.78	1.76
Lost Time Injury Frequency Rate (LTIFR) – employees	0.14	0.41	0.18
Near Miss Frequency Rate	51.58	30.43	23.85
Fatalities – employees	0	0	0
Fatalities – contractors	0	0	0

<b>Energy reliability</b>			
Electricity grid reliability – <i>System Average Interruption Duration Index</i> (“SAIDI”), under normal operations (in minutes).	127.30	140.67	109.84
Electricity grid reliability – <i>System Average Interruption Frequency Index</i> (“SAIFI”)	1.07	1.15	1.03
Electricity grid reliability – <i>Customer Average Interruption Frequency Index</i> (“CAIDI”)	119.12	122.35	106.67

Notes:

6. The number of injuries per 200,000 hours worked by employees and Algonquin’s permanent contractors. Similar to U.S. Total Recordable Injury Rate in the U.S.

## Environment

	2016	2017	2018
<b>GHG emissions (in metric tons of CO<sub>2</sub>e)</b>			
<b>Scope 1 emissions</b>			
Power generation – thermal	273,487	3,084,242	2,742,513
Power generation – hydroelectric	107	118	121
Power generation – solar	0.74	0.04	87.26
Power generation – wind	5.99	1.40	145.16
Utilities – electric, gas, and water/wastewater	86,103	94,849	95,030
<b>Scope 2 emissions</b>			
Power generation – thermal	800	5,222	6,922
Power generation – hydroelectric	655	631	616
Power generation – solar	118	129	193
Power generation – wind	1,153	1,041	1,049
Utilities – electric, gas, and water/wastewater	38,787	34,085	34,054
<b>Total emissions</b>			
Power generation – thermal	274,287	3,089,463	2,749,435
Power generation – hydroelectric	762	749	737
Power generation – solar	118	129	280
Power generation – wind	1,159	1,042	1,195
Utilities – electric, gas, and water/wastewater	124,890	128,934	129,085
<b>Total GHG emissions from all operationally controlled assets</b>	<b>401,216</b>	<b>3,220,317</b>	<b>2,880,731</b>
<b>Total emissions from power generation (metric tons of CO<sub>2</sub>e)</b>	<b>276,326*</b>	<b>3,091,384</b>	<b>2,751,646</b>
<b>Total power generation (MWh)</b>	<b>3,503,492*</b>	<b>9,379,882*</b>	<b>9,753,968*</b>
<b>GHG emission Intensity (metric tons of CO<sub>2</sub>e/MWh)</b>	<b>0.0789*</b>	<b>0.3296*</b>	<b>0.2821*</b>

Notes:

\* Represents a number that has been updated or corrected since first publication.



## Our Commitment to Sustainability

Algonquin Power & Utilities Corp. is committed to contributing to a sustainable energy and water future. We aim to be a top quartile global utility, known for exceptional performance in terms of safety, customer experience, employee engagement, inclusion, environmental/social responsibility and financial results.

The following principles are core to our organization:

- ❖ We are committed to building and operating our business such that we make a positive and durable contribution to a sustainable energy and water future.
- ❖ We support the global goal of limiting planetary temperature rise to less than 2 degrees Celsius this century to reduce the impact of climate change.
- ❖ We strive to deploy emerging technologies and business models in the delivery of clean, efficient and reliable energy at a fair price to facilitate the transition to low carbon emission communities.
- ❖ We provide safe and reliable drinking water and wastewater services while maintaining healthy water eco-systems by employing best practices in efficiency, conservation, re-use and recycling of water.
- ❖ We believe diversity and inclusion results in a more just society, resilient communities, and a high-performing workforce.
- ❖ We seek open dialogue and collaboration with the communities in which we operate.
- ❖ We encourage good health and wellness for our employees and foster a positive safety culture that promotes ownership, accountability and care.
- ❖ We view our suppliers, vendors and contractors as integral partners and seek their alignment with our values and principles.
- ❖ We view good governance practices as an essential element in the pursuit of positive and balanced outcomes for our business, our workforce, our shareholders and our communities.

Our business systems will support the measurement, management, reporting and continuous improvement of our sustainability performance. This Sustainability Policy will be reviewed and refined periodically by our Executive and Board leadership.

A handwritten signature in black ink, appearing to read 'Ian Robertson', is positioned above the printed name.

Ian Robertson  
Chief Executive Officer  
Algonquin Power & Utilities Corp.

September, 2018



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