

# LEADING FOR THE FUTURE

EPCOR'S 2021  
ESG PERFORMANCE UPDATE

ENVIRONMENT, SOCIAL AND GOVERNANCE REPORTING

Published: May 2022

**EPCOR**

## LAND ACKNOWLEDGEMENT

As a company that operates across Turtle Island, also known as North America, EPCOR recognizes that its work takes place on the traditional territories of Indigenous Peoples. We respectfully acknowledge the significance of the lands and waters our utilities are situated on and by, including the diverse histories, languages, and cultures of the many First Nations, Métis, and Inuit Peoples, whose presence reaches back to time immemorial.

Several of our Canadian operations reside on territory that is covered under Treaties, which were entered into by First Nations peoples and the Crown. In particular, our headquarters in Edmonton, and both of the city's water treatment plants, are located on the banks of the North Saskatchewan River, found in the heart of Treaty 6 territory — the traditional lands of the Blackfoot, the Cree, the Dene, the Nakota Sioux, the Saulteaux, and later the Métis.

### NOTE TO READERS

Throughout this report, "EPCOR" is used to refer collectively to EPCOR Utilities Inc. and its subsidiaries, without distinguishing the legal entity that holds particular operations.

Some of the photos featured in this report were taken prior to, or at different stages of, the COVID-19 pandemic, and therefore may not reflect recent health and safety protocols and procedures.

All currency references are in Canadian dollars unless otherwise noted.

[For information on the scope of reporting, see page 57.](#)

### FORWARD LOOKING INFORMATION

Certain information in this ESG Report is forward-looking as it relates to anticipated performance, events or strategies. When used in this context, words such as "will," "anticipate," "believe," "plan," "intend," "target," and "expect," or similar words, suggest future outcomes. The purpose of forward-looking information is to provide readers with EPCOR's assessment of future plans and possible outcomes and may not be appropriate for other purposes.

Readers are cautioned not to place undue reliance on forward-looking statements as actual results could differ materially from the plans, expectations, estimates or intentions expressed in the forward-looking statements. All forward-looking information contained in this report is expressly qualified by this cautionary statement.

Additional information about the material factors and risks that could cause actual results to differ materially from the conclusions, forecasts or projections in the forward-looking information and the material factors or assumptions that were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information is contained in the most recent Management Discussion and Analysis filed on [SEDAR](http://www.sedar.com) ([www.sedar.com](http://www.sedar.com)) and [EPCOR's website](http://www.epcor.com) ([epcor.com](http://www.epcor.com)).

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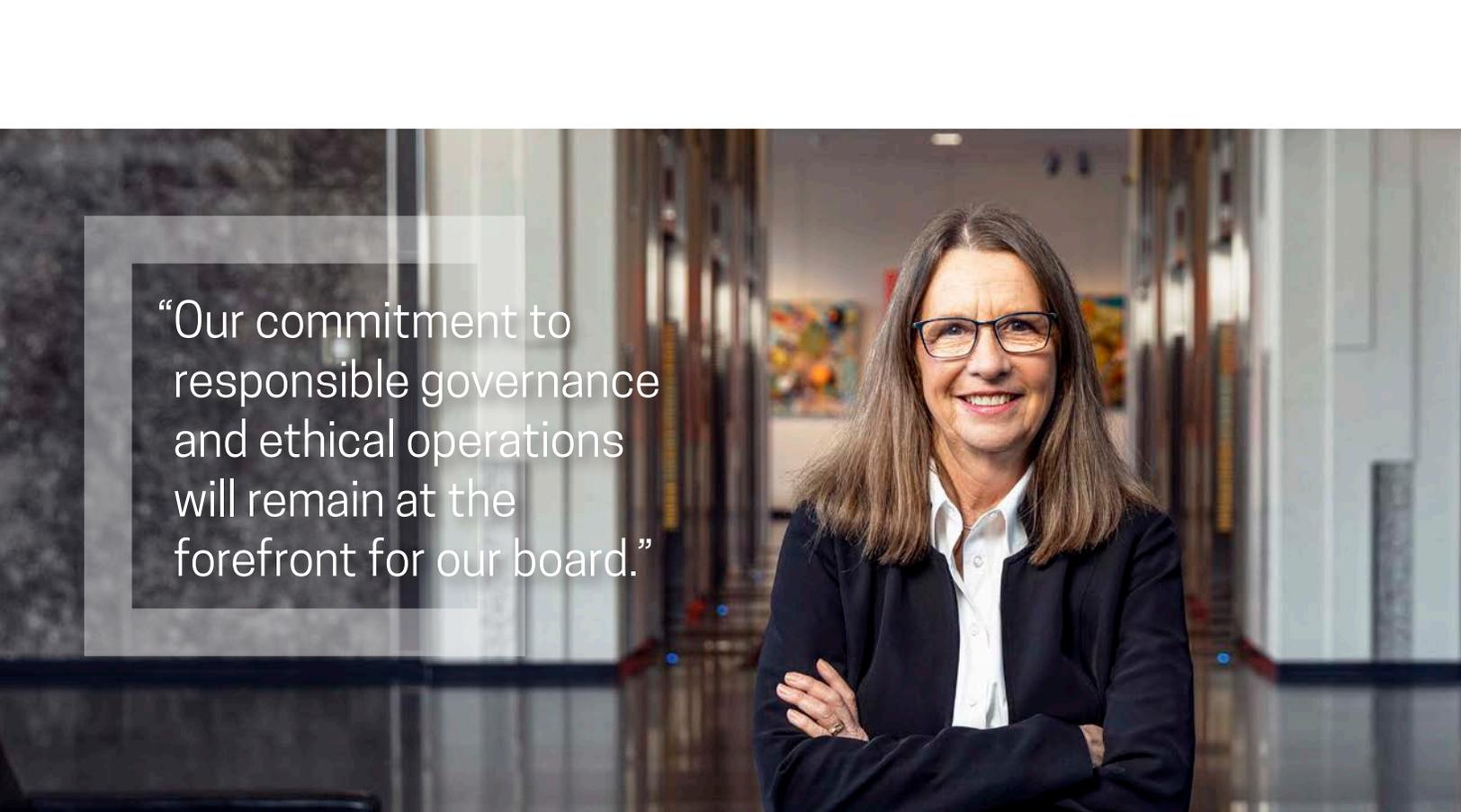
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## SCOPE OF REPORTING AND CONSOLIDATED SCORECARD

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“Our commitment to responsible governance and ethical operations will remain at the forefront for our board.”

## MESSAGE FROM THE BOARD CHAIR

The future of our communities relies on the commitments we make today.

This mindset helped drive the priorities outlined in EPCOR’s 2020 feature report *Leading for the Future*, which included 25 measures and 17 targets focused on leadership in sustainability.

Our 2021 performance update covers the latest on performance and is supported by the same rigorous materiality assessment that launched our way forward, setting our course towards net zero emissions by 2050, advancing projects to protect infrastructure and communities from the impacts of climate change, and delivering reliable services to customers at reasonable costs.

These are just some of the priorities we have set and now keep a watchful eye on. At the same time, we will continue closely monitoring the factors that are most material for the company, carefully weighing opportunities and risks that affect our growth, success and responsibilities to communities.

The board worked with EPCOR’s senior leadership over the past year to incorporate our sustainability priorities into the organization’s long-term plan. This work included an expanded climate change strategy, and the creation of a 2031 ‘end state’ aspirational statement that sets out our vision for success. All four focus areas of the plan — People, Operational Excellence, Growth, and Community — are interconnected by our commitment to ESG priorities and contribute towards our sustainability performance.

Moving forward, our commitment to responsible governance and ethical operations will remain at the forefront for our board, as will our encouragement for EPCOR’s leadership to drive innovation, build partnerships and continue inspiring their teams toward a shared vision for sustainability.

I encourage you to explore the contents of this performance update and all the ways we are advancing in our sustainability journey.

Janice Rennie  
Chair, Board of Directors  
EPCOR

## MESSAGE FROM THE PRESIDENT & CEO

Solid commitments and meaningful actions are what set our path toward a sustainable future.

Behind it, is what motivates us — the connections to our environment, the resources we care for and the communities that count on us.

Launching our ESG targets and measures in our 2020 Leading for the Future feature report firmly established the role we play and the vision we intend to achieve. Our 2021 performance update demonstrates the momentum we're building by investing in major initiatives, advancing innovative projects, navigating complex challenges, and performing against targets.

One of the most prominent milestones this past year was receiving approval by the City of Edmonton for our Performance Based Regulation (PBR) rates for water, wastewater and drainage services. The PBR covers more than \$1.3 billion in priority investments for the city over the coming years, focused on replacing or protecting critical infrastructure, and supporting the full range of water systems and services needed for growing communities.

This attention to investments continued across our operational landscape, including in the southern U.S. where nearly \$150 million U.S. flowed into three major water reclamation projects. Through replacing outdated infrastructure and increasing water treatment facility capacity, EPCOR USA is now better situated to serve the growing customer base of the San Tan water and wastewater districts in Arizona.



As you further explore this year's report, you'll see how the commitments we have made are translating into concrete actions, across all areas of our ESG agenda. This includes advancing projects to improve flood resiliency; protecting the health and safety of our employees and the communities we serve; recycling and maximizing the reuse of treated water; and completing green energy projects intended to reduce net greenhouse gas emissions 50% by 2025 — a leap towards our ultimate goal of net zero emissions within the next 30 years.

In 2021, EPCOR was honoured to once again be named to Corporate Knights' list of Canada's Best 50 Corporate Citizens — this time, holding one of the top spots among utility peers following an evaluation of several ESG-related performance indicators.

This validation of our work, and our commitment to leadership in sustainability, will stay front of mind for Team EPCOR.

We thank you for your interest in this year's performance update and look forward to connecting with you more as we continue our sustainability journey.

Stuart Lee  
President & CEO  
EPCOR

## OUR MISSION

Our mission is to provide clean water and safe, reliable energy.

## OUR VISION

Our vision is to be a premier essential services company that attracts and retains the best employees, is trusted by our customers, and is valued by our stakeholders.

## OUR PRIORITIES

We implement our vision and mission through a long-term plan that focuses on four strategic priorities:

- **People** - attracting and retaining high-quality employees, supporting our workforce in growing and becoming future leaders, and nurturing a strong culture of engagement.
- **Growth** - sustaining capital and organic growth in our existing service areas, and business development and acquisitions.
- **Operational excellence** - continually improving health, safety and environment performance, and seeking efficiencies through scale, business unit synergies and technology.
- **Communities** - being trusted by our customers and stakeholders, engaging in collaborative and transparent planning, and meeting our commitments to the community.

## OUR VALUES



## ACTING WITH PURPOSE

Our mission and vision guide our operations. Our purpose statement inspires the commitment to our work and teams, each and every day.

**“COMMUNITIES COUNT ON US. WE COUNT ON EACH OTHER.”**

Additional information about how EPCOR does business and where it operates can be found in the About EPCOR section of [epcor.com](http://epcor.com).

## EPCOR'S KEY ESG FACTORS

In 2020, EPCOR's board and management embarked on the development of expanded ESG reporting. A materiality assessment was conducted to inform metrics and reporting about the sustainability issues that affect EPCOR's business, as well as to determine the ESG factors most relevant to stakeholders and the company.

As part of the process, interviews were conducted with representatives of equity and debt holders, labour unions, Indigenous communities, multi-stakeholder groups involved in watershed protection and broader environmental issues, and EPCOR employees from across the company's geographic footprint. Customer priorities were identified through public advisory committees, consultation efforts, and engagement research. This work resulted in the 2020 report and its metrics being structured around 10 ESG factors most relevant to stakeholders and the company.



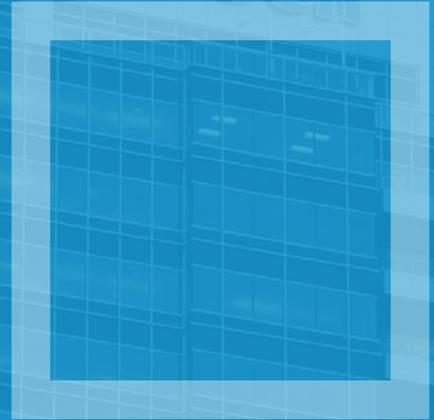
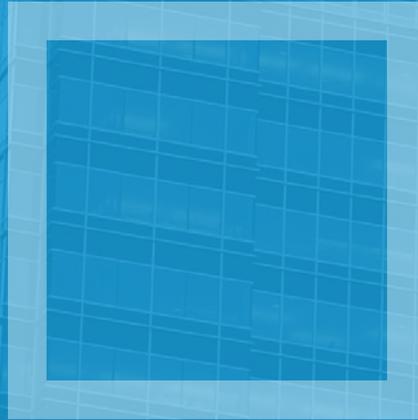
EPCOR will continue to report on progress made in these areas for the 2021 and 2022 reports. To ensure metrics and targets remain aligned with company and stakeholder priorities, a review of materiality factors will occur before the release of EPCOR's 2023 ESG report.

EPCOR's 2020 report described how our sustainability reporting relates to the Task Force on Climate-related Financial Disclosures (TCFD), as well as the standards set by the Sustainability Accounting Standards Board (SASB), the Climate Disclosure Standards Board (CDSB), and the Global Reporting Initiative (GRI). To view how measures align with SASB and GRI, see the [Consolidated Scorecard](#).

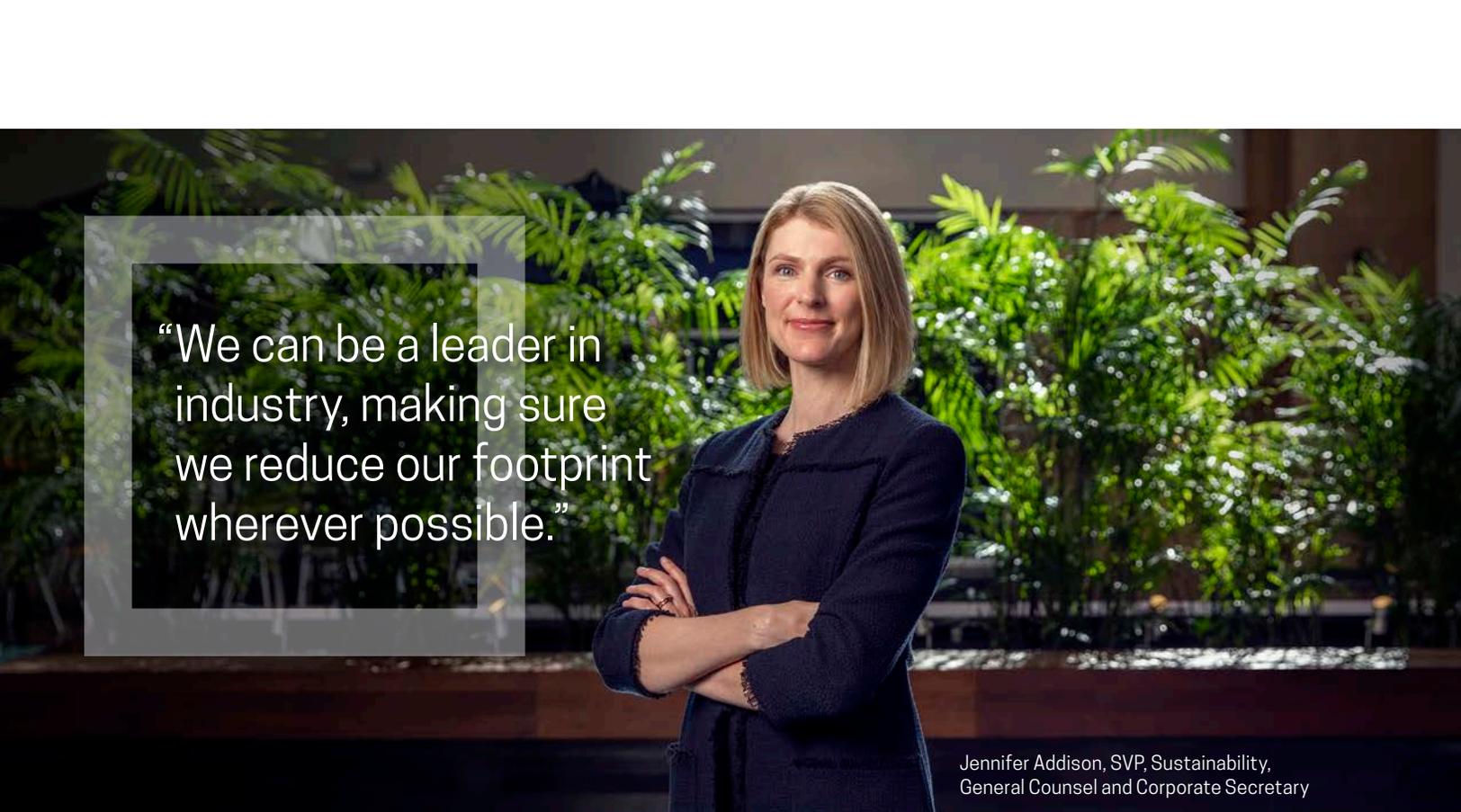


EPCOR's performance makes meaningful contributions towards six of the U.N.'s Sustainable Development Goals. For further details, [visit pages 11 to 13 of EPCOR's 2020 ESG Report](#).

EPCOR



# GOVERNANCE



“We can be a leader in industry, making sure we reduce our footprint wherever possible.”

Jennifer Addison, SVP, Sustainability,  
General Counsel and Corporate Secretary

EPCOR’s commitment to sound governance and leadership in sustainability was further demonstrated in 2021. This was seen through an elevated profile placed on our ESG agenda, at both the executive level and throughout our long-term plan.

## LEADING THE WAY

The past year also brought significant investment approvals for major projects and priorities, and continued growth in our U.S. and Canada operations — all with a focus on providing reliable services to a growing base of customers, in a responsible and sustainable manner.

Following the launch of our 25 measures and 17 targets in 2020, oversight for EPCOR’s ESG agenda was designated to a member of EPCOR’s senior leadership team and our commitments were widely promoted across the organization.

Moving forward, EPCOR’s Senior Vice President, Sustainability, General Counsel and Corporate Secretary will drive our cross-organizational approach to sustainability, ensuring shared ESG responsibilities are ingrained in both our operations and culture — demonstrating care for the future of our environment, our dedicated teams, and the communities we serve.



## PERFORMANCE UPDATES

EPCOR's Governance Scorecard concentrates on measures in three areas — board independence, gender diversity and high ethical standards.

Having a strong base of independent directors allows the board to benefit from broad leadership experience, a range of perspectives and uninfluenced guidance, resulting in a sharp focus on responsible governance and ethical operations. EPCOR has been reporting on board independence since the company's inception in 1996.

The drive for gender diversity is not only a part of EPCOR's efforts across teams and ranks in the organization, it's a priority at the board level, as well. According to the 2021 Diversity Disclosure Practices report by Osler, Hoskin & Harcourt LLP, women now hold just over 23% of board seats among TSX-listed companies in Canada that disclose the number of women on their boards — an increase of about two points over the previous year. EPCOR exceeds this national average by more than ten points, and continues to have one of the few woman-led boards in Canada.

Upholding high ethical standards is a foundational element of governance. EPCOR continues its commitment to investigating any and all complaints, which may be submitted through anonymous channels and with protection for whistleblowers through a no retaliation policy. This is further supported by training on EPCOR's ethics policy, which is provided to all employees and reported on every two years, with the most recent result in 2020 showing 100% of employees had received training.

## BOARD INDEPENDENCE

PERFORMANCE UPDATE:

100%

of EPCOR's board is made up of independent directors.

Target: at least 67% of directors are independent, under National Instrument 58-101.

## BOARD GENDER DIVERSITY

PERFORMANCE UPDATE:

36%

(four out of 11) of EPCOR's board seats are held by women, including the position of board chair.

Target: at least 30% of board seats are held by women.

## ETHICS COMPLAINTS ACTION

PERFORMANCE UPDATE:

100%

of complaints have been actioned (based on 97 complaints received in the past year).

Target: 100% of ethics complaints have been investigated or otherwise resolved.

[For the complete ESG Consolidated Scorecard see page 59](#)



## A SUSTAINABILITY MINDSET FOR THE LONG TERM

EPCOR's long-term plan has four focus areas — People, Organizational Excellence, Community, and Growth — each carrying priorities that are assessed and updated annually to ensure the plan both evolves and maintains its trajectory over successive ten-year planning periods.

In 2021, the board and executive reviewed the priorities within our long-term plan and what lies ahead for our ESG journey. This resulted in a vision for EPCOR in 2031, as a premier essential services company, retaining outstanding talent across our workforce, creating value for our stakeholders, and achieving our mission to provide clean water and safe, reliable energy to the communities that count on us.

Realizing this vision will take fully engaged teams across the organization, achieving a range of priorities and measures, including:

- top decile performance on safety and employment engagement;
- customer satisfaction levels that stand above the industry within our markets;
- demonstrated leadership in source water protection and improving resilience of our infrastructure;
- reductions in our environmental footprint and increased support towards building climate resilient communities;
- the evolution of our workforce to become more reflective of the diversity of the communities we serve, and the purpose and values we live every day;
- ongoing delivery of reliable and affordable services to customers in growing communities across our footprint; and
- sustained growth that maintains our position as one of the top three investor-owned water utilities in North America.

The deliberate integration of our ESG agenda into our long-term plan not only helps guide our teams and drive us toward real progress for communities, it helps with our ability to seek out and invest in meaningful projects.

## EPCOR'S LONG-TERM PLAN: 2022 PRIORITIES

The immediate priorities for our long-term plan demonstrate the clear ties to our ESG agenda.

**People** – Pandemic response and safe reintegration of employees at facilities; and launch of the Where We Work hybrid work program.

**Operational Excellence** – Pursuing funding and opportunities for grid transformation; implementing the Advanced Meter Infrastructure Plan for Water Canada; consolidating teams and resources from Water and Drainage in a shared facility; and moving towards the greening of EPCOR's fleet.

**Community** – Progressing our lead service line replacement program on priority properties in Edmonton; completing projects to green the electricity supply for Edmonton operations; and maintaining effective relationships with our sole shareholder.

**Growth** – Exploring the potential for a renewable natural gas project at Edmonton's Gold Bar Wastewater Treatment Plant; advancing major water projects in Arizona and Texas; and developing the finance structure for our major projects.



### THE EVOLUTION OF THE LONG-TERM PLAN

When we say that our communities count on us and we count on each other, we mean it in every aspect of what we do. Our long-term planning process has evolved to incorporate this spirit, as well as our sustainability commitments, in how we run our business now and into the future.



## INVESTMENTS FOR THE FUTURE

This past year marked the approval of EPCOR’s latest Performance Based Regulation (PBR) rate applications by the City of Edmonton, as regulator of the municipality’s water cycle utilities.

This included approval for a five-year PBR period for water (2022-2026) and a three-year PBR period (2022-2024) for drainage and wastewater treatment, allowing for a future staggered approach to these extensive reviews and potential approvals.

The PBR provides incentive to EPCOR to find efficiencies and reduce costs while maintaining established performance levels — ensuring accountability for delivering and maintaining reliable services in order to earn a fair return. This is similar to the model used by the Alberta Utilities Commission in regulating some natural gas and electric distribution utilities.

The PBR process is about supporting growth, and keeping fair and affordable rates for customers, while ensuring that reliable operations and maintenance of critical infrastructure is well managed.

Public engagement was critical in determining priorities for the PBR. A broad variety of stakeholders gained understanding of the complex, technical topics and helped frame them into real-world impacts and benefits. Then, through online focus groups, opinion surveys, live polling and in-depth interviews, we gathered meaningful input into the process.

The capital plans outlined in the PBR will invest \$1.3 billion in Edmonton’s water cycle utilities, with benefits to: sustain and improve the reliability of utility services, protect communities from flooding, introduce technologies that improve environmental performance and reduce costs, protect worker health and safety, respond to evolving regulatory requirements, and serve a growing base of customers.



Read more about the PBR process and EPCOR’s long-term planning in the feature story: [\*\*\*Striking the Right Balance.\*\*\*](#)

Additional details on EPCOR’s latest PBR can be found in the 2022-26 [\*\*\*PBR Readers Guide.\*\*\*](#)



## PURSUING GROWTH & PROVIDING VALUE

EPCOR's governance model encourages the pursuit of growth. As part of the long-term planning process, we consider opportunities where EPCOR can demonstrate its strengths in the industry across North America, bringing experience, innovation and commitment to jurisdictions that require solid management of utilities and safe, reliable services for our customers. This past year saw EPCOR do just that.

In the U.S., we finalized the acquisition of Johnson Utilities, now referred to as the San Tan operations, including water treatment and distribution, and wastewater collection and treatment. We also completed the latest expansion at the Luke 303 Wastewater Reclamation Facility in Arizona, were selected to develop a new leading-edge wastewater facility for Lake Oswego, and are starting the Pecan Wastewater Reclamation plant expansion in the San Tan Valley.

As these projects further established EPCOR's value in the utility sector in the southern U.S., our time in owning and operating the water utility system in Bullhead City came to a close. This was driven by a two-year process in which Bullhead City pursued expropriation of the utility for operation and management by the municipality. Following the posting of a bond in mid-2021, and assessment to determine fair value for purchase of the utility system, EPCOR and Bullhead City mutually agreed on a settlement and concluded the process in early 2022.

In Canada, we entered into a 30-year agreement with Ontario Power Generation to develop and operate a water treatment plant that will provide ultra-pure demineralized water to the Darlington Nuclear Generating Station. In Ontario's Southern Bruce region, we reached nearly 300 kilometres of installed pipeline as part of our work to bring natural gas to industrial, agricultural and residential customers; and in mid-2021, the province of Ontario announced that EPCOR will receive \$20-million in funding for a proposed project to extend natural gas service to customers in the municipality of Brockton.



## EVALUATING RISK AND ADVANCING OPPORTUNITIES

As we move forward, the board and senior leadership will continue their oversight of our Enterprise Risk Management framework, identifying, managing and monitoring risks that may impact EPCOR's operations and long-term plans.

With these measures in place, we will consider investments where we can bring proven expertise and valuable service to communities, and make investments in renewable energy generation that support our commitment to reducing our environmental footprint and demonstrating leadership in sustainability.





*EPCOR must meet the needs of many: customers, its shareholder and regulators, along with the environment and communities it serves. Long-term planning and performance targets are two key ways the company stays transparent and accountable to all.*

## STRIKING THE RIGHT BALANCE

*by Curtis Gillespie*

The concepts of balance and accountability are universal yet simple. Young or old, dentist or diplomat, grad student or student on the playground — most of us can strip away the complexities of a situation and tell if something is, on balance, working or not and why. This simple idea — that balanced and transparent goals can benefit all parties — is the driving force behind EPCOR's commitment to providing value and integrity in service delivery. But how do you go about achieving the right balance in a business as complicated as EPCOR's, across a set of services on which millions rely? How exactly does that get defined and refined? And by who?

Everything is connected. The PBR is a complex question asking for a simple answer: does EPCOR do what they say they are going to do, do they do it efficiently, and do they do it with integrity?

Martin Kennedy is the Director of Sustainability and External Relations with EPCOR. As he describes it, it's about how EPCOR weaves together layers of systems and processes in its governance model, all of which are designed to both generate and uphold value and equity for everyone involved — the company, the customer, the shareholder and the regulator. "It's all connected," he says. "The long-term planning process, Performance Based Regulation, our Environment, Social and Governance work. They are all linked."

Underpinning everything is EPCOR's long-term planning process (LTP), which is built according to five and ten year outlooks. The LTP assesses opportunities and risks. It creates strategies for growth, such as specific projects or expansion opportunities. It considers new markets and regions. And it's iterative, meaning it is under constant revision and reassessment by both management and the board.

"Management is the creator and owner of the LTP," Kennedy notes, "but the board leads its oversight and provides feedback. It's a dialogue, a stress test. Management does the heavy lifting to build it, but the board does the heavy pushing by challenging management to make it as bulletproof as possible."

It is obviously a massive undertaking to supply water, power and drainage to millions of people across North America while accounting for financial and human decisions in transparent and verifiable ways. It's not easy and nor should it be. It's the right thing to do because it makes for a better company, a better community, and a better planet. One of the key tools EPCOR uses in this undertaking is what's known as Performance Based Regulation (PBR), a regulatory structure used to establish the rates EPCOR can charge water, wastewater and drainage customers in Edmonton. Water Services has been under PBR since 2002. The Gold Bar Wastewater Treatment Plant was transferred to EPCOR in 2009 and also operates under PBR. And when Drainage Services was transferred to EPCOR in 2017, the company made the commitment to utilize a PBR process similar to that of Water Services.

So just how does the PBR get set? "The PBR system," says Darrell Manning, EPCOR's Director of Regulatory and Operational Excellence, "is based on determining how much revenue will be needed to pay for the cost of building, maintaining, operating, and financing the utility system over the next several years. The utility is required to make prudent decisions that are in the public interest. The regulator reviews these plans, and approves the utility's rates, fees and charges."

It takes years to bring a PBR cycle to a successful conclusion. The rates EPCOR can charge are set by the City as regulator, with additional input coming from City Council, the utility and customer feedback. Capital spending, community growth and the operating programs are considered over multi-year periods. To give a sense of the complexity of this process, the filing for the most recent PBR was 3,000 pages long and the capital program was \$1.3 billion. Every dollar EPCOR wants to spend is in the PBR. "And it's only by approving the collection of revenue from customers through rates that EPCOR gets permission to do those things," notes Manning.

It's also important to clarify the incentives at play. EPCOR is penalized if it fails to hit its targets but hitting the targets doesn't guarantee extra profit. It only means EPCOR gets to keep doing its job. The transparency of the system guarantees that the holistic nature of the process is respected and nurtured. This matters because — balance, remember — EPCOR's definition of doing a good job is not based solely on profit, but also by serving customers well, while doing its part to look after the planet, and while empowering customers to do their part, too. It's about making sure the weight of each component helps maintain the balance of the whole.

The PBR process, in other words, is a way for every stakeholder to contribute toward creating a clean, livable and healthy community. The environmental aspect of the PBR process is indicative of this focus, especially as it so perfectly aligns with EPCOR's broader ESG approach. A good example is the Stormwater Integrated Resource Plan (SIRP). This 20-year \$1.6 billion plan approved in the latest PBR, the long-term goal being to protect communities from the risk of flooding. There were also dollars included to use green electricity for the water utility in Edmonton as part of an overall plan to ultimately reduce the electricity carbon footprint of those utilities to zero. The PBR process, therefore, is a direct contributor to and driver of EPCOR's ESG goals.



The PBR process is a way for every stakeholder to contribute toward creating a clean, livable and healthy community.

Everything is connected. The PBR is a complex question asking for a simple answer: does EPCOR do what they say they are going to do, do they do it efficiently, and do they do it with integrity? EPCOR works hard to ensure the answers to those questions are always “yes,” so that future rates will encourage growth and continued success.

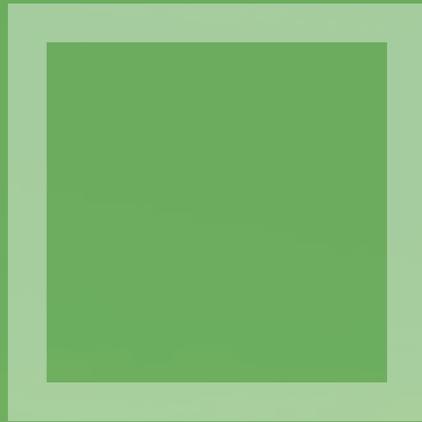
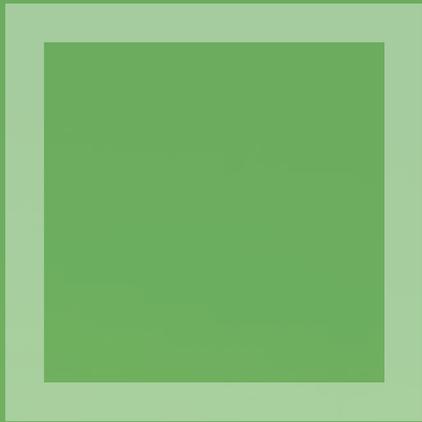
It takes people to make all this happen. Public engagement is important to both the LTP and PBR and involves meaningful and regular consultation to make sure EPCOR is delivering value for money and listening to what the community says it needs. As for the employees, the company can have a long-term plan, but without a talented and dedicated workforce, the plan is not worth the paper it’s written on.

“Our vision and mission revolves around four focus areas,” says Kennedy. “At the top of the list is people. We want to find good people and focus on learning and development, professional growth, career development initiatives, the diversity of employee populations, offering strong retirement and succession planning. The second of those four things is growth. The third is operational excellence. And the fourth is community, meaning the customer and the value EPCOR creates for the communities we serve.”

The transparency of the system guarantees that the holistic nature of the process is respected and nurtured.

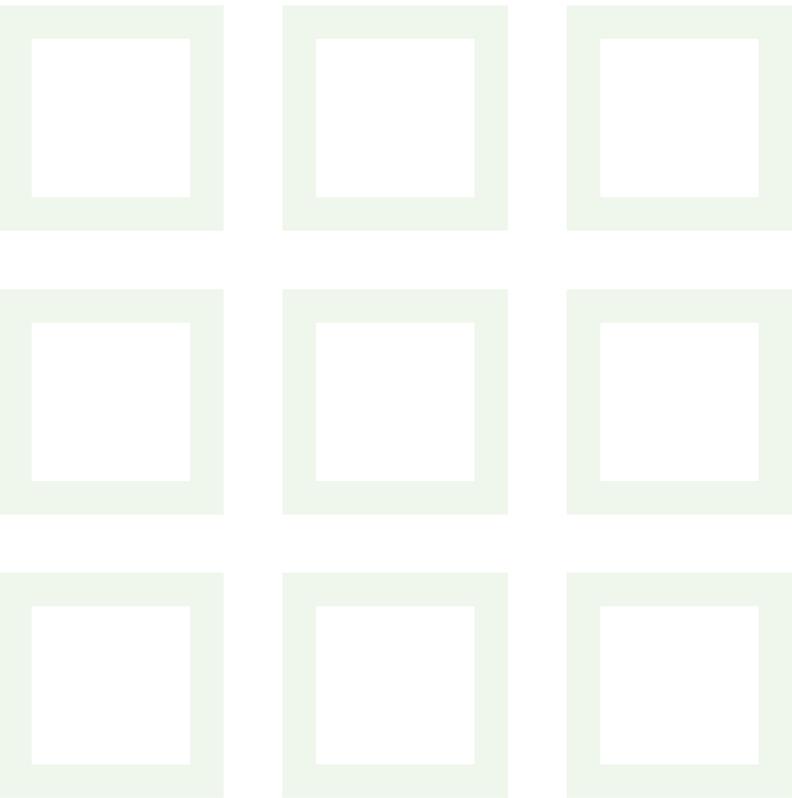
It all circles back to EPCOR’s fundamental governance principles as expressed through its long-term plan and ESG philosophies. These concepts are turned into action and measured through the PBR and its targets for outcomes such as environmental performance, customer service, reliability and drinking water quality. And EPCOR has to report back to the regulator on all of them, in public, which allows the public to keep tabs on how they are doing. Striking the right balance between profit, accountability and stewardship is important because EPCOR knows that the continuous effort required to achieve this balance is not an obstacle to overcome. It’s the reason it works.





ENVIRONMENT





EPCOR's commitment to the environment is foundational to the company's success and the sustainability of the communities we serve.

Over the past year, we continued taking steps to turn major investments into meaningful, long-term results. This included advancing solar and wind energy projects to reduce our environmental footprint; protecting water treatment plants from the risks of flooding and impacts of climate change; and driving innovative approaches in water reuse and the development of resilient communities.

## PERFORMANCE UPDATES

EPCOR's Environmental Scorecard aligns with the three priorities of our Environment and Climate Change Strategy — reducing EPCOR's environmental footprint; improving the resilience of utility infrastructure; and helping communities increase resilience and decrease their environmental footprints.

## REDUCING EPCOR'S ENVIRONMENTAL FOOTPRINT

### PATH TO NET ZERO

EPCOR is committed to reaching net zero greenhouse gas emissions by 2050 and has an ambitious plan to cut net Scope 1 and 2 emissions in half by 2025, and 85% by 2035 compared to 2020 emissions.

As we work towards these reduction targets, we expect to see upward pressure on emissions driven by population growth and economic activity in our existing service territories, and expansion of our operating footprint across North America.

This past year saw EPCOR expand its operational footprint with the acquisition of the San Tan water and wastewater districts in Arizona. The fast-growing 160-square kilometer service area already supports over 32,000 water customers and nearly 40,000 wastewater customers. The expansion of our operational footprint in the U.S. and growing demands in the communities we currently serve resulted in an overall 5% increase in emissions year over year.

Despite this increase, EPCOR remains on track to meet our target of a 50% reduction in emissions by 2025, making significant progress in 2021 on two projects to green the company's electricity supply: the development of a solar farm to support our Edmonton operations, and procurement of renewable energy attributes from the Hilda Wind Farm, now entering construction in southern Alberta's Cypress County.

EPCOR remains on track to meet our target of a 50% reduction in net emissions by 2025.

## GREENHOUSE GAS EMISSIONS (TCO<sub>2</sub>E)

PERFORMANCE UPDATE:

215,651  
TONNES

Target: 50% reduction in net greenhouse gas emissions by 2025, 85% by 2035, and net zero by 2050, compared to baseline 2020 emissions.

[For the complete ESG Consolidated Scorecard see page 59](#)





# GHG EMISSIONS BY SOURCE (TONNES CO<sub>2</sub> E)

## SCOPE 2 EMISSIONS

Scope 2 emissions are indirect emissions from the creation of purchased energy. Most of EPCOR's electricity consumption is used to pump large volumes of drinking water through the treatment process and to customers, and to move and treat wastewater.



Electricity consumption

**162,044**

**75%**

## SCOPE 1 EMISSIONS

Scope 1 emissions are direct emissions from owned or controlled assets.



Wastewater treatment processes (N<sub>2</sub>O)

**25,833**

**12%**



Natural gas consumption

**14,287**

**6.6%**



Vehicle fuels

**11,877**

**5.5%**



Sulphur Hexafluoride (SF<sub>6</sub>)

Carbon Tetrafluoride (CF<sub>4</sub>)

Methane (CH<sub>4</sub>)

**1,609**

**<1%**

See: Scope of Reporting for a discussion of material assumptions, data limitations, the third-party verification process, and the treatment of Scope 2 emissions from electric distribution and transmission system line losses which totaled 174,578 tonnes in 2021.

## REFINING OUR EMISSIONS REPORTING

EPCOR's Scope 1 and 2 greenhouse gas emission reporting for 2021 was independently verified by Brightspot Climate Inc. to a reasonable level of assurance using the ISO 14064-3 standard. The quantitative materiality threshold for reporting is 5% of total emissions.

EPCOR's 2020 baseline emissions have been revised to 204,553 tCO<sub>2</sub>e, from the 193,402 tCO<sub>2</sub>e reported in August 2021. The revision is due to refinements to the standards for calculating N<sub>2</sub>O emissions from wastewater treatment, and the documentation of additional contributions from operations in Ontario and British Columbia.

We expect a further and final revision to the 2020 emissions baseline in our 2022 performance update (to be published 2023), based on incorporation of the final 2020 Grid Intensity Factors being published by the governments of Canada and the United States. Because the carbon intensity of Alberta's grid power supply is rapidly declining, we expect to report lower emissions for 2020 and 2021.

Three-quarters of EPCOR's reported greenhouse gas emissions are from the consumption of electricity. A significant element of that calculation is the carbon intensity of grid-purchased power in each province and state where we do business. The actual grid intensity value is calculated by authorities on a lagging basis. We used the 2019 grid intensity value in our calculations of 2020 and 2021 emissions, because the 2020 and 2021 grid intensities were not yet available.

In general, due to the publication cycle for grid intensity values, we expect publication of final greenhouse emissions totals for each year will lag by two years.



## ROLLING INTO A GREENER FUTURE FOR TRANSPORTATION

In July 2021, as part of EV Week in Canada, Natural Resources Canada (NRCan) announced a contribution of \$210,000 from their Zero-Emission Vehicle Infrastructure Program to boost the number of EV charging stations across Edmonton. Along with another \$660,000 being invested by EPCOR, this initiative will see the installation of 24 new EV charger points at eight sites, all near major recreation sites in the city.

Throughout 2022, EPCOR will be delivering its newly launched Go EV program, supporting NRCan's Zero-Emission Vehicle Infrastructure Program in a new way. Go EV will distribute funds to community partners in South Georgian Bay and Southwestern Ontario, covering up to \$100,000 of the associated costs of purchasing and installing EV charging stations at their sites.



## PROJECT UPDATE SUN, WIND AND POWER

In 2021, construction of the solar farm progressed with the project area cleared and re-graded for stormwater management, racking installed across the site and panel placement getting underway. Extensive design work was completed for the battery, which is now in transit to the site and, when activated, will store energy as part of the smart grid that will provide power for the plant.

The solar farm is expected to be completed and energized before the end of 2022.

The Hilda Wind Farm project in southern Alberta's Cypress County is being developed and constructed by Renewable Energy Systems Canada, with EPCOR set to acquire a portion of the renewable attributes from the project for a 20-year term.

In August of 2021, the 100MW project and associated substation received approvals from the Alberta Utilities Commission, and all environmental studies and publications have been completed. The wind turbines are expected to arrive by the fall of 2022 with the project up and running by the end of the year.



### CREATING CLEAN WATER WITH CLEAN ENERGY

The switch of the solar farm will soon be flicked on and EPCOR will begin powering Edmonton's largest water treatment plant with more than half the electricity it needs, through green energy. This unique project is furthering EPCOR's commitment to net zero GHG emissions, while also deepening relationships with Indigenous communities.



## PROTECTING WATER QUALITY IN THE NORTH SASKATCHEWAN RIVER

As part of protecting the water quality of the North Saskatchewan River, we are dedicated to monitoring what flows into it.

The vast majority of total suspended solids that enter the river in Edmonton — about 90% — are from stormwater runoff, which includes snow melt and rainwater runoff from urban areas. EPCOR tracks the annual mass of solids carried into the river from the stormwater system, as well as the smaller loads from sewer overflows and the wastewater treatment plant.

The amount of solids carried into the river varies seasonally and annually, based on the volume and intensity of rainfall and snow melt, and the impact that flow has on all aspects of the system.

Due to data quality assurance timelines, reporting on this measure lags by one year. Our update is based on the year 2020 and show an increase of 2,528 kg/day over the previous year’s total of 39,688 kg/day. This was due to a particularly wet year in 2020, with additional and heavy rainfall translating into higher loads; however the annual load was within the range seen in the past decade.

## PROTECT RIVER WATER QUALITY

(2020 data - measure lags by one year).

PERFORMANCE UPDATE:

42,216  
KILOGRAMS / DAY

Performance Measure: annual discharges of total suspended solids into the North Saskatchewan River from land drainage, wastewater treatment operations and combined sewer overflows.

2017		37,092 kg/day
2018		28,797 kg/day
2019		39,688 kg/day
2020		42,216 kg/day

Learn how innovative wastewater treatment technology has led to improvements in the water quality of Regina’s Wascana Creek by reading the feature story: [Upping the Creek](#).

### PROJECT UPDATE

#### CHARGING FORWARD ON ELIMINATING PCBs

EPCOR continued to charge forward on its commitment to eliminate PCBs (polychlorinated biphenyls) above 50 ppm concentration from Edmonton and Southwest Ontario electrical systems by 2025.

We targeted over 1,550 pieces of equipment for review, and by years end had completed testing on 838 assets. Only one returned a PCB concentration at a level requiring decommissioning, which was managed in accordance with environmental regulations.

In addition to this review, there are pieces of equipment already slated for decommissioning and others that are tested through routine operations. Any that are found to contain PCB levels exceeding set levels are appropriately decommissioned.



## IMPROVING RESILIENCE OF UTILITY INFRASTRUCTURE

The flooding experienced in B.C. late in 2021 caused an estimated \$7.5 billion in damages, making it the most expensive disaster in Canadian history. Not even a decade earlier, in Alberta during the spring of 2013, flooding resulted in 32 states of local emergency, over 100,000 people displaced and \$5 billion in estimated property damage. These are stark reminders of the quick and extensive impact that flooding can bring to communities.

It's this context, and the long history of floods, that keeps our eyes focused on protecting our critical infrastructure that delivers clean water for over one million Albertans.

## PROTECTING TREATMENT PLANTS FROM RISKS OF FLOODING

In 2021, EPCOR received regulatory approval for investments of nearly \$37 million for the Flood Protection Project, which are further supported by just over \$21 million in federal and provincial grant funding. The protection measures and infrastructure improvements are designed to protect the Rossdale and E.L. Smith Water Treatment Plants from the impacts of a 1:500 year flood.

As we work towards full protection for the plants by 2027, there are different levels of protection being put in place along the way.

- 1. Critical Asset Protection and Relocation:**  
Protecting underground reservoirs and chemical storage tanks, and raising of key electrical infrastructure above the flood water heights.
- 2. Backflow Prevention:**  
Stopping the backflow of flood water through process drains, preventing indoor flooding of buildings, impacting equipment and contaminating the treatment process.
- 3. Overland Flood Prevention:**  
Installing embankments and barriers to connect existing high ground to the treatment plants.

The first two phases of work were originally targeted for completion in 2023, and are now expected to be complete by 2024. This is the result of refinements to the project design and schedule, including the timing of staggered shutdowns to the two water treatments plants while their electrical infrastructure is being relocated.

The primary focus over the past year was on engagement with residents located near the water treatment plants and with key Indigenous stakeholders. Multiple online workshops were held with community members and site

tours were held with First Nation Elders and knowledge keepers to discuss work that will take place on these lands of historical significance and meaning.

Two rounds of engagement sessions gathered valuable input as we consider placement of berms and walls for permanent barriers, development of embankments, and community preferences for the look of these protective assets. A third round of engagement on flood barrier designs, including berms and walls, is planned for 2022.

Construction moved forward on protective berms around the E.L. Smith power feed access tunnel, which supplies power from the Petrolia Substation, and progress continued on designs for embankments for both plants, including precise specifications for how high and wide the embankments will need to be for protective purposes.

For immediate physical protective measures, barriers were installed in 2021 to protect the pump house at Rossdale, providing some level of assurance and a measure of redundancy when the larger-scale project is completed.

## IMPLEMENTATION OF EDMONTON FLOOD RESILIENCE UPGRADES

PERFORMANCE UPDATE:

11%

## PROJECT COMPLETION

Target: complete asset protection and relocation, and backflow prevention, by 2023; and complete 100% of embankments by December 2027.



## PROTECTING WATER SUPPLY BY LIMITING LOSS

Part of improving the resiliency of our utilities is limiting the loss of treated water that we greatly value for communities. This includes losses from water main breaks, reservoir leaks or major incidents, as well as inaccurate meters.

Reporting for this measure lags by one year, with 2020 showing an overall water loss that is in line with previous years, at 6.2%.

Water loss within the Edmonton system did increase somewhat, but was within a normal range of variability that can be seen over time. A key contributor to keeping overall water loss performance stable was the addition of the Vista Ridge pipeline. This new 143-mile transmission line now serves about 20% of the City of San Antonio's water needs. As a new asset, and a single transmission line, Vista Ridge has lower water loss than water distribution systems, which include infrastructure built over many years and feature an extensive network of water distribution mains.

## INCREASING COMMUNITY RESILIENCE AND HELPING CUSTOMERS REDUCE THEIR ENVIRONMENTAL FOOTPRINT

Along with the measures we take to operate in an environmentally-responsible manner, EPCOR strives to develop innovative solutions and create opportunities to help communities become more resilient and reduce their own environmental footprint. From water reuse and community flood protection, to the pursuit of green electricity and transportation, EPCOR works to deliver on its purpose, showing communities can count on us.

## DIGGING DEEP ON WATER REUSE

Maximizing water resources in the Southwestern U.S. takes innovative approaches and dedication to reaching ambitious targets.

This past year saw significant progress on increasing the amount of treated effluent reused or used to recharge aquifers. This was primarily due to treatment capacity expansion, as well as the acquisition of four Arizona-based water reclamation facilities.

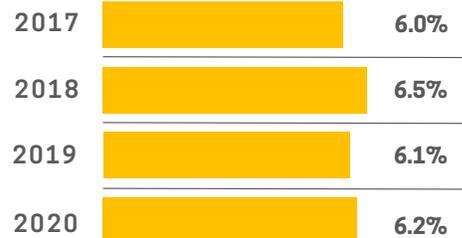
## LIMIT WATER LOSS

(2020 data - measure lags by one year).

PERFORMANCE UPDATE:

6.2%  
**WATER LOSS**

Performance Measure: limit the percentage of treated drinking water lost due to transmission line leaks and failures, and inaccurate meters (Canada and U.S. combined).



## WASTEWATER REUSE (USA)

(2020 data - measure lags by one year).

PERFORMANCE UPDATE:

94.4%  
**REUSED OR USED**

treated effluent to recharge aquifers.

Target: 90% beneficial reuse and/or recharge of treated effluent by existing U.S. operations and a commitment to set targets for each new, expanded or acquired U.S. wastewater operation in arid regions.



#### *PROJECT UPDATE*

### **FUELING GROWTH AND INNOVATION FOR ARIZONA WATER CUSTOMERS**

Once full expansion is complete, EPCOR's Luke 303 Water Reclamation Facility in Phoenix, Arizona will recharge up to eight million U.S. gallons of treated effluent into the ground each day — enough water to serve an average of 24,000 single family homes in the valley annually.

This innovative project, in a distinctly drought-challenged area of the U.S., saw a major milestone reached ahead of schedule in early December 2021 when the expansion reached capacity to recharge 1.25 million gallons per day — a target that was not set to be hit until early 2022. Considering the facility was recharging 250,000 million gallons per day just one year earlier, this demonstrates the importance of keeping pace with one of the fastest growing areas of greater Phoenix.

To get a sense of what that growth looks like along this 36-mile corridor, major corporations have set up or expanded their operations. This includes the Red Bull processing facility — the only one of its kind outside of Europe — which began operations in 2020; a new White Claw brewing facility that started up in October of 2021; and a new Microsoft data processing centre. In addition, Nestlé has announced plans for a bottling and distribution center, and two new industrial complexes have been developed, as well as communities for housing.

Based on projections from a municipal economic analysis in 2017, it's anticipated that development of the Luke 303 corridor will create 21,000 jobs. And, as EPCOR continues its work to serve this growing area, we will maintain our goal of recycling at least 90% of the water we treat.



## ENSURING RELIABILITY TODAY AND IN THE FUTURE FOR SAN TAN VALLEY

In early 2021, EPCOR finalized acquisition of the San Tan water and wastewater districts, located just southeast of the greater metropolitan Phoenix area. The fast-growing 160-square-mile service area already supports more than 32,000 water customers and nearly 40,000 wastewater customers in the communities of Florence, Queen Creek and unincorporated San Tan Valley in Pinal County.

Immediately after the acquisition, EPCOR began construction to expand capacity of the Pecan Water Reclamation Facility. The \$21-million U.S. project will increase the facility's capacity by 1 million U.S. gallons per day and replace poorly maintained parts of the facility where the wastewater treatment process begins, ensuring system reliability for existing customers and helping meet future water needs. The project started in March of 2021 and was completed during the same month of 2022, bringing the facility's treatment capacity to a total of four million gallons per day.

Water treated by the plant is used by area farmers to irrigate the land, promoting water conservation efforts while serving a rapidly growing area in the southwestern U.S. Moreover, the project is another contributor to EPCOR's goal of recharging at least 90% of the wastewater collected and treated in the area. As of mid-2021, the total amount of wastewater recycled/recharged by EPCOR for reuse in Arizona exceeded 18 billion gallons.



Read more about EPCOR's wastewater reuse efforts and other contributions to a circular economy in the feature story: [Full Circle.](#)



### OPPORTUNITY WAY PARK

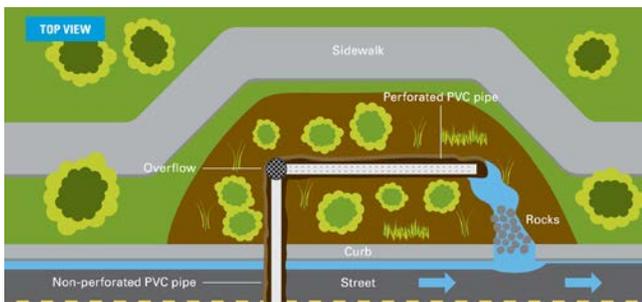
Learn how creativity and community collaboration created one of North America's most unique parks, and the essential services that are at play below the surface.

# CALMING THE STORMS

Following a year of significant recognition in 2020 for EPCOR's Stormwater Integrated Resource Plan (SIRP), and the 2021 approval of a \$240-million investment in flood mitigation through the 2022-24 Drainage and Wastewater Treatment PBR, there has been progress in each of the five focus areas.

## SLOW

Slow the entry of stormwater into the drainage network by absorbing it in green infrastructure and holding it in ponds, creating space in the collection system during storm events.



With the initial assessments of 31 proposed new dry ponds as part of the Phase 1 review with the City of Edmonton Open Spaces team in 2020, plans for Phase 2 community outreach/consultation and construction continued through 2021 for ponds moving to design.

Initial design took place for a dry pond in Kenilworth, and construction was completed in Parkallen and Steinhauer.

Flood mitigation work also included the construction of Low Impact Development (LID) facilities. LID facilities (like the one pictured above) are green infrastructure, and include landscaped features such as plants, grass, soil, rocks that help retain and slow the flow of rain water into the stormwater system (e.g. rain gardens).

In addition to progress made on the installation of LIDs in coordination with City of Edmonton led projects (representing 40 Greened Hectares of stormwater storage), 20 commercial properties were approached to discuss the potential for LID infrastructure at their locations.

## MOVE

Move excess water safely away from areas at risk, quickly and efficiently, by increasing capacity in the drainage system to handle peak water flow.



Approximately 1,700 culverts and 5 kilometres of ditches were inspected and repaired to better manage the movement of stormwater. This involved flushing culverts and removing debris to ensure drainage can continue unimpeded.

## SECURE

Help secure individual properties in higher risk areas against sewer backups, overland flooding and river flooding.



A total of 3,000 manholes were identified for sealing and relining as part of SIRP, reducing inflow and infiltration of groundwater into the system. A total of 676 were completed in 2021, bringing the total to 966. As well, moving toward the target of relining 60 km of sanitary and combined sewer pipes, 9 km was completed in 2021, bringing the total to 56 km.





Parkallen Dry Pond, Edmonton

## PREDICT

Predict and manage the movement of stormwater through smart sensors and technologies that integrate into the collection system.



EPCOR's internal SIRP Dashboard saw Phase 1 go live in August 2021, and Phase 2 completed in Q1 of 2022. This dashboard supports our operations by integrating multiple monitoring and control systems with geographic information system tools, and providing real-time data from a network of pipes, ponds and underground storage locations — increasing the ability to respond to flooding events.

To support these efforts, sensors will be installed at 18 different monitoring stations. Design began on this part of the project in 2021, with completion expected by the end of 2022.

## RESPOND

Respond through the fast rollout of flood barriers, traffic diversions and public communications to protect life, safety and property.



The past year saw the initiation of emergency response plans for 16 high-risk sub basins in the river valley, two mobile emergency flood response trailers were acquired with equipment to provide flood protection for up to four pump stations in the event of a 1:500 year flood, and sandbagging attachment for the trailers to support the assembly of sandbags at a flood location.

Along with the assessment of flood risks provided to the City of Edmonton in 2020 on 1,300 city-owned properties, we provided similar data to the Edmonton Public School Board in 2021, which is now using the information to support their facility planning.





*Kim, Saif and Deidre are part of the team that's turning used water into anything but waste – from gray water for industry to heat-producing biogas, and golf course hydration to nutrients for farmer's fields.*

## FULL CIRCLE

*By Curtis Gillespie*

They say that what goes around comes around, usually in reference to something coming back to bite you. But EPCOR looks at it differently, in that its evolving commitment to a circular economy means that what goes around comes back to the benefit of customers and the environment.

To many EPCOR employees, this is a journey with various stops and branches along the way. Saif Molla arrived in Canada with his wife in 2006 so that both could pursue a Masters in Environmental Engineering. Molla's project was related to processes at the Gold Bar Wastewater Treatment Plant and once he finished his graduate work, he moved straight into working with EPCOR; he now manages long-term planning for both Gold Bar and Clover Bar. "And when it comes to those long-term plans," he says, "the circular economy piece is top of mind."

Terminology matters, which is why Rick Feng believes that 'waste' is not even the right word for what happens at Gold Bar and other EPCOR treatment plants. Feng has been a process engineer there for two years and with EPCOR for 12 years overall. "Wastewater is not even really the proper term," he says. "All water is a resource. Wastewater is not wasted water, it's used water. And there are so many things that are part of the process that are valuable resources. The goal is to have nothing be a true waste."

The way EPCOR treats wastewater is emblematic of its approach to a circular economy. Not only is a considerable percentage of it reclaimed and returned to the environment, the search for even better methods never stops. Deidre Bartlett's background is environmental science and she has been with EPCOR since 2017. "Of course, no one ever grows up saying they want to work in biosolids!" she laughs. "There are so many learning opportunities in biosolids. It's exciting."

"The goal is to have nothing be a true waste."

The entire wastewater treatment process is an astonishing display of breaking down constituent parts to find the value in every aspect of what passes into and then out of the plant. “It’s really about trying to prevent things from being wasted,” says Kim Alcorn. She has a chemical engineering background and has been with EPCOR for seven years as the process safety engineer at Gold Bar. “Having a circular economy helps to achieve the environmental goals of trying to keep our planet as pristine as possible.”

When the wastewater enters the plant, it is essentially separated into three different things — liquid, solid and gas. EPCOR’s Nutri-Gold program is available for any crop-producing farmers within the Edmonton area. On average, EPCOR is able to supply enough treated biosolids to apply them to about 1,200 hectares of agricultural land. “We take things that might otherwise be considered a waste and we beneficially re-use them,” says Bartlett. “We’re providing farmers with the addition of macro and micro nutrients as well as organic matter for the soil.” Phosphorous is also recovered from the biosolids at a Nutrient Recovery Facility, run in a partnership between EPCOR and the nutrient recovery company Ostara, to produce fertilizer for farm use across Canada.

In addition to the agricultural land application, biosolids are used at surface mining operations undergoing reclamation, such as the Paintearth mine near Forestburg, Alberta. These biosolids help regenerate natural plant life by returning nutrients and organic matter to the land.

And then there is the water, which also goes full circle, whether it comes out of the North Saskatchewan River or the Salt River aquifer. EPCOR’s Jeff Stuck has worked in the Arizona water industry for decades. He has observed the state’s progressive approach to groundwater management for the better part of 30 years. There might be no better example than how reclaimed water is provided to golf courses, for example, so they don’t have to draw water from a river or an aquifer. “It’s part of the whole balancing of limited water resources in Arizona,” says Stuck.

EPCOR provides A+ standard quality effluent in Arizona, which is the highest possible quality rating and indicates the water can be reused for any purpose other than human ingestion. It’s considered safe for body contact, which is why there is no health risk from

an accidental spraying in the middle of watering a golf course or a park or a public soccer field. It can also be used for dust control at construction sites. EPCOR is working on another project in the valley’s San Tan area to move treated water to agricultural sites for watering non-edible crops. “It’s all about the aquifer,” says Stuck. “It’s just another way to keep aquifer water in the aquifer and to only draw water for potable purposes. Every other water demand we should be able to fill through alternative means.”

At the Gold Bar plant, back in Edmonton, wastewater is put through a stringent purification process once solids and nutrients have been separated out. Treated water is returned to the North Saskatchewan River. Also worth noting is that EPCOR supplies a portion of the treated water to Suncor for its Edmonton-area operations, which means it does not have to draw water from the North Saskatchewan River. Even before all that happens, however, there are invisible sources of energy and power to be reclaimed. There is the liquid and the solid, but also the gas and the heat. Wastewater is very high in energy, not just because it’s coming from the human body but because it is emanating from controlled climate locations (namely, bathrooms, sinks, showers and drains). Energy is energy and there is no reason not to put it to use. The energy is not yet extracted from the treated water that returns to the river, says Saif Molla. “But when we do it’ll just be another piece in the circular economy puzzle. We are doing a lot but there is still so much potential.”



What is extracted is the biogas produced during the treatment process. “Biogas is a very useful resource,” says Molla. “There’s a significant methane concentration in it, which is natural gas, essentially.” That methane is used to feed boilers that heat the buildings, the boilers and the digesters at Gold Bar, which means some of the energy contained in wastewater, once separated, is turned right around and used to treat and purify the new wastewater coming in.

The value EPCOR brings to the table exists both in its process details and its holistic innovation. For instance, the low levels of water in the Colorado River and Lake Mead have been making headlines around the world. “But that’s why having the ability to act on good ideas is critical right now,” says Stuck. “We have a big seat at the table to create the water management policies of the future. It’s a very strong position for EPCOR to be in.”

The benefits of that leadership, illustrated by the commitment to a circular economy, accrue at every level—customers are provided a more efficient service, regulators and shareholders increase their trust, employees are highly motivated and the planet is better off. “Of course, our focus at Gold Bar is wastewater,” says Saif Molla. “But, really, this kind of thinking

happens in every part of EPCOR. We’re only talking about wastewater here because it’s obviously the most exciting part!” His workmates laugh on our video call. “Not that we’re biased,” adds Kim Alcorn.

Given this group of employees, it’s not all that hard to imagine that maybe one day there actually will be kids standing on the playground saying they are hoping to grow up and work in biosolids. Now that would be full circle.

EPCOR is able to supply enough biosolids to apply them to about 1,200 hectares of agricultural land.



Bob Starko, owner of Starko Century Farms outside Lamont, Alberta receives a shipment of Nutri-Gold from EPCOR Biosolids Technologist, Deidre Bartlett.



*Less than a decade ago, Saskatchewan's Qu'Appelle River watershed was in trouble. EPCOR's public-private partnership with the City of Regina turned things around thanks to innovative wastewater technology.*

## UPPING THE CREEK

by Curtis Gillespie

The Wascana Creek meanders through the heart of Regina, flowing from the southeast corner of the city through to where it exits in the northwest, after which it ultimately empties into the Qu'Appelle River System, which, along with its valley, offers one of western Canada's most idyllic prairie settings. It has been one of the city's primary recreational corridors for decades, but over time the chain of lakes downstream of Wascana Creek had fallen into a less than pristine state, primarily due to the increasing presence of nitrogen and phosphorous in the water.

Nitrogen and phosphorous, of course, are two of nature's core elements and are nutrients in water bodies, sustaining aquatic plant growth, including algae. Both are used in fertilizer, and nitrogen is not only used to help create or manufacture thousands of products, it also makes up nearly 80% of the air we breathe (just don't forget to add the oxygen). But that doesn't mean nitrogen and phosphorous on their own are harmless. Used or disposed of in the wrong ways, nitrogen can be detrimental to humans and our environment, which was precisely the fate that had befallen the Qu'Appelle River system. The City of Regina knew this. And knew it had to save the creek and the lakes downstream by doing its part by reforming its wastewater treatment system. But funding was a major barrier. The question was how to square that circle?

It all led to a 2013 referendum, in which 57% of Regina voters chose to go ahead with a wastewater treatment plant upgrade through a public-private partnership (P3).

Not that winning the bid was ever a slam dunk for EPCOR. Far from it. Even though the P3 was approved in theory via the referendum, EPCOR still had to compete vigorously for the contract.



The company won out and eventually signed what Vicki Campbell describes as a “robust contract” that holds EPCOR to various deliverables and reporting requirements to provincial regulators as well as the City of Regina. Originally from the Regina area, Campbell joined EPCOR as a senior manager for northern Alberta in 2010, but returned to Regina in 2014 after EPCOR won the P3 bid. She has been involved and on site since day one.

“In fact,” she laughs, “when I arrived in 2014 to start up the Regina business for EPCOR, I was the only EPCOR employee here! So I led the transition of the wastewater treatment plant and employees from the City of Regina to EPCOR, led the recruitment process and oversaw pretty much the entire transition of all the business systems, the vehicles while we were going through heavy construction. The whole works.”

What “the whole works” entailed was keeping wastewater treatment going, while the refurbishment of many parts of the old treatment plant and the construction of a new plant were occurring. After construction was completed came the process of figuring out how to run them as one system through a substantial commissioning process. The build and opening took an impressive effort. As the Regina Leader-Post reported back in 2016, “It took the excavation of 275,000 cubic metres of soil, 685,000 construction hours and 1.78 million kilograms of reinforced steel bars, but Mayor Michael Fougere summed up the substantial completion of the wastewater treatment plant upgrade in just a few words. ‘On time and under budget,’ Fougere said. ‘Absolutely incredible.’”

But it is not the bid and build that remains the most impressive thing about the project, but rather the result and the manner in which it’s been achieved. The Wascana Creek and downstream lakes were waterways in serious trouble. Algae was blooming. Fish were dying from lack of oxygen due to the heavy algae growth. The creek had a distinct and not at all pleasant odour to it. This was all the result of decades of nitrogen and phosphorous loading from an inefficient and outmoded wastewater treatment processes along with nutrients from other sources such as farms and other communities.

EPCOR’s solution was to build a new plant that uses a biological nutrient removal process without relying on a chemical reduction process (that chemical being aluminum sulfate). The chemical process is still used elsewhere in the industry and even by EPCOR in Regina if there is a storm or a plant disruption. But during regular operations, the plant cultivates nitrogen — and phosphorous — removing bacteria that consume many of the unwanted elements in the wastewater. “We can control the bacteria that we have by adjusting air and other components of the process,” says Campbell. “It’s quite a complicated facility, but it allows us to remove those elements naturally.” Which means less nitrogen and phosphorous in the effluent and less of a contribution into Wascana Creek and the Qu’Appelle River system.

“We live the belief that we truly are stewards of the environment and that we will do the right things for the right reasons.”



The result is wastewater treated to a high discharge standard which is released back into Wascana Creek and the Qu'Appelle River system. It is an understatement to say that the project has been an environmental success. Greg Kuntz, the Manager of Energy and Sustainability Solutions with the City of Regina, says, "The City of Regina and EPCOR work collaboratively to protect our environment. Combining leading edge wastewater treatment technology, industry experts and best practice, the EPCOR team has proven itself to be a valued and trusted partner."

Scientists agree. In a story published in the fall of 2021, University of Regina biologist Peter Leavitt hailed the overall success of the project. Leavitt noted that their studies of the Creek's water quality found it had improved dramatically after just the first year of the implementation of the new system and has continued to improve year over year. "This shows clearly," he said, "that doing the right thing, taking out the pollutants, will make the system better. That for me is the big take-home message."

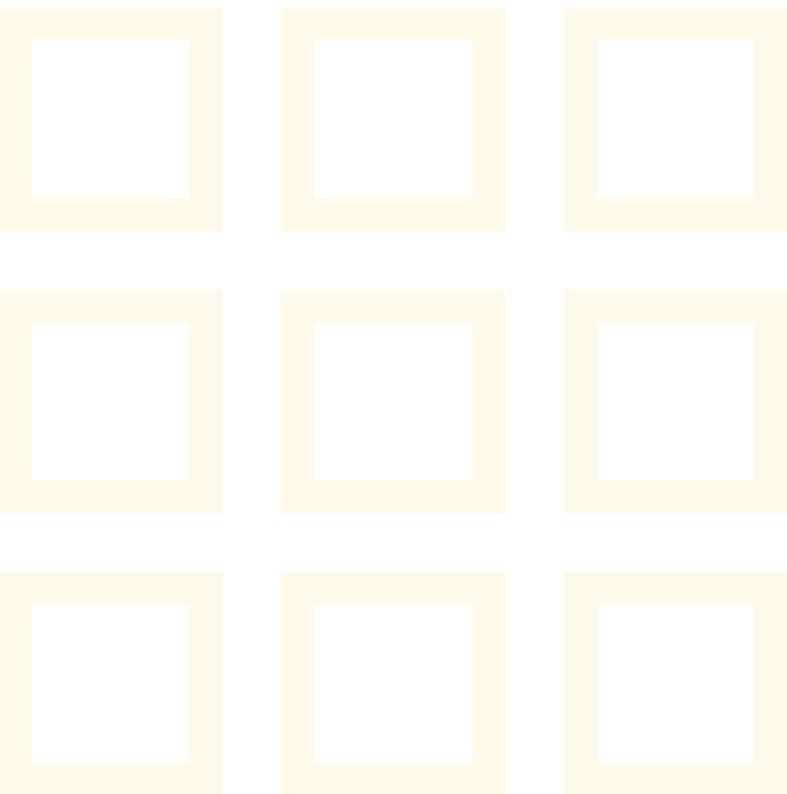
Aside from the successful nature of the project by the measures of science and quality of life, it has also proven successful in the P3 marketplace, which is significant since it's likely to be an often-used model in the future. Still, for EPCOR, it's not about bidding on every contract that comes along, but rather choosing ones that most closely align with the company's core values and strategic priorities and which are helping make the world better by making individual communities better. "We have pretty high standards around what we expect of our people and our integrity," says Campbell. "We live the belief that we truly are stewards of the environment and that we will do the right things for the right reasons."



Saskatchewan's Legislature Building sits on the shore of Wascana Lake.



SOCIAL



Being a socially-responsible company means placing high priorities on people and relationships — with our dedicated teams across the organization and with customers and stakeholders in the many communities we serve.

The past year brought many challenges, as we continued supporting our teams to work safely and stay healthy, delivering reliable services as we responded to emergencies in extreme weather conditions, and demonstrating our commitment to community partners and causes.

Through living our company’s purpose statement — **Communities count on us. We count on each other.** — Team EPCOR kept our performance levels in line with, or close to, what we have seen in previous years.



## PERFORMANCE UPDATES

EPCOR's Social Scorecard covers the broadest range of measures in our ESG report. This includes commitments to keeping our employees and communities safe; building and retaining diverse teams; taking care of our customers; and developing strong relationships with partners and stakeholders.

### HEALTH AND SAFETY AT WORK AND IN COMMUNITIES

#### TEAM SAFETY

Our Health, Safety and Environmental (HSE) Policy makes it clear that nothing is more important than the health and safety of Team EPCOR, our contractors and the public in the communities we serve. Getting home safely at the end of each shift, and protecting the public and environment, are responsibilities we all share.

EPCOR's safety-first culture is embedded in every team, regardless of whether they are operating in the field, running a plant, or working in an office location.

Following a record-best year for safety results, we saw a slight increase in incidents for 2021. Total Recordable Injury Frequency and Lost Time Injury results continue to show a more than 40% improvement over 2018, which was EPCOR's first full year of expanding operations to include the Edmonton Drainage utility.

## TOTAL RECORDABLE INJURY FREQUENCY

PERFORMANCE UPDATE:

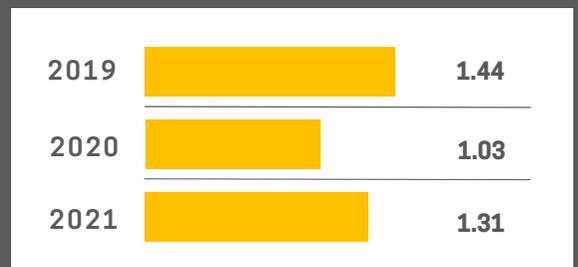
# 1.31

### RECORDABLE INJURIES

for every 100 full-time workers over a one-year period.

Target: a safety-first culture, driving to zero incidents.

[For the complete ESG Consolidated Scorecard see page 59](#)



## LOST TIME INJURY FREQUENCY

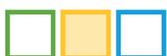
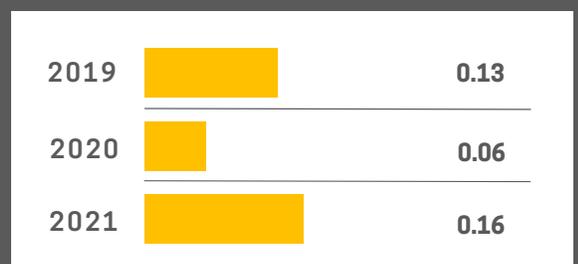
PERFORMANCE UPDATE:

# 0.16

### LOST-TIME INJURIES

per 200,000 hours worked.

Target: a safety-first culture, driving to zero incidents.





## KEEPING PEOPLE SAFE AROUND STORMWATER FACILITIES

The sound of skates scraping the ice on a backyard rink. The bright glow of flood lights over an evening hockey game at the community rink. Sights and sounds that go hand in hand with an Edmonton winter. To help provide families and kids with a safe space to skate, EPCOR provides financial support to community leagues across the city for the construction of outdoor rinks.

The \$800 safe rink grant, which can be used to help construct a boarded or snowbank rink, is a key element of the stormwater management facility safety campaign. This annual program helps raise awareness of the risks of any type of activity — even walking — on the unstable ice at a stormwater facility.

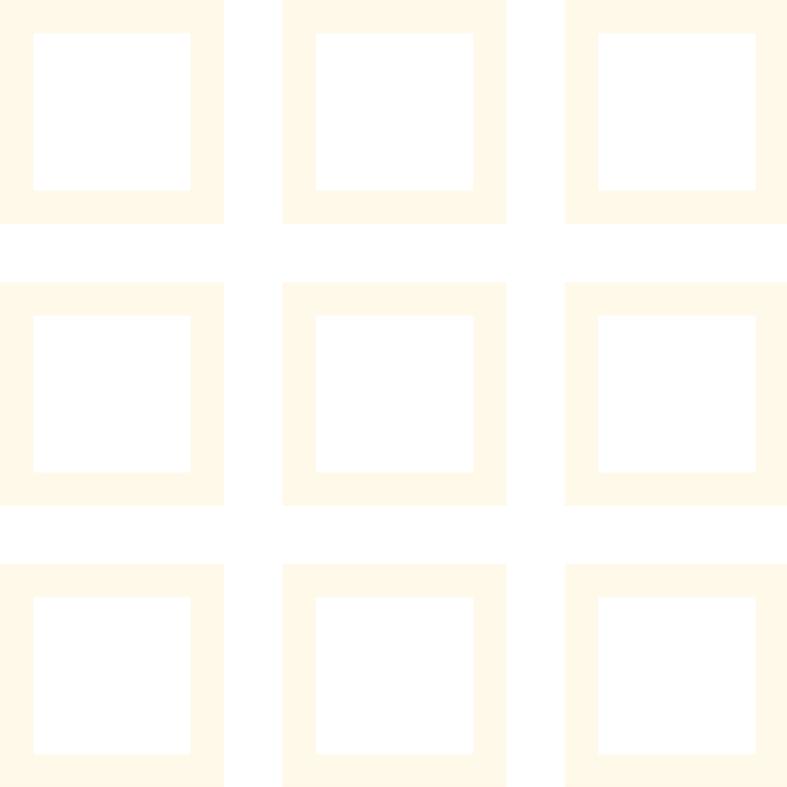
“While stormwater management facilities may look like ponds, they are not,” says Darren Gwozdz, Senior Manager of Health and Safety for EPCOR Drainage Services. “These facilities are there to enhance flood protection and are not safe for any recreational activities. With water continuously flowing underneath the ice surface, any ice that does form on top is very unstable.”

The risks are evident by the safety measures EPCOR crews take when retrieving sporting equipment left on the ice. Only after equipping themselves with harnesses, life jackets and waterproof gear and tethering themselves to each other, can crew members head onto the ice to retrieve the gear.

“There are a lot of companies that talk about safety, but EPCOR actually lives it. Our employees live it, I live it, my team lives it,” says Gwozdz. “Everything we do, safety is part of it.”

The safe rink grant program has grown in popularity annually since it was first introduced in 2018. That year, five community leagues applied for funding — a number that increased substantially to nearly 100 in 2021.

“The grant has allowed our league to provide an ice rink for our community, where residents now have a safe place to skate,” says Teresa Marshall, membership director with Big Lake Community League, one of the fund recipients. “Since we’ve had our ice rink, we thankfully haven’t seen anyone use the stormwater facility for unsafe skating.”



## LINE OF SIGHT ON LEAD MITIGATION

As part of EPCOR's support for Health Canada's new guidelines for drinking water, introduced in 2019, we continued to make progress on our Lead Mitigation Strategy.

An EPCOR study that same year designated about 360 homes in Edmonton as "high priority" for service line replacement. A total of 144 line replacements were completed in 2021, bringing the cumulative total to 213 over the past two years.

At this pace, EPCOR is on track to complete the priority replacements by the 2023 target.

It's important to note that there are no measurable levels of lead in drinking water when it leaves EPCOR's water treatment plants. But lead can enter a home's water supply from plumbing fixtures, interior pipes, or if a lead service line connects a house to the water distribution network.

One of the safest and most efficient ways to reduce or eliminate lead from a home's service lines and plumbing is by adding a lead inhibitor at the source. Orthophosphate is safe and commonly used as an additive in the water treatment process by utilities across North America and the United Kingdom.

It has no impact on the taste or odour of drinking water and, when used as an additive in treated water, it coats the inside of lead pipes and plumbing, preventing lead from leaching into drinking water.

EPCOR plans to add Orthophosphate to drinking water by the end of 2022, resulting in nearly all Edmonton homes and business coming into compliance with the new, lower lead level guidelines set out by Health Canada.

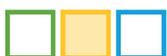
## LEAD MITIGATION

PERFORMANCE UPDATE:

# 213

## CUMULATIVE LINES REPLACED

Target: by 2023, replace 360 lead service lines designated as high priority under EPCOR's Enhanced Lead Mitigation Strategy.



**COVID-19 UPDATE**  
**NAVIGATING THE EVOLUTION**  
**OF THE PANDEMIC**

The second year of the COVID-19 pandemic was a constant exercise in managing the health of team members and the hopes for community recovery.

EPCOR was diligent about keeping team members informed of policies and processes designed to keep them safe and healthy, as well as up-to-date on our preparations for eventual workplace returns.

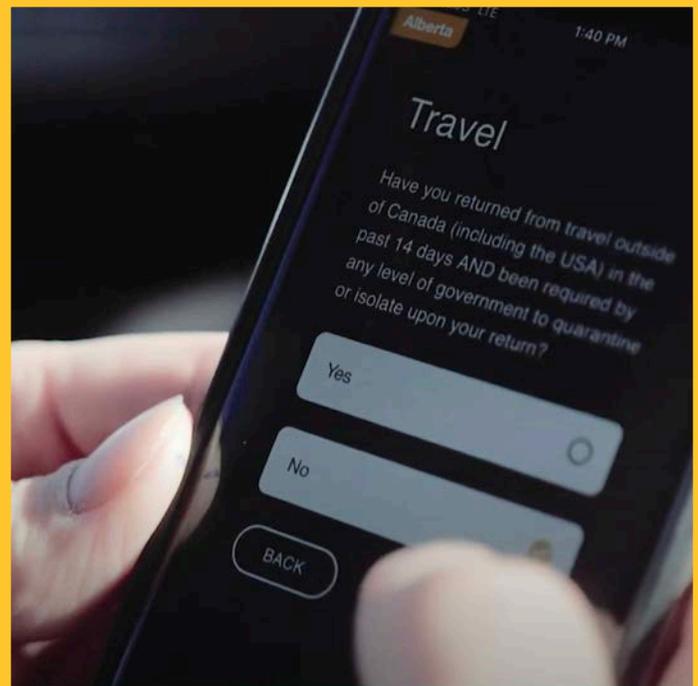
**ECHO – THE DAILY CALLOUT**  
**FOR A HEALTHY WORKFORCE**

By early 2021, EPCOR’s online daily health-screening tool, ECHO (short for EPCOR COVID Health Outlook), became the primary method for verifying that team members were healthy and fit for duty. Designed specifically for EPCOR and accessible through any mobile device, workplace or home computer, ECHO provided a quick and secure way for team members to check in before leaving their home, mitigating the risk of anyone showing up to work while presenting symptoms.

**EXPANDING AWARENESS**  
**ON THE BENEFITS OF VACCINATION**

The personal health of individuals is a private matter that EPCOR respects among our workforce. At the same time, we play a role in educating our workforce on ways to protect their health and increase their likelihood of reporting for work healthy and ready for duty.

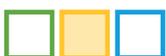
With this in mind, EPCOR ran virtual vaccination awareness sessions, hosted by a medical consultant who is both a physician and lawyer, and who holds a position at the University of Toronto’s faculty of medicine. This combined expertise, and encouragement for welcoming and open discussions, brought value and insight for team members.



**THE PATH TO WORKPLACE REINTEGRATION**  
**AND HYBRID WORK ARRANGEMENTS**

At EPCOR, team members were kept informed of our plans for a staged approach for returns to the workplace when the time is right. This supported being both physically and mentally prepared to return and to understand all steps in the process, with reintegration based on set schedules for teams and locations, and having facility and technology support in place.

Along with these plans, eligible employees were able to request participation in Where We Work — a new hybrid work program that will see employees splitting work days between time at an EPCOR facility and their home offices. The program is designed to balance the benefits of connecting with team members in-person, and the convenience of working from home, with the intent of improving work-life balance.



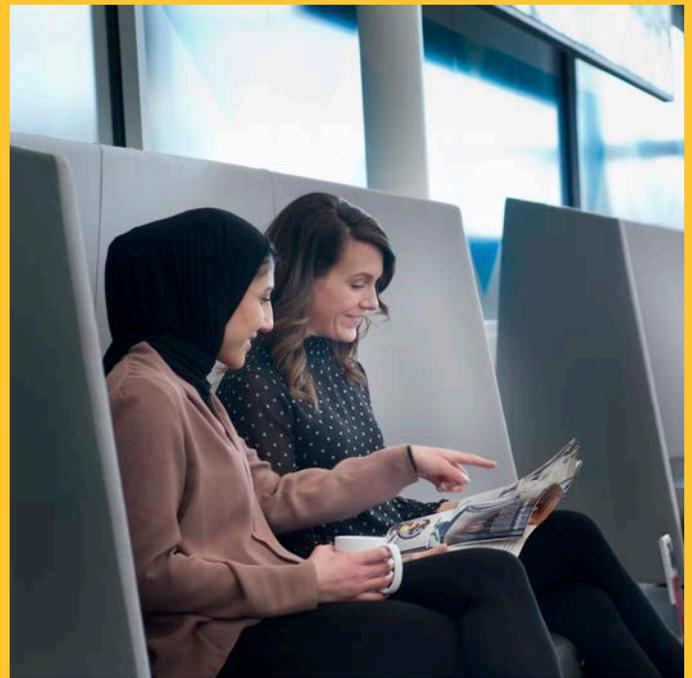
## BUILDING AND RETAINING DIVERSE TEAMS

Attracting and retaining top talent fuels our mission to provide clean water and safe, reliable energy to communities.

The past year saw a three-point increase in total turnover above 2020 levels, which had been the lowest in five years and attributable, in part, to the lack of movement across workforces during the early stages of the pandemic. The 2021 result was in line with pre-COVID performance.

Our measures on diversity in the workplace remained stable over the last year, with little or no change compared to 2020. Moving into 2022, we continue our commitment to being an inclusive, supportive and respectful employer.

And as we bring teams together again in our facilities, following the removal of pandemic health measures, employee engagement will be a priority, providing opportunities to reconnect, work collaboratively and share in a re-energized employee experience. This will contribute towards our target of top decile performance for employee engagement, as measured against a comparator group of companies in 2023.



The University of Alberta's Transition Year Program is helping to remove barriers and encourage greater workplace diversity. Learn more by reading: [Clearing the Way](#).

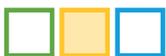
## TOTAL TURNOVER

PERFORMANCE UPDATE:

# 8.4%

## EMPLOYEE DEPARTURES

Performance Measure: employee departures for all reasons, including retirement, divided by year-end headcount.





*PROGRESS UPDATE*  
**GROWING AND CELEBRATING A  
DIVERSE AND INCLUSIVE WORKFORCE**

Since forming our Diversity, Equity and Inclusion (DE&I) Council in 2018, EPCOR has empowered employees to demonstrate their passion in building a workplace that supports and celebrates the unique perspectives and backgrounds of all people.

Because of this, we have seen the development of six Employee Resource Groups (ERGs) — three of which were approved in 2021 — and over 1,000 employees supporting the work of ERG's, either through direct membership or as allies.



**EPCOR'S EMPLOYEE RESOURCE GROUPS**

Over the past several years, EPCOR employees have built a network of grassroots groups providing safe and nurturing spaces to connect. Not only are these groups driving increased belonging, but they are also helping to further our goal to be a workplace where everyone can be their full selves.



The full roster of ERG's currently includes:

**Herstory** – engaging employees in conversations about empowering and enabling women to make informed decisions about their individual professional and personal growth.

**RISE** (Resources, Information and Support for Emerging Leaders) – focused on developing new, emerging and aspiring leaders at EPCOR.

**TIME for Pride** (To Integrate Myself Entirely) – creating a safe, supportive, and respectful environment for all employees regardless of sexual orientation, gender expression, or gender identity.

**Working Parents & Caregivers** – supporting working parents, caregivers and allies by providing education, resources and connections within a safe environment at work. (New in 2021)

**People of Colour @ EPCOR** – inspiring and supporting people of colour in our workforce, while fostering engagement, building alliances, and cultivating an inclusive culture for underrepresented people at work and in our communities. (New in 2021)

**SPIRIT** (Supporting People in Reconciliation of Indigenous Truths) – this ERG provides a safe space for Indigenous and non-Indigenous employees to share, learn and grow together; playing a positive role in fostering Indigenous inclusion, supporting anti-racism and encouraging reconciliation within EPCOR and our communities. (New in 2021)

**Women in the Field** – creating a safe, likeminded, inclusive space for women working in male dominated field roles. (Formed in 2022)

## DELIVERING QUALITY SERVICES FOR OUR CUSTOMERS

EPCOR has built its reputation on delivering high quality, safe and reliable services for customers across all the jurisdictions where we operate, and doing so at costs that are reasonable for our customers and in line with the expectations of regulators.

## CUSTOMER CARE, SATISFACTION AND COSTS

This past year, overall reputation and customer satisfaction results continued to meet or exceed targets, as measured through community perception and customer satisfaction surveys, with little or no shifts compared to 2020. In addition, our five-year trend on water safety continued, with 2021 results remaining at zero, showing no acute health-based incidents taking place for EPCOR-controlled water activities.

As we strive to continue producing positive results in these areas, we also saw a slight decrease in our operating costs per customer, coming in at \$159 for 2021 as compared to \$160 in the previous year. This was due to customer growth through 2021 that somewhat outpaced increases seen in operating costs.

## RELIABILITY AND PROMPT SERVICE

In a year marked by extreme weather conditions across our operating footprint, reliability of service was top of mind. We saw record high summer temperatures in some areas of Canada, a severe snow storm in Texas, and some of the lowest winter temperatures experienced in Alberta.

Despite these conditions, reliability levels remained high in 2021 and in the mid-range of results over the past five years. EPCOR electricity customers experienced 99.9% service reliability, with interruptions averaging 57 minutes in the year.

EPCOR crews responded quickly and effectively to a wide range of conditions and incidents. Drainage crews resolved nearly 96% of service calls within 24 hours – a pace similar to 2020 and in excess of the regulated target of 80%.

In Canmore, EPCOR worked closely with contractors and Town officials to address a high turbidity event that required a Boil Water Advisory. High water pressures during the commissioning of a new pipe dislodged sediments inside the water network, affecting water quality. A flushing and disinfection program was completed before returning the network to service, and EPCOR's follow-up report recommended changes to pipe commissioning practices, network cleaning programs, and record-keeping.

## THE POWER OF AMI IN EDMONTON'S OUTAGE RESPONSE SYSTEM

EPCOR's Outage Management System uses a digital model of Edmonton's electricity distribution grid containing all the company's assets (e.g. power lines, transformers) and combines it with information received by an Advanced Metering Infrastructure (AMI). AMI meters send a signal to control rooms to let EPCOR know customers are affected by an outage. Together, this system provides a full view on the scope of outages on the grid, allowing for a more rapid and focused response.

To expand the system and continually improve response times, EPCOR has been working to increase the number of AMI meters installed at customer locations. In 2021, 7,488 AMI meters were installed, bringing the total to 425,613 in Edmonton.

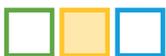
## RELIABLE POWER DISTRIBUTION

PERFORMANCE UPDATE:

57 min.  
OF INTERRUPTED POWER

Performance Measure: number of minutes per year that power service is interrupted (SAIDI, all electricity operations combined).

2019		60
2020		50
2021		57





Bissell Centre Child Care  
2021 Heart + Soul Recipient

## DEMONSTRATING SUPPORT & BUILDING EXPERIENCES

EPCOR has a long tradition of providing more than essential services, supporting important causes and events that improve lives and create meaningful experiences for the communities that count on us. It's something we value as a company and something we encourage across our workforce.

This is why we've included a specific target as part of our sustainability commitments. While this target is focused on the Imagine Canada benchmark, we contribute to the community throughout our Canada and U.S. operations.

This past year, we continued to support a wide range of charitable organizations and saw some of the greatest generosity in employee giving.

In 2020, to support the community in responding to the unique challenges of the pandemic, we initiated the Heart + Soul Fund — a new community investment program to enhance the capacity of front-line social service agencies, and support organizations and practitioners in the hard hit arts and culture sector.

Recognizing the ongoing impacts of the pandemic, we extended the Heart + Soul Fund for another year with a \$1-million investment during 2021 that supported 60 arts, culture and charitable organizations in Canada.

## Charities supported by EPCOR's gift matching programs raised \$2.6 million in 2021.

The charities that received contributions further maximized the \$420,000 provided by EPCOR. By leveraging these funds to seed innovative fundraising and gift-matching programs, and allowing donors to benefit from having their gifts matched and impact doubled, these charities raised an amazing \$2.6-million.

The funding delivered to organizations allowed them to continue or reinvent their approach to arts or community events, and bring outstanding entertainment to communities, through events such as: the Cariwest Caribbean Arts Festival, the Art Gallery of Alberta Sidewalk Cinema, and the Takin' it to Streets (Folk Music Festival) in Edmonton; the Strathmore Stampede in southern Alberta; and the Kincardine Community Living Golf Tournament, and Huron-Kinloss Free Public Skate events in Ontario.

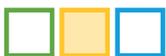
In the U.S., seven different organizations and causes benefited from over \$63,000 U.S. in support, including: Route 66 Arts Alliance (Edgewood, New Mexico), Free Arts of Arizona (Phoenix), West Valley Arts Council (Surprise, Arizona), TheaterWorks (Peoria, Arizona), SciTech Festival (Arizona), First Responders Tree (Fountain Hills, Arizona), and Fighter Country Partnership (Glendale, Arizona).

## COMMUNITY INVESTMENT PERFORMANCE UPDATE:

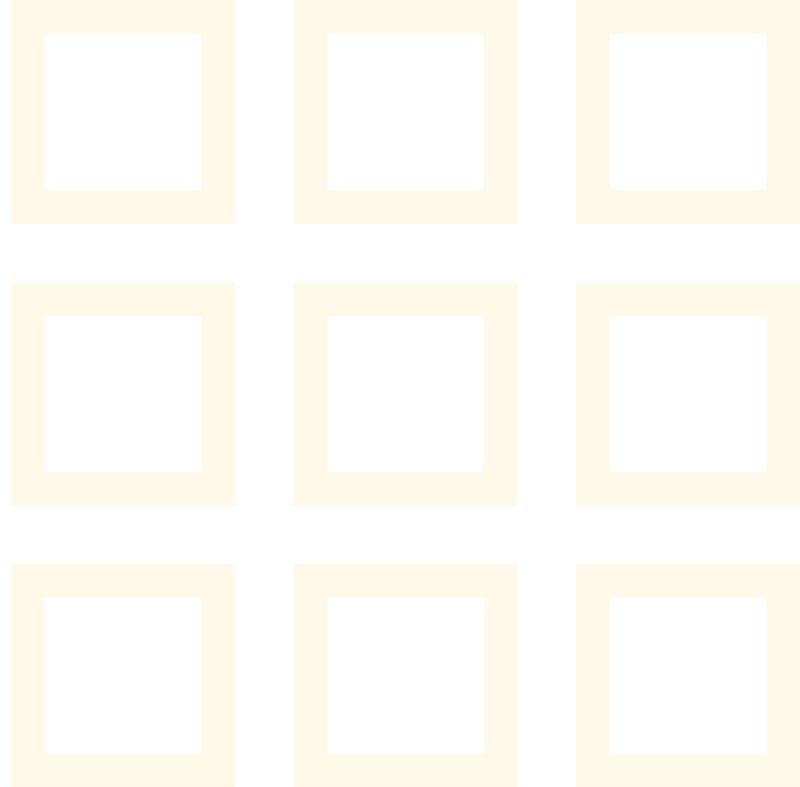
# \$3M

## IN DONATIONS

Target: achieve Imagine Canada's "Caring Companies" designation by 2023 through donations, in-kind support, and volunteering.



Employee volunteers directed company donations to 65 community groups in 2021.



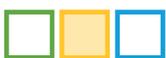
### HELPING HANDS PROGRAM

EPCOR's Helping Hands Program offers a \$300 grant to an employee's charitable or non-profit organization of choice for those who volunteer for at least 30 hours a year. In 2021, Team EPCOR logged almost 8,000 volunteer hours through this program and more than \$25,000 was provided to non-profits.

Rebekah Pool, a finance manager with EPCOR USA, accessed funding from the Helping Hands Program for the Cystic Fibrosis Foundation — an organization that she began volunteering for when her nephew was diagnosed with Cystic Fibrosis.

### HEART + SOUL SUPPORTS INDIGENOUS PEOPLES EXPERIENCE

Combining EPCOR's spirit of community giving and our ongoing efforts to promote the spirit of reconciliation, a portion of this year's Heart + Soul Fund supported Fort Edmonton Park in delivering Indigenous-focused workshops and educational programs as part of the new Indigenous Peoples Experience installation. This included the sharing of Indigenous narratives, customs and traditions, and the opportunity for participants to grow their understanding and value of our relationships with Indigenous Peoples.





## ENGAGING COMMUNITIES IN BUILDING THE FUTURE

EPCOR aims to engage in collaborative, transparent and respectful processes for planning, building and operating utilities in a way that aligns with public values. Building trust among our customers, stakeholders, Indigenous Peoples and the public is part of how EPCOR lives up to its own values.

EPCOR's community engagement approach aligns with the International Association of Public Participation (IAP2) engagement framework and, for projects that take place in Edmonton, is in step with the City of Edmonton's public engagement framework.

## GAINING PERSPECTIVE FROM COMMUNITY MEMBERS

In 2021, EPCOR engaged community members and key stakeholders in providing their perspectives as we either began or continued making progress on numerous projects across the communities we serve.

A prime example for this past year included consultation to develop shared outcomes and design principles for our water treatment plants in Edmonton. This involved a series of workshops and other engagement activities designed to help community members understand how we will operate and upgrade the plants in an environmentally and socially responsible manner that aligns with community interests. The shared outcomes will be applied to the Edmonton Water Treatment Plants Flood Protection Project as it progresses through 2022, with the intent to protect critical infrastructure and water supplies for many years to come.

In addition, we engaged stakeholders on development of four dry pond projects in Ermineskin/Steinhauer, Kenilworth, Tweddle Place and Parkallen; connected with community members on projects such as the 50th Street transmission relocation and the installation of a new antenna at the Garneau Substation; and carried out over 25 engagement activities related to the Valley Line West LRT Utility Relocations.

### ENGAGEMENT PERFORMANCE UPDATE:

2,606 PARTICIPANTS

Performance Measure: the number of community participants in engagement processes conducted at the "Advise" level or higher in the IAP2 engagement spectrum.



EPCOR took a number of different approaches to community consultation during times when in-person interaction wasn't possible, including erecting signage that included project details, along with a QR code directing community members to where they could share feedback.

## THE FLOW OF COMMUNITY CONSULTATION

Drainage Services manages stakeholder communications and engagement for more than 150 capital projects, many of which are critical to the success of delivering stormwater and sanitary drainage services. Each day, Dawn Fenske, Senior Communications Advisor in Drainage, and her colleagues in Water Services and Electricity Operations, are the faces of projects to community members and the advocates for customers to project teams.

“We are committed to transparency with project information, which helps build trust,” explains Fenske. “We strive to have ongoing, two-way communication that increases understanding and confirms customer and stakeholder preferences and values.”

EPCOR's community engagement teams are hopeful that 2022 will see a return to in-person engagements. Either way, the landscape for how we engage with our community has changed, whether connections are face-to-face or virtually, and the teams are focused on being flexible in meeting stakeholders' evolving needs and expectations.

“Through stakeholder engagement, we are committed to developing and fostering positive, strong relationships with customers and stakeholders so they may even become champions for the projects in their community,” adds Fenske. “It's rewarding work, and what we do makes a real difference for our customers and communities.”

“We are committed to transparency with project information, which helps build trust”





## RESPECTING THE LANDS, GROWING KNOWLEDGE & NURTURING RELATIONSHIPS

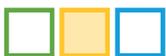
Through ongoing commitments to building partnerships with Indigenous communities — including joint implementation of a [Memorandum of Understanding](#) signed with Enoch Cree Nation in 2020 — EPCOR saw meaningful work continue through our Indigenous Monitoring Program and consultation efforts that supported in-depth learning and sharing.

### THE MEANING IN DISCOVERIES

EPCOR's Indigenous Monitoring Program provides Indigenous Nations and communities with access to sites where excavations related to our projects take place. We regularly reach out to more than 30 First Nations and Métis communities on major projects in Edmonton's river valley. Even projects that may seem simple can unearth an important part of history that requires a respectful approach to honouring the past and moving toward the future.

This past year saw EPCOR connect with Indigenous communities on six occasions to review potential findings that were located during projects. For example, during a maintenance project to replace a water main hydrovac crews discovered a bison horn which, following further excavation by an archaeologist, turned out to be a full bison skull. Consultation with Indigenous leaders from Enoch Cree Nation resulted in a smudge ceremony, a prayer song and laying of tobacco, before the extraction was completed.

Apart from this particular find, work supervised by archaeologists and Indigenous communities on the grounds at the E.L. Smith Water Treatment Plant has discovered cultural deposits such as tools and animal bone fragments, as well as signs of historical activities like camp sites and fires. This has provided opportunities to learn more about the history of the site and river valley, which points to multiple different occupations over thousands of years.





## BUILDING A FUTURE TOGETHER

As EPCOR moved forward with flood protection planning and projects for Edmonton-based water treatment plants, a key part of the consultations focused on our work with Indigenous leaders and communities who wanted to get both a deeper understanding of the projects and a direct connection with the lands.

By the end of 2021, over 80% of identified Indigenous Nations and communities had participated in various engagement activities, and EPCOR created an opportunity to visit the grounds of the E.L. Smith plant for a walking tour where stories of the past were shared, as well as a vision for the future.

Representatives from 11 Indigenous Nations and communities took part in the walking tour where they were able to connect with history, learn about the activities that took place on the lands, and discuss the flood protection project. Participants walked the length of future development for the berm and flood wall that will be installed, learned about commitments to protect the environment and mitigate any impacts of development, while sharing perspectives on the importance of moving forward for the growth and care of generations to come.

## FURTHERING OUR COMMITMENT TO INDIGENOUS BUSINESS RELATIONS

Through 2021, EPCOR continued working toward achieving the “Committed” status level as part of the Canadian Council for Aboriginal Business’s Progressive Aboriginal Relations certification program. This program supports progressive improvement made by businesses in Aboriginal relations and signals to communities that they are supportive business partners and committed to prosperity in Aboriginal communities. EPCOR expects to reach this target in 2022 rather than 2021 due to additional time and diligence invested in completing our Indigenous Peoples Policy, which was approved in February 2022; and the completion of a Leadership Commitment Statement and Employee Communication and Training Plan, expected before the summer. These elements will support progression to the “Committed” status level in 2022 and move us towards reaching “Bronze” level certification by the end of 2023.





## PROVIDING VALUE FOR THE ECONOMY

As EPCOR continues with existing and growing operations, and making capital investments in the communities where it operates, a significant amount of economic value is distributed to a wide range of stakeholders.

**\$1,036 million**

### SUPPLIERS (CAPITAL INVESTMENTS)

Payments made for investments in property, plant and equipment, including acquisitions.

**\$865 million**

### SUPPLIERS (OPERATING COSTS)

Payments for materials and services, including energy, operating costs, contractors, materials, facilities, and administration.

**\$367 million**

### EMPLOYEES

Employee wages and benefits, including payroll taxes and pension contributions.

**\$350 million**

### PROVIDERS OF CAPITAL

Repayment of principal on loans, and interest paid on debt and borrowing.

**\$171 million**

### DIVIDENDS

Dividends paid to our sole shareholder, the City of Edmonton.

**\$143 million**

### GOVERNMENTS

Current income tax, property tax and franchise fees to all orders of government.

**\$3 million**

### COMMUNITY INVESTMENTS

Payments to not-for-profit organizations through EPCOR's Community Investment Program and watershed-related sponsorships.

In 2021, a total of **\$2.9 billion** in economic value was distributed to stakeholders.





*When it became clear that the pandemic would stretch the resources of social and cultural agencies for another year, EPCOR's Heart + Soul Fund stepped up again. But supporting our communities means more than just writing cheques.*

## EPCOR'S SOUL PURPOSE

*By Curtis Gillespie*

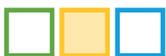
Being part of a community means caring for one another not just when times are good but showing up for real when things take a turn for the worse. Through its Community Investment program, EPCOR has long been supporting many aspects of the communities in which it operates. But then came COVID. The pandemic put such an added strain on so many levels of society that EPCOR realized it was a moment of both responsibility and opportunity to help make a difference. The result was the Heart + Soul Fund, which EPCOR created in 2020, and continued again in 2021, to assist social serving organizations meet the growing demand for services; and help ensure local artists and culture organizations could continue creating inspiring and uplifting works of art.

“We nearly tripled our community support the first year of the pandemic,” says Gillian Adams, Senior Manager of Marketing and Community Investments with EPCOR. “We received so much feedback from grant recipients that they would not have made it without our help.”

Of course, the Heart + Soul Fund (as well as the Community Investment program) may provide much-needed funding, but it's about more than the cash. Liz O'Neill is the Executive Director of Boys & Girls Clubs Big Brothers Big Sisters (BGCBigS) and has been with the organization since 1979. BGCBigS is about making sure children and youth have mentors in their lives to help them mature into adulthood. O'Neill has also seen Edmonton mature, from a small city to the dynamic and complex community it is today.



Heart + Soul Fund recipient, GeriActors Theatre Company.



EPCOR has grown along with it. “It’s not just a company that writes a cheque,” says O’Neill. “It’s a place that takes its assets and its networks and its people in its family, and it shares them with our family. We’re trying to mobilize good people to be there for kids, just as EPCOR is mobilizing good people to be there for the organization.”

A good example of reciprocal benefits is the BGCBiggs mentorship program, in which many EPCOR employees act as mentors to children, bringing them to various workplaces once a week where they get help with their homework, have access to a one-to-one mentor, maybe have some recreational down time. The added benefit is that it gives numerous EPCOR employees the chance to broaden their worlds through cultural and sociological insight.

To Liz O’Neill, it’s about a company knowing the DNA of its community. She recalls when BGCBiggs, which has been supported through both the Community Investment program and the Heart + Soul Fund, was delivering holiday gifts back in December. With 3,300 families on the delivery list, there was no way for them to do it alone. They reached out to EPCOR for help and EPCOR supplied the staff and trucks to make it happen. “EPCOR really works to identify what help might look like and then it thinks of how it can use its assets to make it possible. They make it about human beings. And they don’t respond because it’s the nice thing to do, they respond because it’s the right thing to do.”

Erica Angus and Valerie O’Brien were also looking for EPCOR to do the right thing when they reached out in 2020. Angus is Executive Director of Theatre Collingwood, and O’Brien the Business Development Manager. EPCOR supplies power to Collingwood, a city of 22,000 on the shores of Georgian Bay, about two hours’ drive north of Toronto. Angus has been with the theatre a decade now and O’Brien developed her passion for the arts growing up in Edmonton while attending shows at the Citadel and the Jubilee Auditorium.

Running a theatre is hard enough during the good times. When the pandemic hit, it meant going from 60 to 0 in the blink of an eye, not just for Theatre Collingwood,

but for most of the performing arts in Canada. The question Theatre Collingwood asked itself was the same one thousands of other creative enterprises had on their minds: How are we going to survive this?

The Porchside Festival was one idea. Collingwood is blessed to have a number of historic homes that are a source of community pride. The company put together a plan to collaborate with many of their patrons and supporters to stage plays on grand home porches and have the audience come along and bring their own chair to set up on lawns.

“It was wonderful,” says Angus. “When people left a play they were floating, they were so happy to be able to come together as a community, but feel safe, be outside and experience a play or a concert.”

“It’s not just a company that writes a cheque. It’s a place that takes its assets and its networks and its people in its family, and it shares them with our family.”

*Liz O’Neill, Executive Director of BGCBiggs*



But the financial struggle was perilous without the ability to stage a regular run of ten or twelve plays a year. Angus and O'Brien reached out to EPCOR, knowing how central the arts are to community and how committed EPCOR is to supporting its communities. "We just made the case to EPCOR that, yes, it's vital to support our hospitals because we have to take care of our physical health," says Angus. "But it's also vital to keep our minds and souls fortified. EPCOR was just so receptive to helping us to continue to connect and to fuel the soul."

Because Theatre Collingwood could not mount a normal production schedule, the conversation with EPCOR revolved around how to adapt to the new reality of smaller-scale and online events. "They truly invested in the Heart + Soul of the community," says O'Brien. People need to feel the heart and soul of their community beating strongly, adds Angus. "EPCOR helped create that feeling," she says.

Adams believes the Heart + Soul message is so powerful because, she says, "It captured the spirit of what we wanted it to accomplish. We are supporting the heart and soul of their community, of our community." A third year of Heart + Soul funding has recently been approved. "It makes me happy to be able to close each partnership saying, 'With love from EPCOR.' Because it's true."

## THE 2021 HEART + SOUL FUND BY EPCOR:

**PROVIDED FUNDING TO NEARLY 60 ARTS, CULTURE AND CHARITABLE ORGANIZATIONS**

**49** in Alberta, **8** in Ontario and **2** in BC

### HELPED EMPLOY

**680** artists, including **141** BIPOC artists, of whom **68** are Indigenous.

### SUPPORTED

**13** artist centres, **8** local theatres, **10** festivals, **5** Indigenous-specific arts programs, and **520** new artistic works.

Many of the charities used their funding as matching dollars within their fundraising campaigns. The \$420,000 provided to charities through the Heart + Soul fund helped raise a total of \$2.6-million.



Liz O'Neill, Executive Director BGCBigs



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*Schooling is the pathway to better opportunities for so many. But for students like Austin, ambition alone may not be enough. EPCOR helps remove barriers to educational success — from kindergarten to post-secondary.*

## CLEARING THE WAY

By Neil Wedin

Huge lecture halls, stressful courses, and feeling alone at a massive college or university is a stressful prospect for anyone. For students fresh out of high school it can be scary. For someone who has been in the workforce for a few years, it can be overwhelming. Support is essential, especially when a student is considering more challenging disciplines.

The Conference Board of Canada states that while Indigenous people make up over four per cent of Canada's population, only about two per cent work in fields focused on science, technology, engineering, and math, known as STEM. The Board goes on to say that improving Indigenous participation and leadership in major economic sectors, such as science, technology, and finance, is an important part of the reconciliation journey.

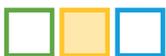
Donations from EPCOR to the University of Alberta's Transition Year Program (TYP) are helping address some of these issues. The three-year, \$130,000 investment allows the university's First Peoples' House to create inclusive, supportive learning environments for First Nations, Métis, and Inuit (FNMI) students, specifically for those pursuing degrees in STEM-related fields.

"When we sat around a table together, we had an interesting discussion about why more students weren't pursuing STEM," says Gillian Adams, Senior Manager Marketing and Community Investment at EPCOR. "It was that conversation that led to a really creative solution and ultimately a proposal by the University of Alberta, and our commitment to funding that would reduce class sizes."

Today, the TYP offers students smaller classes, as well as one-on-one tutoring, refresher classes, and ongoing academic support whenever someone needs it. Smaller classes are less intimidating and foster stronger, more supportive relationships between instructors, students and their peers, many who are from rural communities and are away from home for the first time.

Austin, 21, is in the TYP business track on his way to getting his Bachelor of Commerce degree. "I want to be able to give back to my community and help the less fortunate with understanding finances and... managing their own budgets," he says.

"The TYP program and the services provided have given me a sense of belonging, culture, identity, and encouragement... without the support of First Peoples' House and the TYP, I would be lost and most likely unsuccessful on my journey."



Dr. Francis Whiskeyjack is a Cree Elder, educator, and cultural advisor. Dr. Whiskeyjack says that places like the First Peoples' House allow students to spend time and "find a common ground, (and) not just for Indigenous students, but other groups can come, share, and learn the Indigenous ways of knowing and doing."

Programs like the TYP, he notes, build self-esteem, offer support services, and funding means more students will graduate, get better careers, and become leaders in the community.

"Truth and reconciliation come through leadership and community," and that "working together overcomes animosity. In the end, we are all Canadians," says Dr. Whiskeyjack.

Tim Erickson has been a math tutor for over 18 years. "The reality is mathematics is often the weakest aspect a student has and failing that requirement puts their degree in danger," he says.

"From an instructor perspective, EPCOR's support has made it possible to spend the time to work with individual students as required and there are many who benefit from every moment spent with them."

Suzanne Butler, Associate Director of the TYP notes that success is transformational. The program means FNMI students become "leaders and role models in their communities... and when one student succeeds, so does

the family." She adds that successful students pay it forward for the next generation, and create a ripple effect that results in highly skilled students who then offer support and mentorship to new students and their peers.

Suzanne notes that one of their biggest wins takes place when a student simply stops by her office to say, "Hey, I passed!" These moments of shared successes mean the program is making a difference. More success stories mean more students will apply, institutional support increases, programs will be expanded, and more youth will have a chance to succeed. It truly is win-win-win.

Supporting programs like the TYP helps break down barriers faced by many Indigenous students interested in an education in a STEM-based field. The support also means that a more diverse, engaged, and talented group of graduates enters the workforce. Corporations like EPCOR, in turn, gain access to an expansive labour pool that reflects the communities where they do business, whether locally, regionally, or nationally.

Austin is just one of many students grateful for additional support provided by TYP.

"Coming from a life of hardships, there are not many places I find happiness or many people I can go to for support. But with the help and support of EPCOR and the TYP, I have found a community I can call home and I deeply appreciate what they provide and how they are helping students like me succeed."



Austin and his math tutor, Tim.



*Connecting growing communities to cleaner heating sources, like natural gas, can be challenging work. EPCOR's long history of working collaboratively with developers, regulators and customers has given us the edge in helping cities and towns make smart energy choices — from Ontario to Texas.*

## IT'S ALL ABOUT THE CONNECTION

*By Curtis Gillespie*

EPCOR has ambitions for growth, but only in reasonable, sustainable, and ethical ways, as we are seeing play out with EPCOR's expansion into Ontario and Texas. David Billinger was born and raised in Texas, and after working as an environmental advisor with various companies, he moved to EPCOR three years ago to become Director of U.S. Gas Operations. As a member of the Texas Coastal Conservation Association, he has also a personal interest in environmental sustainability. Still, he says, "Texas is one of the faster growing areas for the corporation. We have ambitious plans to grow the business footprint."

Texas is a highly competitive natural gas market. Unlike Canada, where companies bid on contracts for clearly demarcated areas, the Texas market is somewhat less structured than many others in which EPCOR operates. "We don't have the same kind of defined service areas," says Billinger. "It is a very free market. It does well for the end consumer because it drives the competitiveness of the business."

Also driving the competitiveness is the fact that natural gas for home heating is far from an automatic assumption in Texas. Slightly over 50% of home connections use it, but a significant portion use electric heating. Conversion of existing homes hasn't had much uptake to date, and so EPCOR is focusing on greenfield expansion, meaning new housing. There is such rampant growth across the state that you can plant a flag anywhere near a city and be certain of finding a new market. Four of the 10 most populated cities in the United States are in Texas. The state has a deep-water port. The weather is good. There is significant diversity. "It's a great place to be," says Billinger. "A real economic powerhouse."



Ontario may be Canada's economic powerhouse, but before EPCOR was awarded the franchise for the Kincardine/Bruce area (a chain of smaller communities northwest of Toronto on the Lake Huron shore), the energy mix was approximately 60% propane, 25% electricity and the remainder oil and wood. Being cleaner, more convenient, and more affordable, natural gas is a significant upgrade for customers in these areas. In fact, it was the community that drove the move to natural gas. Three mayors of small towns in the region created a joint RFP that EPCOR bid on and won, though there was a hiccup. The Ontario Energy Board decided after the fact that it was their RFP to oversee and so they re-ran it. EPCOR bid again, and won again. After roles in various aspects of the energy industry, Susannah Robinson joined EPCOR four years ago as Vice President of the Ontario Region and remembers how unusual the process was. "Winning that bid was a long journey, as you can imagine," says Robinson. "But the communities played a big role in discussions with the government because they were a strong proponent of our original and second proposals."

Since then, EPCOR has completed a backbone natural gas pipeline and distribution lines, but it's been a challenging project, not just because of the pandemic. "We had to enter people's homes to inspect infrastructure," she says. "And because gas is new to everybody in the area, there has been significant education around natural gas. The community has been very welcoming, though, and now we're over-subscribed."

When it comes to the rationale behind why people do or don't convert to gas, David Billinger says that the primary reason is that conversion savings take too long to recoup the upfront investment. With newer homes in suburban and exurban areas, natural gas is a natural fit. The cost can be built into the price of a new home. "It pretty much sells itself," says Billinger.

What doesn't automatically sell itself, though, is getting developers and regulators to choose EPCOR in an aggressive marketplace. "The competition to serve a new development is fierce," says Billinger. He focuses any bid on EPCOR's many strengths—its history, its service record, its strong reputation with both developers and regulators, community feedback, deadline delivery. He also highlights the facts that EPCOR is Canadian and municipally owned as strengths, since they represent lasting relationships and inherent stability, unlike, say, a utility owned by a private equity firm. EPCOR's strategy of measured and principled expansion is working so far in Texas, with 5,400 connections and thousands more upcoming. "Sustained growth is the goal," adds Billinger. "We're growing the business close to 6% a year on customers and a little over 10% a year on contracted growth. We have a definite growth window here."

Before EPCOR was awarded the Natural Gas franchise for the Kincardine/Bruce area, the energy mix was approximately 60% propane, 25% electricity and the remainder oil and wood.

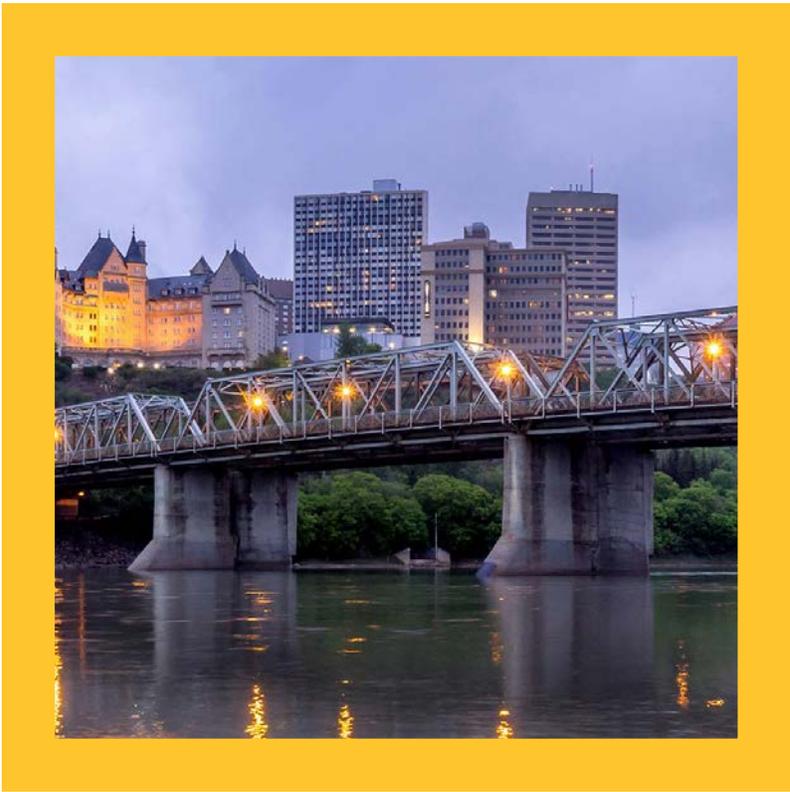
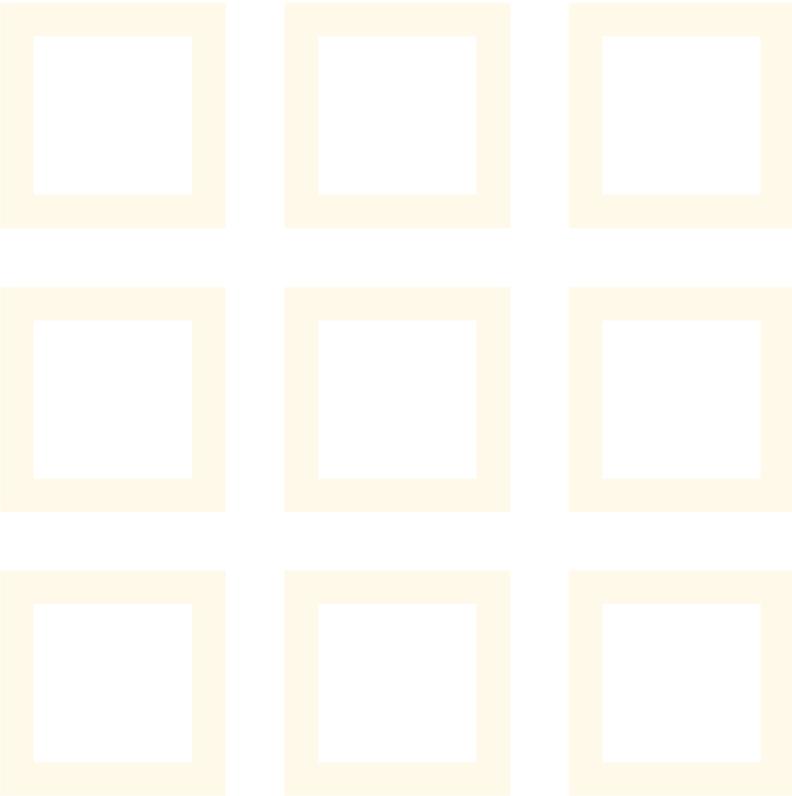


The growth window is also open in Ontario, but you still need incentives to get customers there. For example, EPCOR committed to a 10-year guaranteed rate, excluding annual inflation, to offer customers migrating to natural gas a higher comfort level. The connection pace is exceeding expectation so far, even if, as in Texas, some are less inclined because of the conversion cost. Nevertheless, says Robinson, there has been strong uptake. “We are seeing many of those propane and oil customers actively converting,” says Robinson. “There are savings to be had but also peace of mind associated with switching to a cleaner fuel.”

EPCOR has plans to continue its expansion in Ontario and Texas, but it must be sustainable. Texas is a volatile market and Ontario much less so, but in both places the way EPCOR is connecting with customers is through highlighting its standards, its track record and its ability to connect both gas lines and communities. It remains the foundation of EPCOR’s success. “What we do resonates with communities,” says Robinson. “And we have a good sense of what success means for a community.”

“We are seeing many propane and oil customers in Ontario convert to natural gas. There are savings to be had, but also the peace of mind associated with switching to a cleaner fuel.”





## SCOPE OF REPORTING

Data in the report and ESG Scorecard:

- Includes aggregate environmental performance data for EPCOR-owned and leased operations.
- Excludes environmental performance data for utilities operated by EPCOR personnel for a client.
- Includes data for all EPCOR operations with respect to governance, health and safety, workforce, community and financial data.

Data referenced in the ESG Scorecard is as of December 31, 2021. Other information in the report is current as of the date of publication in May 2022. Throughout the report, references to Sustainability Accounting Standards Board (SASB) or Global Reporting Initiative (GRI) standards indicate instances where data or subject matter relates to measures within the standard being referenced, or to the topic addressed by that standard, and does not indicate that the report provides data for all aspects of the referenced standard.

## MATERIAL ASSUMPTIONS AND DATA LIMITATIONS

### HUMAN CAPITAL – WORKFORCE DEMOGRAPHICS

The social section of the ESG Scorecard reports on diversity and inclusion attributes within EPCOR’s workforce companywide. Information for Canadian employees is based on voluntary self-reporting, with some employees not making a disclosure, which is a limitation of the data on visible minority representation.

## GREENHOUSE GAS EMISSIONS

EPCOR engaged Brightspot Climate Inc. to conduct a review of the company's 2021 greenhouse gas emissions data, in accordance with the ISO 14064 Part 3 standard. Their review concluded that, at a reasonable level of assurance, the statement for Scope 1 and Scope 2 emissions is materially correct and presented fairly in accordance with the relevant criteria.

EPCOR's reported Scope 1 and Scope 2 greenhouse gas (GHG) emissions follow the classifications contained in the Greenhouse Gases Protocol issued by the World Resources Institute. The assumptions and methodologies used in emissions reporting include:

- Grid intensity values used in the calculation of emissions from electricity consumption. These values are unique to each province or state and were obtained from the most updated data made available by the US Environmental Protection Agency (April 2021) and Canada's National Inventory Report (April 2021). Due to lags in reporting by these agencies, and the de-carbonization of grid power supplies, grid intensity values are subject to retroactive adjustments that are likely to lead to downward restatements of historical emissions in future reports. Both publications reference grid intensities for the year 2019, and these values were used to calculate 2020 and 2021 emissions.
- The calculation of nitrous oxide (N<sub>2</sub>O) emissions from the wastewater treatment processes at the Gold Bar Wastewater Treatment Plant in accordance with National Pollutant Release Inventory (NPRI) methodologies prescribed by Environment Canada, based on measurement of nitrogen loading levels in influent, and the measurement of influent and effluent volumes.
- The estimation of nitrous oxide (N<sub>2</sub>O) emissions from the wastewater treatment processes in EPCOR USA operations based on indexes calculated for Gold Bar Wastewater Treatment Plant and the measurement of influent and effluent volumes.
- The inclusion of CH<sub>4</sub> and N<sub>2</sub>O emissions associated with the combustion of biogas from wastewater treatment processes, and the exclusion of CO<sub>2</sub> emissions thereof.
- The use of the IPCC Fifth Assessment Report Global Warming Potential (GWP) factors (2019), rather than the GWP values from the 2014 IPCC Assessment that are currently referenced in GRI standard 305 and SASB Code IF-UE-110.
- The exclusion of GHG contributions from the sewer system, wastewater/sludge lagoons, and the land application of biosolids, as these have not been fully assessed and may not be material or quantifiable with certainty.
- In adherence to the Greenhouse Gas Protocol, the electricity line losses from the overall Distribution and Transmission grid in Edmonton and Collingwood have been calculated and identified as part of the overall Scope 2 emissions of EPCOR as utility owner. Emissions from line losses totaled 174,578 tonnes CO<sub>2</sub>e in 2021. However, as the regulatory construct does not provide sufficient control for utility investment in line loss reduction opportunities, this portion of the Scope 2 is excluded from the Scorecard and from EPCOR's emissions subject to the net zero goal.

Some of the excluded sources mentioned above may be included in future reports or as data is made available. EPCOR expects that future updates to historic grid intensity values will result in revisions to the company's Scope 2 and total greenhouse gas emissions, with final values lagging by two years.



## EPCOR'S CONSOLIDATED ESG SCORECARD

This table consolidates EPCOR's ESG Scorecard — a simplified selection of performance measures, performance data, and targets aligned to the ESG factors rated most material to the company.

EPCOR's executive and employee compensation includes performance-based short and mid-term incentives, as further described on pages 42 to 60 of the 2021 Annual Information Form. The ESG Scorecard includes a number of targets and performance measures, some of which are used to determine the value of incentive-based pay. In addition, certain other ESG-related targets and measures are set for each specific line of business, geography, operating unit or individual.

In addition to the endnotes provided in the ESG Scorecard, the [Scope of Reporting](#) commentary provides additional information on the scope of data, material assumptions, assurance processes and the range of uncertainty for certain data.

The references to Sustainability Accounting Standards Board (SASB) or Global Reporting Initiative (GRI) standards indicate instances where ESG Scorecard data or subject matter relates to measures within the standard being referenced, or to the topic addressed by that standard. In some instances, this indicates that the ESG Scorecard entry is disclosing data against a single metric, while the relevant standard also contains additional metrics. In other instances, this indicates that the disclosure is related to the subject matter of the standard being referenced, but may be presented differently or use a different unit of measure. Where additional information is available in the ESG Report narrative that relates to other elements of a standard or to the subject matter in general, cross-references are provided to guide readers to the relevant content.

# CORPORATE GOVERNANCE

	2017	2018	2019	2020	2021	TARGETS AND COMMENTARY
<b>G1 BOARD INDEPENDENCE</b> Percentage of Directors who are independent under National Instrument 58-101	100%	100%	100%	100%	100%	At least 67% of Directors are independent under National Instrument 58-101.
<b>G2 BOARD GENDER DIVERSITY</b> Share of board seats held by women <i>GRI 405-1(a)(i)</i>	36%	36%	36%	36%	36%	At least 30% of board seats are held by women.
<b>G3 EMPLOYEE ETHICS TRAINING<sup>A</sup></b> Percentage of eligible employees who have received training on <i>EPCOR's Ethics Policy</i> <i>Relates to GRI 102-16 reporting recommendation 3.1.2</i>	N/A	100%	N/A	100%	N/A	EPCOR conducts ethics training every second year. 100% of eligible employees are trained.
<b>G4 ETHICS COMPLAINTS ACTIONED</b> Number of ethics complaints received and the percentage investigated or otherwise resolved	39 100%	106 100%	96 100%	80 100%	97 100%	Reporting volumes are provided for context. 100% investigated or otherwise resolved.

# ENVIRONMENT

2017 2018 2019 2020 2021 TARGETS AND COMMENTARY

## Reduce environmental footprint

### E1 NET GREENHOUSE GAS EMISSIONS<sup>B</sup>

EPCOR owned and leased, company-wide Scope 1 and 2 emissions net of offsets (tCO<sub>2</sub>e)

Relates to subject of SASB Code IF-EU-110a.1, GRI 305-1(a) and GRI 305-2(a)

Not reported Not reported Not reported 204,553 215,651

2025: 50% reduction in net Scope 1 and Scope 2 CO<sub>2</sub>E emissions from 2020 levels.

2035: 85% reduction in net Scope 1 and Scope 2 CO<sub>2</sub>E emissions from 2020 levels.

2050: Net zero CO<sub>2</sub>E Scope 1 and 2 emissions.

[See pages 31-36 of the 2020 report](#) for a discussion of management's approach to emission reduction, and [pages 17 and 18](#) of this report for a performance update.

### E2 PROTECT RIVER WATER QUALITY

Annual discharges of suspended solids into the North Saskatchewan River from land drainage, wastewater treatment operations and combined sewer overflows (kg/day)

37,092 28,797 39,688 42,216 Not reported

Performance data only, with reporting lagging by one year.

[See pages 48-49 of the 2020 report](#) and [page 20](#) of this report for information on work to protect river water quality and discussion of source water strategies (related to SASB Code IF-WU-440a.3).

## Resilient utility infrastructure

### E3 IMPLEMENTATION OF EDMONTON FLOOD RESILIENCE UPGRADES

Protect utility assets and critical infrastructure from river flooding to at least a 1:200-year flood event (percentage implemented)

N/A Initiated 1% 4% 11%

Complete asset protection and relocation, and backflow prevention, by 2023<sup>c</sup>. Embankments 100% complete by December 2027.

[See pages 42-43 of the 2020 report](#) and [page 21](#) of this report for more information.

### E4 WATER LOSS<sup>D</sup>

Limit the percentage of treated drinking water lost due to transmission and distribution line leaks and failures, and inaccurate meters (US and Canada combined).

6.0% 6.5% 6.1% 6.2% Not reported

Performance data only, with reporting lagging by one year.

See [page 22](#) of this report for an update on this metric.

Relates to SASB Code IF-WU-140a.2

	2017	2018	2019	2020	2021	TARGETS AND COMMENTARY
<b>Community resilience and environmental footprint</b>						
<b>E5 WASTEWATER REUSE<sup>E</sup></b> Percentage of treated effluent reused or used to recharge aquifers (USA only)  <i>Relates to SASB Code IF-WU-440a.2(1)</i>	92.4%	95.7%	96.7%	94.4%	Not reported	90% beneficial reuse and/or recharge of treated effluent by existing U.S. operations, and a commitment to set targets for each new, expanded or acquired U.S. wastewater operation in arid regions. Data lags by one year.  See <a href="#">page 22</a> of this report for an update on this performance metric.

## SOCIAL

	2017	2018	2019	2020	2021	TARGETS AND COMMENTARY
<b>Health and Safety</b>						
<b>S1 TOTAL RECORDABLE INJURY FREQUENCY</b> Continuous reduction in total incidents (TRIF)  <i>SASB Code: IF-EU-320a.1(1) GRI 403-9(a)(iii)<sup>F</sup></i>	1.12	2.35	1.44	1.03	1.31	A safety-first culture, driving to zero incidents.  See <a href="#">page 35</a> of this report for an update on this performance metric.
<b>S2 LOST-TIME INJURY FREQUENCY</b> Continuous reduction in lost-time incidents (LTIF)	0.16	0.35	0.13	0.06	0.16	A safety-first culture, driving to zero incidents.
<b>S3 LEAD MITIGATION</b> Number of high priority lead service lines replaced as part of EPCOR's updated 2019 Enhanced Lead Mitigation Strategy, and not including EPCOR's lead replacement programs prior to this date.	N/A	N/A	Pilot program year	69	144 (213 cumulative)	Edmonton households comply with new Health Canada guidelines for lead at the tap by 2025, prior to provincial regulation. EPCOR has replaced 360 high priority LSLs by 2023, and commissioned the orthophosphate system.  See <a href="#">page 37</a> of this report for an update on this performance metric.

	2017	2018	2019	2020	2021	TARGETS AND COMMENTARY
<b>Human Capital</b>						
<b>S4</b>	<b>EMPLOYEE ENGAGEMENT</b>					
	Employee engagement as measured in a companywide survey. In 2020, top quartile performance compared to similar companies was 75% or better and top decile performance was 82% or better					
	N/A	78%	N/A	77%	N/A	Top decile performance against a group of comparator companies by 2023 (the next survey date).
<b>S5</b>	<b>TOTAL TURNOVER</b>					
	Employee departures for all reasons including retirement, divided by year-end headcount					
	6.8%	6.1%	8.6%	5.4%	8.4%	Performance data only. <a href="#">See pages 71-72 of the 2020 report</a> for discussion of EPCOR's workplace culture and initiatives.
	<i>Relates to GRI 401-1(b)<sup>6</sup></i>					
<b>S6</b>	<b>DIVERSE AND REPRESENTATIVE WORKFORCE</b>					
	EPCOR's workforce is reflective of the diversity of the communities it serves					
	<ul style="list-style-type: none"> <li>▪ Women in workforce (Canada and USA)</li> <li>▪ Visible minorities (Canada)<sub>H</sub></li> <li>▪ Visible minorities (U.S.)</li> <li>▪ Women in senior leadership (Canada and U.S.)</li> </ul>					
	27.4%	27.6%	28.4%	28.5%	28.5%	Performance data only. <a href="#">See pages 71-72 of the 2020 report</a> and <a href="#">page 40</a> of this report for a discussion of EPCOR's workforce.
	15.1%	15.2%	16.4%	16.9%	17.3%	
	34.2%	35.3%	36.6%	34.6%	35.1%	
	23.2%	22.4%	21.1%	21.4%	21.4%	
	<i>Relates to GRI 405-1(b)(i) and b(iii)</i>					

## Customers

<b>S7</b>	<b>CORPORATE REPUTATION</b> EPCOR's reputation score in Edmonton compared to utility peers.	+5	+6	+7	+7	+5	Exceed utility peer scores by 5 points or more.
<b>S8</b>	<b>CUSTOMER SATISFACTION</b> Number of customer satisfaction metrics that meet or exceed full-year satisfaction targets set by utility regulators.	4 of 4	4 of 4	4 of 4	5 of 5	5 of 5	Meet or exceed regulated targets in all surveys.
<b>S9</b>	<b>REASONABLE COSTS<sup>i</sup></b> Operating costs per customer (rounded to nearest dollar) as defined by the EPCOR's Mid-Term Incentive Plan and approved by the Board of Directors. <sup>i,ii</sup>	Not reported	Not reported	\$157	\$160 1.9%	\$159 0.7%	Three-year average operating costs per customer increase by 2% or less. The 2020 percentage change reported is for a single year. The 2021 percentage change is a two year average, using 2019 as the base year.
<b>S10</b>	<b>RELIABLE POWER DISTRIBUTION<sup>j</sup></b> Number of minutes per year that power service is interrupted (SAIDI, all electricity operations combined).  <i>SASB Code: IF-EU-550a.2(1)</i>	59	53	60	50	57	Performance data only. <a href="#">See pages 74-75 of the 2020 report</a> for discussion of EPCOR's grid reliability programs.
<b>S11</b>	<b>SAFE WATER</b> Number of acute health-based drinking water violations from EPCOR controlled activities.  <i>SASB Code: IF-WU-250a.1(1)</i>	0	0	0	0	0	Zero violations.
<b>S12</b>	<b>PROMPT SERVICE</b> Percentage of drainage maintenance calls resolved within 24-hours (Edmonton)	N/A	N/A	N/A	97.2%	95.7%	Meet or exceed regulated target of 80% of calls resolved within 24 hours.

**S13 ENGAGEMENT<sup>K</sup>**

The number of community participants in engagement processes conducted at the “Advise” level or higher in the IAP2 engagement spectrum.

Not reported	Not reported	980	2,178	2,606
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Performance data only. See [pages 21 and 44-47](#) of this report for highlights of 2021 activities, [pages 83-88 of the 2020 ESG report](#) for discussion of EPCOR’s overall public engagement program, and [pages 9-10 of the 2020 report](#) for discussion of the stakeholder engagement process for the ESG Report (related to GRI 102-43).

**S14 ECONOMIC VALUE DISTRIBUTED**

Direct economic value delivered to stakeholders, including suppliers, employees, providers of capital, governments and community organizations.

\$2.4 B	\$2.5 B	\$2.3 B	\$2.5 B	\$2.9 B
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Performance data only. [See pages 89-91 of the 2020 report](#) and [page 48](#) of this report for discussion of EPCOR’s direct economic value delivered to stakeholders, including suppliers, employees, providers of capital, shareholder, governments, and community organizations (related to GRI 201-1).

**S15 COMMUNITY INVESTMENT<sup>L</sup>**

Historical data: cash donations and sponsorships only. Future data will include eligible in-kind contributions, implementation costs, and volunteering.

\$1.6 M	\$2.0 M	\$2.1 M	\$3.3 M	\$3.0 M
0.7%	0.7%	0.8%	1.1%	1.0%

Achieve Imagine Canada’s *Caring Companies* designation by 2023.

**S16 INDIGENOUS RELATIONS**

Progressive Aboriginal Relations (PAR) certification by the Canadian Council for Aboriginal Business, and achievement levels.

N/A	N/A	N/A	Member	Member
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Achieve PAR “Committed” status by 2021, achieve “Bronze” level performance certification by 2023, and set targets for higher level performance once “Bronze” level status achieved.

[See pages 81-82 of the 2020 report and page 47](#) for an update on our work towards achieving the “committed” status level.

<sup>K</sup>G3: For some employee training records, data was obtained from summary files rather than original sources.

<sup>L</sup>E1: Material assumptions and data limitations for this entry are listed in the Scope of Reporting, including information on the re-statement of 2020 results, and the expected future re-statement of 2020 and 2021 results based on final grid intensity factors used to calculate emissions from purchased electricity. This topic is also discussed in the Progress Update at page 18 of this report. As described in the Scope of Reporting, Scope 2 emissions from electricity line losses totaling 174,578 tonnes CO<sub>2</sub>e in 2021 are excluded from the Scorecard and from EPCOR’s emissions reduction target, and EPCOR has utilized the 2019 Global Warming Potential values from the IPCC assessment rather than the 2014 values currently referenced in the noted SASB and GRI standards.

<sup>E</sup>E3: Due to refinements to the project design and schedule, including the timing of staggered shutdowns to the two water treatment plants, the phases of work originally targeted for completion in 2023 are now expected to be complete by 2024.

<sup>E</sup>E4: Data is sourced from a mix of regulatory filings and facility operating records. For some facility operating records, data was obtained from summary files rather than original sources. The unit of measure for water loss selected as most relevant by EPCOR (percentage) differs from the relevant SASB standard (cubic metres).

<sup>E</sup>E5: Data is sourced from a mix of regulatory filings and facility operating records. For some facility operating records, data was obtained from summary files rather than original sources. The unit of measure for wastewater reuse selected as most relevant by EPCOR (percentage) differs from the relevant SASB standard (cubic metres).

<sup>S</sup>S1: The injury data reported aligns with the rate statistic specified in GRI standard 403-9(a)(iii). The ESG Scorecard does not report on the other element of GRI standard 403-9(a)(iii), the total number of injuries in the reporting period.

<sup>S</sup>S5: The total turnover data reported aligns with a portion of the data specified in GRI standard 401-1(b), and does not additionally report on other data specified in that standard, including reporting of employee turnover by age group, gender, and region, by both total number and rate.

<sup>S</sup>S6: Data limitations for a portion of this metric [Visible minorities (Canada)] are listed in the Scope of Reporting. Employee hiring or departures near year-end may not be fully reflected in these results, but any impact on reported results would be non-material.

<sup>S</sup>S9: For some information, data was obtained from summary files rather than original sources.

<sup>S</sup>S9: Information on the use of this metric is found in EPCOR’s Annual Information Form.

<sup>S</sup>S9: 2021 two-year average cost increase of 0.7% is based on the 2020 year over year increase of 1.9% and the 2021 year over year decrease of 0.6% ((1.9%-0.6%)/2). The average costs reported are a blend of changes in US dollar costs for US operations, and Canadian dollar costs for Canadian operations. The blended result shown is not converted into Canadian dollars.

<sup>S</sup>S10: Prior to October 1, 2018, electricity reliability data is for Edmonton only. From October 1, 2018, the data incorporates performance from EPCOR’s Collingwood, Ontario operations. Data from EPCOR’s Collingwood operations is preliminary, and subject to re-statement based on annual regulatory filings which occur after the finalization of the ESG Progress Update.

<sup>S</sup>S13: For some information, data was obtained from summary files rather than original sources.

<sup>S</sup>S15: For 2021, EPCOR USA community contributions were removed from the reported data in order to align with the Imagine Canada Caring Communities definition, which targets Canadian community contributions equal to 1% of Canadian pre-tax operating income. Donations and programs in EPCOR USA operations are discussed in pages 42 and 43 of this report.