

LEADING FOR THE FUTURE

EPCOR'S 2022 ESG PERFORMANCE UPDATE



ENVIRONMENT, SOCIAL AND GOVERNANCE REPORTING



Ceremony returned to the land where the E.L. Smith Water Treatment Plant and kisikāw pisim solar farm are located. This area is former reserve land of Enoch Cree Nation, taken from them in 1908.

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 Sauteaux, and later the Métis.

LEADING FOR THE FUTURE:

EPCOR is leading by listening to the communities that we serve, and working with them to create a sustainable future.

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.

For additional information about EPCOR’s principal risks, see “Risk Factors and Risk Management” in our [Management's Discussion and Analysis](#) for the year ending December 31, 2022. The risks and material factors identified could cause actual results to differ materially from the conclusions, forecasts or projections in the forward-looking information.

EPCOR’s financial reports are filed on [SEDAR](#) and can be found on [EPCOR’s website](#).

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.

All currency references are in Canadian dollars unless otherwise noted.

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“One of the four pillars of EPCOR’s strategy is people. We are fortunate to have a talented team of executives, and depth throughout the company.”

MESSAGE FROM THE BOARD CHAIR

EPCOR’s sustainability reporting reflects our commitment to providing stakeholders with the information they need to evaluate how the company is managing its material risks and capturing opportunities, both now and for the long-term.

We continue to report against 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 metrics are grounded in a rigorous materiality assessment that included input from a wide range of stakeholders, and which aligns performance measures to the ESG factors most relevant to stakeholders and the company.

One of the four pillars of EPCOR’s strategy is people — including our work on professional growth and development, and succession planning. In early 2023, we announced that President & CEO Stuart Lee planned to retire following the completion of the company’s Annual General Meeting in May 2023, and that upon Stuart’s retirement, Senior Vice President Commercial Services John Elford would become EPCOR’s next President & CEO.

The announcement capped a robust and detailed succession process led by the Board of Directors — a process that built on EPCOR’s longstanding succession planning work at all levels of the organization. We are fortunate to have a talented team of executives and depth throughout the company.

During Stuart’s seven-and-a-half-year tenure, there has been significant asset, net income and dividend growth. Stuart’s positive impact on business performance has been matched by his focus on creating value for stakeholders, including EPCOR’s adoption of a consolidated scorecard of sustainability measures through its ESG reporting. The strategies, targets, and team that Stuart has developed will serve the organization well as it enters its next phase.

John has been a key member of EPCOR’s leadership team, with a track record of success across leadership roles in electricity, water, corporate services and commercial services. The board looks forward to working with John and is confident in his ability to guide EPCOR through its next phase of growth, and the continued execution of the company’s strategy.

Janice Rennie
Chair, Board of Directors

MESSAGE FROM THE PRESIDENT & CEO

In 2022, EPCOR's people achieved record-best safety results, a North American leadership position in industrial water, and strong operational, sustainability, and financial performance.

We continued to build momentum on our sustainability journey, advancing our performance towards the targets we set in our *2020 Leading for the Future* ESG report.

With the commissioning of the kīsikāw pīsim solar farm in September 2022, we made progress towards our ambitious target of reducing net greenhouse gas emissions 50% by 2025, and our goal of fostering and sustaining strong relationships with Indigenous Peoples. We were honoured by Enoch Cree Nation's gift of an Indigenous name for the solar farm. In the spirit of reconciliation, EPCOR continues to seek opportunities to reconnect Enoch Cree Nation and its people to this land.

In our U.S. operations, we invested more than US \$100 million in new and expanded facilities that will help us achieve continued high rates of wastewater reuse, protecting water supplies in a drought-affected region. Since 2012, EPCOR's U.S. operations have returned more than 18.2 billion gallons of water to the natural water cycle through reclamation efforts.

Mindful of the impacts on our customers from inflation, we continued to focus on operating efficiency. We contained operating cost increases per customer to an average of 1.5% per year from 2020 to 2022, even as we advanced investments in climate resiliency and energy transition.

These are just some of the initiatives featured in this 2022 ESG Performance Update, which highlight the progress and the challenges on our sustainability journey.

Our success in all of this work comes down to our people — Team EPCOR. It's their dedication that drives our mission to provide clean water and safe, reliable energy, and which is elevating us to being a premier essential services company.



Thanks to their efforts, we were honoured to again be named one of Canada's Best 50 Corporate Citizens by *Corporate Knights* magazine, and to advance into Committed status with the Canadian Council of Aboriginal Business's Progressive Aboriginal Relations certification program. Across our footprint, we were recognized as a great place to work — named one of Phoenix's Best Places to Work, one of Alberta's Top 75 Employers, and one of Canada's Top Employers for Young People.

It has been an honour to lead EPCOR, and I would like to thank each one of the 3,500 members of Team EPCOR for their commitment to our purpose. As we prepared for my retirement over the past several months, I worked closely with incoming President & CEO John Elford, the leadership team, and the board to prepare for a smooth transition. John has been a key member of EPCOR's leadership team, and has a deep understanding of our organization, culture, and businesses. With his strong relationships within the company and with external stakeholders, I am confident he and Team EPCOR are well positioned for continued success.

Stuart Lee
President & CEO

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 environmental 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.

EPCOR'S KEY ESG FACTORS

The 2022 Performance Update marks the second performance update since the initial report was published, and provides a look at the progress EPCOR has made over the past year.

EPCOR's ESG report is produced on a three-year cycle. Another full version will be published in 2024 once a review of materiality factors is complete, and we are assured that metrics and targets remain aligned with company and stakeholder priorities.

EPCOR expanded its ESG reporting in 2020 under the leadership of its board and management. As a first step, a materiality assessment was completed to identify metrics and targets. These related to issues that affected EPCOR's business, and the ESG factors most relevant to stakeholders and the company.



EPCOR's key ESG factors were identified after consulting with a variety of stakeholder groups.

TOP RANKED FACTORS

AFFORDABILITY AND ACCESS TO UTILITY SERVICES

COMMUNITY RELATIONS

PUBLIC HEALTH AND SAFETY AND EMERGENCY MANAGEMENT

PHYSICAL CLIMATE RISK

WATER AND WASTEWATER MANAGEMENT

HIGH RANKED FACTORS

BUSINESS ETHICS AND CORPORATE GOVERNANCE

GREENHOUSE GAS EMISSIONS

RIGHTS OF INDIGENOUS PEOPLES

WORKFORCE HEALTH AND SAFETY

HUMAN CAPITAL MANAGEMENT

As part of the process, interviews were conducted with equity and debt holders, labour unions, Indigenous communities, multi-stakeholder groups involved with watershed protection and broader environmental issues, and employees across EPCOR's geographies. Through public advisory committees, consultation efforts, and engagement research, customer priorities were also identified.

This work resulted in EPCOR's 2020 report, and metrics and targets being structured around 10 key ESG factors.

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 UN's Sustainable Development Goals. For further details, [visit pages 11 to 13 of EPCOR's 2020 ESG Report](#).





GOVERNANCE

“For EPCOR, demonstrating strong sustainability performance over time is key to long-term success.”



Jennifer Addison, Senior Vice President, Sustainability, General Counsel and Corporate Secretary

In 2022, EPCOR once again earned the distinction of being ranked one of Canada's Best 50 Corporate Citizens.

This recognition by *Corporate Knights* reflects EPCOR's continued high performance across a diverse suite of sustainability measures.

At the foundation of this performance is the integration of sustainability objectives into the company's governance and planning processes, and the cascade of these accountabilities into operational plans and individual performance targets.

Each year, EPCOR's board approves a refreshed long-term plan for the business. Historically, the objectives of this strategy focused on value creation for EPCOR's shareholder, the City of Edmonton.

Over the past several years, the strategy has evolved into a broader set of objectives and priorities, with the goal of ensuring Team EPCOR is working together to achieve the company's purpose, and create value for the company's stakeholders as we fulfill our mission to provide clean water and safe, reliable energy.

EPCOR's long-term plan continues to be organized around four strategic priorities: people, community, operational excellence, and growth. We take a holistic approach to describing success, setting out an "end state" vision for Team EPCOR in each of these areas.



UPDATES TO THE LONG-TERM PLAN

Building on this work, in 2022 we made further updates to our strategy that aligned long-term plan performance targets to our ESG Scorecard, and incorporated additional ESG factors into the risk appetite statement we use to evaluate business planning decisions, including growth opportunities.

Work in the 2022 planning cycle included a focus on effective risk management. Management and the board examined areas of existing and emerging risk, including grid transformation, threats to source water, water scarcity risk for our customers in the Southwest U.S., supply chain disruptions, and the management of EPCOR's growth in the commercial water sector. Activities to effectively manage many of these risks are discussed in this 2022 ESG Performance Update.

SUSTAINABILITY AT EPCOR

There is increasing adoption of ESG frameworks, as companies work to meet stakeholder expectations by expanding the metrics used to define success and manage risk. Although "ESG" as a brand has come under criticism, EPCOR's investors and stakeholders retain a strong interest in the comprehensive disclosure of risks and risk management practices, and information that demonstrates the company is effectively managing its material risks and capturing opportunities over near- and long-term time horizons.

For EPCOR, demonstrating strong sustainability performance over time is key to long-term success. All four focus areas of the long-term plan are interconnected and contribute to our sustainability performance. To achieve EPCOR's targeted end state, the principles of environmental stewardship, social responsibility, and excellence in governance practices must continue to be integrated across the company.

Part of this integration is the inclusion of sustainability metrics in EPCOR's short-term (annual) and medium-term (three-year) incentive plans.

Annual targets for the company and its business units weigh performance across four categories: financial performance, health and safety, operating efficiency, and customer and stakeholder, with non-financial metrics comprising more than half the target weighting.

Medium-term targets for executive leaders are based on cumulative net income, and success in limiting increases in per customer operating costs. This reflects the importance the board and management place on achieving both strong financial performance and affordability for EPCOR's customers.

The board governs the annual cycle of performance target setting, performance data verification, and public reporting, receiving independent expert advice and support throughout the process.

THE EVOLUTION OF STRATEGY AND REPORTING

EPCOR undertook a materiality assessment in 2019 to determine the ESG factors most important to its stakeholders. These factors informed the creation of the ESG Scorecard that was published in the 2020 ESG Report and in the 2021 and 2022 performance updates.

In 2022, work began on the development of the second-generation of EPCOR's ESG Scorecard, and the updating of the company's sustainability strategy. A new materiality assessment process was begun, through which a wide range of external stakeholders and internal leaders will inform the selection of the ESG factors that will structure the second generation of target-setting and reporting.

We expect to continue this three-year cycle of target-setting and performance reporting, with an updated ESG Scorecard to be published in the company's 2023 ESG Report, followed by two years of performance updates.

Achieving success across a diverse set of sustainability measures is expected to support the company's reputation and relationships with stakeholders, particularly due to the broad support for investments in community resilience and action to manage inflation in customer costs.



PERFORMANCE UPDATES

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

Good corporate governance has been a cornerstone of EPCOR's growth since its inception in 1996. The company consistently delivers value to stakeholders and a stable and increasing dividend. The board has always placed a high priority on recruiting independent directors, who bring strong leadership experience, diverse perspectives, and uninfluenced guidance.

EPCOR's commitment to gender diversity, across its operations, starts at the top. There are four female directors, representing 40% of the board's membership. This exceeds the national average among TSX-listed companies in Canada, which stood at 26% in 2022. EPCOR's current board chair, Janice Rennie, was appointed to her position in 2018.

Another constant at EPCOR, whether at the board table or site field office, is a commitment to upholding the highest ethical standards. In 2022, the company followed up on 100% of the complaints filed under its ethics or respectful workplace policies by employees, those working with EPCOR, customers, and the general public. Anonymous reporting channels exist and whistleblowers are protected by a no retaliation policy.

A far-reaching training program for office and field employees is also in place. By September 2022, a total of 3,342 employees had completed their biennial ethics policy 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:

40%

(four out of 10) 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 122 complaints received in the past year).

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

[For the complete ESG Consolidated Scorecard see page 65](#)



THE LONG-TERM PLAN

EPCOR's priorities demonstrate clear ties to our ESG objectives.



PEOPLE

Attract and retain high-quality and diverse employees; continue to foster a culture that drives excellence in employee safety, wellness and engagement; and mature our hybrid work.



OPERATIONAL EXCELLENCE

Support the transition to a low-carbon economy through grid transformation initiatives; continue to protect source water and develop resilient infrastructure systems; and implement new technologies and innovations, in support of our vision for the utility of the future.



COMMUNITY

Seek efficiencies through continuous improvement, business unit synergies and technology to control costs and keep rates affordable for our customers; continue to reduce our environmental footprint through operation of the kīsikāw pīsim solar farm and energization of the Hilda Wind Farm; and prudently manage risks, such as those related to government and regulatory concerns, extreme weather, health, safety and environmental performance, and new business integrations.



GROWTH

Invest in our regulated business lines to maintain system reliability and meet the needs of our customers; and pursue growth opportunities in Canada and the United States based on strategic fit, and leveraging our experience and expertise within our industries.





The Britannia Mine Water Treatment Plant,
Howe Sound, B.C.

*Marine life has returned to
British Columbia's Howe Sound
thanks to EPCOR's award-winning
water treatment plant.*

VITAL PARTNERSHIPS

COLLABORATION IS EPCOR'S OXYGEN

by Curtis Gillespie

Everything on this earth exists in partnership. Philosophy and science remind us of this on a daily basis, and it applies as much, if not more, to the challenges we face as to the joys we share. Which is why EPCOR's Britannia Mine project is such an important example of how to conduct a partnership at multiple levels, levels far beyond the details of any contract.

Howe Sound is one of the most stunning locations on the planet. Located north of Vancouver, B.C., it leads most of the way to Whistler, terminating in Squamish about 10 kilometres up the road from the old mine site and where the Britannia Mine Museum now operates. On a sunny day, it's impossible to imagine anything but perfection flowing out of this landscape.

Unfortunately, the decommissioned Britannia Mine was far from perfect. It operated from 1904 to 1974 and at its peak it was the largest copper mine in the British Empire. Nearly 60,000 people lived and worked there, which is hard to imagine today as you drive through the tiny hamlet. When operating and after it closed, the site was poisoning the Sound.

For more than 70 years, the Britannia Mine has been an ecological concern. Every year, hundreds of thousands of kilograms of heavy metals entered British Columbia's Howe Sound through contaminated acid rock drainage that came from the now abandoned copper mine. In the early 2000s, the British Columbia government realized the situation was dire. In 2004, the government issued a Request for Proposals to find a solution.

At that time, EPCOR did not have a significant track record in Public Private Partnership (P3) projects. But it did know how to handle wastewater. And, almost as importantly, how to successfully work with multiple stakeholders. Collaboration is EPCOR's oxygen. Its proposal was successful, and EPCOR was awarded the contract to build a water treatment facility and oversee operations for a 20-year period.

Vicki Campbell is a senior manager for EPCOR and worked on another successful project — to upgrade the Regina wastewater treatment plant. "What we found at Britannia," says Campbell, "was leachate from a copper mine. Like with any mine, they stockpile tailings and when the rain percolates through the soil, it turns into acid rock drainage.



It was a toxic, heavy metal mixture made up of zinc, copper, aluminum, cadmium, iron, and manganese, and it was draining straight into Howe Sound.” EPCOR created a high-density sludge water treatment facility, which uses slaked lime to gather the dissolved heavy metals in the mine water that allows the solids to settle. The resulting lime-sludge mix is removed and stored off-site. After the water's pH and turbidity levels are tested, it flows downhill into Howe Sound. EPCOR annually treats 4.2 billion litres of drainage and removes an average of 226,000 kilograms of contaminants. That’s a quarter of a million kilograms of toxins that would have otherwise ended up in Howe Sound, every year. The project is nearly 20 years old, meaning nearly five million kilograms of toxins have been kept out of the waters.

Howe Sound had once been deemed a dead zone, but the whales are back. Not only is the project environmentally successful, it’s also educational; the public can learn about the ongoing work to clean up the mine site when they visit the Britannia Mine Museum. The project has won numerous awards, including Government of British Columbia



EPCOR Senior Manager Vicki Campbell has worked on two successful P3 projects – the Britannia Mine Water Treatment Plant and the Regina Wastewater Treatment Plant upgrade.

Premier’s Award for Innovation and Excellence 2007, and the Fraser Basin Council Caring for Ecosystems Award 2006.

Eric Taylor is the EPCOR site manager for the Britannia Mine project. He’s been with EPCOR since 2020, but he was familiar with and working on the site for the prior two decades in other roles. “I’ve been aware of the issue and project since even before the RFP,” says Taylor. “When you consider it was one year to build a high-end complex plant, I think EPCOR hit most of the keynotes.”

It has been a complex project, to be sure, with an added level of scrutiny in being a Public Private Partnership (P3). It’s a project structure not always viewed positively in the public eye, but it’s the details that matter. The logic behind a P3 is simple. Large infrastructure and management projects carry considerable financial risk, and governments often wish to shield citizens (and themselves) from those risks. P3s create a scenario where the private partner EPCOR, in this case, assumes both the risk and the incentive; it will do better financially and reputationally if the project goes well. The public partner — the B.C. government — carries the responsibility of making the best choice to begin with, and then with laying out stringent performance standards and the reporting mechanisms that best combine operational flexibility and diligent oversight, while reducing financial uncertainty for the taxpayer.

“The benefits of a P3 seem fairly clear,” adds Campbell. “If it’s a company with demonstrated integrity, a good plan, and they’re financially motivated, the risk is transferred to the company and off the public purse. But not every company is willing to take on that risk because once you sign, there’s no going back. It takes a lot of skill to put these together.”

And trust. EPCOR’s relationship with the B.C. government is strong, says Taylor. And while there may be a high level of confidence, it’s underpinned by robust reporting and communications. “We provide them with monthly operating reports,” says Taylor. “And we have weekly touch-base calls with the various stakeholders and monthly check-in calls with the province’s Crown Contaminated Sites Program.”

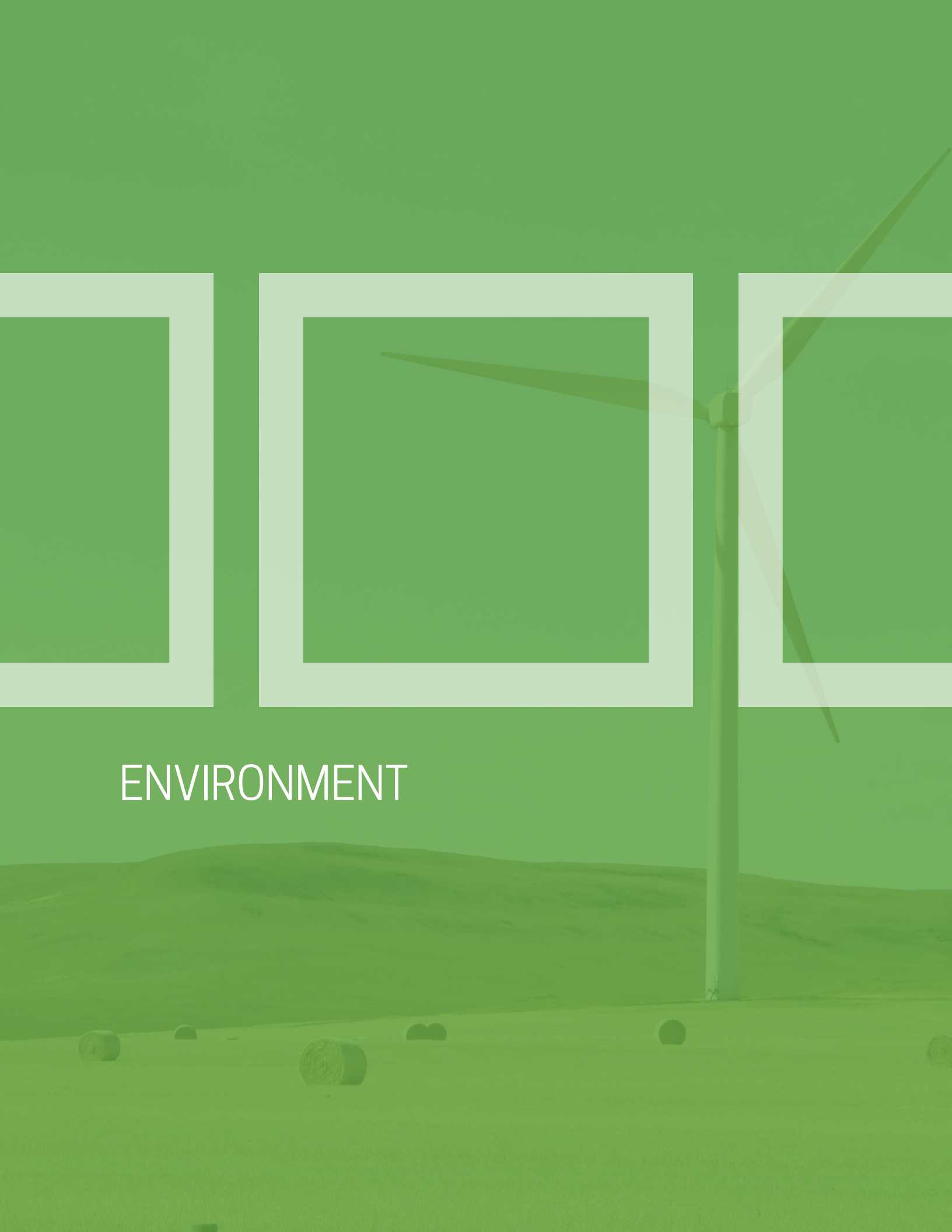


The fact that P3s are competitive is why it's essential to develop strong partnerships, a bit like climbers moving together up a rock face, where success is measured with each step and there is so much at stake. Trust and reliability are everything. The consequences of failure are stark enough with Britannia Mine that you could almost describe it as a P4 project — a Public Private Planet Partnership. There was a lot on the line for EPCOR and for the B.C. government, but it was life and death for Howe Sound and the living creatures and organisms being decimated by decades of ongoing toxic releases. The planet needed this project to work. And it has.

The success of the Britannia Mine project demonstrates many things. Most importantly, it shows that EPCOR has the expertise to turn around environmental calamities, but it also tells us that the P3 model can work when partnerships are strong enough to benefit every partner. In Howe Sound, that means not just the human partners, but the entire ecosystem. If there has ever been a project that demonstrates why partnerships must happen and just how intricately connected and inter-reliant we are, it is the Britannia Mine "P4."



The Regina Wastewater Treatment Plant was built under a Public Private Partnership (P3) between EPCOR and the City of Regina.



ENVIRONMENT



Maintaining the Brintnell Stormwater Facility in Edmonton, AB.

We take our role as environmental stewards seriously.

At EPCOR, this means reducing our greenhouse gas emissions across our North American operations, and investing in projects that reduce our environmental footprint.

It also underscores our responsibility to protect communities, utility infrastructure, and critical water sources for the future. Whether it's finding innovative ways to mitigate the risk of flood waters, or reusing water in drought stricken areas, our actions are grounded in a commitment to making our neighbourhoods more resilient to the unpredictable and extreme impacts of climate change.

PERFORMANCE UPDATES

EPCOR’s Environmental Scorecard aligns with the priorities of our Climate Change Strategy:

- reducing our environmental footprint and mitigating the impact of our operations on climate change;
- adapting our infrastructure and operations against the risks and impacts of changing climate;
- helping communities and customers to mitigate and adapt to climate change impacts; and
- pursuing opportunities to invest in infrastructure and business opportunities that support environmental sustainability.

TOWARD NET ZERO

EPCOR continues to make progress on our journey to net zero, implementing projects that move us closer to our goal of reducing net Scope 1 and 2 emissions by 50% in 2025, and 85% by 2035, compared to 2020 emissions.

Our goal is ambitious, particularly given two key drivers that we expect will put upward pressure on emissions. These drivers are growth in the populations and local economies where EPCOR operates, and the addition of new operations and service territories. EPCOR operates in some of the fastest-growing regions in North America. In 2022 alone, Alberta welcomed an all-time high of 153,000 new residents, while Arizona’s population grew by more than 94,000.

This means more homes, businesses and institutions using more energy and water, creating more demand for EPCOR services.

EPCOR continues to expand into new geographies across North America, whether extending natural gas service to communities and businesses in Ontario, or growing our footprint in the U.S. Southwest where EPCOR is among the largest private water utilities.

To meet our 2025 target, EPCOR is focused on greening our electricity supply through two major projects — the kīsikāw pīsim solar farm, which helps power our Edmonton water operations, and procurement of renewable energy attributes from the Hilda Wind Farm being developed in southern Alberta.

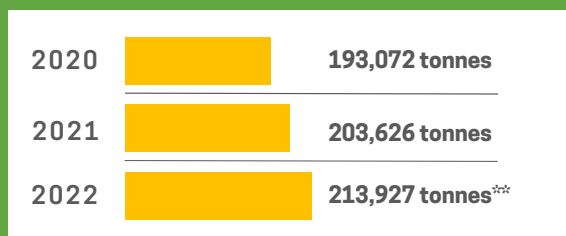
GREENHOUSE GAS EMISSIONS (tCO₂ E)

PERFORMANCE UPDATE:

213,927
TONNES

Target: 50% reduction in net greenhouse gas emissions by 2025, 85% by 2035, and net zero by 2050.*

[For the complete ESG Consolidated Scorecard see page 65](#)



* Reduction targets set from baseline 2020 emissions.

** The addition of reporting of CH₄ and NO_x emissions from our Clover Bar Lagoons increased overall GHG emissions by 3%.

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



2022 GHG EMISSIONS INVENTORY UPDATE

In previous reports, we identified several potential sources of greenhouse gas emissions that we were not yet able to quantify and include in our reporting. In 2022, we developed a methodology to reasonably estimate emissions from our Clover Bar Lagoons, based on laboratory measurements of a parameter (digestate carbonaceous biological oxygen demand) that is required to quantify emissions. These are now included in our 2022 emissions reporting, and will be going forward. The inclusion of emissions of methane (CH₄) and nitrous oxide (NO₂) from our Clover Bar Lagoons increases our overall GHG emissions by 3%.



EPCOR is acquiring renewable attributes from the Hilda Wind Farm, currently under construction in southern Alberta.

GREENING OUR ELECTRICITY SUPPLY

More than 70% of EPCOR's GHG emissions are from electricity use and defined as Scope 2 emissions. Most of this electricity is used at our water plants to treat and pump large volumes of drinking water to customers, and to move and treat wastewater.

To meet our greenhouse gas targets, we are taking steps to reduce and offset these Scope 2 emissions.

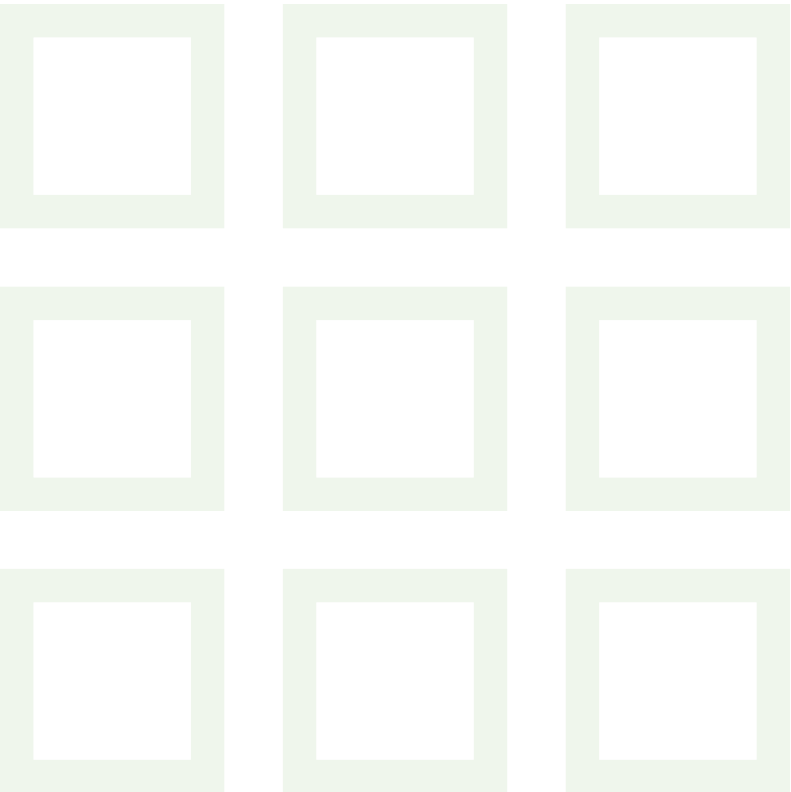
Renewable energy is now being produced at our k̄sik̄aw p̄sim solar farm, adjacent to EPCOR's E.L. Smith Water Treatment Plant in Edmonton. The solar farm was completed and energized in 2022 and started generating renewable electricity in August.

To year-end, most of the 3,100 MWh of electricity produced at the solar farm was used directly at the plant, eliminating the need to draw from the power grid. Extra electricity produced by the solar farm, 1,346 MWh, was exported to the grid. EPCOR keeps these credits to offset power use at our other Edmonton-based facilities.

The k̄sik̄aw p̄sim solar farm has earned UL Environment's ECOLOGO® Certification. This certification provides science-backed, third-party assurance that the solar farm meets rigorous, lifecycle-based environmental performance standards.

EPCOR is also procuring renewable energy attributes from the Hilda Wind Farm, currently under construction in Alberta's Cypress County. The wind farm is being developed by Energy Systems Canada with EPCOR acquiring a portion of the renewable attributes from the project for a 20-year term.

Energization of the 100 MW project and associated substation have been impacted by delays in the shipping of equipment and unfavourable weather conditions for turbine installation. The wind farm is now expected to be operational by summer 2023.



Encor by EPCOR installed 24 electric vehicle chargers — free to users in Edmonton, AB.

GHG EMISSIONS BY SOURCE (TONNES CO₂ 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	154,468	72%
Total emission credits for Kīsikāw pīsim solar farm*	787	<1%

SCOPE 1 EMISSIONS

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



Wastewater treatment processes (N ₂ O)	27,986	13%
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Natural gas and propane consumption	14,206	6.6%
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Vehicle fuels	10,077	4.7%
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Sulphur Hexafluoride (SF ₆)	7,977	3.7%
Carbon Tetrafluoride (CF ₄)		
Methane (CH ₄)		

*Emission credits calculated are only for electricity that was sent to the Alberta electrical grid. Electricity produced by the solar farm and directly used by the E.L. Smith Water Treatment Plant is not included.

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 137,743 tonnes in 2022.



The k̓isik̓aw p̓isim solar farm now powers plant operations at the E.L. Smith Water Treatment Facility in Edmonton, AB.

REFINING OUR EMISSIONS REPORTING

EPCOR's reported Scope 1 and Scope 2 greenhouse gas (GHG) emissions follow the classifications contained in the Greenhouse Gas Protocol issued by the World Resources Institute. The assumptions and methodologies used in emissions reporting are outlined on [page 64](#) of this report.

Brightspot Climate Inc. independently verified to a reasonable level of assurance the company's 2021 and 2022 Scope 1 and Scope 2 greenhouse gas emissions data, in accordance with the ISO 14064 Part 3 standard. The quantitative materiality threshold for reporting is 5% of total emissions.

Emissions data in this ESG Report is updated every year due to a two-year lag between our publication date and the release of Grid Intensity Factors by the Canadian and U.S. governments. Our numbers are reconciled against their formal findings.

The source of electricity generation, which varies in the provinces and states where we operate, determines the carbon intensity of the power we purchase from the grid. The actual grid intensity value is calculated by governments on a lagging basis. Due to the publication cycle for grid intensities, our final greenhouse gas emission totals for each year will continue to lag by two years.

The Alberta power supply is rapidly de-carbonizing. As governments finalize grid intensity values for prior years, we expect to make downward revisions to EPCOR's GHG emissions in future reports. Our 2021 ESG Performance Update referenced grid intensity values for 2019, and our 2022 ESG Performance Update uses grid intensity values for 2020, which were used to calculate electricity emissions for 2020, 2021, and 2022.

As a result, EPCOR's 2020 baseline emissions have been revised to 193,072 tCO₂E from the 204,553 tCO₂E reported in May 2022, using the updated grid intensity factors for 2020. The revised 2020 baseline number will be independently verified to a reasonable level of assurance and reflected in EPCOR's 2023 ESG Report.



A HEALTHY NORTH SASKATCHEWAN RIVER

MORE MEASUREMENT, BETTER PROTECTION FOR THE FUTURE

EPCOR is a partner in protecting the water quality of the North Saskatchewan River (NSR). As part of our commitment, we measure and report on what flows into the river, providing a way to set targets and develop plans to meet those targets. From 2009-2022 EPCOR reported on total suspended solids (TSS) discharged into the North Saskatchewan River. High concentrations of TSS can negatively affect fish, invertebrates and algae. The river is naturally high in TSS due to an abundance of silt and clay soils in the watershed. Runoff from naturalized areas carries sediment; however, land uses such as agriculture, roads, forestry, and urban environments increase both runoff and erosion, and thus TSS.

About 85% of total suspended solids that enter the North Saskatchewan River within Edmonton arrive from stormwater runoff, which includes snow melt and rainwater runoff from urban areas. EPCOR measures or estimates the annual mass of solids carried into the river from the stormwater drainage system, as well as smaller loads from sewer overflows, water treatment plants, and wastewater treatment plants. TSS from some sources are measured directly, while other sources are estimated.

TOTAL SUSPENDED SOLIDS (TSS)






Total suspended solids is a measurement of substances such as silt, clay, sand, sediment and organic matter found in water that typically come from eroded sediments. High loads of TSS naturally occur, but increase as a result of human activities such as urban development.

PROTECT RIVER WATER QUALITY

PERFORMANCE UPDATE:

44,321
KILOGRAMS / DAY

Performance Measure: Annual discharges of suspended solids into the North Saskatchewan River from land drainage, Edmonton water treatment plants, Gold Bar and Alberta Capital Region wastewater treatment plants, and combined sewer overflows (kg/day).

2018		45,205 kg/day
2019		62,743 kg/day
2020		65,245 kg/day
2021		31,312 kg/day
2022		44,321 kg/day

Recalculated data from 2018-2021 using new methodology. See Scorecard footnote E on Page 72 for more information.

CHANGES TO REPORTING

To continually improve our knowledge of river water quality, EPCOR has updated the methodology for measuring discharges. Our intention is to provide a more comprehensive picture of the sources of suspended solids entering the river from both overland sources and through the stormwater drainage system.

In this report we have gone back and recalculated numbers from 2018-2021 using our new methodology. The data now includes:

- discharges from the Rosedale and E. L. Smith Water Treatment Plants, as well as the Alberta Capital Region Wastewater Commission wastewater treatment plant;
- improved estimating of flows from unmonitored outfalls; and
- estimated stormwater flows into Wedgewood, Whitemud, Mill Creek and Horsehills creeks.





Taking water samples in Kananaskis, AB.

PERFORMANCE

The amount of solids carried into the river varies seasonally and annually, and is primarily based on the volume and intensity of rainfall and snow melt, and the impact that flow has on all aspects of the watershed and land drainage system. For example, when flows are lower, solids have more chances to settle out of the water at various parts of the system, and not enter the river.

The year 2022 had an average amount of precipitation, which translated to less suspended solids compared to the wetter years of 2019 and 2020, and a higher load compared to the drier year in 2021. EPCOR's climate change modelling predicts there will be more water at different times due to intense storm and melt events, as well as increased weather volatility and unpredictability. The overall goal for TSS is that there be no increasing trend, based on a five-year rolling average. The current measurements show no increasing trend in TSS loading into the North Saskatchewan River.

FUTURE REPORTING

TSS is just one indicator of river water quality. To provide a more complete assessment of water quality and river health, EPCOR is adding to what we measure in discharges to the river. From 2010-2022 EPCOR has reported total suspended solids. We will now also be reporting phosphorus, ammonia, nitrate and nitrite, chloride and *E. coli*, with the overall objective being no degradation of water quality in the North Saskatchewan River.

EPCOR is working to continually improve how we measure and assess water quality and the health of the North Saskatchewan River.





An open house was one of several ways EPCOR engaged the community on our flood mitigation projects for Edmonton's two water treatment plants.

PROTECTING WATER TREATMENT PLANTS FROM FLOOD RISK

Climate change is predicted to increase weather volatility and variability in many regions.

For the North Saskatchewan River, the change in weather, snowmelt and rainfall patterns is expected to increase the risk of higher flows in the winter and spring, with earlier or multiple spring runoff periods. EPCOR's water treatment plants in Edmonton — E.L. Smith and Rosedale — are situated next to the source of the region's drinking water, the North Saskatchewan River.

Our efforts today are focused on ensuring we can continue supplying Edmonton, and the more than 90 communities surrounding the city that we serve, with safe and clean drinking water.

To understand the risk, consider that the flooding in B.C. in late 2021 caused an estimated \$7.5 billion in damages, making it the most expensive disaster in Canadian history. Less than 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 disruption that flooding can bring to communities.

This is why we're taking action to protect Edmonton's drinking water in the event of a major flood by limiting potential damage to our water treatment facilities, and ensuring we can resume producing clean water as quickly as possible.

IMPLEMENTATION OF EDMONTON FLOOD RESILIENCE UPGRADES

PERFORMANCE UPDATE:

12%

PROJECT COMPLETION

Target: complete asset protection and backflow prevention by 2024, and complete flood barriers by December 2027.



MULTI-BARRIER PROTECTION FROM FLOOD RISKS

In 2021, EPCOR made a commitment to invest in flood mitigation, which has been supported by federal and provincial grant funding. Our mitigation measures and infrastructure improvements are designed to protect the Rossdale and E.L. Smith Water Treatment Plants from the impacts of a one in 500-year return period flood.

As we work toward improved robustness for the plants by 2027, there are different levels of mitigation being put in place along the way:

1. Critical Asset Protection and Relocation: Protecting key treatment infrastructure below floodwater heights.
2. Backflow Prevention: Stopping floodwater from back-flooding through process drains, preventing indoor building backups that could affect equipment and contaminate the treatment process.
3. Overland Flood Prevention: Installing barriers to connect existing high ground around the treatment plants.

The second component of work remains on track to be completed by 2024. In 2022, construction was completed on protective berms around the E.L. Smith power feed access tunnel to protect the main electrical feed from river flooding. The regulatory approval process for the flood barriers at both plants continues with the City of Edmonton and the Government of Alberta.

With more details and data in 2022 for all three components, the calculation for progress has been improved to now include scope of work, in addition to financial results.

INDIGENOUS AND COMMUNITY PERSPECTIVES

Since May 2021, EPCOR has been engaging the public and Indigenous Nations and communities to understand how we can best integrate the flood barriers into neighbourhoods and areas around the plants.

We provided nearly 20 opportunities for feedback through online and in-person workshops, sessions with communities, ceremonies, and project update meetings. These sessions yielded a set of design considerations for the barriers at each plant, which we are taking forward to detailed design in 2023.

The community engagement also highlighted the public's interest in the concurrent work we are doing to advance neighbourhood flood protection through our [Stormwater Integrated Resource Plan](#).

We will continue to engage with Indigenous Nations and communities as the project progresses. Construction of the barriers is expected to begin in 2024 and run until 2027. Visit epcor.com/floodprotection to learn more.



Several walking tours were held for Indigenous Nations and communities at Edmonton's water treatment plants.



CREATING FLOOD RESILIENT NEIGHBOURHOODS

SMARTER, GREENER SOLUTIONS



With our Stormwater Integrated Resource Plan (SIRP), EPCOR has been actively addressing stormwater flooding in Edmonton by focusing on risks unique to each neighbourhood, and by putting smarter, greener mitigation strategies in place.

Over the long-term, SIRP will mitigate flood risk across Edmonton by reducing the health, safety, financial, social and environmental risks of flooding. Future flood mitigation work will include a combination of homeowner programs, drainage system improvements, green infrastructure and planning.

In addition, we're creating a smarter stormwater network that will allow us to anticipate and react to storms in real time, using monitoring and control technology. The plan is detailed at [Community Flood Protection \(epcor.com\)](https://www.epcor.com/community-flood-protection).

The goal is to SLOW, MOVE, SECURE, PREDICT, and RESPOND to flooding events to prevent or reduce their impact. Here is an overview of some of the progress we've made in each of these five focus areas.

SLOW

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

We have identified multiple locations across Edmonton for the potential development of dry ponds. Dry ponds are designed to capture water during large-intensity rain events, hold the water within the neighbourhood until after the storm has ended, then slowly release it into adjacent drainage networks. In 2022, work continued on six dry ponds, which are in various phases of development.

Flood mitigation also included the construction of greened hectares by installing low impact development facilities and small-scale storage. Greened hectares are determined by water volume captured during any storm events and storage is different than that of dry ponds.

Dry ponds only activate storage during a major storm event. Low impact facilities are green infrastructure and include rain gardens, bioretention, soil cells, and small underground storage tanks. In 2022, approximately 37 greened hectares were installed across the city in about 20 locations.



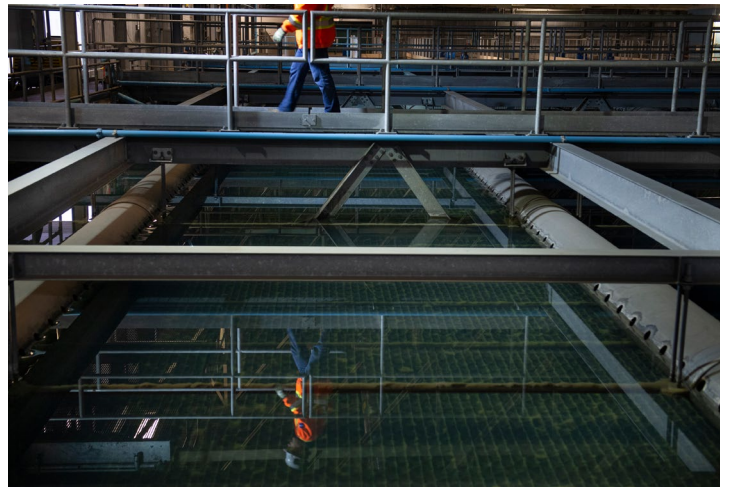


MOVE

We quickly and efficiently move excess water away from at-risk areas by increasing capacity in the drainage system, to handle peak water flow. In 2022, we focused on reducing flood risk related to ditches and swales by working with the City of Edmonton to identify historical flooding locations. Through this review, we identified a number of locations requiring regrading and culvert upgrades. A formal process to track and manage new concerns was also developed.

As well, we reviewed partially separated sewer areas to identify opportunities to reduce stormwater entry into the combined system. Construction on the storm pipe supporting the Kenilworth neighbourhood dry pond began in 2022.

SIRP is designed to reduce the health, safety, financial, social and environmental risks of flooding in Edmonton.



SECURE

We help secure individual properties in higher risk areas against sewer backups, overland flooding, and river flooding. Significant progress has been made to increase staff and resources for flood inspection and backwater subsidy programs. We provided free flood inspections for 897 residential homes and 180 multi-family properties in 2022.

EPCOR worked on creating greater flood awareness in the Rosedale community with mailouts and the promotion of free Wi-Fi water sensors for customers. This work was coordinated with flood hardening initiatives taking place at the nearby water treatment plant. Future sessions will be held in the Cloverdale and Riverdale communities.

A total of 8,000 manholes were identified for sealing and relining as part of SIRP, which will reduce inflow and infiltration of groundwater into the system. In 2022, 746 manholes were sealed, adding to the 1,000 completed since 2020. About 6,465 metres of pipe were also lined during the year.

Design was completed to automate the manual gates on river outfalls in the Cloverdale neighbourhood to improve operation during a high river water event. This will also reduce the risk of river water backing up into the stormwater pipes and into the neighbourhood. Additional automatic gates are planned for installation in other river valley neighbourhoods.





PREDICT

We predict and manage the movement of stormwater through smart sensors and technologies that are integrated into the collection system. Our SIRP Dashboard then supports our operations by providing geographic information to multiple monitoring and control systems, 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 monitoring stations across Edmonton, and underpass warning systems will be put in place.

In 2022, the federal government awarded \$22 million through its Disaster Mitigation and Adaptation Fund toward reducing flood risk and damage in Edmonton. Of this amount, \$17 million will be used to add automated gates and sensors to 117 stormwater wet ponds, turning them to smart ponds. The smart ponds will detect and manage water levels and flows, preventing flooding damage to surrounding areas.

The balance of the government funding will go toward three new backwater outfall gates that will prevent river water from flowing back into the Gold Bar Wastewater Treatment Plant during high water events.



RESPOND

We mitigate the impact of future flooding by planning and preparing for potential outcomes in advance. Our team is working with the City of Edmonton to simulate an overland, flash-flooding scenario resulting from a major wet weather event. This involves enacting procedures relating to underpass flooding and a storm operations guideline.

We also respond through the fast rollout of flood barriers, traffic diversions and public communications to protect life, safety and property. In 2022, we began coordinating with the City to refresh emergency response protocols for river valley flooding, and to identify locations and types of flood barriers suited for different parts of the river valley.

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

We lessen the impact of future flooding by planning and preparing for potential events.





Parkallen dry pond, Edmonton, AB.

Dry ponds are a key component of the Stormwater Integrated Resource Plan (SIRP), EPCOR's holistic approach to gauging flood risk in Edmonton.

DRY PONDS

IT'S NOT WHAT YOU MIGHT THINK.
... AND SO MUCH MORE

by Curtis Gillespie

Some Edmonton neighbourhoods are located in areas that once contained small lakes and sloughs that were suppressed or diverted decades ago for development. But here's the thing with water — it's still going to come up out of the ground and it's still going to fall out of the sky and it's still going to want to go where it's been going for millennia. Which can be a problem when your neighbourhood used to be a lake and you've got an old basement. So, what can be done?

Welcome to the dry pond. No, it's not an oxymoron, it's one solution EPCOR is employing as part of a broader strategy to mitigate flooding in Edmonton. The concept is deceptively simple. A dry pond is a depression in the landscape that is usable for recreation, but when storms and floods occur, they act as catchments for excess water, diverting it away from the drainage network.

The construction and engineering design is also straightforward. The hole is dug, underground infrastructure such as weeping tile is put in place, inlet-outlet pipes are fed into the depression for overflow control, drainage grates are put in place, the surface is resodded and there you have it. The dry pond then looks and functions as a park. This solution takes an enormous amount of pressure off the drainage network during extreme weather, meaning that if you live in a high-risk neighbourhood water might end up in a dry pond instead of your basement.

Dry ponds are a key component of the Stormwater Integrated Resource Plan (SIRP), EPCOR's holistic approach to gauging flood risk in Edmonton (a plan that has won numerous industry awards). There are five primary components to SIRP. They are SLOW (slowing the entry of stormwater into the drainage network), MOVE (moving excess water away from high-rise areas), SECURE (making sure individual properties are protected against flood risk), PREDICT (using technology to predict stormwater flow and management) and RESPOND (quickly reacting to storm events to protect the community).



Susan Ancel is in her 31st year working with EPCOR and is now director of One Water Planning, spearheading the company's overall water strategy. "There are multiple form factors for dry ponds. In Edmonton, we typically have a soccer field or a baseball diamond or two, maybe a running track," says Ancel. "But first you have to make sure they're in a location where the water wants to go."

Equally important, says Ancel, is nothing happens until the City and the relevant school boards approve of the location. "The first step is to confirm the pond makes sense in the designated location. Once that's done, then we go into the community and do the broader, deeper discussions."

What's almost as important as the purpose and location, however, is the process by which dry ponds are created. Yes, they are there for flood mitigation, but they also serve as soccer fields, pathways, green spaces, sledding hills, and natural habitats for flora and fauna. They are, in other words, integral aspects of a community's broader landscape. It requires listening and working with communities through communication and consultation to make sure it remains as such after the dry pond goes in, especially because the City of Edmonton and school boards are also often involved. For something so simple on the surface, there are many factors to be considered at the technical and human levels to make sure everyone from EPCOR engineers to children tobogganing in the winter are happy.

Which is where Dawn Fenske comes in. She is an EPCOR senior advisor of stakeholder engagement supporting drainage capital projects. "Dry pond projects might be similar from a construction methodology perspective," says Fenske, "but how our team engages with the communities and residents changes based on location, what exactly we're doing there, and the priorities of the community."

For all drainage capital projects, Fenske and other members of EPCOR's consultation team use a "stakeholder matrix" with roughly a dozen criteria for each project. They gather data, examine sensitivities around each criterion that helps inform the engagement process. "Our dry pond projects follow a very high level of engagement and consultation," she says. "The data and our collective experience help guide our interaction and communication with the community and identify unique sensitivities based on conversations and our other experiences in that community."

EPCOR uses a common methodology for such projects, but the characteristics of each project and community allow them to adapt and customize plans. A combination of engagement opportunities are offered, including surveys, open houses, online information sessions, chances for individual feedback, and ways for key stakeholders such as schools, school boards and community leagues to participate.

Given the intense community focus on these projects, relationships are critical. Kent McMullin was president of the Ermineskin Community League when EPCOR was putting dry ponds into Ermineskin and the adjacent Steinhauer neighbourhood. He says EPCOR's approach made all the difference to community buy-in. "They managed expectations in a professional manner," says McMullin. "We all understood the need as soon as the team from EPCOR showed us the map of all the basements that flooded with storms in years past. EPCOR explained the concept and what they were going to do."



Even still, the community did express concern that the original plan called for the removal of a toboggan and sledding hill that McMullin says was special for families. After hearing the concerns, EPCOR adapted its plan, salvaged the treasured hill and even added a smaller new hill.

“It has totally redefined the neighbourhood,” says McMullin. “Instead of a plain flat field having a contoured bowl and landscaping, we now have multiple toboggan spots. The younger kids will slide down into the dry pond area and the older kids who want a little bit of speed will go to the hill in the southeast corner of the school. It happened through open dialogue and communication between the community league and EPCOR.”

“SIRP is a changing of the conversation,” says Susan Ancel. “It used to be about green versus grey infrastructure, with people thinking green, like a dry pond, was not as reliable as the grey, such as pipes. With SIRP, we made green our SLOW strategy and gray the MOVE strategy, and connected them to SECURE, PREDICT and RESPOND. It’s a unique strategy and it’s here in Edmonton.”

Dry ponds are proving to be cost-efficient, low-impact, community-oriented and future-forward. “I’m really proud of the work we do on dry ponds,” says Dawn Fenske. “I feel like we’ve made a difference.”

Steinhauer dry pond, Edmonton, AB.



SECURING TOMORROW'S WATER SUPPLY IN ARIZONA

The U.S. Bureau of Reclamation placed new restrictions on the Colorado River in the summer of 2022 to address ongoing 23-year drought conditions, accelerated by climate change. In Arizona, municipalities were asked to voluntarily enter the first stage of their drought mitigation plans. They are, through the state's drought contingency plan, shielded from water cuts through to 2026, after which impacts could be more severe.

While EPCOR customers will not be directly impacted in the near-term, the need for everyone to understand drought resiliency and water security — and to take action — has never been more critical. With state water leaders and providers, EPCOR has anticipated, prepared and put plans in place to keep water flowing to our customers.

The focus on strategic, long-range planning and smart water use and management underscores the work we do on a day-to-day basis.

In Arizona, 13% of EPCOR's total water supply comes from the Colorado River. A total of 71% is from groundwater, with the remaining from stored water or water allocations that have not been used, other surface water, and reclaimed water.



Horseshoe Bend, Colorado River, AZ

In each of our Arizona service areas, best management practices are in effect to guide water conservation and resource management. Efforts include conservation programs, customer education, school programs, upgrades and repairs to reduce water loss due to leaks, and extensive water reclamation initiatives.

Since 2012, EPCOR has returned more than 18.2 billion gallons of water to the natural water cycle through reclamation efforts such as aquifer recharge, public irrigation, and support for local farms. This is enough to cover 55,000 football fields in a foot of water.

WASTEWATER REUSE

PERFORMANCE UPDATE:

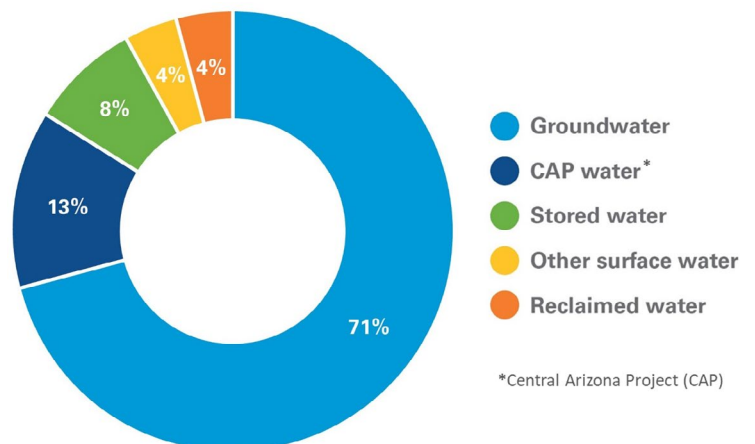
93.1%*

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.

*Data from San Tan, AZ operations is not included in the 2021 data because it is a new acquisition, but will be included in future reports.



*Central Arizona Project (CAP)

WATER RECLAMATION FACILITIES FOR THE FUTURE

LUKE 303

An expansion of the Luke 303 Water Reclamation Facility was completed in 2022 to allow the facility to process up to 1.75 million gallons every day. It serves one of the fastest-growing regions of Maricopa County and the Greater Phoenix metropolitan area.

The facility treats effluent to the highest of state standards and at full build-out is projected to be able to recharge up to 2.9 billion gallons of treated effluent into the ground annually. This is enough water to support about 24,000 single-family homes annually.

Luke 303 represents a deliberate and thoughtful approach to water management in a distinctly drought-challenged area. It anchors sustainable growth and development in the area, while also protecting an essential water supply.

PECAN

When EPCOR acquired the San Tan water and wastewater districts in January 2021, we identified the need for more than US \$136 million in improvements. At the top of the list was the Pecan Water Reclamation Facility expansion, which was the most urgent wastewater infrastructure need in the service area.

Upgrades to the Pecan Water Reclamation Facility, located southeast of the greater metropolitan Phoenix area, were completed in 2022, meeting an ambitious 12-month construction timeline.

It provided immediate system reliability for existing customers, and helps to meet the future wastewater needs of rapidly growing Pinal County.

The facility is designed to recycle roughly 717 million gallons of water annually, and reuse or recharge up to 100% of the wastewater EPCOR receives.



The Luke 303 Water Reclamation Facility serves one of the fastest-growing regions of Maricopa County and Greater Phoenix.

COPPER BASIN

Construction of the Copper Basin Water Reclamation Facility, which is also located in EPCOR's new San Tan service area, is on-track for completion by December 2023. It will be fully-enclosed and feature state-of-the-art odour control equipment, as well as extensive systems to monitor conditions around the clock.

The new facility replaces a previous plant that existed prior to EPCOR's acquisition, did not reflect industry standards, and had seriously deteriorated over the years.

When complete, Copper Basin is expected to serve 14,000 San Tan wastewater customers, accommodate future population growth, and put an additional 1 billion gallons of safe, clean water annually into the natural water cycle.





In the booming Southwest U.S., EPCOR is leading with innovations and partnering with communities, regulators and policymakers to navigate an historic drought.

WATER SCARCITY

BRINGS CHALLENGE AND OPPORTUNITY

For the better part of 8,000 years, communities across the Southwest United States have been able to flourish in an otherwise challenging desert environment. With its rugged and beautiful landscapes, the area remains as popular as ever today — with a growth rate that is twice the U.S. average.

But that growth has been challenged by 20 years of drought — the worst in at least 1,200 years — that has pushed governments to plan usage cutbacks on the Colorado River. Regulators, policymakers, communities and industry, meanwhile, are completely rethinking their water management practices and searching for innovations in water treatment and reclamation.

“Water scarcity brings challenges but also brings opportunity,” says Joe Gysel, President of EPCOR USA.

“We believe EPCOR has the expertise to continue to be a leader and key partner in conservation, finding new sources of water, and sending clean water back to the water cycle.”

EPCOR is among the largest private utilities in the Southwest and the largest in Arizona, providing water, wastewater and natural gas service to approximately 780,000 people across 42 communities and 18 counties in Arizona, New Mexico and Texas.



WATER MANAGEMENT APPROACH IS WORKING

There is evidence that water management plans implemented in states like Arizona are already having a positive impact.

“The state actually uses less water today than it did in 1957, even with a population growth of more than 500% over the same time period,” says Doug Dunham, a water resource manager for EPCOR in Phoenix.

Those policies have included limiting turf in common areas and rights-of-way, treating wastewater so that it can be safely used to water golf courses, encouraging the use of high-efficiency appliances, and educating the public on how shortening common tasks that use water can reduce usage.

Because these water management plans require communities and businesses to reduce their overall water use, this can make regular operations for utility providers more complex. EPCOR has been able to adjust its operations accordingly, thanks to its diversified water sources — a mix of ground, river, storage, reclaimed and other surface water.

EPCOR continues to expand its work in water reclamation, too. Last year, EPCOR completed a US \$48 million expansion of its Luke 303 Regional Water Reclamation Facility, which is adjacent to the Luke Air Force Base outside Phoenix. The facility will ultimately recharge up to eight million gallons a day of treated effluent back to the water cycle.

“We have increased the capacity of Luke 303 by two-thirds since 2021,” says Richard Obenshain, an EPCOR water resource analyst in Phoenix. “This will allow us to treat and recharge enough water annually to fill around 330 Olympic-size swimming pools.”

This increase in treatment capacity, along with improvements to other EPCOR facilities, is a key reason why EPCOR continues to surpass its standard of using or reusing at least 90% of treated effluent to recharge aquifers.

SEEKING NEW SOURCES OF WATER

While states served by the Colorado River prepare for cutbacks, communities to the east, in Texas, have been taking action to protect another important water source — the Edwards Aquifer, which serves the water needs of almost two million people in the south central region of the state. Public and private-sector planners are seeking new water sources and delivery methods to ease the strain of population growth. One solution is water conveyance — the movement of water from where it is abundant to the areas where it is needed. This practice has become an EPCOR specialty.

The 142 mile-long (228 km) Vista Ridge Pipeline, which EPCOR operates, supplies 20% of the water for San Antonio and helped the city of almost 1.5 million people avoid widespread water shortages during record heat and limited rainfall in the summer of 2022. Vista Ridge, along with EPCOR’s 130 Pipeline, which has supplied municipalities in the Austin metro area since 2016, is helping to curtail the negative and immediate effects of drought.

Through a combination of water conveyance, recycling and conservation, EPCOR is leading the charge to support and meet the demands of growing communities in one of the fastest growing regions of the United States.



U.S. SOUTHWEST DROUGHT

A historic drought combined with record population growth in the Southwest U.S. has forced leaders to reset their thinking about water management. Learn how EPCOR is leading the charge to support and meet the demands of growing communities in one of the country’s fastest growing regions.





The k̄isik̄aw p̄isim solar farm takes an innovative approach to managing energy. EPCOR Senior Manager Trina Manning was a member of the project team.

FUTURE GRID

GETTING A CHARGE OUT OF DERMS

by Curtis Gillespie

The k̄isik̄aw p̄isim solar farm at EPCOR's E. L. Smith Water Treatment Plant in southwest Edmonton is an undertaking that tells us much about our past, present and future. These former reserve lands of Enoch Cree Nation are an ancient Indigenous gathering place, and the solar farm's Cree name was gifted to EPCOR by the Nation. The site now hosts a renewable energy solar farm and battery system that helps power one of the two plants that provide Edmonton and more than 90 communities and counties with a source of clean potable water.

The project is also giving us a glimpse into our energy future. A future that will largely focus on where our energy comes from, and how we will manage and distribute that energy in the most effective way. This is where EPCOR's Distributed Energy Resource Management System (DERMS) comes in. It's a new and innovative way to manage the production, storage, and flow of electrical energy in our community. Here's how it works.

Solar panels produce energy, but where that energy goes depends on the needs in the moment. The solar energy needs to be collected, converted, and conveyed to where it is needed. When the water plant needs power, the energy from the solar farm is directed to the plant. When there is surplus power and room in the batteries, the batteries can be topped up with solar energy. And when the plant has sufficient power and the batteries don't need charging, surplus solar energy can be directed to the provincial grid.

In the past, these functions were sometimes performed manually, and often in isolation from one another. Today, in EPCOR's DERMS-enabled system, this transformative technology essentially acts as an air traffic controller overseeing water plant operations, solar generation, battery storage and the grid. DERMS directs electrical traffic in real-time, monitoring the supply and needs of each component, and maximizing the benefit for all. It is cutting-edge technology.



Chris Chapelsky is EPCOR’s senior manager for grid transformation. “Managing the electrical grid is more important than ever,” he says. “And that’s where DERMS comes in. At its heart, it’s a computerized control system. And it enables electric utilities like EPCOR to model, monitor, forecast, and leverage distributed energy resources across our entire grid, in real-time, 24/7, large or small.”

Trina Manning is senior manager of sustainability with EPCOR, and she says the transformation is in how the pieces of the system talk to one another. “It’s about how those systems communicate and how decisions are made,” says Manning. “DERMS changes the way the grid functions in terms of directing electricity to the plant, to batteries or to the grid. And it happens every second of the day. DERMS is really about optimization.”

Nathaniel Papay graduated as an electrical engineer from the University of Alberta and has been with EPCOR his entire career, the last decade as a project manager. “I worked on quite a few projects with electrical backgrounds,” he says. “But when I asked our consultants and others, ‘Is there anything like this solar farm and DERMS in Canada?’ they all said, ‘No!’”

What makes it so unique, says Papay, is the level of integration and coordination between so many systems and functions. The solar farm and battery are technically two twin systems arranged side by side. This allows for the critical redundancy the water treatment plant requires. The water treatment plants, he says, are essential infrastructure. “There are two electrical cables coming into the water treatment plant,” he says. “So, if one cable fails, we can still run the plant. And because we have two cables which are active and live, we have basically two solar farms and two systems that together make up the whole.” This all helps protect and ensure the continual operation of Edmonton’s primary source of clean drinking water, while also supplying it with clean energy.

DERMS controls it all not just for the k̓isikāw p̓isim solar farm and EPCOR’s E. L. Smith Water Treatment Plant, but as part of the larger overall electrical distribution system in the Edmonton

region. It is a tool to support all Edmontonians in a cleaner energy future. “We use it to monitor distributed generation across the entire grid, not just here at k̓isikāw p̓isim,” says Papay. “It can ‘see’ what is happening here at our site, how much power we’re using, how much we’re storing, how much we’re sending to the grid. It allows for us to be integrated with the entire regional system.”

Solar, wind, and other carbon-free energy sources are a big part of our energy future, but gone are the simple one-way flows of energy from a big power plant to our homes and businesses. Many solar systems and battery systems sprinkled throughout the electrical grid mean that we have a more complex flow of energy on that grid. Energy will need to be managed and distributed efficiently to meet the needs of all our customers. Making the most out of what is available, DERMS is key to grid transformation and how we are going to manage our energy resources of the future.

Chapelsky says that this project is a watershed moment for EPCOR. “It shows not only our commitment to clean water and reducing our emissions,” he says, “but in setting us up for the future of electricity because the electric grid is undergoing a significant transformation, and distributed generation sites, large and small, are accelerating across our system.”



WHAT IS DERMS?

The energy produced by the k̓isikāw p̓isim solar farm is sent where it’s needed most, thanks to cutting-edge technology. Distributed Energy Resource Management Systems, or DERMS, is like an air traffic controller, figuring out when excess power can go to the grid.



The day will come, says Manning, when many people will be generating their own electricity and storing it with their own battery systems. “DERMS is going to play a really important role,” says Manning. “It will help manage the inputs and outputs on the overall system. When everyone goes home at the end of the day and plugs their car in, how do we shift our loading to where it’s needed, depending on customer usage and customer generation? It’s not just about one water treatment plant, it’s about millions of people and how what we learn will help us optimize these technologies.”

DERMS is a way to change the grid to make sure the switch flip of the future produces electricity, all as part of a transformation to use renewable energy to create a low-carbon economy. EPCOR’s goal is to be a net-zero entity. That means doing the technical work, but also bringing people along for the ride.

“Helping people see that a new system is more reliable in the long run is going to be critical,” says Manning. “Sometimes it’s about changing hearts and minds. We have a vision for rethinking the way utilities are designed and operated to reduce our environmental footprint, but we have to be patient, too. Different perspectives are important. Having community engagement on all these innovations is how everyone benefits going forward.”

“DERMS may be enabling the next grid transformation,” says Papay. “And it’s really all about what’s next.”

Which in some ways is the point. Yes, DERMS is a new system EPCOR is using to regulate, store and direct electricity. But it’s also a tool to help us prepare for what’s next. The future.

“DERMS changes the way the grid functions in terms of directing electricity to the plant, to batteries or to the grid. And it happens every second of the day.”

A total of 1,008 batteries connected together make up the battery storage system at the k̓isik̓aw p̓isim solar farm.





SOCIAL



An electricity underground crew in Edmonton, AB.

Communities count on us. We count on each other.

Our purpose statement says it all. Millions of people count on us to provide life's essentials of power and water, safely and reliably. We do this every day of the year, and we strive to do much more.

We place a high priority on people — our customers, partners, stakeholders and colleagues — because our best work is done when we have solid relationships in place. When we listen before we act. Only then can we truly create sustainable communities and a future that we all want to be a part of.



PERFORMANCE UPDATES

EPCOR’s Social Scorecard covers the broadest range of measures in our ESG report. It includes commitments to keep our employees and communities safe; build and retain diverse teams; take care of our customers; and develop strong relationships with partners and stakeholders.

LOST-TIME INJURY FREQUENCY

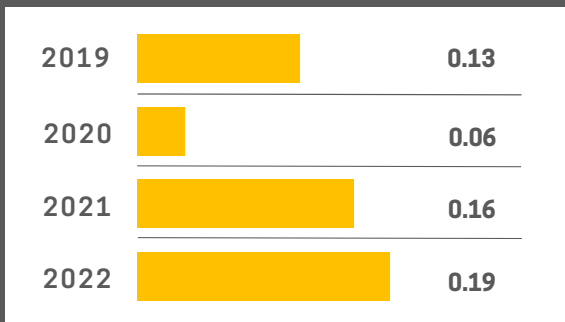
PERFORMANCE UPDATE:

0.19

LOST-TIME INJURIES

per 200,000 hours worked.

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



TOTAL RECORDABLE INJURY FREQUENCY

PERFORMANCE UPDATE:

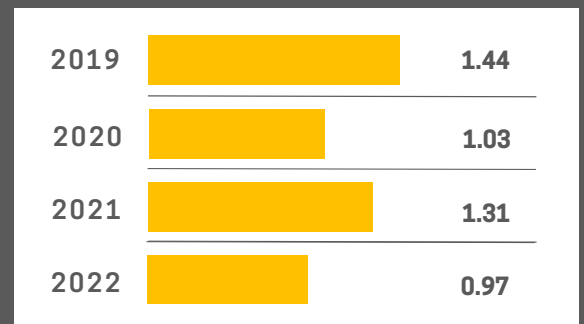
0.97

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 65](#)





Team EPCOR has built stretching into their daily routine as a way to prevent injury, stay healthy, and prepare for work – physically and mentally. Above, employees take part in EPCOR Athletes: the Biggest Stretch of All-Time event.

A CULTURE OF SAFETY AND INJURY PREVENTION

There is nothing more important at EPCOR than the health and safety of our employees, contractors and public in the communities we serve. This is a commitment that runs deep in our company and is formalized in our Health, Safety and Environment (HSE) Policy.

Through strong leadership and a focus on operational excellence, we have continued to improve our health and safety performance. In 2022, our Total Recordable Injury Frequency (TRIF) rate was 0.97 — our best result ever and down from 1.31 in 2021. We had 30 total recordable incidents compared to 42 in the previous year. Our Lost-Time Injury Frequency (LTIF) rate has remained consistent with our performance in 2021 at 0.19.

On the path to continuous improvement, EPCOR places more emphasis on leading indicators as a complement to industry-accepted measures such as TRIF. We focus on actions that promote safety, create a culture that prevents all work-related injuries and illnesses, and support the mental health of employees.

For example, over the past five years, EPCOR has required: the identification of near misses and hazards; that all management levels conduct workplace inspections and observations; and the implementation of an employee ergonomics and safe movement program called EPCOR Athletes.





Vanessa Johnston, EPCOR health and safety manager, has played a key role in implementing a new method for investigating safety incidents.

TAKING THE NEXT STEP

BUILDING A RESILIENT SAFETY CULTURE

At EPCOR, getting home safely at the end of each shift and protecting the public and environment are shared responsibilities and integral to the company's mission to be socially responsible.

For Jodi Nypuik, EPCOR's director of Health, Safety, Security and Environment, achieving that mission means building a culture where safety is a way of life.

"We want our team members to feel empowered to point out hazards or mistakes, even if they made them," he says. "In this kind of resilient safety culture, we embrace that some errors are normal."

When he joined EPCOR in 2019, Nypuik arrived with almost three decades leading health, safety and emergency response teams on three continents. He wanted to introduce a new method of investigating safety incidents to support and advance EPCOR's safety culture for the better.

It's called "causal analysis," and it's about going beyond the "what" of an incident or serious near-miss (known as a Significant Injury or Fatality Potential incident, or SIFP) and looking at the "why."

"What are the organizational systems and behaviours that led to the incident?" Nypuik says. "And how can we improve future performance to prevent recurrence?"

MAPPING OUT THE 'WHY' OF INCIDENTS

The process of implementing the causal analysis approach started with selecting a dozen health, safety and technical experts across EPCOR's electrical operations in Edmonton to take a week-long training in causal analysis, with Vanessa Johnston, now a health and safety manager, leading the group to understand and implement the causal analysis approach.

Trainees worked in teams, using the new method to investigate safety incidents across Edmonton's electrical operations. "The biggest shift with causal analysis is mindset," Johnston says. "By using traditional investigative methods that often rely on software programs, you can identify causes fairly quickly. But those causes are usually negative in nature — human error or inattention, procedure not followed, things like that. It's about what didn't happen, not what did happen."



With causal, as it's informally known, investigators conduct interviews and gather evidence to map out the complex web of decisions and external factors at play for any incident.

"Why did the worker choose that specific tool, or what was going on in their workday that caused them to miss a step?" Johnston says. "With causal, we can answer those questions, and make the organizational changes to ensure the incident or near miss doesn't happen again."

CREATING PSYCHOLOGICAL SAFETY

For Electricity Services Trouble Operations Trainer Adam Mitchell, causal goes beyond improving tools and processes. It's actually about safeguarding the psychological wellness of frontline team members, who might worry about being held 100% responsible when something goes wrong.

"If you're involved in an incident, beating yourself up or being afraid of being blamed can take a mental toll," says Mitchell, who helps train the team that restores power outages in Edmonton, as well as acts as a fill-in member.

Mitchell says restoring outages requires any number of electrical skills that must be deployed both safely and without delay.

"Quick decisions have to be made," Mitchell says. "Speed must always be balanced with safety, and our teams make those calculations every day."

Mitchell was invited to join Johnston's team in 2020 and has taken part as an expert advisor in three investigations. The experience has shown him that EPCOR is committed to taking even more responsibility as a company for its role in safety training and analysis.

"There's usually more to an incident than somebody just made a mistake," Mitchell says. "What about the factors outside their control? Did they get the right training, for instance?"

ROLLING OUT CAUSAL ANALYSIS

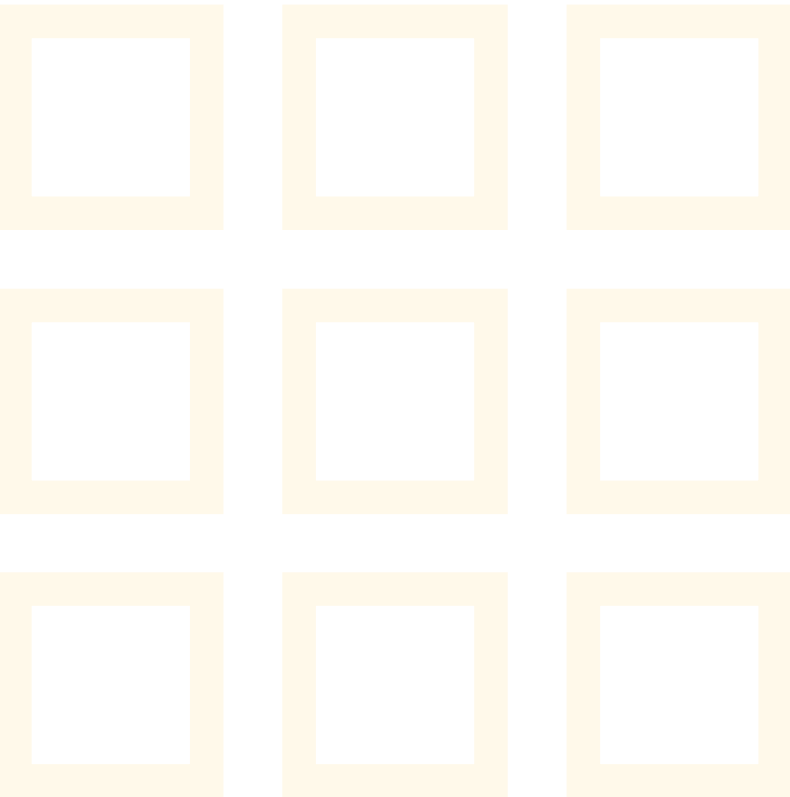
EPCOR's safety record has been consistently improving. In 2022, the company's total recordable injury frequency — a measure used across Canada and the U.S. of the number of injuries per 200,000 hours worked — fell below 1.00 for the first time.

Nyquik hopes that the new investigative method will help EPCOR do even better as it focuses on a safety-first culture, driving to zero incidents. In the years to come, causal analysis is expected to be rolled out across EPCOR's operations in water, electricity and natural gas across Canada and the U.S.

"Systemic change is not about introducing policies and procedures alone," he says. "Causal analysis allows team members to be part of the change we need to build a resilient safety culture."



Causal analysis was first used by Electricity employees and is expected to be rolled out across EPCOR operations.



MITIGATING THE HARMFUL EFFECTS OF LEAD

In 2019, Health Canada lowered the Maximum Acceptable Concentration (MAC) for lead in drinking water from 0.010 mg/L to 0.005 mg/L. As a result, the Government of Alberta directed regulated water providers to develop a plan to meet this new guideline by 2025.

While there is no measurable amount of lead in drinking water when it leaves EPCOR's water treatment plants, lead can be introduced through other household plumbing fixtures, interior pipes or lead water service lines on the private or public side of a property. This was recognized by Health Canada, as its new guideline shifted the point of compliance from the municipal drinking water system to the tap on the customer's premise. Lead-containing household plumbing fixtures are still available for sale, so even new homes may have lead exceedances.

EPCOR developed its Enhanced Lead Mitigation Strategy in response to the new national guideline. The strategy includes adding the lead inhibitor orthophosphate to the water treatment process and replacing all high-priority lead service lines in Edmonton that would not meet the guideline even after adding orthophosphate.

We have been testing the effectiveness of orthophosphate at our E.L. Smith Water Treatment Plant since 2017, and our studies show orthophosphate is effective at preventing more than 80% of the lead getting into water. Orthophosphate is safe and commonly used in the water treatment process by utilities in Canada and around the world.

Construction work on orthophosphate systems at EPCOR's two water treatment plants — E.L. Smith and Rosedale — was largely completed in 2022. We started adding orthophosphate in 2023, well ahead of the province's requirement to have a plan in place by 2025.

EPCOR completed 67 of the high-priority lead service line replacements in 2022, for a total of 280 since 2020. The overall number of these lines needing replacement has been updated to 307, based on on-site technical inspections, and verification of lead service lines connected to houses now condemned or being demolished.

EPCOR will continue to monitor lead concentrations in drinking water from customer taps to ensure our lead mitigation strategy objectives are achieved, and the new national guidelines met.

LEAD MITIGATION

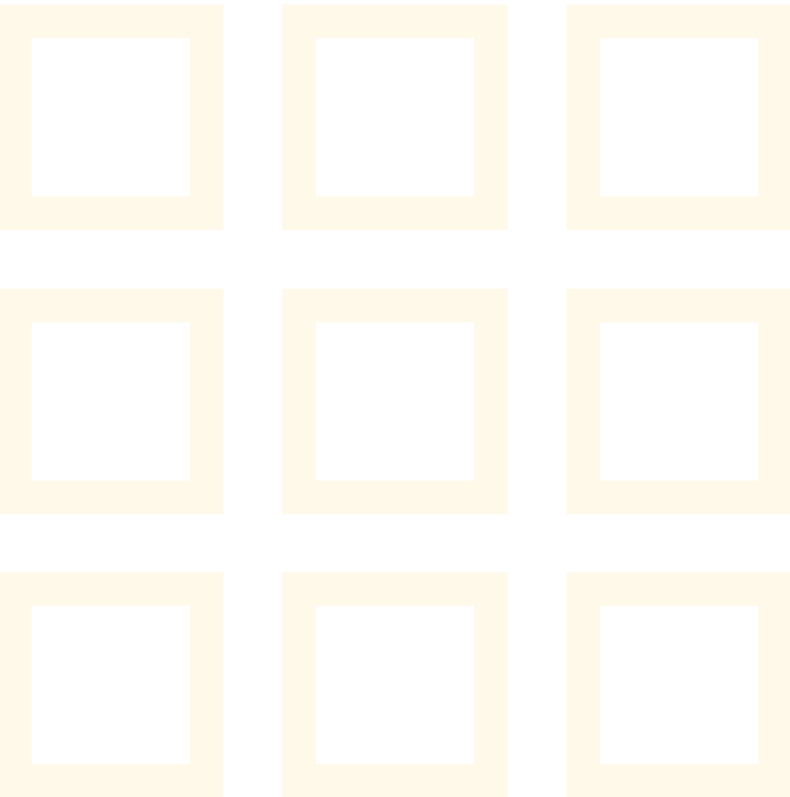
PERFORMANCE UPDATE:

280

**CUMULATIVE LINES
REPLACED**

Target: by 2023, replace 307 lead service lines designated as high priority under EPCOR's Enhanced Lead Mitigation Strategy.





THE IMPACTS OF INFLATION

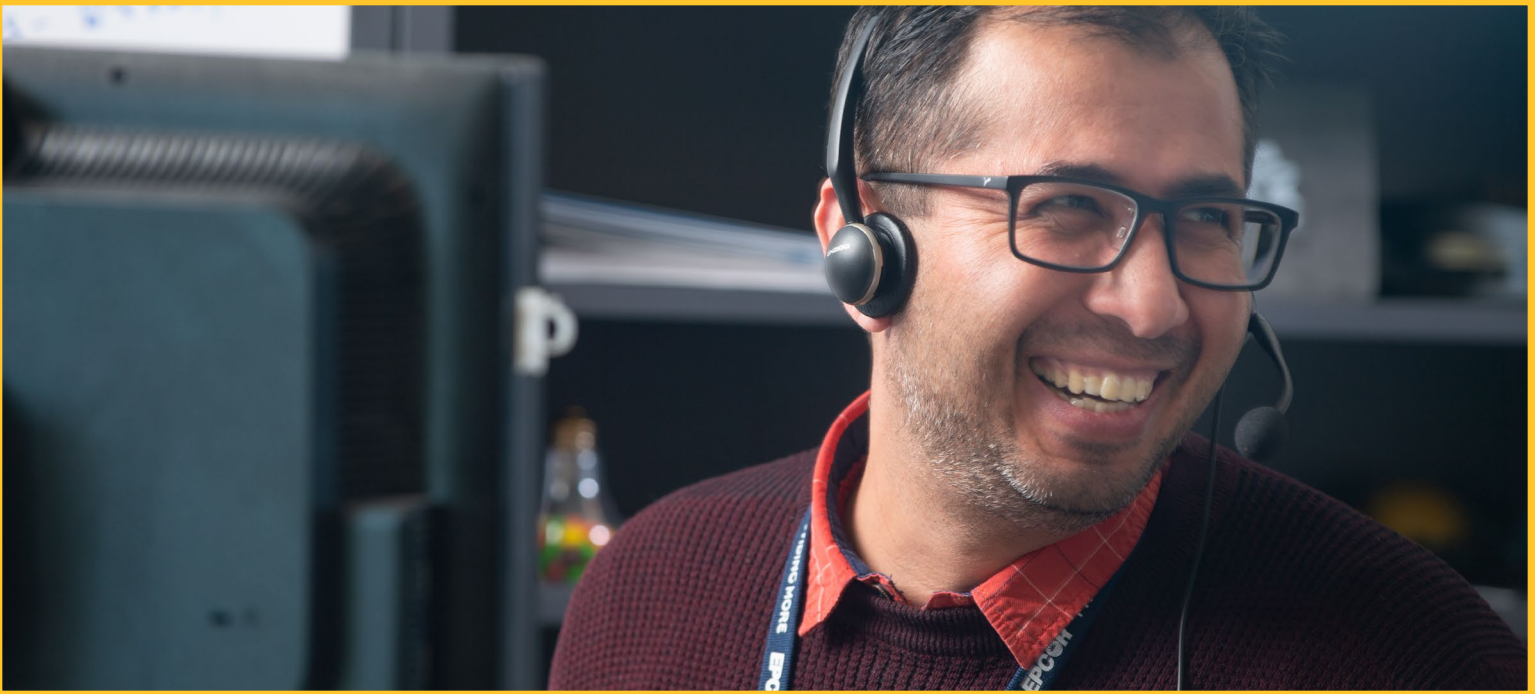
The costs of groceries, gasoline and other daily goods and services added up quickly for consumers in 2022, as inflation rose to its highest levels in over three decades across Canada and U.S.

Energy costs rose sharply in many jurisdictions, but particularly in Alberta's wholesale electricity market where prices quadrupled in late 2022. The Alberta electricity consumers most impacted were those on the default Regulated Rate Option (RRO), who have not entered into a fixed price contract with a competitive retailer. These consumers are exposed to swings in electricity pricing from the wholesale market. In 2022, an increasing number of RRO customers signed up for our competitive fixed price option through our competitive retailer, Encor by EPCOR. With this contract offer, we were able to help many customers reduce their electricity bills by almost half.



This past year, EPCOR looked for ways to ease the impact of high inflation on our customers.

Our billing team focused on ensuring that the Alberta government's electricity rebate and temporary RRO price-ceiling program were applied seamlessly to customer bills. We also continued to work closely with individual customers to provide payment options, helping them manage their account. Through these and other actions, EPCOR looked for ways to ease the pressure and impact of high inflation on our customers.



Overall satisfaction with EPCOR continues to be high, according to our annual customer survey.

HOLDING THE LINE ON COSTS PER CUSTOMER

Despite high inflation, EPCOR continued to hold the line on operating costs, successfully limiting operating costs per customer to an average 1.5% per year increase from 2020 to 2022.

This performance is the result of the tight focus we maintain — across all our utility businesses and corporate services — on operational efficiency. We work to balance this against the need for capital investment to ensure that we can continue to provide reliable utility services and serve the needs of growing communities.

COMMUNITY AND CUSTOMER PERCEPTIONS

In 2022, EPCOR's reputation ranked first among utility peers and comparator companies in the Edmonton market. This is set against a common backdrop of high inflation and shifting public attitudes, post-pandemic, and a general trend toward declining trust in traditional institutions. In an annual survey, 78% of respondents said they trusted EPCOR to do the right thing. Our annual customer survey showed that overall satisfaction with EPCOR continues to be high. We also continued to meet or exceed customer satisfaction targets set by our utility regulators.

EPCOR's operating costs per customer grew by just 1.5% per year from 2020 to 2022.



ELECTRICITY RELIABILITY REMAINS TOP OF MIND

The year began with extreme weather in Ontario and a major power outage in Edmonton — a clear signal that reliability of service would be top of mind in 2022.

While reliability for electricity customers remained high at 99.9%, interruptions to service averaged a five-year high of 78 minutes throughout the year for Edmonton and Collingwood.

EDMONTON

The increase in 2022 was driven by a single large outage event. On January 10, Edmonton experienced an outage that impacted more than 45,000 electricity customers on its south side, resulting in about 217,000 customer hours of interruption. Given the number of customers involved and the nature of the outage, crews worked through the night to restore power safely. Extreme cold weather and equipment failure were key contributors to this outage. To prevent similar incidents occurring on our system, EPCOR assessed and initiated proactive replacement of equipment that was of the same make and vintage of the failed equipment.

Outside of this major event, Edmonton had a reliability rating of 99.9%, averaging just over 43 minutes per customer for the year.

This reliability level is due, in part, to a risk-based methodology our Edmonton team uses that draws on data from our grid modernization, and gives us greater insight into our grid.

Leveraging data analytics to make more informed decisions allows us to know where and when to complete work on our grid. For instance, while cable failures remain the top reason for outages, with data analytics we are able to see where cables may be overloaded and upgrade them sooner. This reduces the likelihood of an unplanned outage for customers served by that cable.

Another way we are sustaining this level of reliability is by reconfiguring circuits through our system planning. Reconfiguring and rebalancing circuits allows our System Control to reroute power more easily and quickly, reducing impacts to customers when there is an outage.






Like all Distribution and Transmission companies in Alberta, we work with the Alberta Electric System Operator to plan for community growth. This means adding in new substations and new transmission lines, or reinforcing the transmission system, as we did in 2022 with the energization of the West Edmonton Transmission Upgrade Project.

RELIABLE POWER DISTRIBUTION

PERFORMANCE UPDATE:

78 min.
OF INTERRUPTED POWER

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

2018		53
2019		60
2020		50
2021		57
2022		78



COLLINGWOOD

Although Ontario experienced significant storms in 2022, EPCOR's Collingwood service area was not greatly impacted. Of five significant events, minimal damage occurred on two occasions due to a thunderstorm and a high wind incident. The most significant weather event took place in December when feeder trips and a broken pole resulted in 16 power outages in a day.

The steps we have taken to lessen the impact of severe storms on our customers and operations have made a difference. These include a vegetation management program, which has reduced the number of outages resulting from trees falling on power lines.



A crew completing a pole line rebuild in Collingwood, ON.

ELECTRIC VEHICLE CHARGERS FOR SOUTHWEST ONTARIO

Electric vehicle charging stations are being installed at municipal and retail sites, workplaces and recreational facilities in the South Georgian Bay area and beyond as part of EPCOR's Go EV program. Over 200 charging stations are expected to be energized in 2023.

The EV charging stations are made possible by \$1.7 million from the Canadian government's Zero Emission Vehicle Infrastructure Program. The funding will help to meet a growing demand, as more customers switch to electric vehicles. They also represent another tangible step EPCOR is taking toward sustainability, and supporting communities and our customers in reducing their environmental footprint.

We have also made capital investments into our infrastructure. Efforts are underway to automate Ontario electrical system, with the installation of automated switches and fault indicators, which help us to respond to outages more quickly. In addition, a new inspection program helps us identify cables in need of replacement, increasing our overall reliability.

We continue to build our Ontario system to industry standards and best practices, and work with the communities we serve to ensure reliability for our customers and plan for growth.





Upgrades at the Pecan Water Reclamation Facility, AZ, were completed in 2022.

PROVIDING VALUE FOR THE ECONOMY

As EPCOR continues to provide reliable utility services in our existing and growing operations, and make capital investments toward improvement, we distribute a significant amount of economic value to a wide range of stakeholders across multiple geographies.

\$920 million

SUPPLIERS (CAPITAL INVESTMENTS)

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

\$1,429 million

SUPPLIERS (OPERATING COSTS)

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

\$374 million

EMPLOYEES

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

\$281 million

PROVIDERS OF CAPITAL

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

\$177 million

DIVIDENDS

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

\$160 million

GOVERNMENTS

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

\$2.9 million

COMMUNITY INVESTMENTS

Payments to non-profit organizations through EPCOR's community investment program. Funding for research, community infrastructure, and sponsorship of community events.

In 2022, a total of **\$3.3 billion** in economic value was distributed to stakeholders.





Herstory, an Employee Resource Group, hosts an annual event that engages employees in conversations about gender equity.

CELEBRATING CULTURES, LIFE EXPERIENCES DIVERSITY, EQUITY & INCLUSION

We continue to make progress toward our goal of building and retaining a diverse workforce that reflects the communities we serve. In 2022, we saw improved retention across our organization, with our total employee turnover rate dropping to almost pre-pandemic levels. Overall, we saw incremental improvement in all of EPCOR's workforce demographic measures.

Building a diverse and inclusive workforce means attracting people with different backgrounds, and creating a work environment that supports and celebrates cultural traditions and life experiences. We believe that when employees feel welcome, respected, and psychologically safe, they are more likely to be engaged and motivated.

To embed diversity, equity and inclusion into our culture, EPCOR is investing in resources, programs and, most importantly — our people.

Our Diversity, Equity & Inclusion Council is comprised of employees from across the company who work in a variety of positions from front-line to leadership. Employee Resource Groups (ERGs) flow from the Council, and are grassroots collectives of employees who are part of — or allied with — a specific community.

In 2022, two new ERGs were formed: SPIRIT - Supporting People in Reconciliation of Indigenous Truths, and Women in the Field, which creates like-minded, inclusive spaces for women working in male-dominated field roles. STIGMA - Stronger Together in Growth, Mindfulness and Allyship, is our newest group, launching in early 2023 and is focused on mental health and well-being. This brings the total number of ERGs at EPCOR to eight.



BUILDING A DIVERSE AND INCLUSIVE WORKFORCE

EPCOR continually strives to build a workforce that reflects the diversity of the communities it serves. Along with this comes a focus on respecting and valuing the different backgrounds and perspectives individuals bring to the company. Hear from members of Team EPCOR across North America on why they think diversity and inclusion makes an important difference.



Employees, the Council and ERGs create resources and activities to educate and instill cultural awareness among Team EPCOR. Several events and observances were recognized in 2022. For example:

- National Day for Truth and Reconciliation in Canada
- National Indigenous Peoples Day and National Indigenous History Month in Canada
- Native American Heritage Month in the U.S.
- PRIDE Month
- Ramadan
- International Women's Day
- Pink Shirt Day, also known as Anti-Bullying Day

EPCOR declared National Day for Truth and Reconciliation as a statutory holiday across our Canadian operations. Team EPCOR was encouraged to use the day to learn and reflect on the troubling legacy of residential schools. Customized resources were provided to them during the week to further understanding of how we all fit in the journey of reconciliation.

Our SPIRIT ERG, partnered with the Heard Museum in Phoenix to host a 90-minute virtual event in recognition of Native American History Month. The event provided a look into the Indigenous history, arts, and culture of the American Southwest, and was well attended by EPCOR employees from across Canada and the U.S.

Starting in 2023, Martin Luther King Jr. Day will become a paid statutory holiday for EPCOR employees in the United States. We believe this is an appropriate way to honor the values that Dr. King represented. It also aligns with the sentiment expressed by a majority of our U.S. employees, surveyed in 2022, who said EPCOR is moving in the right direction when it comes to diversity, equity and inclusion.

Across EPCOR's borders and business lines, Team EPCOR is pulling together with purpose to create a workplace focused on respect, our cultures and experiences.

EPCOR EMPLOYEE RESOURCE GROUPS (ERG)

Herstory – engaging employees in conversations about empowering and enabling women to make informed decisions about their 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.

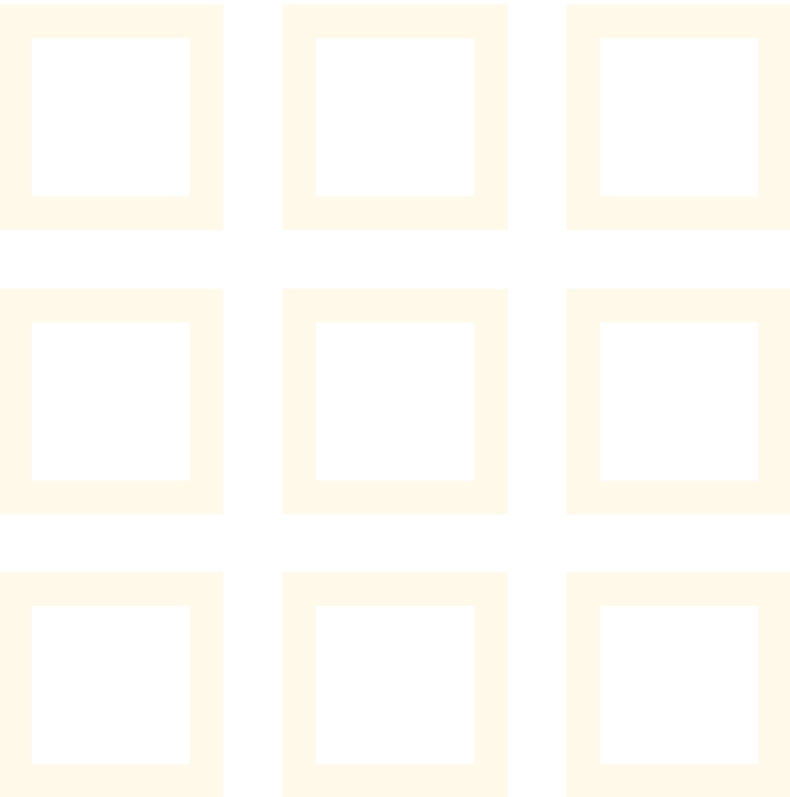
People of Colour @ EPCOR – inspiring and supporting people of colour in our workforce, while fostering engagement, building alliances, and cultivating an inclusive culture for underrepresented people at work and in our communities.

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.

Women in the Field – creating a safe, like-minded, inclusive space for women working in male-dominated field roles.

STIGMA (Stronger Together In Growth, Mindfulness and Allyship) – building a community that supports mental wellness within EPCOR, generating awareness to reduce the stigma associated with mental illness, and improving the mental health of employees and their families. (Launching in 2023)





WOMEN IN THE FIELD

Field workers and tradespeople are essential to EPCOR and are at the heart of our company and what we do. Across Canada, and across many industries, women make up only 5% of skilled tradespeople, according to Statistics Canada.

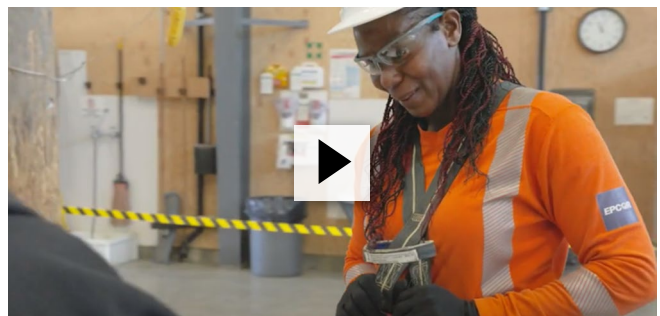
EPCOR is working with partners to help shift this balance, and to build a workforce that reflects the diversity of our communities. For example, we are:

- promoting frontline opportunities to young women through partnerships with, and financial support for, Alberta non-profit CAREERS, which works with schools, industry, government and communities to promote career paths in high-demand areas like the skilled trades;
- establishing a mentorship program to listen, receive feedback and provide apprentices with the guidance and camaraderie they need to be even more successful;
- building a workplace that supports gender and cultural diversity through events, programs and training throughout the year;



A power line worker prepares for the installation of electrical equipment in Edmonton, AB.

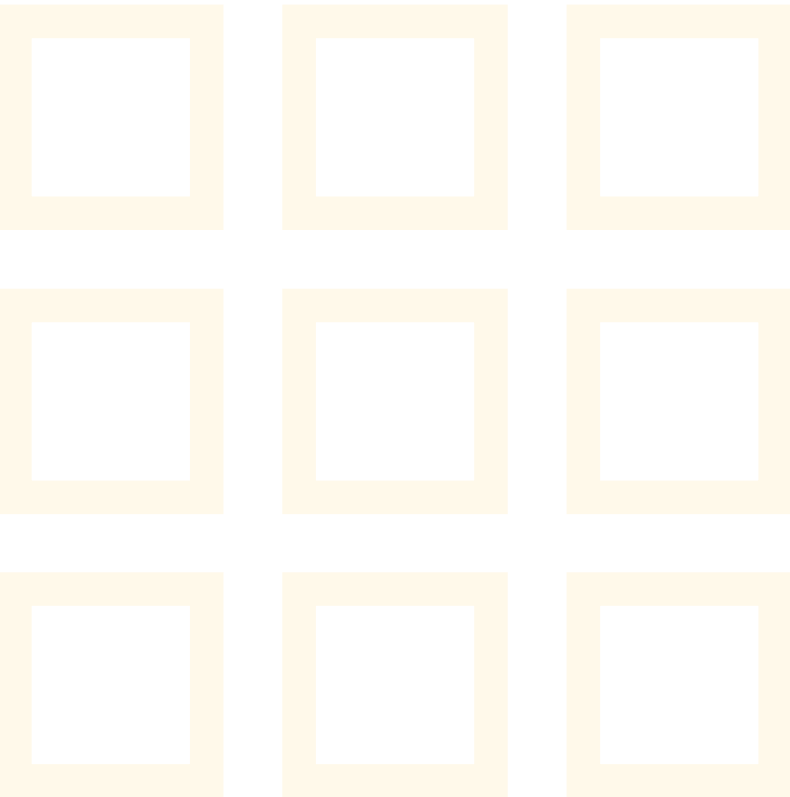
- launching the Women in the Field Employee Resource Group to create a safe, like-minded, inclusive space for women working in male-dominated field roles; and
- tracking the ethnic and gender diversity of our workforce and leadership as part of our ESG commitments.



ON THE FRONT LINE

EPCOR powerline technician Julian Francis-Williams is inspiring young women to take on careers in a male-dominated industry. Her story is one of determination and resilience — taking her from a young child fixing her family's radio in Jamaica to a respected and highly skilled member of Team EPCOR.





EPCOR's U.S. operations have returned more than 18.2 billion gallons of water to the natural water cycle through reclamation efforts.

THE FUTURE IN MIND

EPCOR is part of the discussion to protect Arizona's most precious resource — water — for tomorrow. In tandem with industry and academia, we support initiatives that help address the critical challenges caused by two decades of drought and diminishing water supplies.

This is another way we are putting our water leadership and expertise to work, and contributing to the future of communities in Arizona and the southwestern U.S.

Our long-standing partnership with the Kyl Center for Water Policy at Arizona State University's Morrison Institute, focuses on producing user-friendly information and tools to help the public and policymakers better understand water supply and use.

EPCOR supports TenAcross, a platform for collaboration and forward-thinking that places a spotlight on the Interstate 10 corridor, stretches coast to coast across the southern U.S. from Los Angeles to Jacksonville.

TenAcross advances proactive decision making for resiliency and sustainability, as the region faces a number of transformational issues. These issues include extreme weather and water-related challenges, fast-growing and increasingly diverse populations, and an energy industry in transition.





In partnership with the Fiesta Bowl, EPCOR employees helped build a playground for the Colorado River Boys & Girls Clubs.

Whether in Canada or the U.S., we are committed to contributing to the communities where we operate, whether at the corporate or grassroots level.

In 2022, EPCOR joined hands with the Phoenix Children’s Hospital, and the construction industry, for the Big Dig for Kids event to give 300 patients a one-of-a-kind experience, and raise over US \$750,000 for pediatric cancer research.

Our U.S. employees crossed state lines in friendly competition, and also took part in raffle games and an online auction as part of their United Way campaign, benefiting charities and non-profits in Arizona, Texas and New Mexico.

REACHING OUT WITH A HELPING HAND

EPCOR understands the importance of being there when the communities we serve need us the most. In 2022, we continued to respond to the unique challenges of pandemic recovery through our Heart + Soul Fund. This complemented our continuing efforts to help build sustainable communities through sponsorships, in-kind donations and charitable partnerships.

Once again, our employees proved to be generous volunteers in the communities where they work and live. Our Helping Hands program offers a \$300 grant to an employee’s charity or non-profit organization of choice, once they register their completion of at least 30 volunteer hours in a year. EPCOR processed 87 grants to 68 organizations in 2022.

To strengthen and sustain our performance when it comes to community investment, EPCOR has set a target of achieving Imagine Canada’s Caring Companies designation by the end of 2023. This designation sets the benchmark for corporate giving at 1% of Canadian pre-tax profits. On a three-year rolling average basis, we will have met this targeted level of giving in 2023.

COMMUNITY INVESTMENT

PERFORMANCE UPDATE:

\$2.9M

IN COMMUNITY SUPPORT

Target: achieve Imagine Canada’s “Caring Companies” designation by 2023 with the three-year rolling average of qualifying community investments being at least 1% of Canadian pre-tax income.





PUTTING OUR HEART + SOUL INTO WHAT WE CARE ABOUT

The need in our communities is clear. To provide a lifeline to those hardest hit by the pandemic and help sustain organizations that bring us joy, we established EPCOR’s Heart + Soul Fund in 2020.

Since then, we have committed nearly \$3.9 million through the fund, in addition to the more than \$1 million we provide in community support each year. In 2022, a total of \$792,000 was distributed to front-line social service agencies, and to organizations and performers in the hard-hit arts and culture sector through our Heart + Soul Fund. This included the awarding of 31 grants to 13 charities and 18 festivals and arts programs.

Toward the end of 2022, the issues of homelessness, hunger and poverty became even more urgent with the arrival of cold weather in Edmonton. EPCOR provided an additional \$180,000 to gift-matching campaigns launched by six of our Heart + Soul funded charities, including the food bank, shelters such as the Bissell Centre and Hope Mission, and United Way. These charities did a remarkable job of leveraging our gifts, raising a collective \$2 million to help the city’s most vulnerable.

Organizations and performers in the arts and culture sector, which was hit hard by the pandemic, received support from EPCOR.

SUPPORT FOR UKRAINIAN NEWCOMERS AND REFUGEES

Taking a back seat was not an option. As the war in Ukraine intensified, Edmonton was one of two Canadian hubs welcoming more than 132,000 Ukrainian nationals entering Canada in 2022.

EPCOR’s early efforts focused on offering mental health supports for affected employees and linking others who wanted to contribute with organizations like the Canadian Red Cross. But as Ukrainian citizens started arriving, the immediate needs of food, housing, health care and day-to-day living in a new country became urgent.

The plight of the Ukrainians who landed on Canadian soil is similar to that of vulnerable refugees from Afghanistan and other regions around the world affected by conflict. Similar to our involvement with Syrian refugees a few years ago, EPCOR directly helped those arriving in our community instead of donating to international relief efforts.

With this in mind, EPCOR set-up a Heart + Soul matching campaign for up to \$40,000 with the Edmonton Mennonite Centre for Newcomers. The centre raised \$75,700 resulting in \$115,000 for newcomers, thanks to our matching grant.



Team EPCOR volunteers at the Edmonton Mennonite Centre for Newcomers.





Young Women in Trades and Technologies Spring Camp, hosted through our charitable partner, CAREERS.

EDUCATION AS A PATHWAY OUT OF POVERTY

Education helps lead to stable, successful employment. This is a long-standing belief that has anchored EPCOR's community investment strategy.

In 2022, EPCOR hosted an all-day careers camp for 12 high school students as part of the Young Women in Trades and Technologies Spring Camp through our charitable partner, CAREERS.

The young women toured our electricity training facility, and a water treatment plant, and learned more about how EPCOR provides the essentials of power and water. They also had the chance to hear from women who work in the field, and learn about career options in the skilled trades.

EPCOR has also taken an active role in encouraging Indigenous students to pursue their interest in the science, technology, engineering and mathematics fields. Through specialized courses, a speaker series, a direct mail matching donation campaign and other activities, we are helping First Nations, Métis and Inuit students overcome barriers.

A NEW PARK ON THE WATERFRONT

The Town of Collingwood, Ontario opened Sunset Point Park in October 2022, following nearly a year of construction and three years of planning. EPCOR donated \$150,000 to help pay for the community park and new playground structures, which included identifiable Collingwood features like a lighthouse, wetland, town hall and village, forest, amphitheatre, and beach.



Sunset Point Park, Collingwood, ON.



ENGAGING COMMUNITIES TO BUILD THE FUTURE

Trust is earned when relationships are built — that’s what EPCOR strives to do in the planning and development of projects. Our community engagement approach aligns with both the International Association of Public Participation (IAP2) and the City of Edmonton’s Public Engagement Framework.

LEARNING FROM COMMUNITY MEMBERS

In 2022, EPCOR returned to more in-person engagement activities, and used fewer large-batch surveys than during the pandemic. While this shift in format and approach resulted in fewer stakeholders participating than in the previous year, it allowed for deeper conversations and connections on the work taking place in communities.

We engaged community members and key stakeholders on numerous projects, including the ongoing Edmonton Water Treatment Plants Flood Protection Project, which is designed to protect critical infrastructure and water supply for the city and over 90 surrounding communities and counties.

Two major flood mitigation projects increased EPCOR’s engagement with Indigenous Nations and communities, including site visits and walking tours with Elders. Work to verify underground utilities, which required digging, at the Rossdale Water Treatment Plant in March 2022 led to multiple meetings with Nations and communities, including Pipe Ceremonies. EPCOR also increased engagement with Métis people in 2022 through the development of a Declaration of Relationship with the Métis Nation of Alberta.

EPCOR asked for feedback on a proposed renewable natural gas facility in southern Alberta, and we consulted all adjacent landowners and occupants for the Clover Bar Interconnection Project. This above-ground electrical project will connect the Clover Bar Substation to a private substation serving a new Edmonton Net-Zero Hydrogen Energy Complex, owned and operated by Air Products.

In addition, we held monthly meetings with the Edmonton Downtown Business Association on the Valley Line West LRT Utility Relocations. We engaged hundreds of residents in Edmonton’s Lauderdale neighbourhood during information sessions and with online and hard-copy surveys that sought input on enhanced amenities for an off-leash dog park that is part of a dry pond construction project. Community feedback on an upcoming trunk line in Mill Creek is helping us look at ways to reduce our construction footprint and give back more greenspace to the community.

Throughout 2022, EPCOR actively engaged stakeholders on a variety of projects across Canada and in the Southwestern U.S. to share project proposals and plans, and to discuss ways to reduce the impacts of construction. Whether we’re hosting an open house on the expansion of natural gas service within the Southern Bruce region of Ontario, or presenting at an information session in the San Tan Valley near Phoenix, we invite dialogue on the work we do.

The common goal in our outreach efforts is to design and build better projects that address a community’s need and align with its values.

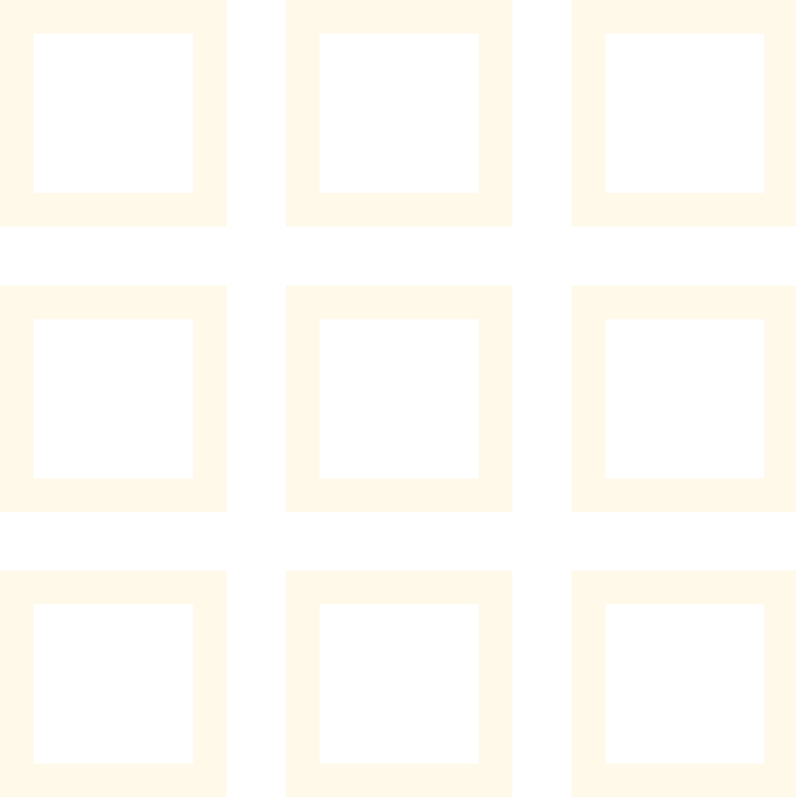
ENGAGEMENT PERFORMANCE UPDATE:

1,279

PARTICIPANTS

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





ENOCH Cree Nation Powwow held July 2022 on Treaty 6 territory.

LISTENING AND LEARNING

Authentic relationships are built on obtaining feedback and being open and honest in our communications. Through workshops with Nations and communities, we heard that providing updates on current projects must be a priority. In 2022, we hosted seven engagement sessions as part of our flood mitigation project. We provided status reports on our work and addressed questions and concerns.

These sessions also helped to strengthen EPCOR's Indigenous Monitoring Program. This program encourages monitors to come to lands that have been used by Indigenous peoples for thousands of years, which today house EPCOR operations. They are invited to share their knowledge and perspectives with us. Monitors have a key role during ground disturbance activities at the treatment plants, as they provide valuable perspective on archeological finds and the importance of the land.

INTEGRATING INDIGENOUS CEREMONY, ART AND LANGUAGES

We recognize the role that EPCOR must play to support Indigenous culture, ceremony, art and language.

Ceremony is an integral part of Indigenous culture, and adding ceremony at our E.L. Smith and Rosedale Water Treatment Plants was identified as being important to the Indigenous communities we work with. In 2022, EPCOR welcomed more than 60 representatives from Nations and communities for three separate Pipe Ceremonies at our Rosedale Water Treatment Plant.



SPIRIT Employee Resource Group executive members with Stuart Lee, EPCOR President & CEO.

WE ALL HAVE A ROLE TO PLAY IN RECONCILIATION

Reconciliation in Canada is everyone's responsibility. It can be uncomfortable, as it requires us to look at our beliefs, past actions, and the things we have been taught. It challenges us to 'unlearn' and take action. It's a journey and everyone is at a different stage in their awareness and understanding.

On National Day for Truth and Reconciliation on September 30, and the days leading up to it, we can reflect on and deepen our understanding of the history of residential schools, commemorate survivors and their families, and build a path forward.

For Team EPCOR to further its own reconciliation journey, a Resources Guide to support learning and understanding of Truth and Reconciliation, Residential Schools, and EPCOR's commitment to Reconciliation and our Indigenous Peoples Policy was developed. These resources were available to employees online to share with their teams, friends and families, or take a quiet moment to themselves.

RECOGNIZING NATIONAL DAY FOR TRUTH AND RECONCILIATION

After significant consultation with our Indigenous Relations Steering Committee and Indigenous Employee Resource Group (SPIRIT), EPCOR's senior leadership team declared September 30 as a statutory holiday across all EPCOR operations in Canada starting in 2022.



THE HONOUR OF CEREMONY

by Jed Johns

Manager, EPCOR Government & Indigenous Relations
Member, Sucker Creek First Nation, Treaty 8

Indigenous spiritual and cultural beliefs are sometimes private and other times can be shared. For EPCOR, we are on an active journey of learning about Indigenous ceremonies and how to support Indigenous peoples in their practices on Treaty lands. Indigenous peoples have complex belief systems that have existed before European contact and a way at looking at the world that is distinct. Sometimes it is difficult to explain what needs to be done from a ceremonial or spiritual perspective because it may not conform to a scientific or Western perspective regarding the work ahead.

Additionally, not all ceremonies, offerings, and protocols are the same for all Nations and communities we engage and consult with across Treaties 6, 7 and 8 in Alberta.

EPCOR takes pride in reflecting the diversity of peoples and thought among employees. This means when we were faced with a request to conduct ceremony we jumped up and said “when”?

Organizing a Pipe Ceremony meant many things; one was giving up certainty on how it would happen. It can be difficult for a utility company built on foundations of regulation, laws, and process to be asked to walk a path that was not predetermined by checklists or schemata.

EPCOR would ask: what kind of ceremony would be suggested? Who was expected to attend? Would there be multiple ceremonies and, if so, how many? And as part of our learning, we came to understand this would come out after speaking to Elders and knowledge holders from the Nations and communities. This had to be led by Indigenous ceremonialists, and it had to be done with patience in mind.

So, we sat down with ceremonialists from the three different Treaty areas and after receiving additional advice, it was agreed that four Pipe Ceremonies would be held on the Rosedale Water Treatment Plant in Edmonton.



When Indigenous spiritual and cultural ways of knowledge collides with the rigour of utility management, there must be an opportunity to create space for dialogue and understanding. I have seen it numerous times at EPCOR and it is refreshing that as a company these important considerations are approached with a “what more can we learn” and “what can we do to accommodate” attitude.

Jed Johns





The *Magpie and the Buffalo Treaty* artwork depicts the symbiotic relationship between the magpie and the buffalo, and the deep roots these creatures have within Edmonton's river valley.

This artwork, by Indigenous artist Matthew James Weigel, was unveiled at EPCOR's new Ambient Air Quality Monitoring Station near our Gold Bar Wastewater Treatment Plant.

EPCOR's water and wastewater plants in Edmonton are located in the river valley, and deeply connected to Indigenous communities through the land.

“And now, of course, buffalo do not cross the river here at this place like they have ... The magpies are here waiting for the buffalo to return. I feel there's definitely a connection there with the magpies remembering and maintaining their presence here, waiting for the buffalo.”

Indigenous Artist Matthew James Weigel



EPCOR supplies Fountain Hills, Arizona, with potable water.

2022 ESG SCORECARD

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; and
- includes metrics for all EPCOR operations with respect to governance, health and safety, workforce, community and financial data.

Data referenced in the ESG Scorecard is current as of December 31, 2022. Other information in the report is current as of the date of publication in May 2023. Throughout the report, references to Sustainability Accounting Standards Board (SASB) or Global Reporting Initiative (GRI) standards indicate instances where data or the 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. This 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 2022 greenhouse gas emissions data, in accordance with the ISO 14064 Part 3 standard. Brightspot Climate also conducted a review of the revised 2021 greenhouse emissions data, based on the new grid intensity factors. Its review concluded that, at a reasonable level of assurance, the statement for 2021 and 2022 Scope 1 and Scope 2 emissions are materially correct and presented fairly in accordance with the relevant criteria.

The 2020 greenhouse gas emissions data has been revised based on the new grid intensity factors published in 2022. The 2020 data is the baseline for measuring performance against targets set and will be third-party reviewed to a reasonable level of assurance for the 2023 ESG Report.

EPCOR's reported Scope 1 and Scope 2 greenhouse gas (GHG) emissions follow the classifications contained in the Greenhouse Gas 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 United States Environmental Protection Agency (April 2022) and Canada's National Inventory Report (April 2022). Due to lags in reporting by these agencies, and the decarbonization 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. Grid intensity factors published for 2020 were used to calculate 2020, 2021 and 2022 emissions.
- The calculation of nitrous oxide (N₂O) emissions from the wastewater treatment processes at the Gold Bar Wastewater Treatment Plant are 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 (N₂O) emissions from the wastewater treatment processes at EPCOR U.S. operations are based on indexes calculated for Gold Bar Wastewater Treatment Plant and the measurement of influent and effluent volumes.
- The inclusion of CH₄ and N₂O emissions associated with the combustion of biogas from wastewater treatment processes and wastewater/sludge lagoons located in Edmonton, and the exclusion of CO₂ emissions thereof.
- The use of the IPCC Sixth Assessment Report Global Warming Potential (GWP) factors (2021), 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 continuing exclusion of GHG contributions from the sewer system, wastewater/sludge lagoons located in the U.S., 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 grids 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 137,743 tonnes CO₂E in 2022. 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.



The North Saskatchewan River is the source of drinking water for Edmonton and many surrounding communities.

EPCOR'S CONSOLIDATED ESG SCORECARD

The ESG Scorecard contains 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 43 to 56](#) of EPCOR's 2022 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

	2018	2019	2020	2021	2022	TARGETS AND COMMENTARY
G1 BOARD INDEPENDENCE 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.
G2 BOARD GENDER DIVERSITY Share of board seats held by women <i>GRI 405-1(a)(i)</i> .	36%	36%	36%	36%	40% ^A	At least 30% of board seats are held by women.
G3 EMPLOYEE ETHICS TRAINING^B Percentage of eligible employees who have received training on <i>EPCOR's Ethics Policy</i> . Relates to GRI 102-16 reporting recommendation 3.1.2.	100%	N/A	100%	N/A	100% ^C	EPCOR conducts ethics training every second year. 100% of eligible employees are trained.
G4 ETHICS COMPLAINTS ACTIONED Number of ethics complaints received and the percentage responded to, investigated, or otherwise resolved.	106 100%	96 100%	80 100%	97 100%	122 100%	Reporting volumes are provided for context. 100% responded to, investigated, or otherwise resolved.

ENVIRONMENT

2018 2019 2020 2021 2022 TARGETS AND COMMENTARY

Reduce environmental footprint

E1 NET GREENHOUSE GAS EMISSIONS^D

EPCOR owned and leased, company-wide Scope 1 and 2 emissions net of offsets (tCO₂E).

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

Not reported

Not reported

193,072

203,626

213,927

2025: 50% reduction in net Scope 1 and Scope 2 CO₂E emissions from 2020 levels.

2035: 85% reduction in net Scope 1 and Scope 2 CO₂E emissions from 2020 levels.

2050: Net zero CO₂E 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 20](#) of this report for a performance update.

E2 PROTECT RIVER WATER QUALITY^E

Annual discharges of suspended solids into the North Saskatchewan River from land drainage, Edmonton water treatment plants, Gold Bar and Alberta Capital Region wastewater treatment plants, and combined sewer overflows (kg/day).

45,205

62,743

65,245

31,312

44,321

Performance data only.

[See pages 48-49 of the 2020 report](#) and [pages 21 and 22](#) 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^F

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

Initiated

1%

4%

6%

12%

Complete asset protection and backflow prevention by 2024, and complete flood barriers by December 2027.

[See pages 42-43 of the 2020 report](#) and [pages 23 and 24](#) of this report for more information.

E4 WATER LOSS^G

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

6.5%

6.1%

6.2%

5.7%

Not reported

Performance data only, with reporting lagging by one year.

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

	2018	2019	2020	2021	2022	TARGETS AND COMMENTARY
Community resilience and environmental footprint						
E5 WASTEWATER REUSE^H Percentage of treated effluent reused or used to recharge aquifers (U.S. only, not including San Tan operations). <i>Relates to SASB Code IF-WU-440a.2(1).</i>	95.7%	96.7%	94.4%	93.1%	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 pages 31 and 32 of this report for an update on this performance metric.

	2018	2019	2020	2021	2022	TARGETS AND COMMENTARY
SOCIAL						
Health and Safety						
S1 TOTAL RECORDABLE INJURY FREQUENCY Continuous reduction in total incidents (TRIF). <i>SASB Code: IF-EU-320a.1(1) GRI 403-9(a)(iii)^I.</i>	2.35	1.44	1.03	1.31	0.97	A safety-first culture, driving to zero incidents. See page 41 of this report for an update on this performance metric.
S2 LOST-TIME INJURY FREQUENCY Continuous reduction in lost-time incidents (LTIF).	0.35	0.13	0.06	0.16	0.19	A safety-first culture, driving to zero incidents.
S3 LEAD MITIGATION Number of high-priority lead service lines (LSL) replaced as part of EPCOR's updated 2019 Enhanced Lead Mitigation Strategy, and not including EPCOR's lead replacement programs.	N/A	Pilot program year	69	144	67 (280 cumulative)	Edmonton households comply with new Health Canada guidelines for lead at the tap by 2025, prior to provincial regulation. EPCOR has replaced 307 identified high-priority LSLs by 2023 and commissioned the orthophosphate system. See page 41 of this report for an update on this performance metric.

Human Capital

S4	EMPLOYEE ENGAGEMENT						
	Employee engagement as measured in a company-wide survey. In 2020, top quartile performance compared to similar companies was 75% or better and top decile performance was 82% or better.	78%	N/A	77%	N/A	N/A	Top decile performance against a group of comparator companies by 2023 (the next survey date).

S5	TOTAL TURNOVER						
	Employee departures for employee and employer-initiated reasons including retirement and excluding transfers to another organization due to asset divestitures or operational contract changes, divided by year-end headcount. <i>Relates to GRI 401-1(b)^J.</i>	6.1%	7.9%	5.4%	8.2%	7.9%	Performance data only. See pages 71-72 of the 2020 report for discussion of EPCOR’s workplace culture and initiatives.

S6	DIVERSE AND REPRESENTATIVE WORKFORCE						
	EPCOR’s workforce is reflective of the diversity of the communities it serves						
	▪ Women in workforce (Canada and U.S.)	27.6%	28.4%	28.5%	28.5%	29.0%	Performance data only.
	▪ Visible minorities (Canada) _K	15.2%	16.4%	16.9%	17.3%	17.5%	See pages 71-72 of the 2020 report and pages 50 and 51 of this report for a discussion of EPCOR’s workforce.
	▪ Visible minorities (U.S.)	35.3%	36.6%	34.6%	35.1%	36.8%	
▪ Women in senior leadership (Canada and U.S.)	22.4%	21.1%	21.4%	21.4%	22.8%		

Relates to GRI 405-1(b)(i) and b(iii).

		2018	2019	2020	2021	2022	TARGETS AND COMMENTARY
Customers							
S7	CORPORATE REPUTATION EPCOR's reputation score in Edmonton compared to utility peers.	+6	+7	+7	+5	+4	Exceed utility peer scores by 5 points or more.
S8	CUSTOMER SATISFACTION Number of customer satisfaction metrics that meet or exceed full-year satisfaction targets set by utility regulators.	4 of 4	4 of 4	5 of 5	5 of 5	5 of 5	Meet or exceed regulated targets in all surveys.
S9	REASONABLE COSTS^L 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. ^{i,ii}	Not reported	\$157	\$160 1.9%	\$159 0.7%	\$163 1.5%	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. The 2022 percentage change is a three-year average.
S10	RELIABLE POWER DISTRIBUTION^M Number of minutes per year that power service is interrupted (SAIDI, all electricity operations combined). <i>SASB Code: IF-EU-550a.2(1).</i>	53	60	50	57	78	Performance data only. See pages 74-75 of the 2020 report for discussion of EPCOR's grid reliability programs and pages 47 and 48 of this report for a performance update.
S11	SAFE WATER 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.
S12	PROMPT SERVICE Percentage of drainage maintenance calls resolved within 24-hours (Edmonton).	N/A	N/A	97.2%	95.7%	96.8%	Meet or exceed regulated target of 80% of calls resolved within 24 hours.

	2018	2019	2020	2021	2022	TARGETS AND COMMENTARY
<p>S13 ENGAGEMENT^N The number of community participants in engagement processes conducted at the “Advise” level or higher in the IAP2 engagement spectrum.</p>	Not reported	980	2,178	2,606	1,279	Performance data only. See pages 24 and page 57 of this report for highlights of 2022 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).
<p>S14 ECONOMIC VALUE DISTRIBUTED Direct economic value delivered to stakeholders, including suppliers, employees, providers of capital, governments, and community organizations.</p>	\$2.5 B	\$2.3 B	\$2.5 B	\$2.9 B	\$3.3 B	Performance data only. See pages 89-91 of the 2020 report and page 49 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).
<p>S15 COMMUNITY INVESTMENT^O Data prior to 2021: cash donations and sponsorships only. Data for 2021 and beyond: additional eligible community investments were tracked and included. (Canadian investments only)</p>	\$2.0 M	\$2.1 M	\$3.2 M	\$3.0 M	\$2.9 M	Achieve Imagine Canada’s Caring Companies designation by 2023 with the 3-year rolling average of qualifying community investments being at least 1% of Canadian pre-tax income.
3-year rolling average			1.1%	1.0%	0.8%	
<p>S16 INDIGENOUS RELATIONS Progressive Aboriginal Relations (PAR) certification by the Canadian Council for Aboriginal Business and achievement levels.</p>	N/A	N/A	Member	Member	Committed	Apply for PAR “Bronze” level performance certification by 2024 and set targets for higher level performance once “Bronze” level status achieved. See pages 58 of this report for an update on our work towards achieving the “Bronze” status level.

- ^AG2: One Board member retired resulting in 10 members as compared to 11 in previous years.
- ^BG3: For some employee training records, data was obtained from summary files rather than original sources.
- ^CG3: One employee retired in August 2022 and did not complete the training during the training period.
- ^DE1: Material assumptions and data limitations for this entry are listed in the Scope of Reporting, including information on the restatement of 2020 and 2021 results, and the expected future restatement of 2021 and 2022 results based on final grid intensity factors used to calculate emissions from purchased electricity. This topic is also discussed in the performance update on [page 17](#) of this report. As described in the Scope of Reporting, Scope 2 emissions from electricity line losses totaling 137,743 tonnes CO₂E in 2022 are excluded from the Scorecard and from EPCOR's emissions reduction target. EPCOR has utilized the 2021 Global Warming Potential values from the IPCC assessment rather than the 2014 values currently referenced in the noted SASB and GRI standards.
- ^EE2: The calculation method for suspended solids has been refined as outlined on page 21 of this report. Annual discharges for 2018 to 2021 were recalculated using the new method to allow for comparison with 2022 levels.
- ^FE3: The Earned Value Measurement used to calculate the percentage implemented has been refined to include schedule progress in addition to dollars spent as outlined on [page 24](#) of this report. Percentage implemented in 2021 and 2022 were calculated using the revised method.
- ^GE4: 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). Data from San Tan, Arizona operations is not included in the 2021 data because it is a new acquisition, but will be included in future reports.
- ^HE5: 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). Data from San Tan, Arizona operations is not included in the 2021 data because it is a new acquisition, but will be included in future reports.
- ^IS1: 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.
- ^JS5: 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. Total turnover data from 2018 to 2021 was recalculated using the definition that excludes employee transfers to another organization due to asset divestitures or operational contract changes.
- ^KS6: 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.
- ^LS9: For some information, data was obtained from summary files rather than original sources.
- ^IS9: Information on the use of this metric is found in EPCOR's Annual Information Form.
- ^IS9: 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% $((1.9\% - 0.6\%) / 2)$. 2022 is a three-year average $((1.9\% - 0.6\% + 3.0\%) / 3)$. The average costs reported are a blend of changes in U.S. dollar costs for U.S. operations, and Canadian dollar costs for Canadian operations. The blended result shown is not converted into Canadian dollars.
- ^MS10: 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 restatement based on annual regulatory filings which occur after the finalization of the ESG Progress Update.
- ^NS13: For some information, data was obtained from summary files rather than original sources.
- ^OS15: Data for 2021 includes implementation costs. Data for 2022 includes implementation costs and investments in research conducted through non-profit organizations including post-secondary research institutions. EPCOR U.S. community contributions were removed from the reported data in order to align with the Imagine Canada Caring Communities definition, which targets Canadian community contributions. Donations and programs in EPCOR U.S. operations are discussed in [pages 53 and 54](#) of this report.