EPCOR UTILITIES INC.

Management's Discussion and Analysis

For year ended December 31, 2021

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This management's discussion and analysis (MD&A), dated February 17, 2022 should be read in conjunction with the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2021 and 2020, including significant accounting policies (note 3), novel coronavirus (note 5), business acquisitions (note 6), expropriation of the Bullhead City water utility systems (note 7), loans and borrowings (note 19), financial instruments (note 27) and financial risk management (note 28) and the cautionary statement regarding forward-looking information at the end of this MD&A. In this MD&A, any reference to "the Company", "the Corporation", "EPCOR", "it", "its", "we", "our" or "us", except where otherwise noted or the context otherwise indicates, means EPCOR Utilities Inc., together with its subsidiaries. Financial information in this MD&A is based on the audited consolidated financial statements, which were prepared in accordance with International Financial Reporting Standards (IFRS) as issued by International Accounting Standards Board (IASB) and effective on December 31, 2021 and is presented in Canadian dollars unless otherwise specified. Terms used throughout this MD&A are defined in the Glossary at the end of this document.

In accordance with its terms of reference, the Audit Committee of the Company's Board of Directors reviews the contents of the MD&A and recommends its approval by the Board of Directors. This MD&A was approved and authorized for issue by the Board of Directors on February 17, 2022.

OVERVIEW

The Corporation, through its wholly owned subsidiaries, builds, owns and operates electrical, natural gas, and water transmission and distribution networks, water and wastewater facilities, sanitary and stormwater systems, and infrastructure in Canada and the United States (U.S.). The Company also provides electricity, natural gas and water products and services to residential and commercial customers. The Company provides Regulated Rate Option (RRO) and default supply electricity related services and sells electricity and natural gas to Alberta residential consumers under contracts through its Encor brand. In addition, EPCOR provides design, build, finance, operating and maintenance services for electrical, water and wastewater infrastructure for municipal and industrial customers in Canada and the U.S. EPCOR operates its business under the Water Services, Distribution and Transmission, Energy Services and U.S. Operations segments. The Company operates in Canada and the Southwestern U.S.

Net income was $101 million and $388 million for the three and twelve months ended December 31, 2021, respectively, compared with net income of $64 million and $276 million for the comparative periods in 2020, respectively. The increase of $37 million for the three months ended December 31, 2021 was primarily due to favorable fair value adjustments related to financial electricity purchase contracts, recovery of natural gas procurement costs related to winter storm "Uri" in Texas (winter storm), gain on finalization of the purchase price related to the expropriation of the Bullhead City (BHC) water utility systems and higher Adjusted EBITDA, as described below, partially offset by higher income tax and depreciation expenses. The increase of $112 million for the twelve months ended December 31, 2021 was primarily due to the gain on expropriation of the BHC water utility systems, favorable fair value adjustments related to financial electricity purchase contracts, gain on the settlement of contingent consideration and higher Adjusted EBITDA, as described below, partially offset by higher income tax, depreciation and finance expenses.

Adjusted EBITDA is a non-IFRS financial measure as described in Adjusted EBITDA and Net Income section on page 6 of this MD&A.

Adjusted EBITDA was $203 million and $843 million for the three and twelve months ended December 31, 2021, respectively, compared with $200 million and $775 million for the comparative periods in 2020, respectively. The increase of $3 million for the three months ended December 31, 2021 was primarily due to higher rates and customer growth, Adjusted EBITDA from the newly acquired Johnson Utilities LLC (JU) water treatment and distribution and wastewater collection and treatment assets (collectively referred to as the San Tan operations), lower provision for expected credit losses from customers and higher Energy Price Setting Plan (EPSP) margins, partially offset by higher operating costs including staff costs.

The increase of $68 million for the twelve months ended December 31, 2021 was primarily due to higher water consumption due to hot, dry weather conditions in the city of Edmonton, higher rates and customer growth, Adjusted EBITDA from the newly acquired San Tan operations, lower water treatment costs for operations in the city of Edmonton due to better water quality and lower provision for expected credit losses from customers, partially offset by higher operating costs including staff costs and lower EPSP margins.

STRATEGY

EPCOR's vision is to be a premier essential services utility company in North America that attracts and retains the best employees, is trusted by our customers and valued by our stakeholders. To achieve this vision, EPCOR must excel at its utility operations and human resources development and be successful in its pursuit of growth opportunities. This vision is driven by EPCOR's purpose statement, "Communities count on us. We count on each other".

EPCOR's water strategy includes maintaining and developing regulated water treatment and distribution infrastructure, sanitary and stormwater collection and wastewater treatment infrastructure within its current franchise service areas, as well as, the development or acquisition of new water and wastewater rate-regulated or contracted assets and operations in new markets. This includes design, build, finance, operating and maintenance services for municipal water and wastewater treatment infrastructure, the provision of water and wastewater treatment services and potable and process water for industrial customers and development of contracted transmission and distribution pipelines. EPCOR expects that significant capital investment will be required in its Edmonton franchise service area to address flood mitigation and other infrastructure needs related to its sanitary and stormwater systems.

EPCOR's electricity strategy includes maintaining and developing new distribution and transmission infrastructure in its Edmonton franchise service area, maintaining and developing new distribution infrastructure in its franchise service areas and in other parts of Ontario, as well as, the development or acquisition of new electrical rate-regulated or contracted assets and operations in new markets. EPCOR will continue to assess the impacts of climate change and resulting impacts of the transition from fossil fuel to cleaner energy including electricity. This may test the resiliency of our infrastructure and may require investments to ensure that the electricity systems are strengthened against impacts of climate change and can react to the various climate change adaptation actions of its customers.

We believe the long-term outlook for the North American water, wastewater, electricity and natural gas businesses remains strong. The demand for this infrastructure in North America is expected to increase due to population growth, aging infrastructure and water scarcity issues. Further, consumer expectations are increasing for safe, high quality water; reliable and environmentally responsible energy and wastewater treatment and disposal.

Over the next five years, we plan to invest in water, wastewater, electricity and natural gas assets where appropriate returns are expected, operational excellence can be delivered and the environmental impact of the investment is acceptable. We will seek growth opportunities within our existing geographical footprint and in new geographies. EPCOR also intends to invest in renewable energy generation including solar, renewable natural gas and biogas facilities within its geographical footprint, where commodity risk can be minimized, to enhance its environmental performance.

EPCOR recognizes the importance of Environmental, Social and Corporate Governance (ESG) issues to its stakeholders and investors and has developed its ESG framework and practices to ensure that the Company has a strong strategic position related to ESG. On August 16, 2021, EPCOR published its 2020 ESG Report - Leading for the Future. The report includes a scorecard of 25 performance measures and 17 targets, feature stories and videos profiling key initiatives, and interviews with leading experts and scientists from across the Company. The ESG report is available on the EPCOR website at www.epcor.com/esg.

Maintaining our investment grade credit rating remains a priority. This will ensure we have access to capital through existing and new credit facilities and public or private debt financing offerings. We recognize that we are not immune to recessionary trends and remain vigilant to maintain a prudent balance of rate-regulated and contracted operations to stay within our financial capacity.

KEY PERFORMANCE INDICATORS

Operational and financial performance is monitored through financial and non-financial measures that fall under four broad categories: health, safety and environment (HSE); people; growth (financial); and operational excellence.

Specific measures are established for each business unit and the corporate shared services group in alignment with the Company's strategy. Business unit measures are focused on customer related measures relevant to the particular business unit, such as customer satisfaction survey results and service reliability metrics.

EPCOR's 2021 total recordable injury frequency rate was favorable compared to 2021 target. We remain committed to building a culture that supports a workplace free of occupational injury and illness with minimal environmental impact. The Company met or exceeded most of its targets in 2021. Segment performance measures are discussed under Segment Results of this MD&A.

SIGNIFICANT EVENTS

Business acquisition of Johnson Utilities LLC operations

On January 29, 2021, the Company acquired the operations of JU through its wholly owned U.S. subsidiary EPCOR Water Arizona Inc., for total consideration of $141 million (US$110 million) including cash consideration of $128 million (US$100 million) and long-term unsecured promissory note of $13 million (US$10 million).

The San Tan operations are located southeast of the greater metropolitan Phoenix area. These operations provide services to approximately 30,000 water and 42,000 wastewater customers and hold a certificate of convenience and necessity that covers 160 square miles. The San Tan operations are regulated by the Arizona Corporation Commission (ACC).

For further information on the acquisition, refer to business acquisitions (note 6) of the audited consolidated financial statements of EPCOR Utilities Inc. for the twelve months ended December 31, 2021 and 2020.

Expropriation of the Bullhead City water utility systems

On November 5, 2019, voters in BHC, a U.S. municipality where EPCOR owned and operated the Mohave and North Mohave water utility systems (water utility systems), passed Proposition 415, authorizing the local government to take steps to acquire the Company's water utility systems using the power of eminent domain. Power of eminent domain is the right of a government to expropriate private property for public use, with payment of fair and equitable compensation. The passage of Proposition 415 allowed BHC to pursue the purchase of the Company's water utility systems through a legal process and failing agreement between the parties, ultimately allow the courts to decide the purchase price. On March 27, 2020, BHC filed a suit seeking to expropriate and take immediate possession of the water utility systems. On May 21, 2021, the judge in the suit ruled that the BHC must post a bond in the amount of US$80 million in order to "Quick Take" possession of and begin operating the water utility systems as municipal utility systems and transferred the case to a jury trial for determination of the fair value of the water utility systems.

On September 1, 2021, the Company received the bond proceeds of $101 million (US$80 million) from BHC and transferred possession of the water utility systems to BHC in compliance with the court order. On January 19, 2022, the BHC and the Company mutually agreed to an out of court settlement, at a fair value of the water utility systems of $126 million (US$100 million). The Company and BHC mutually filed for the dismissal of the court case and the matter was closed by the court on January 28, 2022. Based on the final purchase price, the Company has recognized a gain on the expropriation of the BHC water utility systems of $89 million (US$71 million).

The expropriation of the BHC water utility systems did not have a material impact on the operating income of the Company for the year ended December 31, 2021.

For further information on the expropriation, refer to expropriation of the Bullhead City water utility systems (note 7) of the audited consolidated financial statements of EPCOR Utilities Inc. for the twelve months ended December 31, 2021 and 2020.

Novel Coronavirus (COVID-19)

The Novel Coronavirus (COVID-19) pandemic continues to disrupt business activities, including supply chains around the world. In Canada and the U.S. where the Company's operations are based, the local governments have regularly been monitoring and responding to the emerging situation with maintaining certain travel and business related restrictions. Since the beginning of the pandemic, the Company has been operating under its business continuity plan to ensure safety of its employees and customers. In view of the uncertainty caused by the continued persistence of virus infections, the Company has deferred its plans for re-integration of the non-field / plant employees working from home, back to their permanent work locations. The Company is closely monitoring the situation, including announcements from governments and regulators, to assess potential impact on the operations of the Company.

Despite working under challenging circumstances created by the pandemic, the Company continued providing undisrupted safe and reliable services to all its customers and has not experienced any significant impact on its operations. Last year, the Company, in collaboration with various governments, provided support to its customers during the difficult economic conditions with measures including deferral of utility bill payments, as well as, temporarily suspending customer disconnections and collection activities. These measures resulted in delays in the collection of amounts due from customers, as well as, higher expected credit losses from customers. Recovery of the losses has commenced in the fourth quarter of 2021 and the Company is expecting to recover the majority of the losses incurred under the utility bill payment deferral program over the next several years through various regulatory avenues. Another economic impact of the COVID-19 pandemic faced by the Company is a decline in the sale of water and electricity to its commercial customers resulting from the closure of businesses as a consequence of government imposed restrictions, which has been offset by higher sales to residential and multi-residential customers. During the twelve months ended December 31, 2021, the COVID-19 pandemic did not result in any material impact on the financial results of the Company.

For further discussion of the COVID-19 outbreak and its impacts on the Company, refer to the Risk Factors and Risk Management section below.

SIGNIFICANT ACCOUNTING POLICY CHANGES

The audited consolidated financial statements for the years ended December 31, 2021 and 2020 have been prepared in accordance with IFRS. The Company has adopted amendments to various accounting standards effective January 1, 2021, which did not have a significant impact on the Company's financial statements.

CONSOLIDATED FINANCIAL INFORMATION

($ million) **Years ended December 31,**	**2021**	**2020**	**2019**
Revenues	$ 2,226	$ 1,987	$ 1,862
Adjusted EBITDA	843	775	730
Net income	388	276	231
Capital spending and investment	1,036	938	786
Total assets	13,247	12,180	11,421
Loans and borrowings (non-current)	3,638	3,207	3,026
Other financial liabilities (non-current)	180	165	176
Common share dividends	171	171	171

Revenues

($ millions)	**Three months ended December 31,**		**Twelve months ended December 31,**	
	2021	**2020**	**2021**	**2020**
Water Services segment	$ 173	$ 170	$ 724	$ 676
Distribution and Transmission segment	134	131	500	494
Energy Services segment	173	107	597	433
U.S. Operations segment	95	71	325	286
Other	25	42	112	130
Intersegment eliminations	(10)	(9)	(32)	(32)
Revenues	**$ 590**	**$ 512**	**$ 2,226**	**$ 1,987**

Consolidated revenues were higher by $78 million and $239 million for the three and twelve months ended December 31, 2021, respectively, compared with the corresponding periods in 2020, primarily due to the net impact of the following:

- Water Services' segment revenues increased by $3 million for the three months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher water consumption, higher water and wastewater rates, and customer growth, partially offset by lower construction revenues and lower commercial revenues from certain operating and maintenance contracts.

  Water Services' segment revenues increased by $48 million for the twelve months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher water consumption due to hot, dry weather conditions in the city of Edmonton, higher water and wastewater rates, customer growth, higher construction revenues and higher commercial revenues from certain operating and maintenance contracts.

- Distribution and Transmission segment revenues increased by $3 million and $6 million for the three and twelve months ended December 31, 2021, respectively, compared with the corresponding periods in 2020, primarily due to higher electricity distribution and transmission rates, partially offset by lower transmission system access service charge net collections, lower revenues related to lighting, traffic signals and light rail transit (LRT) electrical services for the City of Edmonton (the City) and lower commercial services revenues.

- Energy Services' segment revenues increased by $66 million and $164 million for the three and twelve months ended December 31, 2021, respectively, compared with the corresponding periods in 2020, primarily due to higher electricity prices, higher other revenues due to collection of late payment charges and connection fees from customers in 2021 and higher Encor revenues due to growth, as well as, a change in the terms of certain customer contracts resulting in presentation of gross revenues in 2021, compared to revenues net of related expenses in the corresponding periods in 2020.

- U.S. Operations' segment revenues increased by $24 million and $39 million for the three and twelve months ended December 31, 2021, respectively, compared with the corresponding periods in 2020, primarily due to revenues from the San Tan operations acquired in January 2021, higher energy sales due to extraordinary high prices for natural gas during the winter storm in Texas, higher construction revenues and customer growth, partially offset by lower water consumption due to higher precipitation in Arizona and New Mexico, lower revenues due to expropriation of the BHC water utility systems in September 2021 and lower foreign exchange rates.
- Other revenues decreased by $17 million and $18 million for the three and twelve months ended December 31, 2021, respectively, compared with the corresponding periods in 2020, primarily due to lower construction revenues related to the electricity sub-station infrastructure for the Trans Mountain pipeline expansion project and the Darlington Nuclear Generating Station (Darlington) water treatment plant project, partially offset by higher construction revenues related to commercial construction contracts in Ontario and higher natural gas revenues. In addition, for the twelve months ended December 31, 2021, there were lower energy sales in Ontario primarily due to lower rates.

Adjusted EBITDA and Net Income

We use earnings before finance expenses, income tax recovery (expense), depreciation and amortization, changes in the fair value of derivative financial instruments, transmission system access service charge net collections, net collections of U.S. natural gas procurement costs and other unusual items (collectively, Adjusted EBITDA) to discuss operating results for the Company's lines of business.

Change in fair value of derivative financial instruments represents the change in fair value of financial electricity purchase contracts between the electricity market forward prices and the contracted prices at the end of the reporting period, for the contracted volumes of electricity. Transmission system access service charge net collections is the difference between the transmission system access service charges paid to the provincial system operators and the transmission system access service charges collected from electricity retailers. Transmission system access service charge net collections are timing differences, which are collected from or returned to electricity retailers as the transmission system access service charges and customer billing determinants are finalized. Net collections of U.S. natural gas procurement costs represents the difference between collection of flow through natural gas procurement costs from customers and natural gas procurement costs paid to suppliers or producers. Net collections of U.S. natural gas procurement costs are timing differences, which are collected from or returned to customers on finalization of the regulatory process.

We believe that Adjusted EBITDA provides an indicator of the Company's ongoing ability to fund capital expenditures, to incur and service debt and to pay dividends to its shareholder, and may be useful for external stakeholders in evaluating the operations and performance of the Company. Adjusted EBITDA is a non-IFRS financial measure, which does not have any standardized meaning prescribed by IFRS and is unlikely to be comparable to similar measures published by other entities.

($ millions)	Three months ended December 31, 2021	Three months ended December 31, 2020	Twelve months ended December 31, 2021	Twelve months ended December 31, 2020
Adjusted EBITDA by Segment				
Water Services segment	$ 84	$ 84	$ 373	$ 335
Distribution and Transmission segment	60	62	245	233
Energy Services segment	17	9	37	34
U.S. Operations segment	36	37	153	152
Other	6	8	35	21
Adjusted EBITDA	**203**	**200**	**843**	**775**
Other income	7	-	7	1
Finance expenses	(35)	(35)	(148)	(137)
Income tax expense	(15)	(5)	(39)	(16)
Depreciation and amortization	(100)	(96)	(377)	(351)
Change in fair value of financial electricity purchase contracts	-	(5)	10	(1)
Transmission system access service charge net collections	7	5	3	5
Net collections of U.S. natural gas procurement costs	14	-	-	-
Gain on expropriation of the BHC water utility systems	20	-	89	-
Net income	**$ 101**	**$ 64**	**$ 388**	**$ 276**

Changes in each business segment's Adjusted EBITDA, compared with the corresponding periods in 2020, are described in Segment Results below. Explanations of the remaining variances in net income for the three and twelve months ended December 31, 2021, compared with the corresponding periods in 2020, are as follows:

- Higher other income of $7 million and $6 million for the three and twelve months ended December 31, 2021, respectively, was primarily due to a gain on the settlement of contingent consideration related to EPCOR Gas Texas.
- Finance expenses for the three months ended December 31, 2021 had no changes compared to corresponding period in 2020, due to higher expenses on the issuance of long-term debt in June 2021 being fully offset by an increase in capitalized interest on eligible projects.

  Higher finance expenses of $11 million for the twelve months ended December 31, 2021 were primarily due to full year interest expense on the long-term debt issued in May 2020, interest expense on the new long-term debt issued in June 2021, the unwinding of interest on contributions from customers and developers assumed on acquisition of San Tan operations and losses on interest rate swaps. These increases were partially offset by higher capitalized interest on eligible projects.
- Higher income tax expense of $10 million and $23 million for the three and twelve months ended December 31, 2021, respectively, was primarily due to income tax expense on the gain on expropriation of the BHC utility water systems and higher income subject to tax in Canadian and U.S. Operations, partially offset by a lower Alberta tax rate and impact of the decrease in Alberta income tax rate in 2020 on the deferred tax asset.
- Higher depreciation and amortization of $4 million and $26 million for the three and twelve months ended December 31, 2021, respectively, was primarily due to full year depreciation and amortization expense on 2020 asset additions and depreciation and amortization expense on 2021 asset additions, as well as, depreciation on JU assets acquired in January 2021, partially offset by lower loss on disposal of assets and lower depreciation due to expropriation of the BHC water utility systems in September 2021.

- Favorable changes in the fair value of financial electricity purchase contracts of $5 million and $11 million for the three and twelve months ended December 31, 2021, respectively, were primarily due to market forward contract prices being higher than electricity contracted prices in 2021, compared to electricity contracted priced being higher than market forward contract prices in 2020.
- Higher transmission system access service charge net collections of $2 million for the three months ended December 31, 2021 were primarily due to lower payments to the Alberta Electric System Operator (AESO) for system access and lower electricity distribution flow though payments to provincial system operator in Ontario, partially offset by lower collections from customers in Alberta.

  Lower transmission system access service charge net collections of $2 million for the twelve months ended December 31, 2021 were primarily due to lower payments to the AESO for system access and higher electricity distribution flow though collections from customers in Ontario, partially offset by lower collections from customers in Alberta.
- Higher net collection of U.S. natural gas procurement costs of $14 million for the three months ended December 31, 2021 were due to the decision by Railroad Commission of Texas (RCT) for recovery of extraordinary procurement costs incurred during the winter storm in February 2021. The Company expects to receive the funds in first half of 2022. For further information, refer to U.S. Operations segment below.
- Gain on expropriation of the BHC water utility systems of $20 million and $89 million for the three and twelve months ended December 31, 2021, respectively, has been recognized on the finalization of the purchase price related to the expropriation of the BHC water utility systems. For further information, refer to Significant Events section above.

SEGMENT RESULTS

Water Services

Water Services is primarily involved in the treatment, transmission, distribution and sale of water, the collection and conveyance of sanitary and stormwater and the treatment of wastewater within Edmonton and other communities in Western Canada. This segment’s water and wastewater business also includes the provision of design, build, finance, operating and maintenance services for municipal and industrial customers in Western Canada.

Water Services’ primary objective is to reliably supply drinking water and industrial process water, to collect and treat wastewater and to collect and convey stormwater while ensuring that the quality meets or exceeds public health, environmental and industrial requirements. The majority of Water Services’ income is earned through a performance based rate (PBR) tariff charged to its Edmonton customers. The PBR tariff is intended to allow Water Services the opportunity to recover its costs and earn a fair rate of return on invested capital while providing an incentive to manage costs below inflation and other prescribed adjustments built into the tariff. Under the Performance Based Regulation framework, customer rates are adjusted for inflation and expected efficiency improvements over the PBR term.

In October 2016, EPCOR’s Water Services segment received the decision related to its 2017-2021 Edmonton water and wastewater PBR application under Bylaw 17698 EPCOR Water Services and Wastewater Treatment Bylaw (Edmonton water and wastewater Bylaw). The decision includes a 10.175% return on equity (ROE) which is applicable for the full term of the Edmonton water and wastewater Bylaw. The Performance Based Regulation also has service quality metrics and targets for the utility to meet. Within the PBR term non-routine adjustments (NRA) to rates, for certain costs outside management’s control, may be allowed if they meet the criteria under the Edmonton water and wastewater Bylaw. For the 2017-2021 PBR term, the Edmonton City Council approved four NRAs to the water and wastewater treatment rates. Effective April 1, 2019, a negative NRA for the impacts of reductions in corporate administration cost allocations resulting from the transfer of the Drainage utility to EPCOR is being applied to the fixed monthly service charges. The remaining three NRAs pertain to Leduc County Annexation, LRT Relocations of water infrastructure and Lead Mitigation Strategy. These NRAs were added to the fixed monthly service charges effective April 1, 2020.

Edmonton City Council approved Bylaw 18100 EPCOR Drainage Services Bylaw (Drainage Bylaw) to cover the period from January 1, 2018 to March 31, 2022, which includes customer rates and terms and conditions for Drainage services under Performance Based Regulation. The Drainage Bylaw reflects EPCOR's commitment to hold average annual rate increases to 3% for the current PBR term. For the aforementioned PBR term, Edmonton City Council has approved three NRAs to the sanitary and stormwater treatment rates for the Stormwater Integrated Resource Plan (SIRP), Corrosion and Odour Reduction Strategy (CORe) and LRT Relocations of drainage infrastructure. These NRAs were added to the variable rate charges effective January 1, 2020. In February 2020, the Drainage Bylaw was amended to include performance measures, targets and penalties to ensure standard levels of performance are achieved in the areas of customer service, the environment, system reliability and employee safety.

With the scheduled expiration of the Edmonton water and wastewater Bylaw and Drainage Bylaw on March 31, 2022, EPCOR initiated the process of seeking approval of new bylaws for these services. Two PBR applications were filed in February 2021, one covering water services and the second covering drainage services and wastewater treatment. The Utility Committee of Edmonton City Council initiated the proceedings for review of the PBR applications, which concluded with Edmonton City Council approving the new bylaws on August 30, 2021. The Bylaw 19626 – EPCOR Water Services Bylaw includes an allowed ROE of 9.89%, which was then reduced by 0.25% to reflect a risk reduction following the implementation of a customer consumption deferral account for water services for the PBR term. The Bylaw 19627 – EPCOR Drainage Services and Wastewater Treatment Bylaw includes a separate ROE for wastewater treatment and drainage services. For the wastewater treatment it includes an allowed ROE of 9.89% which was then reduced by 0.25% to reflect a risk reduction following the implementation of a customer consumption deferral account for wastewater treatment. For drainage services, an ROE of 9.95% was approved and will be implemented on an inclining basis over the 2022-2026 period in equal increments, starting at 5.50% in 2022 and results in an average ROE of 7.14% over the first three year period. The ROE of 9.95% in 2025 and 2026 will require further approval in a future bylaw. The approvals include a consumption deferral account that will accumulate over the PBR terms. The consumption deferral account for both PBR approvals is based on the difference between actual and forecast consumption, with a refund to or collection from customers in the subsequent PBR terms. The new PBR for water services covers the five-year period effective from April 1, 2022 to March 31, 2027, while the new PBR for drainage service and wastewater treatment covers a three-year period effective from April 1, 2022 to March 31, 2025.

In 2018, EPCOR initiated the development of the SIRP to provide a risk-based approach to prioritize investments in stormwater infrastructure. The SIRP was identified by the City as one of the action items to support overall City ability to adapt to changing climate conditions and aligns with the City's Climate Change Adaptation and Resiliency Strategy. The SIRP approach allows for a continuous and adaptable plan that incorporates traditional sanitary and stormwater infrastructure upgrades with more environmentally friendly infrastructure improvements including implementation of green infrastructure. The risk methodology of the SIRP includes a risk analysis by sub-basin on four perspectives: health and safety, environment, social and financial impacts to properties, along with detailed maps. In 2019, EPCOR presented the Utility Committee of Edmonton City Council with various options to execute the SIRP program, with a recommended 20-year SIRP capital plan with cost of approximately $1.6 billion. A formal NRA application was filed by EPCOR in August 2019, which was approved on November 26, 2019. The NRA is an interim measure to recover the costs under current PBR. These costs have been included in the approved rates for the new PBR term, effective from April 1, 2022 to March 31, 2025 and will earn an ROE of 9.95% throughout the PBR term.

Operationally, the facilities owned or managed by Water Services generally performed according to plan in 2021. EPCOR was able to maintain the required quality of Edmonton's drinking water and wastewater discharge throughout the year. The impact of higher temperatures and lower precipitation in 2021 resulted in higher water consumption than anticipated during the year. This increased consumption more than offset the lower Commercial consumption as a result of COVID-19 related business closures.

Work on several significant capital projects within Edmonton progressed uninterrupted in 2021. These projects include the annual water main renewal and protection programs required to improve Edmonton's water distribution system, annual water, sanitary and stormwater service connections programs to provide new connections throughout Edmonton, upgrade and rehabilitation projects at both the E.L. Smith Water Treatment Plant (E.L. Smith WTP), Rossdale Water Treatment Plant (Rossdale) and the Gold Bar Wastewater Treatment Facility (Gold Bar), start of construction of a solar power farm with an associated battery energy storage system adjacent to the E.L. Smith WTP, renewal of the sanitary system to address aging infrastructure in mature neighborhoods, rehabilitation of trunks impacted by corrosion and odour issues, stormwater dry pond upgrades to mitigate the future risk of flooding in various communities, rehabilitation of the trunk sewers in Groat Road and new trunk sewer infrastructure to support new development.

Water Services Operating Income and Adjusted EBITDA

($ millions, including intersegment transactions)		Three months ended December 31, 2021	Three months ended December 31, 2020	Twelve months ended December 31, 2021	Twelve months ended December 31, 2020
Revenues	Water sales	$ 59	$ 56	$ 247	$ 232
	Provision of services	111	109	463	432
	Construction revenues	1	4	9	7
	Other commercial revenue	2	1	5	5
		173	170	724	676
Expenses	Other raw materials and operating charges	25	24	98	93
	Staff costs and employee benefits expenses	39	38	149	146
	Depreciation and amortization	46	46	170	163
	Franchise fees and property taxes	9	9	38	35
	Other administrative expenses	7	8	30	34
		126	125	485	471
Operating income before corporate charges		47	45	239	205
Corporate charges		(9)	(7)	(36)	(33)
Operating income		**38**	**38**	**203**	**172**
Exclude depreciation and amortization		46	46	170	163
Adjusted EBITDA		**$ 84**	**$ 84**	**$ 373**	**$ 335**

	Three months ended December 31,	Twelve months ended December 31,
Adjusted EBITDA for the periods ended December 31, 2020	**$ 84**	**$ 335**
Higher water and wastewater consumption, rates and customer growth	9	38
Lower water treatment costs	-	5
Lower provision for expected credit losses	-	2
Higher (lower) commercial margins	(3)	2
Higher operating costs and staff costs	(5)	(10)
Other	(1)	1
Increase in Adjusted EBITDA	-	38
Adjusted EBITDA for the periods ended December 31, 2021	**$ 84**	**$ 373**

Water Services' Adjusted EBITDA remained the same for the three months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher water consumption in the city of Edmonton, higher water and wastewater rates, and customer growth, which was fully offset by lower margin from commercial operations and higher operating and staff costs.

Water Services' Adjusted EBITDA increased by $38 million for the twelve months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher water consumption due to hot, dry weather conditions in the city of Edmonton, higher water and wastewater rates, customer growth, lower water treatment costs for operations in the city of Edmonton due to better water quality, lower provision for expected credit losses from customers and higher margin from commercial operations, partially offset by higher operating costs.

Year ended December 31,	**2021**	**2020**
Water sales volumes (megalitres)		
Water sales for Edmonton and surrounding regions	128,794	121,621

Water sales increased in 2021 compared with 2020, primarily due to hot, dry weather conditions and customer growth.

Year ended December 31,	**2021**	**2020**
Sanitary volumes (megalitres)		
Sanitary volumes for Edmonton and surrounding regions	88,806	85,563

Edmonton and surrounding region sanitary volumes were higher in 2021 compared with 2020, primarily due to higher consumption of water and customer growth.

Distribution and Transmission

Distribution and Transmission is involved in the transmission and distribution of electricity within Edmonton. The segment also provides contract commercial services including the design, construction and maintenance and other support services of street lighting, traffic signal, LRT and other utility electrical infrastructure for municipal and commercial customers in Alberta.

Distribution and Transmission's priority is to be a trusted provider of safe and reliable electricity, known for operational excellence through innovative and practical solutions. Distribution and Transmission earns income principally by transmitting high-voltage electricity through its facilities that form part of the Alberta Interconnected Electrical System to points of distribution, and from there, distributing lower voltage electricity to end-use customers. The transmission services are provided to its sole customer, the AESO. The distribution services are provided to retailers within its distribution service area in Edmonton. Distribution and Transmission's assets are located in and around Edmonton and are rate-regulated by the Alberta Utilities Commission (AUC). Transmission charges a regulated rate tariff (RRT) intended to allow recovery of prudent costs and earn a fair rate of return on invested capital. Distribution earns income through a PBR tariff charged to its customers. The PBR tariff is intended to allow Distribution the opportunity to recover its costs and earn a fair return on capital while providing an incentive to manage costs below inflation and other prescribed adjustments built into the tariff.

Transmission filed its 2020-2022 Transmission Facility Owner Tariff Application with the AUC on July 31, 2019. On April 17, 2020, a favorable decision on the tariff application was received and final rates were effective from August 2020.

Distribution's current PBR tariff covers the years 2018 to 2022. On March 1, 2021, the AUC initiated a generic proceeding to determine the approach for a one-year 2023 forecast, which could be used to set going in rates for the next PBR tariff, should the AUC continue with that format for distribution utilities. On March 22, 2021, utilities filed their proposed approaches to establishing 2023 Distribution rates with the AUC. On June 18, 2021, the AUC issued its decision directing that the 2023 rates will be set through a hybrid cost of service approach in which the extent of expenditure examination will be guided by the nature, size or complexity of the associated costs. EPCOR filed its application on January 17, 2022.

In addition, on March 1, 2021, the AUC initiated a generic proceeding to review and evaluate the PBR tariff regulated framework in terms of whether it has achieved its intended goals and whether distribution utilities should continue with PBR tariff. The purpose of the proceeding was to understand the impacts PBR tariff has had on utility efficiencies, customer rates, regulatory efficiency and burden, service quality, and the potential scope of a next PBR tariff proceeding. The utilities filed their responses to the AUC on April 22, 2021. On June 30, 2021, the AUC issued its decision that there will be a third PBR term commencing January 1, 2024. The 2023 Distribution cost of service rates will be the basis for the third PBR term.

Early in 2020, EPCOR participated in the 2021 Generic Cost of Capital (GCOC) proceeding in which the AUC was planning to set the ROE and capital structure for 2021 and 2022 (GCOC parameters). On October 13, 2020, the AUC directed that the ROE for 2021 remains at 8.5% and the equity ratio remains at 37% for both distribution and transmission utilities extending the currently approved rate for the full duration of 2021. Subsequently, on December 22, 2020, the AUC initiated a GCOC proceeding for 2022. Utilities filed submissions requesting extension of current GCOC parameters into 2022 on a prospective and final basis. On March 4, 2021, the AUC approved the extension of current GCOC parameters (37% Equity and 8.5% ROE) for 2022 on a final basis.

In January 2022, EPCOR received notification from the AUC on their planned approach to the 2023 GCOC and future years. The AUC has requested all interested parties to submit comments by February 2022 on whether the 2022 GCOC rates should be maintained throughout 2023 (37% Equity and 8.5% ROE). A decision on 2023 GCOC rates is anticipated by the end of the first quarter of 2022. The AUC also notified interested parties that it would like to consider a formula-based approach to the GCOC for the year 2024 and beyond. The AUC is of the view that a formula-based approach to ROE could increase transparency and predictability, and ultimately save customers and utilities considerable time, resources and money associated with having fully litigated proceedings every one to three years. The 2024 formula-based approach proceeding is planned for the third quarter of 2022.

In October 2021, the AUC issued a decision that revised the regulatory accounting treatment for AESO directed customer contributions. As per the decision, any AESO directed customer contributions made by the distribution facility owners after April 23, 2021, will require the contributing entity to expense the contributions for regulatory purposes in the year they are incurred. These contribution related expenses will be forecasted and included in EPCOR's next annual distribution rate application for recovery, with a true up between forecast and actual contributions in the following year. EPCOR filed a request for permission to appeal this decision with the Court of Appeal of Alberta, which was granted by the court on January 19, 2022. EPCOR filed its Notice of Appeal on January 31, 2022.

On November 2, 2020, the AUC approved the AESO's proposed 2019 deferral account reconciliation shortfall. As a result, Distribution recorded a $5 million payable to the AESO representing its share of the total decision costs. On December 7, 2020, the AUC approved Distribution's ability to collect this amount from retailers in calendar year 2021.

In April 2020, the AUC approved EPCOR's application to expand its Distribution service territory to include two areas of land that the City annexed from Leduc County and the Town of Beaumont in January 2019. The AUC approved the purchase price for the transfer of the assets from Fortis and the Battle River Rural Electrification Association to EPCOR in July 2021. The addition of the annexed areas will not have a material impact on EPCOR's operations.

Effective April 1, 2019, the Company is operating under two new agreements with the City to provide electrical services related to installation, maintenance, and repair of street lighting, traffic signals and LRT. These agreements are master service agreements with an initial term of two years and are renewable at the City's option for an additional two years. The primary contract is the Electrical Services Agreement which assigns sole-source work and is based on unit pricing and fixed fee for a set project scope. The Electrical Contractor, Traffic Signals and Street Lighting Agreement provides the City commercial flexibility to tender work. EPCOR is one of five pre-approved vendors able to compete on projects as they are released for bid. During the year, EPCOR has been awarded work under both of the agreements, however the volume of work has gradually reduced. In view of the reduced work volume, EPCOR has decided to phase out electrical services field work, including LRT work for the City and commercial customers.

Work on several significant capital projects proceeded in 2021. These projects include work to construct new Distribution infrastructure to accommodate the City of Edmonton's planned LRT system expansion, new 25kV circuits which are needed to meet demand in south-west Edmonton, ongoing work to connect new residential and industrial customers to EPCOR's distribution system, the annual underground Distribution cable life cycle replacement program to maintain the system reliability, continuation of work on Distribution aerial and underground line reconfigurations, the Southeast Edmonton capacity and the West Edmonton Transmission Upgrade Project which are both needed to comply with the AESO operating and reliability requirements, and providing development rebates to land developers who construct underground primary and secondary distribution infrastructure for new residential lot developments within the city of Edmonton.

Distribution and Transmission Operating Income and Adjusted EBITDA

($ millions, including intersegment transactions)		Three months ended December 31, 2021	Three months ended December 31, 2020	Twelve months ended December 31, 2021	Twelve months ended December 31, 2020
Revenues	Provision of services				
	Distribution	$ 86	$ 80	$ 314	$ 301
	Transmission	28	27	111	108
	Commercial and other	20	24	75	85
		134	131	500	494
Expenses	Other raw materials and operating charges	12	14	43	54
	Staff costs and employee benefits expenses	20	20	79	80
	Depreciation and amortization	26	23	102	96
	Franchise fees and property taxes	23	21	92	83
	Other administrative expenses	5	3	15	16
		86	81	331	329
Operating income before corporate charges		48	50	169	165
Corporate charges		(6)	(5)	(23)	(22)
Operating income		**42**	**45**	**146**	**143**
Exclude depreciation and amortization		26	23	102	96
Exclude transmission system access service charge net collections		(8)	(6)	(3)	(6)
Adjusted EBITDA		**$ 60**	**$ 62**	**$ 245**	**$ 233**

	Three months ended December 31,	Twelve months ended December 31,
Adjusted EBITDA for the periods ended December 31, 2020	**$ 62**	**$ 233**
Higher electricity distribution rates	4	10
Higher electricity transmission rates	1	3
Lower (higher) operating costs including staff costs	(2)	1
Higher property taxes	(1)	(3)
Higher provision for expected credit losses	(2)	-
Other	(2)	1
Increase (decrease) in Adjusted EBITDA	(2)	12
Adjusted EBITDA for the periods ended December 31, 2021	**$ 60**	**$ 245**

Distribution and Transmission’s Adjusted EBITDA decreased by $2 million for the three months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher property taxes, provision for expected credit losses from customers and operating costs partially offset by increase in electricity distribution and transmission rates.

Distribution and Transmission’s Adjusted EBITDA increased by $12 million for the twelve months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to higher electricity distribution and transmission rates, partially offset by higher property taxes.

Year ended December 31,	2021	2020
Distribution reliability and electricity volumes		
Reliability (system average interruption duration index in hours)	0.79	0.61
Electricity distribution (gigawatt hours)	7,513	7,249

Distribution and Transmission's primary measure of distribution system reliability is the System Average Interruption Duration Index (SAIDI), which it focuses on minimizing. This measure captures the annual average number of hours of interruption experienced by Distribution and Transmission's customers, including scheduled and unscheduled interruptions to its primary distribution circuits. In 2021, the SAIDI was 0.79 hours which is a deterioration from the 2020 value of 0.61 hours but remains well below the target of 1.15 hours set by AUC. Distribution and Transmission will continue with its reliability improvement programs to help maintain and improve overall system reliability. Electricity distribution volumes in 2021 increased by 4% compared to 2020.

Energy Services

Energy Services is primarily involved in the provision of the RRO electricity service and default supply electricity services to customers in Alberta. The segment also provides competitive electricity and natural gas products under the Encor brand.

Energy Services' business focuses on providing cost effective retail electricity service and efficient customer care through a highly skilled, knowledgeable and engaged customer service team. Energy Services earns income from selling electricity to residential, farm and small commercial customers under a RRT and default rate (customers with higher electricity volumes that are not under a competitive contract) in the EPCOR Distribution and Transmission Inc. and FortisAlberta Inc. service areas and several Rural Electrification Association service territories. The RRT is intended to allow Energy Services to recover its prudent costs and earn a return margin. Energy Services also provides billing, collection, and contact center services for EPCOR Water Services Segment in Edmonton and the City waste department. Energy Services focuses on providing excellent service experiences for its customers and measures call answer performance, billing performance, and customer satisfaction. These results are reported to the AUC on a quarterly basis.

EPCOR has the exclusive right to provide RRO electricity services to customers in the EPCOR Distribution and Transmission Inc. distribution service territory. Pursuant to an agreement, EPCOR also has the exclusive right to provide RRO electricity services to customers in FortisAlberta Inc.'s distribution service area through the year 2028, with successive three year renewal options through 2040.

The RRO business, which comprises the majority of the Energy Services business segment, has its rates regulated by the AUC under a cost-of-service based framework. The cost-of-service based framework allows the RRO business to recover its costs and earn a fair margin.

Energy Services' electricity revenue is determined in accordance with an EPSP approved by the AUC. Under the EPSP, Energy Services manages its exposure to customer load and fluctuating wholesale electricity spot prices by entering into financial electricity purchase contracts in advance of the month of consumption under a defined risk management process. The 2018-2021 EPSP was implemented effective April 1, 2019. In the first quarter of 2021, an application was filed with the AUC for the 2021-2024 EPSP and a final decision on the plan was received from AUC on October 27, 2021, wherein the AUC approved the EPSP as filed. The 2021-2024 EPSP will be effective in May 2022.

An application was filed with the AUC on July 16, 2021, for recovery of the lost revenues and bad debts incurred as a direct result of the Utility Payment Deferral Program (UPDP) mandated by the Government of Alberta in 2020 in response to the COVID-19 pandemic. A decision on the application was received in August 2021 wherein the AUC approved the recovery of bad debts and carrying costs related to the three-month deferral period between

March 18, 2020 to June 18, 2020, to be collected through a province wide rate rider between November 2021 and February 2022. The AUC directed that the recovery of the remaining lost revenues and bad debts incurred outside the aforementioned three-month deferral period should be applied for as a part of the 2021-2022 RRO Non-Energy rate application.

The 2021-2022 RRO Non-Energy rate application (including the recovery of lost revenues and bad debts outside the UPDP deferral period) was filed in August 2021 and the regulatory process is underway with the majority of costs negotiated through a mediated settlement and decision on remaining application expected in the first half of 2022. Rates for the majority of the year were based on the prior 2018-2020 Non-Energy decision. Energy Services filed an application for the implementation of interim rates and a decision on this application was received on October 25, 2021, wherein the AUC approved the 2021 and 2022 Non-Energy interim rates as filed, effective December 1, 2021.

Energy Services also serves the competitive retail market by offering electricity and natural gas contracts to Alberta consumers under the Encor brand, which partly mitigates the impact of RRO customer attrition. The service offerings which includes green energy options, provides customers wishing to move from the RRO to a competitive contract with an Encor offering.

Energy Services Operating Income and Adjusted EBITDA

($ millions, including intersegment transactions)		Three months ended December 31, 2021	Three months ended December 31, 2020	Twelve months ended December 31, 2021	Twelve months ended December 31, 2020
Revenues	Electricity and natural gas sales	$ 161	$ 102	$ 553	$ 400
	Provision of services	12	5	44	33
		173	107	597	433
Expenses	Energy purchases and system access fees	136	79	467	315
	Other raw materials and operating charges	-	(1)	-	-
	Staff costs and employee benefits expenses	10	10	39	36
	Depreciation and amortization	2	1	8	6
	Other administrative expenses	5	11	26	36
		153	100	540	393
Operating income before corporate charges		20	7	57	40
Corporate charges		(5)	(4)	(18)	(13)
Operating income		**15**	**3**	**39**	**27**
Exclude depreciation and amortization		2	1	8	6
Exclude change in fair value of financial electricity purchase contracts		-	5	(10)	1
Adjusted EBITDA		**$ 17**	**$ 9**	**$ 37**	**$ 34**

	Three months ended December 31,		Twelve months ended December 31,	
Adjusted EBITDA for the periods ended December 31, 2020	**$**	**9**	**$**	**34**
Lower provision for expected credit losses		3		9
Higher other revenues		1		4
Higher commercial services revenue		1		2
Higher competitive power and gas margins		1		2
Higher (lower) EPSP margins		4		(6)
Higher staff costs		-		(3)
Other		(2)		(5)
Increase in Adjusted EBITDA		8		3
Adjusted EBITDA for the periods ended December 31, 2021	**$**	**17**	**$**	**37**

Energy Services' Adjusted EBITDA increased by $8 million for the three months ended December 31, 2021 compared with the corresponding period in 2020, primarily due higher EPSP margins and lower provision for expected credit losses from customers.

Energy Services' Adjusted EBITDA increased by $3 million for the twelve months ended December 31, 2021 compared with the corresponding period in 2020, primarily due to a lower provision for expected credit losses from customers, higher other revenues due to restrictions on collections under the UPDP in 2020, higher commercial services revenues due to increased customer sites, as well as, higher competitive power and gas margins due to increased customer sites, partially offset by lower EPSP margins and higher staff costs related to additional operational support required for the stabilization of the Customer Information System.

Energy Services' retail electricity sales volumes were as follows:

Year ended December 31,	**2021**	**2020**
Retail electricity sales (gigawatt hours)		
RRO	4,499	4,545
Default and Competitive supply	1,225	1,009
Total	**5,724**	**5,554**

Energy Services' RRO sales volumes were marginally lower in 2021, compared with 2020, primarily due to a decrease in customer sites partially offset by higher consumption per customer. The increased competitive supply sales volume was primarily due to an increase in competitive customer sites, partially offset by a decrease in default supply due to a decrease in default customer sites as well as lower consumption per site.

Energy Services retail natural gas sales volumes were as follows:

Year ended December 31,	**2021**	**2020**
Retail natural gas sales (terajoules)		
Competitive supply	10,418	9,251

Energy Services' natural gas sales volumes were higher in 2021, compared with 2020, primarily due to increase in customer sites.

U.S. Operations

U.S. Operations is primarily involved in the treatment, transmission, distribution and sale of water, the collection and treatment of wastewater, and operating and maintenance services within the Southwestern U.S. This segment also provides natural gas distribution and transmission services in Texas. All of the Company's operations conducted in the U.S. are included in this segment.

Customer rates in Arizona and New Mexico are subject to approval by the ACC and the New Mexico Public Regulation Commission, respectively. Customer rates are intended to allow EPCOR the opportunity to recover costs and earn a reasonable rate of return under a historical cost-of-service framework.

At December 31, 2021, in Arizona and New Mexico, EPCOR owned operations in 14 water utility districts, each containing one or more water treatment and / or distribution facilities, and four wastewater utility districts, each containing one or more wastewater treatment and / or collection facilities. In the first quarter of 2019, the ACC considered U.S. Operation’s rate application for consolidation of the 11 Arizona water utility districts, which resulted in a tie vote with no decision being rendered. The Company filed for interim rates for the 11 Arizona water utility districts, which were approved by the ACC in March 2019. The ACC ordered the Company to file a new rate application for the 11 Arizona water utility districts (including two water utility districts, which were subsequently expropriated by the BHC) that included regional consolidation options. The application, including various consolidation options, was filed on June 15, 2020. On January 26, 2022, the ACC voted to approve the Company’s water rate case effective February 1, 2022. Out of the remaining nine water utility districts operated by the Company, the ACC has approved consolidation of the six water utility districts. The ACC issued the written order on February 1, 2022.

U.S. Operations also operates non-regulated water services in the state of Texas. The EPCOR 130 Pipeline delivers water through a 30-inch pipeline to four municipal customers near Austin, Texas under long-term contracts. While these wholesale water contracts are technically subject to Texas Public Utilities Commission appellate review, they are considered to be effectively unregulated.

EPCOR has also been approved by the San Antonio Water System, Texas to operate and maintain the Vista Ridge Pipeline Project, a 143-mile wholesale water supply pipeline that delivers groundwater to the community of San Antonio. EPCOR owns a 5% minority interest in Vista Ridge LLC (Vista Ridge). In addition, U.S. Operations is also involved in providing operating, maintenance and management services to various water and wastewater utilities.

EPCOR Gas Texas Inc. provides natural gas distribution and transmission services to customers in Texas. Natural gas customer rates in Texas are subject to approval by the RCT.

In February 2021, Texas faced record-low temperatures during a winter storm, resulting in higher demand for natural gas and a significant increase in the natural gas market spot prices. EPCOR’s physical infrastructure in Texas was not significantly impacted by the winter storm and during the storm we were able to provide natural gas to approximately 99.9% of our customers throughout the entire event. Due to the high demand during the winter storm, natural gas prices increased exponentially resulting in residential customer bills for the month of February escalating to thousands of dollars compared to average monthly bill of around one hundred dollars per customer under normal circumstances. The natural gas procurement costs are considered flow through costs to customers in Texas and normally any shortfall in the recovery of procurements costs are recovered by utility companies through regulatory mechanism in future periods. In order to minimize the immediate impact of utility bills on customers, the RCT, through its notice dated February 13, 2021, restricted the natural gas utility companies from immediately passing on the extraordinary natural gas costs to the customers. The Company recognized the extraordinary costs of $14 million (US$11 million) in the first quarter of 2021, without recognizing any revenue until the recovery mechanism was approved by the Regulator.

Subsequently, the Texas legislature approved a house bill HB1520 which was designed to repay the natural gas utility companies for the extraordinary cost of the natural gas procured (after ensuring reasonableness of the costs), and was enacted into law on June 16, 2021. Under the requirements of the new law, the Company filed an application with the RCT for repayment of extraordinary procurement costs for natural gas, which was approved in November 2021. Accordingly based on the approval of the RCT, the Company recognized revenues against the extraordinary procurement costs of $14 million (US$11) in the fourth quarter of 2021.

The U.S. federal government had announced plans to increase the federal corporate income tax rates from the existing rate of 21% to 26.5% through the Build Back Better Act. If the proposed plan is approved and federal income tax rates are increased, the change will significantly increase the deferred tax liability related to the Company's U.S. Operations. Over the long-term, the change in tax rate is not expected to have any material impact on the financial results of the Company, as the majority of the Company's operations in the U.S. are rate regulated such that any increase in corporate income tax expense resulting from a rate increase should be recoverable in future rates from customers. The U.S. federal government continues to evaluate the proposed plan and has not finalized any decision.

Work on several significant capital projects within the U.S. progressed satisfactorily in 2021. These projects primarily include the sewer main extension and wastewater treatment plant expansion west of metropolitan Phoenix to accommodate new industrial and commercial customers, and expansion of wastewater treatment plant in San Tan district acquired in January 2021.

U.S. Operations Operating Income and Adjusted EBITDA

($ millions, including intersegment transactions)		Three months ended December 31,		Twelve months ended December 31,	
		2021	**2020**	**2021**	**2020**
Revenues	Natural gas and water sales	$ 62	$ 50	$ 213	$ 208
	Provision of services	28	21	106	78
	Construction revenue	5	-	6	-
		95	71	325	286
Expenses	Energy purchases and system access fees	1	1	16	3
	Other raw materials and operating charges	22	15	72	57
	Staff costs and employee benefits expenses	13	10	48	42
	Depreciation and amortization	16	17	64	61
	Franchise fees and property taxes	3	2	10	8
	Other administrative expenses	5	5	20	18
		60	50	230	189
Operating income before corporate charges		35	21	95	97
Corporate charges		(1)	(1)	(6)	(6)
Operating income		**34**	**20**	**89**	**91**
Exclude depreciation and amortization		16	17	64	61
Exclude net collections of U.S. natural gas procurement costs		(14)	-	-	-
Adjusted EBITDA		**$ 36**	**$ 37**	**$ 153**	**$ 152**

	Three months ended December 31,	Twelve months ended December 31,
Adjusted EBITDA for the periods ended December 31, 2020	**$ 37**	**$ 152**
Higher Adjusted EBITDA from acquired San Tan operations	6	23
Higher commercial services margins	-	2
Lower foreign exchange rate	(1)	(10)
Lower water and wastewater revenues in Arizona and New Mexico	(1)	(4)
Lower (higher) operating costs including staff costs	1	(4)
Lower Adjusted EBITDA on expropriation of the BHC water utility systems	(2)	(3)
Other	(4)	(3)
Increase (decrease) in Adjusted EBITDA	(1)	1
Adjusted EBITDA for the periods ended December 31, 2021	**$ 36**	**$ 153**

U.S. Operations' Adjusted EBITDA decreased by $1 million for the three months ended December 31, 2021, compared with the corresponding period in 2020, primarily due lower water consumption in Arizona and New Mexico resulting from higher precipitation and lower water sales due to the expropriation of the BHC water utility systems, lower foreign exchange rates, as well as, higher operating costs, partially offset by Adjusted EBITDA from the San Tan operations acquired in January 2021.

U.S. Operations' Adjusted EBITDA increased by $1 million for the twelve months ended December 31, 2021, primarily due to Adjusted EBITDA from the San Tan operations acquired in January 2021 and higher commercial services margins from operations and maintenance of the Vista Ridge pipeline. These increases were partially offset by lower water consumption in Arizona and New Mexico resulting from a wet summer and lower water sales due to expropriation of the BHC water utility systems, lower foreign exchange rates, as well as, higher operating costs.

Year ended December 31,	**2021**	**2020**
Water sales volumes (megalitres)		
Water sales for Arizona and New Mexico	99,073	94,086
Wholesale (by EPCOR 130)	3,551	4,001
Total	102,624	98,087

Arizona and New Mexico water sales volumes increased in 2021 compared to 2020 primarily due to the acquisition of San Tan operations, partially offset by expropriation of the BHC water utility systems and lower volumes due to lower temperatures and higher precipitation in 2021. EPCOR 130 water volumes decreased in 2021, compared to 2020 due to lower volumes related to take or pay wholesale customer contracts.

Year ended December 31,	**2021**	**2020**
U.S. natural gas distribution volumes (terajoules)		
Natural gas distribution volumes	341	308

Natural gas distribution volumes increased in 2021, compared with 2020, primarily due to the winter storm in February 2021 as well as lower average temperatures in Texas resulting in higher average heating days.

Capital Spending and Investment

($ million) **Years ended December 31,**	**2021**	**2020**	**2019**
Water Services segment	$ 474	$ 448	$ 333
Distribution and Transmission segment	252	218	237
Energy Services segment	2	53	2
U.S. Operations segment	134	117	103
Other	47	88	80
Total capital spending	909	924	755
San Tan operations acquisition (net of acquired cash)	127	-	-
Brooke Water LLC acquisition	-	2	-
Rio Verde Utilities Inc. acquisition	-	-	31
Payment of consideration for Vista Ridge	-	12	-
Total acquisitions and investment	127	14	31
Total capital spending and investment	**$ 1,036**	**$ 938**	**$ 786**

We continued to invest in our infrastructure assets to improve reliability and meet increasing electricity, natural gas, treated water, sanitary and stormwater collection and wastewater treatment demands. We continue to expand our business through acquisition as well. Total capital spending and investment increased by $98 million for the twelve months ended December 31, 2021, compared with the corresponding period in 2020.

During the year, the Company invested in sustaining and lifecycle projects like, the annual water main replacement program, upgrade and rehabilitation projects related to wastewater and sanitary infrastructure in the city of Edmonton, upgrade of storm water dry ponds, underground electricity distribution cable replacement, electricity transmission and distribution capacity upgrade projects to improve reliability and meet increased customer demands as well as relocation of utility infrastructure necessitated by construction of the West valley light rail project. In addition, the Company also invested in growth projects like the new southwest Edmonton substation and duct bank under the North Saskatchewan River, development of a solar farm adjacent to the E.L. Smith WTP and expansion of existing wastewater treatment plants.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION – ASSETS

($ millions)	December 31, 2021	December 31, 2020	Increase (decrease)	Explanation of material changes
Cash	$ 30	$ 8	$ 22	Refer to Consolidated Statements of Cash Flows section.
Trade and other receivables	582	488	94	Increase primarily due to accrual for settlement proceeds related to expropriation of the BHC water utility systems ($25 million), receivable from the RCT related to winter storm ($14 million), higher accruals for energy sales revenues due to higher prices and higher volume, higher water sales receivable related to San Tan operations acquired during the year and higher income tax receivable, partially offset by reduction in receivables from the City relating to construction work and settlement of overdue invoices, and transfer of unbilled receivable related to Darlington water treatment plant to finance lease receivable.
Inventories	18	17	1	
Other financial assets	243	189	54	Increase primarily due to construction on the electricity infrastructure for the Trans Mountain pipeline expansion project, acquisition of JU assets ($2 million) and transfer of unbilled receivable related to Darlington water treatment plant from trade and other receivable to finance lease receivable, partially offset by payments received on long-term receivables and finance lease receivables.
Deferred tax assets	91	97	(6)	Decrease is primarily due to utilization of deferred tax assets against income subject to income tax in 2021.
Property, plant and equipment	11,725	10,913	812	Increase primarily due to capital expenditures and acquisition of San Tan assets ($216 million), partially offset by expropriation of the BHC water utility systems ($53 million), depreciation expense and lower foreign exchange rate.
Intangible assets and goodwill	558	468	90	Increase primarily due to capital expenditures and acquisition of San Tan assets ($98 million), partially offset by amortization expense and lower foreign exchange rate.
Total Assets	$ 13,247	$ 12,180	$ 1,067	

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION – LIABILITIES AND EQUITY

($ millions)	December 31, 2021	December 31, 2020	Increase (decrease)	Explanation of material changes
Trade and other Payables	$ 506	$ 426	$ 80	Increase primarily due to increase in payables for energy purchases and distribution and transmission costs due to higher prices and volume, higher capital and operating accruals, and higher holdback payables, partially offset by lower income tax payable.
Loans and borrowings (including current portion)	4,029	3,572	457	Increase primarily due to issuance of long-term debt ($564 million), issuance of long-term unsecured promissory note on acquisition of San Tan operations ($6 million) and net issuance of short-term debt, partially offset by principal repayments of long-term debt including private debt note ($209 million) and increase in debt issuance costs.
Deferred revenue (including current portion)	4,187	3,992	195	Increase primarily due to assumption of San Tan liabilities ($60 million), customer and developer contributions received, partially offset by deferred revenue recognized and the de-recognition of customer and developer contributions on expropriation of the BHC water utility systems ($15 million).
Provisions (including current portion)	221	142	79	Increase primarily due to assumption of San Tan liabilities ($84 million) and higher employee benefit accruals, partially offset by the de-recognition of customer and developer contributions on expropriation of the BHC water utility systems ($5 million).
Other liabilities (including current portion)	223	214	9	Increase primarily due to assumption of San Tan liabilities ($34 million) and derivative financial liabilities, partially offset by Drainage transition cost compensation payment, payments for lease liabilities and settlement of contingent consideration related to EPCOR Gas Texas.
Deferred tax liabilities	74	43	31	Increase is primarily due to temporary differences arising from the expropriation of the BHC utility water systems in 2021.
Equity	4,007	3,791	216	
Total Liabilities and Equity	$ 13,247	$ 12,180	$ 1,067	

CONSOLIDATED STATEMENTS OF CASH FLOWS

($ millions) **Cash inflows (outflows)** **Three months ended December 31,**	**2021**	**2020**	**Increase (decrease)**	**Explanation**
Operating	$ 210	$ 146	$ 64	Higher inflows are primarily due to higher net cash flows from operations including higher contributions received, lower income tax and interest payments, and higher funds from the changes in non-cash operating working capital.
Investing	(329)	(333)	4	Lower outflows are primarily due to lower capital expenditures and higher funds from changes in non-cash investing working capital, partially offset by higher advances on other financial assets, payments of contingent consideration and lower proceeds from disposal of property, plant and equipment.
Financing	80	75	5	Higher inflows primarily due to higher net issuance of short-term debt, issuance of long-term private debt note, partially offset by higher repayments of long-term debt and higher lease payments.
Opening cash	69	120	(51)	
Closing cash	$ 30	$ 8	$ 22	

($ millions) **Cash inflows (outflows)**							
Twelve months ended December 31,		**2021**		**2020**		**Increase (decrease)**	**Explanation**
Operating	$	724	$	691	$	33	Higher inflows primarily due to higher funds from the change in non-cash operating working capital, partially offset by lower contributions received from customers and higher interest payments.
Investing		(965)		(1,028)		63	Lower outflows primarily due to proceeds from expropriation of the BHC water utility systems ($101 million), lower capital expenditures, payment of the outstanding consideration for Vista Ridge in 2020, lower advances on other financial assets, lower Drainage transition cost compensation payment and higher inflow of funds related to the change in non-investing working capital, partially offset by funds used on acquisition of San Tan operations net of acquired cash ($127 million).
Financing		263		312		(49)	Lower inflows primarily due to higher repayment of long-term debt ($209 million in 2021 compared to $33 million in 2020), lower net issuance of short-term debt and higher refunds to customers, partially off by higher proceeds from issuance of long-term debt ($564 million in 2021 compared to $400 million in 2020).
Opening cash		8		33		(25)	
Closing cash	$	30	$	8	$	22	

Operating Activities and Liquidity

The Company maintains its financial position through rate-regulated utility and contracted operations, which generate stable cash flows.

The Company expects to have sufficient liquidity to finance its plans and fund its obligations, including current liabilities in excess of current assets, for the next twelve months, with a combination of available cash, funds from operations, issuance of commercial paper, public or private debt offerings and availability of liquidity from committed credit facilities described under the Financing section below. Cash flows from operating activities would be impaired by events that cause severe damage to our facilities and would require unplanned cash outlays for system restoration repairs. Under those circumstances, more reliance would be placed on our credit facilities for working capital requirements until a regulatory approved recovery mechanism or insurance proceeds are put in place.

Capital Requirements and Contractual Obligations

EPCOR's projected cash requirements for capital spending and investment in 2022 include $725 million to $950 million for investment in existing businesses and new business development.

The following table represents the Company's contractual obligations by year:

($ millions)	2022	2023	2024	2025	2026	2027 and thereafter	Total
Distribution and Transmission segment capital projects[1]	$ 14	$ 17	$ -	$ -	$ -	$ -	$ 31
Developer funded sanitary and stormwater capital projects[2]	14	2	-	-	-	-	16
Various sanitary and stormwater capital project service agreements[3]	92	21	-	-	-	-	113
U.S. Operations billing and customer care services agreement[4]	3	3	4	3	4	13	30
Design and build sub-contract for Darlington water treatment plant[5]	22	7	-	-	-	-	29
Renewable electricity credits purchase contract[6]	-	1	1	2	1	25	30
Loans and borrowings[7]	391	132	139	34	34	3,318	4,048
Interest payments on loans and borrowings	147	141	143	139	138	2,016	2,724
30-year US$ note purchase agreement[8]	63	-	-	-	-	-	63
Drainage transition cost compensation[9]	6	-	-	-	-	-	6
Contingent consideration[10]	1	41	-	-	-	-	42
Lease liability payments[11]	15	14	13	13	13	64	132
Other	28	14	10	7	7	-	66
Total contractual obligations	**$ 796**	**$ 393**	**$ 310**	**$ 198**	**$ 197**	**$ 5,436**	**$ 7,330**

1 The Company has commitments for several Distribution and Transmission projects as directed by the AESO.

2 The Company has commitments for several developer funded new sanitary and stormwater infrastructure projects throughout the city of Edmonton.

3 The Company has executed various non-cancellable purchase commitments related to sanitary and stormwater related Master Service Agreements for engineering services and construction contractors for various capital projects, as well as, commitments related to rehabilitation and upgrade of the sanitary sewers in the city of Edmonton.

4 The Company has entered into a contract for billing and customer care services for its U.S. Operations. The contract is valid for a period of 10-years up to November 2030.

5 The Company has entered into a sub-contract with the Bird Construction Industrial Services Ltd to design and build a water treatment plant in Darlington, Ontario.

6 The Company has entered into a contract with Renewable Energy Systems Canada Inc. to acquire renewable

electricity credits (RECs) sourced from a new wind farm in southern Alberta for a term of 20 years. The procurement of RECs is sized to match EPCOR's grid electricity consumption for all of its operations within the city of Edmonton, net of expected generation from a solar farm adjacent to E.L. Smith WTP. The construction of the new wind farm is proposed to be completed in the first half of 2023.

[7] During the year, the Company issued $500 million of three-tranche long-term unsecured public debentures, consisting of a $100 million three-year note with a coupon rate of 0.98% and an effective interest rate of 1.13%, a $200 million 10-year note with a coupon rate of 2.41% and an effective interest rate of 2.49%, and a $200 million 30-year note with a coupon rate of 3.29% and an effective interest rate of 3.35%. The interest is payable semi-annually and the principal is due at maturity for all three notes. The Company also issued a $64 million (US$50 million) 30-year private debt note with coupon rate of 3.08% and an effective interest rate of 3.13%.

For additional information on loans and borrowing refer note 19 Loans and Borrowings of the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2021 and 2020.

[8] The Company has entered into a US$ note purchase agreement with a group of investors for the issuance of $63 million (US$ 50 million) 30-year US$ private debt at a coupon rate of 3.13%. The funds will be drawn in April 2022.

[9] The Company has a commitment to compensate the City for stranded costs, including liabilities retained by the City, related to the transfer of Drainage operations to EPCOR from the City on September 1, 2017. Out of the total $75 million commitment, the Company has paid $69 million to the City up to December 31, 2021. The remaining outstanding amount of $6 million, was paid on January 4, 2022.

[10] On acquisition of the Blue Water and Cross County Water Supply Corporation assets, the Company committed to pay the previous owners of Blue Water a fee which is contingent on securing new long-term contracts for the supply of water and finalization of certain pending agreements with third parties. This fee is capped at US$33 million with no time limit for payment of the fee. The Company is reasonably certain that it will be required to settle the obligation, by way of cash payment, and has accordingly recognized the liability for contingent consideration in the consolidated statements of financial position.

[11] The Company has entered into various agreements for lease of land and buildings (including office space). For additional information on lease liabilities, refer the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2021 and 2020.

As at February 17, 2022, there were three common shares of the Company outstanding, all of which are owned by the City. During the year ended December 31, 2021 the Company paid a dividend of $171 million to the City which will be increased to $177 million in 2022 and beyond until such time as the EPCOR Board recommends that it be changed.

In the normal course of business, EPCOR provides payment guarantees and performance assurances bonds to third parties on behalf of its subsidiaries. At December 31, 2021, total guarantees of $532 million (2020 - $511 million) have been issued to various third parties.

Financing

Generally, our external financing is raised at the corporate level and invested in the operating business units. Our external financing has consisted of commercial paper issuance, bank loans under credit facilities, debentures payable to the City related to utility assets transferred from the City, debentures payable to the other municipalities, publicly issued medium-term notes and U.S. private debt notes.

The Company has bank credit facilities which are used principally for the purpose of backing the Company's commercial paper program, issuance of bank loans for operational requirements and providing letters of credit, as outlined below:

($ millions) December 31, 2021	Expiry	Total facilities	Letters of credit issued	Banking Commercial paper issued	Net amounts available
Committed					
Syndicated bank credit facility[1]	November 2026	$ 600			
Bank credit facility[1]	March 2024	200			
Total committed		$ 800	$ -	$ 256	$ 544
Uncommitted					
Bank credit facilities[2]	No expiry	200	134	-	66
Bank credit facility	No expiry	25	-	-	25
Total uncommitted		225	134	-	91
Total credit facilities		**$ 1,025**	**$ 134**	**$ 256**	**$ 635**

($ millions) December 31, 2020	Expiry	Total facilities	Letters of credit issued	Banking Commercial paper issued	Net amounts available
Committed					
Syndicated bank credit facility[1]	November 2024	$ 600	$ -	$ 154	$ 446
Uncommitted					
Bank credit facilities[2]	No expiry	200	85	-	115
Bank credit facility	No expiry	25	-	-	25
Bank credit facility	November 2021	13	-	-	13
Total uncommitted		238	85	-	153
Total credit facilities		**$ 838**	**$ 85**	**$ 154**	**$ 599**

[1] The Company's $600 million committed syndicated bank credit facility and $200 million committed bank credit facility added during the first quarter of 2021, are available and can be used for direct borrowings, issuance of letters of credit and backstopping EPCOR's commercial paper program. The committed bank credit facilities cannot be withdrawn by the lenders until expiry, provided that the Company operates within the related terms and covenants. The extension feature of EPCOR's committed bank credit facilities gives the Company the option each year to re-price and extend the terms of the facilities by one or more years subject to agreement with the lenders. The Company regularly monitors market conditions and may elect to enter into negotiations to extend the maturity dates. At December 31, 2021, commercial paper totaling $256 million was issued and outstanding (December 31, 2020 - $154 million).

[2] The Company's uncommitted bank credit facility consists of five bilateral credit facilities (totaling $200 million) which are restricted to letters of credit. At December 31, 2021, letters of credit totaling $134 million have been issued and outstanding (December 31, 2020 - $85 million) to meet the credit requirements of electricity market participants and to meet conditions of certain service agreements.

The Company has a Canadian base shelf prospectus under which it may raise up to $2 billion of debt with maturities of not less than one year. At December 31, 2021, the available amount remaining under this base shelf prospectus was $2 billion (December 31, 2020 - $1.60 billion). The Canadian base shelf prospectus expires in January 2024.

If the economy or capital market conditions were to deteriorate in the longer term, particularly in Canada and the U.S., the Company's ability to extend the maturity or revise the terms of bank credit facilities, arrange long-term financing for its capital expenditure programs and acquisitions, or refinance outstanding indebtedness when it matures could be adversely impacted. We believe that these circumstances have a low probability of occurring. We continually monitor our capital programs and operating costs to minimize the risk that the Company becomes short of cash or unable to honor its debt servicing obligations. If required, the Company would look to add temporary liquidity sources, reduce capital expenditures and operating costs.

Credit Ratings

Years ended December 31,	2021	2020	2019
Credit ratings			
S&P Global Ratings:			
Long-term debt	A-	A-	A-
DBRS Morningstar:			
Short-term debt	R-1 (low)	R-1 (low)	R-1 (low)
Long-term debt	A (low)	A (low)	A (low)

In September 2021, DBRS Morningstar confirmed its A (low) / stable senior unsecured debt and R-1 (low) / stable short-term debt. In October 2021, S&P Global Ratings confirmed its A- / stable long-term corporate credit and senior unsecured debt ratings for EPCOR.

These credit ratings reflect the Company's ability to meet its financial obligations given the stable cash flows generated from the rate-regulated water, wastewater, natural gas and electricity businesses. A credit rating downgrade for EPCOR could result in higher interest costs on new borrowings and reduce the availability of sources and tenor of investment capital.

Financial Covenants

EPCOR is currently in compliance with all of its financial covenants in relation to its committed bank credit facility, Canadian public medium-term notes and U.S. private debt notes. Based on current financial covenant calculations, the Company has sufficient borrowing capacity to fund current and long-term requirements. Although the risk is low, breaching these covenants could potentially result in a revocation of EPCOR's credit facilities causing a significant loss of access to liquidity or resulting in the Company's publicly issued medium-term notes and private debt notes becoming immediately due and payable causing the Company to find a means of funding which could include the sale of assets.

The key financial covenants and their thresholds, as defined in the respective agreements and EPCOR's actual measures at December 31, 2021 and 2020 were as follows:

	Actual 2021	Financial Covenant 2021	Actual 2020	Financial Covenant 2020
Modified consolidated net tangible assets to consolidated net tangible assets[1]	100%	> or = 80%	100%	> or = 80%
Consolidated senior debt to consolidated capitalization ratio[2]	51%	< or = 75%	49%	< or = 75%
Interest coverage ratio[3]	4.76	> or = 1.75:1.00	4.75	> or = 1.75:1.00
Debt issued by subsidiaries to consolidated net tangible assets[4]	0.1%	< or = 12.5%	0.1%	< or = 12.5%

1 Modified consolidated net tangible assets to consolidated net tangible assets refers to the total assets of the material subsidiaries of the Company on a consolidated basis, less intangible assets expressed as a percentage of the total assets of the Company on a consolidated basis, less intangible assets.

2 Consolidated senior debt to consolidated capitalization refers to the Company's total unsubordinated long-term debt expressed as a percentage of total unsubordinated long-term debt plus shareholder's equity. This excludes subordinated debt which has a lower ranking for repayment.

3 Interest coverage ratio refers to the Company's ability to pay the interest that arises on outstanding debt. It is calculated by dividing the Company's operating income before interest income and depreciation and amortization expense by the Company's interest expense on loans and borrowings. The interest coverage ratio is not applicable if the Company has an investment grade credit rating.

4 Limitation of debt issued by subsidiaries refers to the total debt held by the Company's subsidiaries that is not guaranteed by the Company plus total debt held by material subsidiaries which is secured by the subsidiaries' assets, expressed as a percentage of the Company's total assets less any intangible assets.

OUTLOOK

In 2022, EPCOR will focus on ensuring continuity of services to our customers notwithstanding the COVID-19 pandemic, integration of the recent acquisition of San Tan operations, expansion and construction of wastewater treatment plants in the U.S. Operations segment, natural gas pipeline construction in the Southern Bruce region of Ontario, construction of a solar farm near E.L. Smith WTP, construction of water treatment plant in Darlington, Ontario, exploring construction of a renewable natural gas facility within Edmonton and continuing to target growth in rate-regulated and contracted water, wastewater, electricity and natural gas infrastructure. We expect much of this investment to come from new infrastructure to accommodate customer growth and lifecycle replacement of existing infrastructure primarily related to the Edmonton and U.S. based operations. We intend to expand our water and electricity commercial services activities and to invest in renewable energy generation, including solar and biogas facilities, which will help reduce greenhouse gas emissions.

On March 31, 2020, EPCOR entered into a 20-year design, build, own, maintain and transfer (DBOMT) agreement with the Trans Mountain Pipeline L.P. and a corresponding design-build agreement with a partnership between Kiewit Energy Group and Western Pacific Enterprises. The scope of the DBOMT is to build and maintain electrical sub-station infrastructure along the Trans Mountain pipeline expansion project. The Company started construction on the project in April 2020 and the project was ready for energization in 2021, except for work at two sites, which triggered the 20-year maintenance period as of December 1, 2021. Construction work at the two remaining sites will be finalized in 2022 and these sites will be moved into the maintenance phase once the remaining work is completed.

EPCOR is considering constructing a renewable natural gas facility within the footprint of its existing Gold Bar wastewater treatment facility. The proposed facility would reduce flaring and greenhouse gas emissions while creating a green energy product for re-sale. The proposed facility would be expected to produce approximately 230,000 gigajoules of renewable natural gas per year of operation.

EPCOR was awarded franchises by two municipalities and one township in the Southern Bruce region of Ontario near Kincardine to use municipal rights-of-way to build, own and operate a natural gas distribution system. EPCOR received all requisite approvals and started construction of the gas distribution system in July 2019, through a design build contractor. EPCOR's Southern Bruce natural gas distribution system started connections to industrial, agricultural and residential customers in second half of 2020. At December 31, 2021, 250 km out of total 296 km length of the pipeline has been installed. The remaining portion of the system, including two small communities, is expected to be substantially complete by the end of 2022.

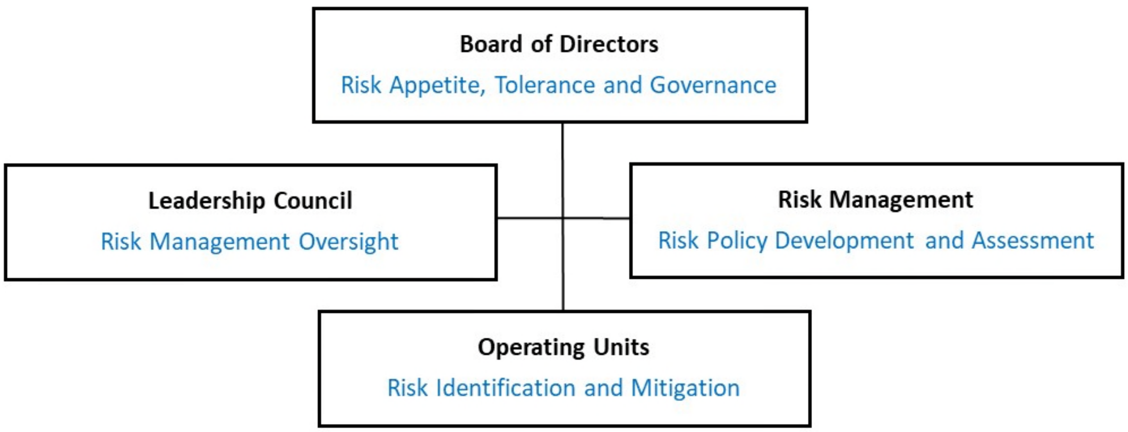
On June 9, 2021, the Province of Ontario announced that EPCOR was selected for $20 million in funding from the Ontario Natural Gas Expansion Program for a proposed project to extend natural gas service to customers in the Municipality of Brockton. The Company is in the process of obtaining necessary approvals for this project.

The Company is developing a solar farm on EPCOR owned land adjacent to its existing E.L. Smith WTP. The solar farm, which is expected to have a rated generation capacity of 13.6 megawatts with a 4 megawatts battery energy storage system, will generate "green" energy to help power the E.L. Smith WTP. The project has received all requisite approvals including approval on the re-zoning application from the Edmonton City Council after public hearing and a development permit from the City. In December 2020, an opponent of the project, Edmonton River Valley Conservation Coalition Society (ERVCCS), filed a judicial review of City Council's re-zoning approval alleging that the City erred in failing to apply the deemed essential test as set out in the North Saskatchewan River Valley Area Redevelopment Plan Bylaw. The judicial review application was heard in November 2021 and a decision was received by EPCOR in early January 2022 dismissing the ERVCCS' application. ERVCCS has appealed the dismissal of their judicial review application to the Alberta Court of Appeal, which is expected to be heard at the end of 2022. EPCOR commenced construction on the project in the second quarter of 2021 and anticipates energization of the system in mid-2022.

On December 16, 2021, EPCOR entered into a 30-year agreement with Ontario Power Generation to design, construct, finance and operate a demineralized water treatment plant at Darlington to provide ultra-pure demineralized water. As of December 31, 2021, design of the facility is nearly completed and the construction is anticipated to be completed in 2023, with operations and maintenance of the facility until 2053.

RISK FACTORS AND RISK MANAGEMENT

Approach to risk management



Our approach to Enterprise Risk Management (ERM) is to manage the key controllable risks facing the Company and consider appropriate actions to respond to uncontrollable risks. ERM includes the controls and procedures implemented to reduce controllable risks to acceptable levels and the identification of the appropriate management actions in the case of events occurring outside of management's control. EPCOR's ERM framework is aligned with the Committee of Sponsoring Organizations 2017 Integrated ERM Framework and the ERM process follows CAN / CSA ISO 31000-10 Risk Management – Principles and Guidelines. EPCOR's ERM program and the risk management framework and process it supports is designed to identify, assess, measure, mitigate and report on EPCOR's significant risks. The goal is to create and sustain business value by helping the Company achieve its business objectives and strategies through better management of risk. The program promotes a common framework and language for managing risk across EPCOR.

Acceptable levels of risk appetite and risk tolerance for EPCOR are established by the Board of Directors and are embodied in the decisions and Board-approved corporate policies associated with risk management. Oversight of the Company's strategy and ERM framework to identify, monitor and report EPCOR's top strategic and operational risks, including those that are climate-change related, is provided by the Board of Directors. Oversight of the Company's system of controls and procedures associated with mitigating EPCOR's top risks is provided by the Company's senior executive body, Leadership Council. The corporate Director, Audit and Risk Management is responsible for developing the framework and assessing risk at an enterprise level and monitors effectiveness of risk mitigating controls and conformance with risk management policies through the internal audit function. The Director, Audit and Risk Management provides the Board of Directors with an enterprise risk assessment quarterly. The Company's operating units, comprised of business units and shared service units, are responsible for identifying risks and developing and performing the activities associated with mitigating the risks in their respective operations. These risk management activities are integral aspects of the business units' and shared service units' operations.

EPCOR believes that risk management is a key component of the Company's culture and that we have cost-effective risk management practices in place. At the same time, EPCOR views risk management as an ongoing process and we continually review our risks and look for ways to enhance our risk management processes.

Large scale emergencies resulting from various events discussed below may have a significant impact on the Company's ability to provide services that are considered essential to the public. Maintaining essential services is critical to EPCOR's customers and EPCOR's reputation. The Company manages its ability to continually deliver services with emergency response protocols and business continuity plans which are periodically tested through various exercises and scenarios. These procedures provide assurance that the Company has the coordination, capacity and competence to respond appropriately to emergency situations arising from various forms of risk.

Among other things, the Company's Ethics Policy includes procedures which provide for confidential disclosure of any wrong-doing relating to accounting, financial reporting and auditing matters. The policy prohibits retaliation against any person making a complaint. During 2021, no significant substantiated complaints with respect to accounting, financial reporting or auditing matters were received.

The Company's principal risks are outlined below in order of most to least potentially serious, as assessed at December 31, 2021. Since December 31, 2020, new risks have been added, relative rankings of certain risks have been revised and commentaries have been amended, reflecting the evolving nature of the Company's risk exposure.

Government and Regulatory

EPCOR is subject to risks associated with changing political conditions and changes in federal, provincial, state, or municipal laws, regulations and permitting requirements in Canada and the U.S. It is not always possible to predict changes in laws or regulations that could impact the Company's operations, income tax status or ability to renew permits and licenses as required.

The Company owns utilities that provide services to municipalities in Canada and the U.S. Although the Company is granted exclusive rights to operate in the municipalities through franchise agreements and certificates of convenience and necessity, the municipalities may exercise their rights under legislation to expropriate the utilities at fair value, subject to a special vote to do so.

In December 2016, the Government of Alberta enacted *Bill 21: the Modernized Municipal Government Act* (MGA), which could restrict the ability of a municipally controlled corporation (MCC) to conduct its business. EPCOR, which is an MCC of the City, was previously exempt from the MGA and a similar exemption is not present in the new MGA. On July 1, 2018, however, the Government of Alberta declared the Municipally Controlled Corporations Regulation (MCC Regulation) into force, exempting EPCOR from the provisions of the MGA. For purposes of ensuring that the MCC Regulation is reviewed for ongoing relevancy and necessity, it expires periodically with the option that it may be repassed and extended in its present or an amended form following a review. The MCC Regulation expired on June 30, 2021 and was extended in its present form to June 30, 2023. In advance of the MCC Regulation's next expiry, EPCOR will work with the Government of Alberta to extend the exemption past June 30, 2023, or to permanently exempt EPCOR from the MGA, as failing to have the exemption could impair EPCOR's ability to achieve its strategic objectives.

EPCOR maintains an open dialogue with all levels of government in order to stay abreast of emerging issues including, but not limited to, proposed changes in legislation or government sentiment towards utility ownership in order to mitigate the Company's exposure to political and legislative risk.

The majority of EPCOR's operations are subject to risks associated with the regulation of utility rates. Such processes can result in significant lags between the time customer rates or tariffs are applied for and the time that regulatory decisions are received. Furthermore, the regulator may deny or alter the applied-for customer rates or tariffs.

EPCOR's water treatment and distribution services and wastewater treatment services to customers within Edmonton are rate regulated by Edmonton City Council pursuant to the Edmonton water and wastewater Bylaw. EPCOR's sanitary and stormwater collection services to customers within Edmonton are rate regulated by Edmonton City Council pursuant to the Drainage Bylaw. Our ability to fully recover operating and capital costs and to earn a fair return is dependent upon obtaining regulatory approval of customer rates, achieving the performance targets prescribed in the bylaws, maintaining cost increases at or below inflation, managing operational risks and not exceeding approved capital additions. Rates for water sales to regional water commissions surrounding Edmonton are regulated by the AUC on a complaints-only basis. EPCOR sets the rates it charges to the regional water commissions to recover actual operating and capital costs plus earn a fair rate of return.

The AUC utilizes a Performance Based Regulation structure for distribution utilities in Alberta. Under the Performance Based Regulation framework, which was revised effective January 1, 2018, EPCOR's annual electricity distribution rates are set by a formula that is generally equal to last year's rates plus an inflation factor less a productivity factor plus a provision for additional approved capital additions. Approval of certain additional capital projects may be applied for annually in a separate capital application, however, the criteria for qualifying projects is stricter than under the previous Performance Based Regulation framework. Our ability to recover the actual costs of providing service and to earn a fair return is dependent upon EPCOR's ability to manage cost increases at or below inflation, achieve the productivity factor and not exceed the approved capital additions, all as defined by the Performance Based Regulation formula or approved in a separate capital application.

The AUC sets rates intended to permit EPCOR's regulated electricity transmission business to recover forecast costs of providing service plus earn a fair return on capital invested in the business. The AUC sets rates intended also to permit the regulated Energy Services' RRO customer services business to recover forecast costs of providing service plus earn a return margin.

Water, wastewater and natural gas services provided by EPCOR's U.S. subsidiaries are regulated by the state regulatory commissions within Arizona, New Mexico and Texas. Our ability to fully recover operating and capital costs and earn a fair return is dependent upon EPCOR's ability to achieve our capital and operating cost, and customer growth and consumption targets built into customer rates. Since customer rates are established on a historical cost basis, any new capital additions for water, wastewater or natural gas infrastructure must be carefully planned and evaluated before commencement, since the addition of such costs to the regulatory rate base for subsequent recovery will only take place after the new infrastructure is built and the regulator approves the rate base additions through the rate application process.

Weather and Climate-change

Acute impacts

Normal weather can have a significant impact on our operations. Melting snow, freeze / thaw cycles and seasonal precipitation in the North Saskatchewan River watershed affect the quality of water entering our Edmonton water treatment plants and the resulting cost of purification. Climate-change could cause extreme weather events such as urban flooding, ice and electrical storms, and high winds resulting in damage to the Company's electricity transmission and distribution system assets, temporarily disrupting the reliable supply of power to customers. In Edmonton, urban flooding could also result in damage to the Company's reputation and increase exposure to legal action, where EPCOR is responsible for stormwater management. EPCOR has developed a long-term SIRP for Edmonton that will prioritize infrastructure investments to help mitigate the impact of urban flooding events.

Extreme heat is not considered to have a significant adverse effect on the majority of EPCOR assets and business, other than the suspension of outdoor work at peak heat times, due to concerns for the safety of the employees. However, as temperature rises, the efficiency of electrical equipment decreases, which puts a strain on the electricity operations in Alberta and Ontario. Wildfires and high wind events associated with summer and fall storms have historically occurred in Alberta, Ontario and British Columbia, and it is believed that their frequency and intensity are increasing. Electricity operations are the most vulnerable to these events, and the potential outcomes could include collapse of lines and structures, and extended outages.

Unseasonal temperature changes can cause water main breaks, temporarily disrupting the reliable supply of water to customers. Severely cold temperatures can cause natural gas distribution lines to freeze if moisture is present in the natural gas or the main pipelines, disrupting service to customers.

Flooding of the North Saskatchewan River valley could damage electrical equipment in our three large treatment plants and two electricity substations and result in a loss of income due to the facilities being inoperable for an extended period of time to perform repairs. EPCOR has developed a plan to mitigate the Company's exposure to flooding of the North Saskatchewan River valley including engineered solutions, some of which have already been employed.

Chronic impacts

Climate-change in the form of long-term shifts in weather patterns could result in drought conditions reducing source water supply, particularly in the desert region of the Southwestern U.S. where EPCOR's water sales comprise 9% of the Company's total revenues. In August 2019, under a Lower Basin Drought Contingency Plan involving Arizona, Nevada and California, the United States Bureau of Reclamation activated mandatory reductions in water deliveries in which Arizona's allocation of water to supply the Central Arizona Project, which delivers water by canal to Phoenix, Tucson and other areas, was reduced by 12%. In Arizona, a number of water management and supply augmentation strategies are employed to mitigate the risk of water supply shortage including enacting some very progressive policies to protect groundwater supplies. EPCOR actively manages its sources of water including replenishing reserves by injecting water into its wells when opportunity arises and working with regulators on rate rebalancing to mitigate the effects of declining consumption should it occur.

Climate-change could also result in increased precipitation and cooler temperatures during summer months, reducing customer demand for water and electricity, or increased temperatures during winter months, reducing customer demand for natural gas. Increased precipitation could also adversely affect turbidity levels in the North Saskatchewan River and impact EPCOR's ability to produce potable water in an economical and sustainable manner. High temperatures during summer months could result in wildfires, damaging assets and disrupting services to customers, although the majority of the Company's operations are in urban municipalities rather than heavily forested rural areas more exposed to wildfires.

Transitional impacts

Financial exposures associated with climate-related events are partly mitigated through our insurance programs, however there is no guarantee that insurance covering climate-related events will continue to be available to the Company. Due to the number of catastrophic events in the past few years and the magnitude of losses incurred by the insurance industry, insurers have begun to limit and eliminate coverage for high risk climate-related or climate-change related events such as flooding, wildfires, etc. Water conservation could lead to lower EPCOR revenues initially, but could also result in an opportunity for the Company to invest in water re-use infrastructure in the longer term.

Environmental and utility regulators are increasingly concerned with and requiring measures by utility companies to address emissions and mitigate other climate change factors. However, to date there have only been limited consideration by utility regulators regarding the recoverability of costs related to the foregoing and the effects of extreme weather and other climate change. This is compounded by the fact that the Company operates in several jurisdictions each with a different regulator. Recoverability of capital and operating costs related to response to acute weather and other climate conditions and also in preparation for chronic weather changes, including increased infrastructure resiliency, have not as yet been significantly tested before most utility regulators.

Changes in climate change policy and social perceptions and expectations may also change customer behavior and expectations, such as reduced per-household water, electricity or gas consumption. These changes could reduce customer demand and therefore revenue to the Company. Failure to address customer expectations regarding climate change could also adversely affect EPCOR's reputation.

The introduction of and / or demand for technology change related to climate change factors also presents risks to the Company. As the electrification of public and private transportation continues, the transmission grid and other electrical assets will need to be upgraded or replaced in order to accommodate the associated increase in electrical demand. Refer to the Technological Change Section for further information.

Health and Safety

The Company is responsible for ensuring that the potable water it sells to customers is safe to drink. The ability of the water treatment plants to meet potable water quality standards is dependent on continuous water testing in order to ensure that the prescribed requirements under regulation or conventional industry standards are met. EPCOR performs continuous and rigorous quality control testing of water purification, consistent with government and industry standards, to prevent public health issues due to inadequately treated, stored or distributed drinking water. Failure to properly maintain fully functioning treatment and measurement systems could result in regulatory fines or the occurrence of public health issues.

Drinking water quality for EPCOR's Alberta operations is regulated by the provincial Environmental Protection and Enhancement Act (EPEA). Regulation under the EPEA takes the form of an "Approval to Operate" which, among other things, specifies the quality of the treated water, the number, frequency and form of water quality testing, as well as, mandatory standards for the water treatment process. The drinking water quality requirements in Alberta meet or exceed the National Guidelines for Canadian Drinking Water Quality recommended by Health Canada.

Raw water quality is an important factor in the treatment of potable water. In Edmonton, we obtain source water from the North Saskatchewan River to treat and sell to customers in the greater Edmonton area. The North Saskatchewan Watershed Alliance, among other things, aims to protect and improve North Saskatchewan River water quality by developing and sharing knowledge and facilitating workshops with members and interested parties.

Drinking water quality and wastewater standards for EPCOR's U.S. operations are regulated by the U.S. Environmental Protection Agency (U.S. EPA) under the Safe Drinking Water Act and Clean Water Act, respectively. Among other things, the U.S. EPA sets drinking water standards specifying the treatment, source water protection, operator training and funding for water system improvement and relies on the states and localities to carry out the standards. Oversight of water and wastewater systems is conducted by state and county authorities to the degree that they establish standards at least as stringent as the U.S. EPA's standards.

In Arizona, we obtain source water from surface and ground water sources to treat and sell to customers. Surface water primarily comes from the Central Arizona Project. The Central Arizona Project conducts water quality testing upstream of the take-off points and has a formal process in place to notify our Arizona operations of any water quality issues that may arise. Process and compliance sampling results are stringently analyzed and trended for all groundwater and surface water systems in Arizona and New Mexico to ensure systems continue to meet all regulatory standards. Each system in Arizona and New Mexico has an emergency operations plan which addresses water quality issues and provides further risk mitigation.

There are no formal watershed protection groups in the Arizona and New Mexico service areas. The Arizona Department of Environmental Quality and New Mexico Environment Department oversee the water systems in their respective states. In Texas, the Texas Commission on Environmental Quality and the Texas State Soil and Water Conservation Board support the development and implementation of watershed protection plans. Water wells in

Arizona, New Mexico and Texas are protected from contamination by proper well construction and system operation and management.

Our operations have hazardous chemicals, high voltage electricity and natural gas transmission and distribution systems located in close proximity to populated areas and a significant incident could result in injury to the public, our employees or on-site suppliers. We manage occupational health and safety risks through a management system and measure occupational health and safety performance against recognized industry and internal performance measures. We conduct external compliance and internal conformance audits to verify that we meet or exceed all regulatory requirements. We are committed to working with industry partners to share and improve health and safety practices within the industry. At the end of 2021, all of our Edmonton water, wastewater, sanitary and stormwater, and electricity transmission and distribution operations were ISO 45001 registered. In 2021, our White Tanks water treatment operations in Arizona was recognized for exemplary achievement in the prevention and control of occupational health and safety hazards under the U.S. Occupational Safety and Health Administration's Voluntary Protection Program.

New Business Integration

EPCOR plans to grow its utility infrastructure business across various investment types and North American geographies. The Company has been accomplishing this growth through expansion into the natural gas distribution and sanitary and stormwater collection utility businesses, as well as, entry into new geographies. Expanding its utility infrastructure offerings and geographies will help diversify the Company's investments and thereby reduce investment risk.

While EPCOR has experience and expertise in linear utility infrastructure, natural gas distribution and large sanitary and storm water collection systems are relatively new to us. Expanding into new utility industries introduces risk to the Company due to potential unfamiliarity with the associated operational, safety and regulatory aspects of these businesses in addition to the risks associated with integrating these and other new businesses into EPCOR.

The Company continues to integrate into its U.S. operations, the Johnson Utilities LLC business which was acquired in January 2021. The integration includes the requirement to bring the utility into compliance with certain Arizona Department of Environmental Quality requirements by various dates extending to December 31, 2024. This is the largest business integration undertaken by the Company since the Drainage business was integrated a few years ago. Failing to successfully integrate new businesses could have long-term adverse effects on the Company, including reputational impact. The Company has successfully integrated all of its new businesses acquired in Canada and the Southwestern U.S over the past 11 years and applies the learnings from each one to ensure future business integrations are carefully planned and successfully executed.

Public Health Crisis

EPCOR is exposed to various potential effects that could result from a public health crisis such as an epidemic or pandemic like the COVID-19 outbreak. The potential short-term effects on the Company of a public health crisis include: failure to maintain continuity of service to customers due to a shortage of available employees and / or key supplies required to maintain operations should measures implemented to reduce spread of the virus be unsuccessful; and lower net income due to lower revenues primarily from commercial customers, increased credit losses from customers, costs incurred to mitigate risks of the outbreak and lower capitalization of operating costs due to reduced capital activity.

The Company could experience longer term effects due to failed economic recovery following the end of any outbreak, including: sustained decline in revenues, income and cash flows; operational challenges due to failure of the Company's supply chain relied upon for key parts, supplies and services; a credit rating downgrade leading to increased borrowing costs which in turn, could result in goodwill impairment or make the Company's cost of capital less competitive and limit growth potential.

The extent of the Company's exposure to the effects of a public health crisis is dependent upon a number of factors including, but not limited to: the spread, mortality rate and duration of the outbreak, including the length of time any mitigating measures are to be applied as recommended by healthcare experts or required under government order; the time required to develop and administer antibiotics or vaccines, and their efficacy; impact on customers, capital markets and the economy; ability of the Company's key suppliers to maintain service continuity; government orders imposed on utilities preventing the cut-off of customers for non-payment during an outbreak or allowing customers to defer payment of their bills, for example; effectiveness of the Company's business continuity plan; and ability to mitigate the various risks.

As a result of the COVID-19 outbreak, the Company implemented its business continuity plan designed to ensure the health and safety of its employees and continuity of services to customers.

Cybersecurity

We use several key information technology systems to support our core operations, including industrial control systems and electricity settlement and utility billing systems. These systems and the associated hardware are vulnerable to malfunction and unauthorized access including cyber-attacks, which could lead to loss or unauthorized disclosure of sensitive customer or EPCOR information, extortion or otherwise disrupt operations. We take measures to reduce the risk of malicious attack or failure of these systems including the data, hardware and network infrastructure on which the systems operate.

EPCOR's security program is based on the ISO 27002 control framework. In applying this framework, EPCOR has implemented a series of complementary defense mechanisms, starting from the external information technology perimeter down to the end user. Each layer is designed to prevent, detect and report on malicious activity. We regularly monitor our information technology protection systems and periodically employ third-party security providers to test their effectiveness and to strengthen the systems as new cyber threats arise. Financial exposures associated with cyber-attacks are partly mitigated through our insurance programs.

Due to increased cyber security threats from malicious actors exploiting the world's heightened vulnerability during the COVID-19 outbreak, the Company implemented additional controls and precautionary measures to protect against cyber-attacks and prevent fraud.

Reputational Damage and Stakeholder Activism

The Company is exposed to a number of risks that could damage its reputation as a safe, trusted and reliable utility operator and provider of environmentally friendly utility products and services, as well as, a safe, respectful employer. A damaged reputation could impair the Company's ability to sell its competitive products and services and to attract and retain employees.

Utilities are increasingly being challenged by external stakeholder activists on climate change, utility rates, environmental matters, etc. leading to public opposition to infrastructure projects. A lack of social license could impair the Company's ability to execute its capital expenditure programs necessary for the continued provision of safe, reliable utility services or achievement of strategic objectives. Risk of reputational damage and stakeholder activism is exacerbated by social media and the speed at which news stories and rumors can be spread or public opposition can develop.

EPCOR has controls and strategies in place to mitigate the exposure to the various risks that could result in damage to EPCOR's reputation should an event occur. The Company proactively maintains positive and transparent relationships with stakeholders. In addition, EPCOR communicates with stakeholders and the media when issues first arise and actively monitors social media in order to address reputational matters before they escalate.

Actual Performance Compared to Approved Revenue Requirement

The majority of EPCOR's businesses are rate-regulated. The rate-setting process requires the Company to forecast its revenue requirement for each business' test period based on factors such as projected water and electricity sales volumes, operating expenses, financing expense, etc. If the business is unable to achieve its forecasts, due to lower than projected water volumes or higher operating expenses for example, then the Company's actual financial results could be adversely affected, resulting in lower net income and cash flow, and reduced financial condition, causing the business to perform below the regulator-allowed ROE until the business' revised revenue requirement is approved by the regulator for the next test period, which could be up to several years in the future.

The Company's rate-regulated businesses monitor their actual performance against the various factors forecast in their approved revenue requirements and make operating decisions that results in cost reductions, where it is safe and prudent to do so in order to recover or offset any shortfall between actual and forecast revenues and / or expenses. It is not always possible to achieve the regulator-allowed return.

Failure to Attract, Retain or Develop Top Talent

Our ability to successfully operate and grow the business is dependent upon attracting, retaining and developing sufficient labor and management resources. As with most organizations, the Company has required certain employees to work remotely from home where possible in order to mitigate spread of the COVID-19 virus, and it has proven to be a relatively effective employee working arrangement. In addition, the COVID-19 pandemic has heightened peoples' awareness about communicable diseases and personal safety, and has changed employees' expectations about their working arrangements post-COVID.

The Company realizes it must adapt to the changing views and expectations of the workforce and offer employees flexible working arrangements including the ability to work remotely, to the extent it does not impair their ability to perform their duties. Failing to adapt could result in lower employee engagement levels, high staff turnover as employees leave to work for employers offering more flexible working arrangements, or it could limit the Company's ability to attract new employees due to a less flexible working environment than what other employers offer. However, there is no certainty that the Company's flexible work program will provide employees with the level of flexibility they are seeking and they may inevitably become disengaged and pursue employment with other employers. In addition, a permanently reduced level of in-person interaction and collaboration between employees may diminish the sense of belonging to the EPCOR team and erode the Company's culture and employees' loyalty towards the Company.

As we implement our flexible work program, we will closely monitor employee engagement levels and watch for any adverse consequences of the program in order to adjust it accordingly. We will continue to monitor developments and review our human resource strategies so that we have an adequate supply of labor and management. We believe that we employ good human resource practices and in 2021, Mediacorp Canada Inc. again named EPCOR a top 70 employer in Alberta and one of Canada's Top Employers for Young People. As well in 2021, the Phoenix Business Journal again named EPCOR as one of the best places to work.

Deterioration of Sanitary Trunk Line Infrastructure

High concentrations of hydrogen sulphide can accumulate in sanitary sewer lines and form sulphuric acid. The sulphuric acid corrodes the lines, causing deterioration at points along the lines, resulting in failure. The trunk lines are located on bridges crossing ravines and underneath major roadways, with junction points underneath traffic intersections. Failures often occur at the junction points causing sink holes which could result in vehicles or pedestrians falling into the sink holes. Traffic could also be disrupted for months until repairs are made and the traffic intersections are restored. Failures could result in environmental, public health, public safety, regulatory, customer service and reputational issues for the Company.

While the Company has identified the cause and areas of the sanitary system highest at risk, a failure could occur at any time without warning. A plan has been developed to quickly respond to failures in the short term and mitigate the problems from occurring in the longer term.

Business Interruption

Interruption of EPCOR's operations including failure of plant equipment, electricity transmission or distribution equipment, water, sanitary and stormwater collection systems or natural gas pipelines, or any of the industrial control systems utilized throughout operations could result from accidental actions, natural occurrences or intentional acts such as terrorism or sabotage. In addition, the quality of raw source water can be affected by such things as hydrocarbons and other inorganic or organic contaminants entering water ways and aquifers. Depending on the type and concentration of the contaminant, their removal may be beyond the capabilities of water treatment plant processes, resulting in the water treatment plant being shut down until the contaminants become diluted to the point where they can be treated within the water treatment plant capabilities.

An extended outage could result in lost revenues or additional costs to resume operations, including repair costs. This risk is managed through inherent redundancy and sound maintenance practices. Our maintenance practices are augmented by an inventory of strategic spare parts which can reduce down-time considerably in the event of equipment failure. We also have emergency response and business continuity plans which we exercise regularly. In addition, maintenance and capital plans are determined annually based on rigorous assessment of equipment and by continually monitoring the condition of assets.

Although all of our operations have historically performed in accordance with expectations, there can be no assurance that they will continue to do so. The Company's emergency response protocols are designed to ensure EPCOR can expeditiously resume operations following a business interruption. The Company's business continuity plans aim to enable EPCOR to continue providing critical services to customers in the event of a crisis. Financial exposures associated with business interruption are partly mitigated through our insurance programs.

Electricity Price and Volume

EPCOR sells electricity to RRO customers under a RRT. All electricity for the RRO customers is purchased in real time from the AESO in the spot market. Under the RRT, the quantity of electricity consumption, the method used to reduce the risk of adverse price movement for expected electricity consumption, and the electricity selling prices to be charged to these customers is determined by the EPSP. Under the EPSP, the Company uses financial contracts to mitigate the risk of adverse price movement of electricity under the RRO requirements and incorporate the price into customer rates for the applicable month. The Company enters into financial contracts-for-differences for forecasted volumes of electricity to mitigate the risk of adverse price movement up to 120 days in advance of the month in which the electricity (load) is expected to be consumed by the RRO customers. The volume of electricity is based on load (usage) forecasts for the consumption month. When consumption varies from forecast consumption patterns, EPCOR is exposed to prevailing market prices on fifty percent of the load when the volume of electricity contracted under the financial contracts-for-differences is short of actual load requirements or greater than the actual load requirements. Exposure to variances in electricity volume can be exacerbated by other events such as unexpected generation plant outages and extreme weather patterns which could impact electricity spot market prices.

Under contracts-for-differences, the Company agrees to exchange, with a counterparty meeting the Company's credit risk parameters, the difference between the AESO electricity spot market price and the fixed contract price for a forecasted volume of electricity, all in accordance with the EPSP. The contracts-for-differences are referenced to the AESO electricity spot price and any movement in the AESO price results in changes in the contract settlement amount.

If the risks of the EPSP were to become untenable, EPCOR could test the market and potentially re-contract the procurement risk under an outsourcing arrangement at a certain cost that would likely increase procurement costs and reduce margins. The Company may enter into additional financial electricity purchase contracts outside the EPSP to further economically hedge the price of electricity.

Project Delivery

Development, construction and acquisition of water and wastewater treatment, sanitary and stormwater, electricity transmission and distribution, and natural gas infrastructure are subject to various engineering, construction, stakeholder, government, environmental and valuation risks. These risks can translate into performance issues, delays and cost overruns. Project delays may defer expected revenues, and project cost overruns could make projects uneconomic. Many of the water, wastewater and natural gas growth projects currently pursued by the Company require design and construction capabilities that are provided by third parties. In order to pursue these projects, strategic partnerships have been established with reputable firms with proven abilities to successfully design and construct infrastructure projects. Should these partnerships dissolve or no longer be recognized by the market as a viable approach, the Company's growth plans could potentially be curtailed.

We attempt to mitigate project delivery risks by performing detailed project analysis and due diligence prior to and during development, construction or acquisition, and by entering into appropriate contracts with qualified design engineers and construction contractors for various services to be provided as required. Our ability to complete projects successfully depends upon numerous factors such as weather, availability of materials and skilled labor, strikes, regulatory matters, etc.

Supply Chain

The Company relies on the third-party supply of goods and services in its day-to-day operations including the construction of new facilities. Events such as cyber or terrorist attack, shortage of labor or materials, shipping constraints, energy shortage, labor dispute, severe weather or natural disaster, bankruptcy or credit crisis, pandemics such as COVID-19, etc. could impact the Company's suppliers and disrupt supply of key goods and services relied upon by the Company. As supply chains become increasingly global, they are more interconnected, interdependent and vulnerable to broad disruption from isolated events.

Disruption of the Company's supply chain could impact the Company in a number of ways, the most significant of which include: interruption of services to EPCOR customers if parts critical to perform repairs and maintenance are unattainable when needed; delays in the construction of new facilities, deferring the Company's realization of income or any other benefits to be derived from the facilities; or cause an acute supply and demand imbalance of goods and services, resulting in significant unplanned cost increases. The Company's most vulnerable supply is electricity which is provided by third party power generators for EPCOR to sell and distribute to customers and use to power the systems that treat and distribute potable water to customers, and convey and treat wastewater.

The Company closely monitors supply of key goods and services and applies a number of mitigating strategies to minimize the impact of supply chain challenges including; formalizing arrangements with alternate suppliers of key goods and services; maintaining higher inventories of critical supplies in order to mitigate unexpected delays in delivery; placing orders earlier than normal to offset known extended delivery lead times; etc. The present supply chain challenges experienced globally as a result of the COVID-19 pandemic have not significantly affected the Company, although it has resulted in minor delays of certain materials and components. The impact of the COVID-19 pandemic on the global supply chain could remain for an extended period of time and as a result, could have a greater impact on the Company going forward.

Environmental

There are a variety of environmental risks associated with EPCOR's water, wastewater, electricity, natural gas, sanitary and stormwater operations. EPCOR's operations are subject to federal, provincial and municipal laws, regulations and operating approvals which are designed to reduce the impacts on the environment. Failure to comply could subject the Company to fines or other penalties. In addition, the presence or release of hazardous or other harmful substances or other environmental incident could result in spills or emissions in excess of those permitted by law, regulations or operating approvals or lead to claims by third parties or governmental orders requiring the Company to take specific actions such as investigating, controlling and remediating the effects of these substances.

Furthermore, an environmental event could materially and adversely impact EPCOR's business, prospects, reputation, financial condition, operations or cash flow.

Environmental risks associated with water and wastewater treatment and sanitary and stormwater collection operations include wastewater discharge, biogas release and residuals management. EPCOR's wastewater treatment operations are regulated by stringent wastewater treatment standards and controls covering quality of treated wastewater effluent. Water and wastewater treatment technologies and supporting processes are continuing to evolve and are influenced by more stringent regulation and environmental challenges. Failure to identify and deploy viable new technologies to meet changing regulations and new challenges could undermine the competitiveness of EPCOR's market position and exclude it from some market opportunities.

Risks associated with electricity transmission and distribution operations include the unintended environmental release of substances such as oil from its oil-filled pipe-type cable and polychlorinated biphenyl transformer fluid from transformers.

The primary sources of EPCOR's greenhouse gas emissions relate to powering and heating our treatment plants, distribution of water and building facilities, and operating our vehicle and equipment fleet. The Company is proactive in seeking ways to reduce its greenhouse gas footprint and in early 2021, EPCOR began construction of a solar farm to power its E.L. Smith WTP in southwest Edmonton as an environmentally friendly alternative to using electricity generated from fossil fuels. Once complete, the project will reduce the greenhouse gas emissions generated by the Company's Edmonton operations by 20%.

Compliance with future environmental legislation may require material capital and operating expenditures. Failure to comply could result in fines and penalties or the regulator could force the curtailment of operations. There can be no assurances that compliance with or changes to environmental legislation will not materially and adversely impact EPCOR's business, prospects, financial condition, operations, net income or cash flows.

To the best of our knowledge we comply, in all material respects, with the laws, regulations and operating approvals affecting our facilities, and we minimize the potential for environmental incidents by applying an environmental management system based on the ISO 14001 standard. The scope of the environmental management system encompasses the Company's environmental policy, objectives, processes, procedures, training and stewardship of our environmental responsibility. We require each facility to have an environmental emergency response plan. Each plant and facility is also subject to third party environmental audits to help ensure conformance with the EPCOR HSE management system and compliance with all regulations. The Company's 20-year Edmonton flood mitigation program to protect homes, businesses and essential services from flood risk was recognized as a Clean50 Top Project in 2021. As well in 2021, EPCOR was again recognized as one of the Best 50 Corporate Citizens in Canada in relation to sustainability and environmental protection. At the end of 2021, our Regina wastewater, Britannia mine water run-off operations and Strathmore water and wastewater systems in addition to all of our Edmonton water, wastewater, sanitary and stormwater, and electricity transmission and distribution operations, remain ISO 14001 registered.

Credit

Credit risk is the possible financial loss resulting from the inability of counterparties to satisfy their contractual obligations to EPCOR.

Exposures to credit risk in our rate-regulated and non-rated-regulated businesses are generally limited to amounts due from customers for goods and services provided but not yet paid for.

Exposure to credit risk for residential RRO customers and commercial customers under default electricity supply rates are generally limited to amounts due from customers for electricity consumed but not yet paid for. This portfolio is reasonably well diversified with no significant credit concentrations. Historically, credit losses in these customer segments have not been significant and depend in large part on the strength of the economy and the ability of the customers to effectively manage their financial affairs through economic cycles.

EPCOR's exposure to RRO and default customer credit risk is summarized below. The exposure represents the accounts receivable value for this portfolio, which is managed at the gross exposure level rather than by individual customer account.

($ millions) **December 31,**		**2021**		**2020**
RRO and default supply customers	$	181	$	138

The year-over-year increase in exposure primarily relates to higher commodity prices.

EPCOR is also exposed to the risk of non-payment for water, electricity transmission and distribution, natural gas, and sanitary and stormwater services provided to rate-regulated and non-regulated customers, as summarized below. Exposures represent the accounts receivable value for this portfolio, which is managed at the gross exposure level rather than by individual customer account, excluding receivables related to electricity transmission and distribution which are managed at individual customer level.

($ millions) **December 31,**		**2021**		**2020**
Unrated customers	$	242	$	233
Rated customers[1]		94		57

1 Rated customers having investment grade credit ratings are based on the Company's internal criteria and analyses, which take into account, among other factors, the investment grade ratings issued by external credit rating agencies when available.

EPCOR's credit risks are governed by a Board-approved credit risk management policy, which is administered by EPCOR's Treasurer.

We manage credit risk and limit exposures through our credit policies and procedures. These include an established credit review, rating and monitoring process, specific terms and limits, appropriate allowance provisioning and use of credit mitigation strategies, including collateral arrangements. In view of the COVID-19, the Company reassessed the credit risk for all high value customers to ensure heightened credit risk for identified customers is mitigated through additional security or other collateral arrangements.

Electricity is considered an essential service and regulations limit what actions the Company can apply to address delinquent accounts and therefore, EPCOR may experience credit losses in the future should economic conditions deteriorate.

Financial Liquidity

EPCOR's cash flows from operating activities do not provide sufficient capital to undertake or complete ongoing or future development, enhancement opportunities or acquisition plans and accordingly, the Company requires additional financing from time to time. The ability of the Company to arrange such financing will depend in part upon prevailing market conditions at the time and the Company's business performance. There can be no assurance that debt or equity financing will be available or sufficient to meet these requirements or for other corporate purposes.

Furthermore, if financing is available, there can be no assurance that it will be on terms acceptable to the Company. EPCOR's inability to access sufficient capital for its operations could have a material adverse effect on the Company's business, prospects and financial condition. Detailed discussion of EPCOR's sources of liquidity is included in the Operating Activities and Liquidity section of this MD&A.

The Company manages liquidity risk through regular monitoring of cash and currency requirements by preparing short-term and long-term cash flow forecasts and also by matching the maturity profiles of financial assets and liabilities to identify financing requirements. In addition, the Company maintains access to a number of capital sources including the Canadian public debt and commercial paper markets, the U.S. private debt market and the various banks comprising the Company's syndicated bank credit facility. EPCOR's financial risks are governed by a Board-approved financial exposure management policy, which is administered by EPCOR's Treasurer.

Foreign Exchange

The Company is exposed to foreign exchange risk on foreign currency denominated transactions, firm commitments, monetary assets and liabilities denominated in a foreign currency and on its net investments in foreign entities.

The Company's financial exposure management policy attempts to minimize economic and material transactional exposures arising from movements in the Canadian dollar relative to the U.S. dollar or other foreign currencies. The Company's direct exposure to foreign exchange risk arises from its U.S. operations and on Canadian capital expenditure commitments denominated in U.S. dollars or other foreign currencies. The Company coordinates and manages foreign exchange risk centrally, by identifying and measuring movements in normally opposing cash flows (i.e. revenues versus expenses) or balances (i.e. assets versus liabilities) and then dealing with any material residual foreign exchange risks. The Company's exposure to foreign exchange risk on its investment in foreign entities is partially mitigated by foreign-currency denominated financing and cross-currency interest rate swaps (CCIRS).

The Company may use foreign currency forward contracts to fix the functional currency of its non-functional currency cash flows, thereby reducing its anticipated U.S. dollar-denominated transactional exposure. The Company looks to limit foreign currency exposures as a percentage of estimated future cash flows.

Conflicts of Interest

Certain conflicts of interest could arise as a result of EPCOR's relationship with the City, EPCOR's sole common shareholder and regulator for water and wastewater treatment, and sanitary and stormwater collection utility rates in Edmonton.

Labor Disruption

Most of the Company's Canadian employees are members of labor unions under a number of collective bargaining agreements. Although EPCOR maintains strong working relationships with each of the labor unions, the inability to maintain those relationships or renew collective bargaining agreements with terms that are acceptable to the Company could result in labor disputes potentially leading to service interruption or higher labor costs than what is reflected in approved customer rates.

Technological Change

Technological change could impact the Company directly or indirectly depending on the nature of the technological change.

New technology aimed at reducing natural gas, electricity or water consumption could directly result in lower demand for the Company's products and services. Rapid adoption of electric vehicles could strain the reliability of the Company's electricity transmission and distribution systems in the short term, but could also provide an opportunity in the longer term to invest in infrastructure to increase the capacity of EPCOR's electricity transmission and distribution systems.

The development of technology to sustainably and economically generate renewable energy at scale could significantly reduce world demand for oil and natural gas and adversely impact the oil and natural gas industry, which forms the base of the Alberta economy. This in turn could lead to a significant decline the Alberta economy where EPCOR's operations are most extensive, indirectly resulting in lower demand for the Company's products and services as businesses close and Albertans move out of the province to seek employment elsewhere.

The development of new technologies may outpace EPCOR's ability to react or adapt quickly enough to remain competitive or be able to exploit the technologies as new business opportunities. The Company is continually monitoring new technologies, dialoguing with industry peers and advisors about the potential effects of emerging technologies on the utility industry, and conducts studies on those developing or emerging technologies that could impact EPCOR specifically.

Groundwater Contamination

The Company's U.S. operations rely on multiple sources of water to treat and sell to customers. Aquifers are one of more significant sources of water. Aquifers are charged naturally as water moves downward from the earth's surface through rock formations to form groundwater. Under the Company's water re-use program, the aquifers are also re-charged by injections of partially treated wastewater.

Groundwater can become contaminated by pollutants contained in the surface water that runs off into the aquifers or contained in the partially treated wastewater injected into the aquifers for re-use. The Company's existing water treatment processes may not be capable of treating certain contaminants or excessive pollutant loads specific to any one aquifer. This could result in the Company no longer being able to rely on that aquifer as a source of treatable water until the Company's water treatment plant capabilities can be enhanced to remove the contaminant(s), in turn resulting in scarcity of source water.

New contaminants not yet identified or confirmed as threats to public health may be present in groundwater, go untreated and be present in tap water. In Arizona and New Mexico, two aquifers have been found to be contaminated with per- and polyfluoroalkyl substances (PFAS) directly linked to military operations at nearby air force bases. Accumulation of certain PFAS has been shown, through blood tests, to occur in humans and animals. While the science surrounding potential health effects of certain PFAS is developing, evidence suggests that bioaccumulation of PFAS may cause serious health conditions.

The Company's wells at the Luke Air Force Base in Arizona have all tested negative for PFAS. A small number of the Company's wells located near the Cannon Air Force Base in New Mexico have shown low-level amounts of PFAS, but well below the U.S. EPA's health advisory level of 70 parts per trillion. Wells showing any detectable level of PFAS have voluntarily been taken out of normal rotational use by the Company and used only during peak water demand periods.

Significant Decline in the Alberta Economy

Although EPCOR's geographical footprint spans four provinces in Canada and three states in the Southwestern U.S., the Company's operations are concentrated in Alberta where the oil and natural gas industry forms the province's industrial base. Emphasis in the world to reduce greenhouse gas emissions and decarbonize energy primarily relates to reducing reliance on oil and natural gas as sources of energy, which could result in lower demand for the related products and services that drive the Alberta economy.

A significant and sustained decline in the Alberta economy could in turn reduce demand for the Company's products and services and have an adverse effect on EPCOR's financial condition and cash flows despite regulatory mechanisms designed to compensate utilities for reduced demand. In addition, a significant decline in the Alberta economy could limit future rate base growth or result in a declining rate base over time. The Significant Cash Flow and Net Income Sensitivities table at the end of this Risk Factors and Risk Management section shows the impact on the Company's cash flow and net income of changes in customer base and demand specific to EPCOR's Alberta operations.

The Company's growth strategy includes geographical diversification to reduce the concentration exposure to the Alberta market. This strategy is long-term in nature as opportunities must fit within the Company's risk appetite and align with EPCOR's strategic objectives. Over the past eleven years, the Company has been successful at diversifying its geographical footprint by expanding into Saskatchewan, Ontario and the Southwestern U.S.

General Economic Conditions, Business Environment and Other Risks

In addition to the risks described above, the following factors could materially and adversely impact EPCOR's business, prospects, financial condition, results of operations or cash flows: fluctuations in interest rates; product supply and demand; general economic and business conditions beyond those specific to Alberta as outlined above; risks associated with existing and potential future lawsuits and other regulations; audits and assessments (including income tax) against EPCOR and its subsidiaries; failed execution of the Company's long-term strategy; fraud; billing errors; public disclosure of erroneous information; deficient risk management program and the inability to adequately identify and mitigate risks; and such other risks and uncertainties described from time to time in EPCOR's reports and filings with the Canadian Securities authorities.

The following table outlines our estimated sensitivity to specific risk factors as at December 31, 2021. Each sensitivity factor provides a range of outcomes assuming all other factors are held constant and current risk management strategies are in place. Under normal circumstances, such sensitivity factors will not be held constant but rather, will change at the same time as other factors are changing. In addition, the degree of sensitivity to each factor will change as the Company's mix of assets and operations subject to these factors changes.

Significant Cash Flow and Net Income Sensitivities

($ millions, except as otherwise noted)	Change	Annual cash flow	Annual net income
Related specifically to EPCOR's Alberta operations			
Increase in RRO customers	+2.0%	+1	+1
Decrease in RRO customers	-2.0%	-1	-1
Increase in Water Services segment water volumes	+5.0%	+17	+17
Decrease in Water Services segment water volumes	-5.0%	-17	-17
Related to EPCOR's operations outside of Alberta			
Increase in U.S. Operations segment water volumes	+5.0%	+4	+4
Decrease in U.S. Operations segment water volumes	-5.0%	-4	-4

Litigation Update

The Company is not involved in any material litigation at this time.

CONTROLS AND PROCEDURES

For purposes of certain Canadian securities regulations, EPCOR is a venture issuer. As such, it is exempt from certain of the requirements of National Instrument 52-109 Certification of Disclosure in Issuers' Annual and Interim Filings. The Chief Executive Officer and Chief Financial Officer have reviewed the annual information form, annual consolidated financial statements and annual MD&A, for the year ended December 31, 2021. Based on their knowledge and exercise of reasonable diligence, they have concluded that these documents fairly present in all material respects the financial condition, results of operations and cash flows of the Company for the periods presented.

FUTURE ACCOUNTING STANDARD CHANGES

A number of new standards, amendments to standards and interpretations have been issued by the IASB and the International Financial Reporting Interpretations Committee, the application of which is effective for periods beginning on or after January 1, 2022. The Company does not expect the implementation of these new accounting pronouncements to have a significant impact on its accounting policies.

CRITICAL ACCOUNTING ESTIMATES

In preparing the consolidated financial statements, management made estimates in determining transaction amounts and financial statement balances. The following are the items for which significant estimates were made in the consolidated financial statements.

Electricity Revenues, Costs and Unbilled Consumption

Due to the time lag between customer electricity consumption and receipt of final billing consumption information from the load settlement agents, the Company must use estimates for determining the amount of electricity consumed and the distribution services provided to customers but not yet billed. These estimates affect accrued revenues and accrued electricity costs of the Energy Services segment and accrued revenues of the Distribution and Transmission segment. There are a number of variables and judgments required in the computation of these significant estimates, and the underlying electricity settlement processes within EPCOR and the Alberta electric systems are complex. Such variables and judgments include the number of unbilled sites, the amount of and rate classification of the unbilled electricity consumed and the amount of electricity distributed to customers. Owing to the factors above and the statutory delays in final load settlement determinations and information, adjustments to previous estimates could be material. Estimates for unbilled electricity consumption and distribution services provided to customers averaged approximately $67 million at the end of each month in 2021 (2020 - $48 million). These estimates varied from $57 million to $84 million (2020 - $41 million to $56 million). Adjustments of estimated revenues to actual billings were $1 million (2020 - $1 million).

Fair Values

We are required to estimate the fair value of certain assets or obligations for determining the valuation of certain financial instruments, asset impairments, asset retirement obligations and purchase price allocations for business combinations, and for determining values for certain disclosures. Significant judgment is applied in the determination of fair values including the choice of discount rates, estimating future cash flows, and determining the fair values of assets acquired and liabilities assumed. Following are the descriptions of the key fair value methodologies relevant for 2021.

Fair values of financial instruments are based on quoted market prices when these instruments are traded in active markets. In the case of illiquid or inactive markets, the Company uses appropriate price modeling to estimate fair value. Fair values determined using valuation models require the use of assumptions concerning the amounts and timing of future cash flows and discount rates.

The Company reviews the valuation of long-lived assets subject to amortization when events or changes in circumstances may indicate or cause a long-lived asset's carrying amount to exceed the total discounted future cash flows expected from its use and eventual disposition. An impairment loss, if any, will be recorded as the excess of the carrying amount of the asset over its fair value, measured by either market value, if available, or estimated by calculating the present value of expected future cash flows related to the asset.

Estimates of fair value for long-lived asset impairments are mainly based on depreciable replacement cost or discounted cash flow techniques employing estimated future cash flows based on a number of assumptions, including the selection of an appropriate discount rate. The cash flow estimates will vary with the circumstances of the particular assets or reporting unit and will primarily be based on the lives of the assets, revenues and expenses, including inflation, and required capital expenditures.

Income Taxes

EPCOR follows the asset and liability method of accounting for income taxes. Income taxes are determined based on estimates of our current taxes and estimates of deferred taxes resulting from temporary differences between the carrying values of assets and liabilities in the financial statements and their tax values. Deferred tax assets are assessed and significant judgment is applied to determine the probability that they will be recovered from future taxable income. For example, in estimating future taxable income, judgment is applied in determining the Company's most likely course of action and the associated revenues and expenses. To the extent recovery is not probable a deferred tax asset is not recognized. Estimates of the provision for income taxes and deferred tax assets and liabilities might vary from actual amounts incurred.

Estimated fair values and useful lives are used in determining potential impairments for each long-lived asset, which will vary with each asset and market conditions at the particular time. Similarly, income taxes will vary with taxable income and, under certain conditions, with fair values of assets and liabilities. Accordingly, it is not possible to provide a reasonable quantification of the range of these estimates that would be meaningful to readers.

Impact of Current Market Conditions on Estimates

Although the current condition of the economy has not impacted our methods of estimating accounting values, it has impacted the inputs in those determinations and the resulting values. Future cash flow estimates for assessing the value-in-use of long-lived assets (cash generating units or CGUs) for impairment were updated to reflect any increased uncertainties of recoverability. The assessments did not result in any impairment losses because a large portion of the Company's operations within various CGUs are subject to rate-regulation. Our valuation models for estimating the value-in-use for various CGUs depend partly on discount rates which were updated to reflect changes in credit spreads and market volatility. Our methods for determining the expected credit loss allowance is based on a provision matrix which uses the Company's historical credit loss experience and current economic conditions (including forward looking information) for accounts receivables to estimate the expected credit loss. The Company, in view of the COVID-19 pandemic and related economic impacts, had adjusted the expected credit loss provision matrix in 2020 to assess the customer accounts with additional precaution, which was reviewed and re-adjusted in 2021 using the existing economic conditions. The updated expected credit loss provision matrix did not require in any additional provision for expected credit loss related to COVID-19 and related impacts during the year ended December 31, 2021.

OTHER COMPREHENSIVE INCOME

For the three and twelve months ended December 31, 2021 and 2020, the Company's transactions in other comprehensive income included the following:

($ millions)	Three months ended December 31,		Twelve months ended December 31,	
	2021	**2020**	**2021**	**2020**
Re-measurement of net defined benefit plans	$ 9	$ (2)	$ 9	$ (2)
Foreign exchange gain on U.S. denominated debt designated as a hedge of net investment in foreign operations[1]	2	17	2	7
Unrealized gain (loss) on derivative financial instruments designated as hedges of net investment in foreign operations[2]	9	-	(6)	-
Unrealized loss on foreign currency translation	(5)	(49)	(6)	(23)
Other comprehensive income (loss)	**$ 15**	**$ (34)**	**$ (1)**	**$ (18)**

1 The Company designates the majority of long-term debt denominated in U.S. dollar as foreign exchange hedges on its net investment in foreign subsidiaries to mitigate the foreign currency risk. Accordingly, from the date of designation, foreign exchange gains or losses on translation of the debt denominated in U.S. dollars are recorded in other comprehensive income, which minimizes volatility in earnings resulting from the foreign currency conversion.

2 The Company during the year entered into CCIRS contracts to partially hedge the foreign currency risk exposure related to net investment in foreign operations. These CCIRS contracts have been designated as hedges of net investment in foreign operations. Accordingly, from the date of designation, mark to market gains or losses on these financial instruments are recorded in other comprehensive income. For more information on CCIRS contracts refer to Financial Risk Management (note 28) of the consolidated financial statements for the years ended December 31, 2021 and 2020.

RELATED PARTY BALANCES AND TRANSACTIONS

The Company provides utility services to key management personnel, comprised of the executive leadership team, as it is the sole provider of certain services. Such services are provided in the normal course of operations and are based on normal commercial rates, as approved by regulation.

The Company is 100% owned by the City. The Company provides maintenance, repair and construction services, and customer billing services to the City, and purchases supplies, mobile equipment services, public works and various other services pursuant to service agreements. Transactions between the Company and the City are in the normal course of operations, and are generally based on normal commercial rates, or as agreed to by the parties.

For further information on related party balances and transactions refer to related party balances and transactions (note 26) of the audited consolidated financial statements for the years ended December 31, 2021 and 2020.

QUARTERLY RESULTS

($ millions)	December 31, 2021	September 30, 2021	June 30, 2021	March 31, 2021
Revenues	$ 590	$ 595	$ 522	$ 519
Expenses	466	459	393	429
Operating income	**124**	**136**	**129**	**90**
Other income	7	-	-	-
Finance expenses	(35)	(39)	(38)	(36)
Gain on expropriation of BHC water utility systems	20	69	-	-
Income tax recovery (expense)	(15)	(20)	(5)	1
Net income[1,2]	**$ 101**	**$ 146**	**$ 86**	**$ 55**

($ millions)	December 31, 2020	September 30, 2020	June 30, 2020	March 31, 2020
Revenues	$ 512	$ 517	$ 471	$ 487
Expenses	408	383	365	403
Operating income	**104**	**134**	**106**	**84**
Other income	-	1	-	-
Finance expenses	(35)	(35)	(33)	(34)
Income tax expense	(5)	(8)	(3)	-
Net income[1]	**$ 64**	**$ 92**	**$ 70**	**$ 50**

1 Quarterly results may fluctuate due to the seasonal demands for energy, water, related impact on sanitary system, changes in energy prices, and the timing and recognition of regulatory decisions.

2 Higher net income during the quarters ended September 30, 2021 and December 31, 2021 was primarily due to the gain on expropriation of the BHC water utility systems.

Fourth Quarter Business Segment Information

($ millions)

Three months ended December 31, 2021

	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
External revenues	$ 173	$ 128	$ 169	$ 95	$ 25	$ -	$ 590
Inter-segment revenue	-	6	4	-	-	(10)	-
Revenues	173	134	173	95	25	(10)	590
Energy purchases and system access fees	-	-	136	1	13	-	150
Other raw materials and operating charges	25	12	-	22	6	(2)	63
Staff costs and employee benefits expenses	39	20	10	13	17	(4)	95
Depreciation and amortization	46	26	2	16	10	-	100
Franchise fees and property taxes	9	23	-	3	-	-	35
Other administrative expenses	7	5	5	5	5	(4)	23
Operating expenses	126	86	153	60	51	(10)	466
Operating income (loss) before corporate charges	47	48	20	35	(26)	-	124
Corporate income (charges)	(9)	(6)	(5)	(1)	21	-	-
Operating income (loss)	38	42	15	34	(5)	-	124
Other income	-	-	-	7	-	-	7
Finance recoveries (expenses)	(20)	(16)	(1)	(10)	12	-	(35)
Gain on expropriation of the BHC water utility systems	-	-	-	20	-	-	20
Income tax expense	-	-	-	(12)	(3)	-	(15)
Net income	$ 18	$ 26	$ 14	$ 39	$ 4	$ -	$ 101
Capital additions	$ 166	$ 80	$ 1	$ 45	$ 14	$ -	$ 306

($ millions)

Three months ended December 31, 2020

	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
External revenues	$ 170	$ 127	$ 102	$ 71	$ 42	$ -	$ 512
Inter-segment revenue	-	4	5	-	-	(9)	-
Revenues	170	131	107	71	42	(9)	512
Energy purchases and system access fees	-	-	79	1	13	-	93
Other raw materials and operating charges	24	14	(1)	15	24	(2)	74
Staff costs and employee benefits expenses	38	20	10	10	12	(2)	88
Depreciation and amortization	46	23	1	17	9	-	96
Franchise fees and property taxes	9	21	-	2	-	-	32
Other administrative expenses	8	3	11	5	3	(5)	25
Operating expenses	125	81	100	50	61	(9)	408
Operating income (loss) before corporate charges	45	50	7	21	(19)	-	104
Corporate income (charges)	(7)	(5)	(4)	(1)	17	-	-
Operating income (loss)	38	45	3	20	(2)	-	104
Finance recoveries (expenses)	(19)	(15)	(1)	(11)	11	-	(35)
Income tax expense	(1)	-	-	(3)	(1)	-	(5)
Net income	$ 18	$ 30	$ 2	$ 6	$ 8	$ -	$ 64
Capital additions	$ 132	$ 60	$ 53	$ 32	$ 37	$ -	$ 314

FORWARD - LOOKING INFORMATION

Certain information in this MD&A is forward-looking within the meaning of Canadian securities laws as it relates to anticipated financial 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 investors with management’s assessment of future plans and possible outcomes and may not be appropriate for other purposes. Material forward-looking information within this MD&A, including related material factors or assumptions and risk factors, are noted in the table below:

Forward-looking Information	Material Factors or Assumptions	Risk Factors
The Company expects to have sufficient liquidity to finance its plans and fund its obligations, including current liabilities in excess of current assets, for next twelve months.	EPCOR is able to generate the expected cash flow from operations and various means of funding remain available to the Company.	EPCOR’s operations do not generate the expected level of cash flow and / or circumstances arise, limiting or restricting the Company’s ability to access funds through the various means otherwise available.

Forward-looking Information	Material Factors or Assumptions	Risk Factors
EPCOR's projected cash requirements for capital spending and investment for 2022 include $725 million to $950 million for investment in existing businesses and new business development.	EPCOR is able to complete its 2022 capital expenditure program on time and on budget and no material unplanned business or asset acquisitions are closed in the year.	EPCOR is successful in closing a material, unplanned acquisition or unforeseen circumstances result in construction or acquisition delays.
During the year ended December 31, 2021 the Company paid a dividend of $171 million to the City which will be increased to $177 million in 2022.	EPCOR is able to generate the expected cash flow from operations and various means of funding remain available to the Company. There is no revision to the dividends to be paid to the City.	EPCOR is not able to generate the expected cash flow from operations and various means of funding are not available to the Company. There is a revision to the dividends to be paid to the City.

The following table provides a comparison between actual results and future-oriented-financial information previously disclosed:

Material 2021 Objectives Previously Disclosed	Actual Result	Explanation of Material Differences from Objectives
EPCOR's projected cash requirements for capital spending and investment projects for 2021 include $960 million to $1,160 million for investment in existing businesses and new business development.	$909 million capital expenditures and $127 million business acquisitions and investment	Within the range
EPCOR's projected cash requirements for 2021 include $171 million for common share dividends.	$171 million	No change

Material forward-looking information in Annual Information Form and other communications of the Company, including related material factors or assumptions and risk factors, are noted in the table below:

Forward-looking Information	Material Factors or Assumptions	Risk Factors	Actual Results
CORe includes projects of $219 million to be completed by 2026. This includes $199 million in capital projects and $20 million in operating expenses over the period of 2019-2026.	The capital spending on CORe is approved by the regulator in the forthcoming PBR. EPCOR is able to initiate and complete the project on time and within approved cost.	The Company is unable to complete the project within time and approved costs resulting in higher financing requirements.	The capital spending is proceeding accordingly to plan. The capital spending related to CORe was included and approved as part of the new PBR which is effective from April 2022 and will no longer be tracked separately.

Forward-looking Information	Material Factors or Assumptions	Risk Factors	Actual Results
To improve infrastructure resilience and continuity of operations at Rossdale and E.L. Smith WTP, EPCOR expects total infrastructure investment related to flood mitigation, net of $11 million federal and provincial grant funding already approved, of $26 million through 2027, with commencement of construction in 2022.	EPCOR is able to initiate the projects on time and within the approved cost. Various means of funding including the federal and provincial grants are available to complete the project.	Flood resiliency projects are in early stages of development and timing and cost of the projects may change. The federal and provincial governments may change the quantum and / or criteria for grants resulting in a different level of funding thereby exposing the Company to higher financing requirements.	The Company has started the pre-construction activities on projects in 2021 and the projects are proceeding as per schedule. This infrastructure investment has been included and approved as part of the new PBR which is effective from April 2022 and will no longer be tracked separately.

Whether actual results, performance or achievements will conform to the Company's expectations and predictions is subject to a number of known and unknown risks and uncertainties, which could cause actual results to differ from expectations and are discussed in the Risk Factors and Risk Management section above.

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. Except as required by law, EPCOR disclaims any intention and assumes no obligation to update any forward-looking statement even if new information becomes available, as a result of future events or for any other reason.

GLOSSARY

ACC means Arizona Corporation Commission	**IASB** means International Accounting Standards Board
Adjusted EBITDA earnings before finance expenses, income tax recovery (expense), depreciation and amortization, changes in the fair value of derivative financial instruments, transmission system access service charge net collections, net collections of U.S. natural gas procurement costs and other unusual items	**JU** means Johnson Utilities LLC
AESO means Alberta Electric System Operator	**LRT** means light rail transit
AUC means the Alberta Utilities Commission	**MCC** means Municipally Controlled Corporation
BHC means Bullhead City	**MCC Regulations** means Municipally Controlled Corporations Regulation
CCIRS means cross-currency interest rate swap	**MGA** means *Bill 21: the Modernized Municipal Government Act*
CGU means cash generating unit	**NRAs** means non-routine adjustments
CORe means Corrosion and Odour Reduction Strategy	**PBR** means Performance Based Rate
COVID-19 means novel coronavirus	**PFAS** means per- and polyfluoroalkyl substances
Darlington means Darlington Nuclear Generating station	**RCT** means Railroad Commission of Texas
DBOMT means design, build, own, maintain and transfer	**RECs** means renewable electricity credits
Drainage means drainage utility services within the city of Edmonton	**ROE** means return on equity
Drainage Bylaw means Bylaw 18100 EPCOR Drainage Services Bylaw	**Rossdale** means Rossdale Water Treatment Plant
E.L. Smith WTP means E.L. Smith Water Treatment Plant	**RRO** means Regulated Rate Option
Edmonton water and wastewater Bylaw means Bylaw 17698 EPCOR Water Services and Wastewater Treatment Bylaw	**RRT** means regulated rate tariff
EPEA means Environmental Protection and Enhancement Act	**SAIDI** means System Average Interruption Duration Index

EPSP means Energy Price Setting Plan	**San Tan Operations** mean water treatment and distribution and wastewater collection and treatment assets acquired from JU
ERM means Enterprise Risk Management	**SIRP** means Stormwater Integrated Resource Plan
ERVCCS means Edmonton River Valley Conservation Coalition Society	**U.S. EPA** means U.S. Environmental Protection Agency
ESG means Environmental, Social and Corporate Governance	**UPDP** means utility payment deferral program
GCOC means General Cost of Capital	**Vista Ridge** means Vista Ridge LLC
GCOC parameters means capital structure for 2021 and 2022	**the City** means The City of Edmonton
Gold Bar means Gold Bar Wastewater Treatment Facility	**water utility systems** means the Mohave and North Mohave water utility systems
HSE means Health, Safety and Environment	**winter storm** means winter storm Uri in Texas
IFRS means International Financial Reporting Standard(s)	

ADDITIONAL INFORMATION

Additional information relating to EPCOR, including the Company's 2021 Annual Information Form, is available on SEDAR at www.sedar.com.