

# **EPCOR Utilities Inc.**

## **Management's Discussion and Analysis**

### **December 31, 2018**

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This management's discussion and analysis (MD&A), dated February 14, 2019, should be read in conjunction with the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2018 and 2017, including significant accounting policies (note 3), business transfer and acquisitions (note 5), revenues (note 6), other financial assets (note 13), changes in liabilities arising from financing activities (note 24), related party balances and transactions (note 25) and financial instruments (note 26), 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), and is presented in Canadian dollars unless otherwise specified. 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 14, 2019.

#### **OVERVIEW**

The Corporation, through wholly owned subsidiaries, builds, owns and operates electrical, natural gas, and water transmission and distribution networks, water and wastewater facilities and 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, operation 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 reporting segments. The Company operates in Canada and the Southwestern U.S.

Net income was \$107 million and \$295 million for the three and twelve months ended December 31, 2018, respectively, compared with net income of \$87 million and \$256 million for the comparative periods in 2017, respectively. The increase of \$20 million for the three months ended December 31, 2018, was primarily due to higher Adjusted EBITDA, higher income tax recovery, higher transmission system access service charge net collections and lower finance expense, partially offset by higher unfavorable fair value adjustments related to financial electricity purchase contracts, as well as, higher depreciation expense. The increase of \$39 million for the twelve months ended December 31, 2018 was primarily due to higher Adjusted EBITDA and higher income tax recovery, partially offset by higher unfavorable fair value adjustments related to financial electricity purchase contracts, lower transmission system access service charge net collections, as well as, higher finance and depreciation expense.

Adjusted EBITDA was \$182 million and \$700 million for the three and twelve months ended December 31, 2018, respectively, compared with \$170 million and \$588 million for the comparative periods in 2017, respectively. The increase of \$12 million for the three months ended December 31, 2018, was primarily due to higher electricity distribution customer rates and higher Energy Price Setting Plan (EPSP) margins, partially offset by lower water sales volumes. The increase of \$112 million for the twelve months ended December 31, 2018, was primarily due to twelve months of Adjusted EBITDA from drainage utility services (Drainage) in 2018 compared to four months of Adjusted EBITDA in 2017, as the operations were transferred to the Company in September 2017, higher water and wastewater revenues due to higher rates and customer growth, and higher electricity distribution customer

rates, partially offset by lower EPSP margins. Adjusted EBITDA is a non-IFRS financial measure and is defined and described in the Adjusted EBITDA and Net Income section on page 6 of this MD&A.

## **STRATEGY**

EPCOR's vision is to be a premier essential services utility company in North America, trusted by our customers and valued by our shareholder. To achieve this vision, EPCOR must excel at its utility operations and be successful in its pursuit of growth opportunities.

EPCOR's electricity strategy includes maintaining and developing new distribution and transmission infrastructure in its Edmonton franchise service area as well as the development and / or acquisition of new rate-regulated or contracted assets and operations outside the Edmonton region.

EPCOR's water strategy includes maintaining and developing new regulated water treatment and distribution infrastructure, sanitary and stormwater collection and wastewater treatment infrastructure within its current franchise service areas and the development and / or acquisition of new rate-regulated or contracted assets and operations in new markets. This includes design, build, finance and operate services for municipal water and wastewater treatment infrastructure and the provision of water and wastewater treatment services and potable and process water for industrial customers. 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.

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

Over the next five years we plan to invest in electricity, natural gas, water and wastewater 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 such as Ontario and Texas where we have made recent acquisitions. This includes exploring additional opportunities in natural gas distribution through acquisitions and greenfield development. EPCOR also intends to invest in renewable energy generation within its geographical footprint, including solar and bio gas facilities to enhance its environmental performance.

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 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; people; growth (financial); and operational excellence.

Specific measures are established for each business unit and the corporate shared service 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 2018 total recordable injury frequency rate did not achieve the 2018 target. However, we remain committed to building a culture that supports a workplace free of occupational injury and illness with minimized harm to the environment. The Company met or exceeded most other targets in 2018. Segment performance

measures are discussed under Segment Results of this MD&A.

## **SIGNIFICANT EVENTS**

### **Acquisition of Collingwood PowerStream Utility Services Corp.**

On October 1, 2018, the Company acquired 100% of the issued and outstanding common shares of Collingwood PowerStream Utility Corp. (Collus), an electricity distribution and services holding company with operations in three major communities in Simcoe County, Ontario, for cash consideration of \$28 million and the assumption of \$16 million in third party debt.

Collus is primarily involved in the distribution of electricity through its wholly owned subsidiary to over 17,000 service connections within the area of Collingwood, Stayner and Creemore (Clearview Township) plus the Town of the Blue Mountains (Grey County). These operations are regulated by the Ontario Energy Board (OEB) under a price cap incentive cost-of-service rate setting framework. Collus distributes electricity in these service areas, under licenses issued by the OEB.

For further information on the acquisition, refer to the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2018 and 2017.

### **Investment in Vista Ridge LLC**

On November 21, 2018, EPCOR acquired ownership of a 5% equity interest in Vista Ridge LLC (Vista Ridge) as well as a 30-year operating and maintenance (O&M) concession for a water pipeline in the central part of the state of Texas as the operator of Vista Ridge project for cash consideration of \$24 million (US\$18 million).

The project's production well field is located near the EPCOR 130 well field. EPCOR, under this public-private partnership arrangement, will serve as the O&M contractor for the San Antonio Water System, the ultimate counterparty. The project is presently under construction and is scheduled to be completed on or before April 2020.

For further information on the investment, refer to the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2018 and 2017.

### **Southern Bruce Region, Ontario Franchises**

On April 12, 2018, the OEB awarded EPCOR the certificates of public convenience and necessity to construct works and supply natural gas in the franchise areas previously awarded to the Company. For further information on this project, see the Outlook section of this MD&A.

### **Changes to the Board of Directors**

On May 2, 2018, Hugh J. Bolton retired as Chair of the Board of Directors after leading oversight of the Company since 2000, and Janice G. Rennie was appointed Chair of the Board of Directors.

On February 16, 2018, Alan J. Krause was appointed to the Board of Directors of the Company.

## **SIGNIFICANT ACCOUNTING POLICY CHANGES**

Effective January 1, 2018, the Company implemented IFRS 15 – *Revenue from Customer Contracts (IFRS 15)* and IFRS 9 – *Financial Instruments (IFRS 9)*. The implementation of the new IFRS standards resulted in changes in the accounting policies for revenue recognition, deferred revenue and financial instruments. For a detailed discussion of the impacts of these new standards on EPCOR's accounting policies refer to note 3 of the audited consolidated financial statements of EPCOR Utilities Inc. for the years ended December 31, 2018, and 2017. The implementation of the new IFRS standards did not result in any significant impact on revenue recognition or net income; however, there have been significant changes in the presentation of revenues for the Distribution and Transmission and Energy Services segments as described below.

Prior to implementation of IFRS 15, the Distribution and Transmission segment presented provincial transmission system access service charge collections as revenue with all related costs being presented as expense under energy purchases and system access fees. On implementation of IFRS 15, the Company determined that it is acting as an agent for the collection of provincial transmission system access service charge on behalf of the Alberta Energy System Operator (AESO). Effective January 1, 2018, the transmission system access service charge collections are being presented net of related costs paid to the AESO. The change has resulted in lower revenues and lower operating expenses being presented for the Distribution and Transmission segment.

Prior to implementation of IFRS 15, the Energy Services segment presented distribution and transmission charges collected from customers, charged by electricity distribution companies, as revenue with all related cost being presented as expense under energy purchases and system access fees. On implementation of IFRS 15, the Company determined that it is acting as an agent for the collection of distribution and transmission charges on behalf of the distribution companies. Effective January 1, 2018, the distribution and transmission charges, collected from customers, are being presented net of related cost paid to distribution companies. The change has resulted in lower revenues and lower operating expenses being presented for the Energy Services segment.

The Company used the modified retrospective approach to implement IFRS 15 and IFRS 9 and as a result, comparative information has not been restated and continues to be reported under previous accounting standards. In the Consolidated Results of Operations section below, the impact of any changes due to the implementation of IFRS 15 for the three and twelve months ended December 31, 2018, as compared to the corresponding periods in 2017, have been presented and discussed.

## CONSOLIDATED FINANCIAL INFORMATION

(\$ million)			
<b>Years ended December 31,</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>
Revenues	\$ 1,758	\$ 2,035	\$ 1,932
Net income	295	256	309
Total assets	10,656	10,344	6,161
Loans and borrowings (non-current)	2,630	2,424	1,905
Other financial liabilities (non-current)	90	88	37
Common share dividends	166	153	141

## Revenues

(Unaudited, \$ millions)	Three months ended		Twelve months ended	
	December 31,		December 31,	
	2018	2017	2018	2017
Water Services segment revenues	\$ 149	\$ 155	\$ 629	\$ 468
Distribution and Transmission segment revenues	134	183	458	703
Energy Services segment revenues	116	230	429	849
U.S. Operations segment revenues	58	57	242	225
Other revenues	16	4	27	4
Intersegment eliminations	(7)	(57)	(27)	(214)
<b>Revenues</b>	<b>\$ 466</b>	<b>\$ 572</b>	<b>\$ 1,758</b>	<b>\$ 2,035</b>

Consolidated revenues were lower by \$106 million and \$277 million for the three and twelve months ended December 31, 2018, respectively, compared with the corresponding periods in 2017, primarily due to the net impact of the following:

- Water Services' segment revenues decreased by \$6 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to lower water sales volumes, partially offset by customer growth and higher customer rates.

Water Services' segment revenues increased by \$161 million for the twelve months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to twelve months of revenues from Drainage operations in 2018 compared to four months of revenues in 2017 as the operations were transferred to the Company in September 2017, as well as higher water and wastewater revenues due to customer growth and higher customer rates, partially offset by lower water sales volumes.

- Distribution and Transmission segment revenues decreased by \$49 million and \$245 million for the three and twelve months ended December 31, 2018, respectively, compared with the corresponding periods in 2017, primarily as a result of the presentation of transmission system access service charge collections net of related costs due to the implementation of IFRS 15 which resulted in lower presented revenues of \$63 million and \$287 million for the three and twelve months ended December 31, 2018, respectively, partially offset by higher electricity distribution customer rates.
- Energy Services' segment revenues decreased by \$114 million and \$420 million for the three and twelve months ended December 31, 2018, respectively, compared with the corresponding periods in 2017, primarily as a result of the presentation of distribution and transmission revenues net of related costs due to the implementation of IFRS 15 which resulted in lower presented revenues of \$169 million and \$636 million for the three and twelve months ended December 31, 2018, respectively, partially offset by customer growth and higher electricity prices charged to customers.
- U.S. Operations' segment revenues increased by \$1 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to higher foreign exchange, partially offset by lower water and natural gas sales volumes.

U.S. Operations' segment revenues increased by \$17 million for the twelve months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to higher wastewater rates, higher water sales volumes and twelve months of natural gas revenues from Hughes Gas Resources Inc. (Hughes) in 2018, compared to seven months of natural gas revenues in 2017. Hughes was acquired in June 2017.

- Other revenues increased by \$12 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to revenues from Collus, which was acquired on October 1, 2018.

Other revenues increased by \$23 million for the twelve months ended December 31, 2018, compared with corresponding period in 2017, primarily due to twelve months of revenues from EPCOR Natural Gas Limited Partnership compared to two months of revenues in 2017 as well as revenues from Collus.

- Inter-segment revenue eliminations decreased by \$50 million and \$187 million for the three and twelve months ended December 31, 2018, respectively, compared with the corresponding periods in 2017 primarily due to no longer requiring certain elimination entries related to distribution and transmission revenues and expenses as a result of the presentation differences arising upon implementation of IFRS 15 (\$57 million and \$212 million for three and twelve months ended December 31, 2018, respectively).

### **Adjusted EBITDA and Net Income**

During the first quarter of 2018, we changed our non-IFRS financial measure from “income from core operations”, which was defined as operating results before the impact of our previous investment in Capital Power and changes in the fair value of derivative financial instruments, to “Adjusted EBITDA”.

We use earnings before finance expenses, income tax recovery (expense), depreciation and amortization, changes in the fair value of derivative financial instruments and transmission system access service charge net collections (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 contracted volume of electricity.

Transmission system access service charge net collections is the difference between the transmission system access services charges paid to the AESO and the transmission system access service charges collected from electricity retailers. Transmission system access service charge net collections are timing differences, which will be collected from or returned to electricity retailers as the transmission system access service charges and customer billing determinants are finalized.

We believe that Adjusted EBITDA provides an indicator of the Company’s ongoing ability to fund capital expenditures and to incur and service debt, which 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.

(Unaudited, \$ millions)	Three months ended December 31,		Twelve months ended December 31,	
	2018	2017	2018	2017
<b>Adjusted EBITDA by Segment</b>				
Water Services segment	\$ 71	\$ 72	\$ 302	\$ 208
Distribution and Transmission segment	60	54	214	199
Energy Services segment	14	9	37	38
U.S. Operations segment	29	30	131	121
Other	8	5	16	22
<b>Adjusted EBITDA</b>	<b>182</b>	<b>170</b>	<b>700</b>	<b>588</b>
Finance expenses	(30)	(33)	(121)	(115)
Income tax recovery	34	17	32	14
Depreciation and amortization	(82)	(78)	(299)	(236)
Change in fair value of financial electricity purchase contracts	(10)	3	(11)	2
Transmission system access service charge net collections	13	8	(6)	3
<b>Net income</b>	<b>\$ 107</b>	<b>\$ 87</b>	<b>\$ 295</b>	<b>\$ 256</b>

Changes in each business segment's Adjusted EBITDA, compared with the corresponding periods in 2017, are described in Segment Results below. Explanations of the remaining variances in net income for the three and twelve months ended December 31, 2018, are as follows:

- Lower financing expenses of \$3 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, was primarily due to lower outstanding long-term debt balances and partial refinancing of public debentures at lower interest rates.

Higher financing expenses of \$6 million for the twelve months ended December 31, 2018, compared with the corresponding period in 2017, was primarily due to twelve months of interest expense in 2018 on debt assumed on transfer of Drainage, compared to four months of interest expense in 2017, partially offset by partial refinancing of public debentures at lower interest rates in 2018.

- Higher income tax recovery of \$17 million and \$18 million for the three and twelve months ended December 31, 2018, respectively, compared with the corresponding periods in 2017, was primarily due to an income tax recovery in 2018 on the recognition of previously unrecognized non-capital losses in Canada. In 2017, a tax recovery was recognized related to the re-measurement of net deferred tax liabilities in the U.S. resulting from the U.S. federal income tax rate change as a result of the enactment of the U.S Tax Cuts and Jobs Act.
- Higher depreciation and amortization of \$4 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, was primarily due to depreciation and amortization on capital additions in 2017 and 2018, partially offset by losses on sale of surplus land in 2017.

Higher depreciation and amortization of \$63 million for the twelve months ended December 31, 2018, compared with the corresponding periods in 2017, was primarily due to twelve months of depreciation expense in 2018 resulting from the Drainage operations compared to four months of depreciation expense in 2017 and depreciation and amortization on capital additions in 2017 and 2018, partially offset by losses on sale of surplus land in 2017.

- Higher unfavorable changes in the fair value of financial electricity purchase contracts of \$13 million for the three and twelve months ended December 31, 2018, compared with the corresponding periods in 2017, was primarily due to electricity market forward prices being lower than contracted prices.

- Higher transmission system access service charge net collections of \$5 million for the three months ended December 31, 2018, compared to the corresponding period in 2017, was primarily due to higher collections from customers, partially offset by higher payments to the AESO for system access.

Lower transmission system access service charge net collections of \$9 million for the twelve months ended December 31, 2018, compared to the corresponding period in 2017, was primarily due to higher payments to the AESO for system access, partially offset by higher collections from customers.

## **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 and O&M services for municipal and industrial customers in Western Canada.

Water Services' primary objective is to provide safe and reliable water and to collect and treat wastewater, including the conveyance of stormwater, while meeting or exceeding all environmental requirements and delivering value to customers and the shareholder. The majority of Water Services' income is earned through a performance based rate tariff charged to its Edmonton customers. The performance based rate 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. In October 2016, EPCOR's Water Services segment received the decision related to its 2017 - 2021 Edmonton water and wastewater Performance Based Regulation (PBR) Bylaw application. The decision includes a 10.175% return on equity which will be in place for the full term of the PBR Bylaw.

The City of Edmonton (the City) approved the City 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 PBR. The Drainage Bylaw reflects EPCOR's commitment to hold the average annual rate increases to 3% for the current PBR term and provides a mechanism for non-routine adjustments and service quality metrics and targets.

In 2018, EPCOR initiated the development of a Stormwater Integrated Resource Plan (SIRP) to provide a risk based approach to prioritize investments in stormwater infrastructure. As the SIRP was identified by the City as one of the action items to support overall City ability to adapt to changing climate conditions, the SIRP is aligned with the City of Edmonton Climate Change Adaptation and Resiliency Strategy. The SIRP approach allows for a continuous and adaptable plan that incorporates traditional sanitary infrastructure upgrades with more environmentally friendly infrastructure improvements including implementation of green infrastructure and increased participation of individual property owners in capturing stormwater and improving their stormwater management. The risk methodology includes a risk analysis by sub-basin for four perspectives of health and safety, environment, social and financial impacts to properties, along with detailed maps. Results of risk analysis undertaken by EPCOR were shared with the public and the City of Edmonton Utility Committee in October of 2018. In 2019, EPCOR intends to confirm the anticipated capital and operational investments in the community necessary to meet the future challenges of changing stormwater patterns.

Operationally, the facilities owned or managed by Water Services generally performed according to plan in 2018. EPCOR was able to maintain the required quality of Edmonton's drinking water and wastewater discharge throughout the year. Due to changes in demand, water consumption across all customer categories was lower than anticipated throughout the year.

Work on several significant projects within Edmonton progressed in 2018. These projects include the annual water

main renewal and protection programs completed to improve Edmonton's water distribution system, annual water, sanitary and stormwater service connections programs to provide new connections throughout the city of Edmonton, upgrades to the clarifier and filter assets at the Rosssdale Water Treatment Plant (Rosssdale), digester upgrades at the Gold Bar Wastewater Treatment Facility (Gold Bar), upgrades and rehabilitation to other infrastructure at Gold Bar, renewal of the sanitary system to address aging local sewers in mature neighborhoods, stormwater dry ponds upgrades to mitigate the future risk of flooding in various communities, rehabilitation of the trunk sewers in West Jasper Place and 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		Twelve months ended	
		December 31,		December 31,	
		2018	2017	2018	2017
Revenues	Water sales	\$ 50	\$ 53	\$ 218	\$ 214
	Provision of services	94	97	396	237
	Construction revenues	3	4	9	11
	Other commercial revenue	2	1	6	6
		149	155	629	468
Expenses	Other raw materials and other charges	25	24	98	81
	Staff costs and employee benefits expenses	29	31	134	103
	Depreciation and amortization	41	37	144	88
	Franchise fees and property taxes	7	8	32	25
	Other administrative expenses	8	10	30	27
			110	110	438
Operating income before corporate charges		39	45	191	144
Corporate charges		(9)	(10)	(33)	(24)
<b>Operating income</b>		<b>30</b>	<b>35</b>	<b>158</b>	<b>120</b>
Exclude depreciation and amortization		41	37	144	88
<b>Adjusted EBITDA</b>		<b>\$ 71</b>	<b>\$ 72</b>	<b>\$ 302</b>	<b>\$ 208</b>

	Three months ended	Twelve months ended
	December 31,	December 31,
<b>Adjusted EBITDA for the periods ended December 31, 2017</b>	<b>\$ 72</b>	<b>\$ 208</b>
Drainage Adjusted EBITDA	1	83
Higher (lower) water and wastewater sales	(3)	8
Other	1	3
Increase (decrease) in Adjusted EBITDA	(1)	94
<b>Adjusted EBITDA for the periods ended December 31, 2018</b>	<b>\$ 71</b>	<b>\$ 302</b>

Water Services' Adjusted EBITDA decreased by \$1 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to lower water sales volumes, partially offset by higher Adjusted EBITDA from Drainage operations.

Water Services' Adjusted EBITDA increased by \$94 million, for the twelve months ended December 31, 2018, compared to corresponding period in 2017, primarily due to twelve months of Adjusted EBITDA from the Drainage operations in 2018 compared to four months of Adjusted EBITDA in 2017, higher water and wastewater revenues

due to customer growth and higher customer rates, and higher margins from the segment's various industrial and municipal commercial operations.

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>
<b>Water sales volumes (megalitres)</b>		
Water sales for Edmonton and surrounding region	126,045	125,499

Edmonton water sales increased in 2018 compared with 2017 primarily due to customer growth and higher volumes for regional and residential customers, partially offset by lower volumes for all other customer groups resulting from lower average temperatures.

The following table shows EPCOR's sanitary volumes, based on metered water volumes, for the periods January 1 to December 31, 2018, and September 1 to December 31, 2017:

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>
<b>Sanitary volumes (millions of cubic metres)</b>		
Sanitary volumes for Edmonton and surrounding region	86,749	28,639

Edmonton sanitary volumes are higher in 2018 compared with 2017, primarily due to twelve months of Drainage operations in 2018 compared to four months of sanitary volumes in 2017.

### **Distribution and Transmission**

Distribution and Transmission is involved in the transmission and distribution of electricity within the city of Edmonton. This segment also provides commercial services including the design, construction and maintenance of street lighting, traffic signal and light rail transit electrical infrastructure for the City and other 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 the AESO. The distribution services are provided to customers 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 rate-regulated tariff intended to allow recovery of prudent costs and earn a fair rate of return on invested capital. Distribution earns income through a performance based rate tariff charged to its customers. The performance based rate 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 received a decision on its 2018 - 2019 Transmission Facility Owner Tariff Application with the AUC on October 11, 2018. Transmission does not anticipate any significant true-up collections related to 2018 interim rates during the 2019 fiscal year. In 2019, Transmission will be on final rates approved by the AUC. Transmission plans to file its next Transmission Facility Owner Tariff Application in 2019 with a decision expected in 2020.

Distribution rates for 2018 have been approved by the AUC on an interim basis. Final rates for 2018 will be determined once a decision is received on both the 2017 Capital Tracker True-Up Application and on the AUC initiated review of the 2018 - 2022 PBR decision. The AUC initiated review of the 2018 - 2022 PBR decision will consider the definition of what constitutes an anomaly which may factor into 2018 rates. A decision on the 2017 Capital Tracker True-Up Application is expected in 2019 while a decision on the review of the 2018 - 2022 PBR decision is expected in 2020.

The Transportation Systems Electrical Services Agreement with the City related to installation, maintenance and repair of street lighting, traffic signals and light rail transit was extended during the year and will expire on March 31, 2019. Negotiations with the City are ongoing for execution of a new agreement, however it is anticipated that the committed base level of work under a new agreement will be less than under the current agreement, with EPCOR having the opportunity to bid on additional work.

### Distribution and Transmission Operating Income and Adjusted EBITDA

(\$ millions, including, intersegment transactions)		Three months ended December 31,		Twelve months ended December 31,	
		2018	2017	2018	2017
Revenues	Provision of services				
	Distribution	\$ 84	\$ 132	\$ 264	\$ 509
	Transmission	25	25	99	99
	Commercial and other	25	26	95	95
		134	183	458	703
Expenses	Energy purchases and system access fees	-	58	-	250
	Other raw materials and operating charges	12	13	48	48
	Staff costs and employee benefits expenses	20	19	86	83
	Depreciation and amortization	23	24	88	86
	Franchise fees and property taxes	19	20	78	79
	Other administrative expenses	5	4	16	16
		79	138	316	562
	Operating income before corporate charges	55	45	142	141
	Corporate charges	(5)	(7)	(22)	(25)
	<b>Operating income</b>	<b>50</b>	<b>38</b>	<b>120</b>	<b>116</b>
	Exclude depreciation and amortization	23	24	88	86
	Exclude transmission system access service charge net collections	(13)	(8)	6	(3)
	<b>Adjusted EBITDA</b>	<b>\$ 60</b>	<b>\$ 54</b>	<b>\$ 214</b>	<b>\$ 199</b>

	Three months ended December 31,	Twelve months ended December 31,
<b>Adjusted EBITDA for the periods ended December 31, 2017</b>	<b>\$ 54</b>	<b>\$ 199</b>
Higher distribution approved customer rates	6	16
Other	-	(1)
Increase in Adjusted EBITDA	6	15
<b>Adjusted EBITDA for the periods ended December 31, 2018</b>	<b>\$ 60</b>	<b>\$ 214</b>

As a result of the implementation of IFRS 15, the Distribution and Transmission segment presents transmission system access service charge collections net of related costs, as noted in the Significant Accounting Policy Changes section above. The change resulted in a reduction of \$63 million and \$287 million for the three months and twelve months ended December 31, 2018, respectively, in the 2018 distribution revenues and energy purchases and system access fees presented in the table above.

Distribution and Transmission's Adjusted EBITDA increased by \$6 million and \$15 million for the three and twelve

months ended December 31, 2018, compared with the corresponding periods in 2017, primarily due to higher electricity distribution customer rates.

<b>Year ended December 31,</b>	<b>2018</b>	<b>2017</b>
<b>Distribution reliability and electricity volumes</b>		
Reliability (system average interruption duration index in hours)	0.89	0.83
Electricity distribution (gigawatt hours)	7,743	7,668

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 2018, the SAIDI was 0.89 hours which is an increase from the 2017 value of 0.83. Distribution and Transmission will continue with its reliability improvement programs to help maintain and improve overall system reliability. Electricity distribution volumes in 2018 increased by 1% compared to 2017.

## **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.

The Energy Services' business focuses on providing cost effective retail electricity service and efficient customer care through a highly skilled, knowledgeable, caring and engaged customer service team. Energy Services earns income from selling electricity to residential, farm and small commercial customers under a regulated rate tariff (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 and Drainage operations 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.

Energy Services filed for approval of its 2018 - 2020 RRT in August, 2017, which included plans for a new billing system to be implemented in 2020. On October 4, 2018, Energy Services received approval of its 2018 – 2020 RRT, including approval of its new billing system project.

Energy Services' allowed 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 well-defined risk management process. Energy Services received approval of their 2016 - 2018, EPSP in the first quarter of 2016 and the Company implemented the new plan in the third quarter of 2016. The plan adapts more quickly to changes in wholesale market conditions thereby reducing EPCOR's risk of receiving inadequate commodity risk compensation for the current wholesale market conditions. Under the 2016 - 2018, EPSP Energy Services is receiving lower risk compensation compared to the previous iterations of the EPSP. Energy Services filed the next iteration of the EPSP applicable for 2018 - 2021 in January 2017. On March 16, 2018, Energy Services received approval for the 2018 - 2021 EPSP, including approval of market based mechanism to set EPCOR's risk compensation, which will further increase the alignment between changes in wholesale market conditions and EPCOR's commodity risk compensation. Energy Services will be following the updated EPSP effective in 2019.

Energy Services also serves the competitive retail market by offering electricity and natural gas contracts to Alberta

consumers under the Encor brand, which mitigates the impact of RRO customer attrition. The service offering which includes green energy options, provides customers wishing to move from the RRO to a competitive contract with an Encor offering. In January 2018, Encor expanded its product offering to small and medium size business customers.

### Energy Services Operating Income and Adjusted EBITDA

(\$ millions, including, intersegment transactions)		Three months ended December 31,		Twelve months ended December 31,	
		2018	2017	2018	2017
Revenues	Electricity and natural gas sales	\$ 107	\$ 224	\$ 394	\$ 824
	Provision of services	9	6	35	25
		116	230	429	849
Expenses	Energy purchases and system access fees	97	201	341	746
	Staff costs and employee benefits expenses	7	6	29	27
	Depreciation and amortization	1	2	6	6
	Other administrative expenses	7	7	25	26
		112	216	401	805
	Operating income before corporate charges	4	14	28	44
	Corporate charges	(1)	(4)	(8)	(10)
	<b>Operating income</b>	<b>3</b>	<b>10</b>	<b>20</b>	<b>34</b>
	Exclude depreciation and amortization	1	2	6	6
	Exclude change in the fair value of financial electricity purchase contracts	10	(3)	11	(2)
	<b>Adjusted EBITDA</b>	<b>\$ 14</b>	<b>\$ 9</b>	<b>\$ 37</b>	<b>\$ 38</b>

	Three months ended December 31,	Twelve months ended December 31,
<b>Adjusted EBITDA for the periods ended December 31, 2017</b>	<b>\$ 9</b>	<b>\$ 38</b>
Higher (lower) EPSP margins	3	(3)
Higher competitive business margins	1	1
Other	1	1
Increase (decrease) in Adjusted EBITDA	5	(1)
<b>Adjusted EBITDA for the periods ended December 31, 2018</b>	<b>\$ 14</b>	<b>\$ 37</b>

As a result of the implementation of IFRS 15, the Energy Services segment presents distribution and transmission charge collections net of related costs, as noted in the Significant Accounting Policy Changes section above. The change resulted in a reduction of \$169 million and \$636 million for the three months and twelve months ended December 31, 2018, respectively, in the 2018 energy sales revenues and energy purchases and system access fees presented in the table above.

Energy Services' Adjusted EBITDA increased by \$5 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to higher EPSP margins and growth in the competitive business.

Energy Services' Adjusted EBITDA decreased by \$1 million for the twelve months ended December 31, 2018,

compared with the corresponding period in 2017, primarily due to lower EPSP margins, partially offset by growth in the competitive business.

Energy Services' retail sales volumes were as follows:

Year ended December 31,	2018	2017
<b>Retail Electricity Sales (gigawatt hours)</b>		
RRO	4,931	4,918
Default and competitive supply	900	815
<b>Total Retail Electricity Sales</b>	<b>5,831</b>	<b>5,733</b>

Energy Services' RRO sales volumes were higher in 2018 compared with 2017, primarily due to higher consumption per site, partially offset by a decrease in customer sites. The increased default and competitive supply sales volume was primarily due to an increase in the number of competitive customer sites, partially offset by lower consumption per default site.

## U.S. Operations

U.S. Operations is primarily involved in the treatment, transmission, distribution and sale of water, and the collection and treatment of wastewater 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 Arizona Corporation Commission (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, 2018, 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 two wastewater utility districts, each containing one or more wastewater treatment and / or collection facilities. In June 2017, the ACC voted and approved consolidation of five of the six wastewater utility districts in Arizona resulting in new consolidated rates to be phased in over five years. The ACC's consideration of U.S. Operation's rate application to consolidate all Arizona water districts resulted in a tie vote with no decision being rendered. U.S. Operations has filed for interim rates and is reviewing options for next course of action.

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.

The 2017 acquisition of Hughes added natural gas services to our U.S. business platform and expanded our Texas-based operations. Natural gas customer rates in Texas are subject to approval by the Railroad Commission of Texas.

U.S. operations is also involved in providing O&M and management services to various water and wastewater utilities.

Work on several significant projects within the U.S. progressed satisfactorily in 2018. These projects include the Luke 303 Water Reclamations Facility, expansion of the White Tanks Water Treatment Facility and completion of the New River water filling station, a self-serve water filling facility accessible to state-licensed water hauling providers and local residents in the New River and Desert Hills Communities.

## U.S. Operations Operating Income and Adjusted EBITDA

(\$ millions, including intersegment transactions)		Three months ended		Twelve months ended	
		December 31,		December 31,	
		2018	2017	2018	2017
Revenues	Natural gas and water sales	\$ 41	\$ 37	\$ 180	\$ 156
	Provision of services	17	20	62	69
		58	57	242	225
Expenses	Energy purchases and system access fees	2	-	6	-
	Other raw materials and operating charges	12	11	46	44
	Staff costs and employee benefits expenses	8	8	32	32
	Depreciation and amortization	12	12	46	43
	Franchise fees and property taxes	3	3	8	8
	Other administrative expenses	3	4	13	14
			40	38	151
Operating income before corporate charges		18	19	91	84
Corporate charges		(1)	(1)	(6)	(6)
<b>Operating income</b>		<b>17</b>	<b>18</b>	<b>85</b>	<b>78</b>
Exclude depreciation and amortization		12	12	46	43
<b>Adjusted EBITDA</b>		<b>\$ 29</b>	<b>\$ 30</b>	<b>\$ 131</b>	<b>\$ 121</b>

	Three months ended	Twelve months ended
	December 31,	December 31,
<b>Adjusted EBITDA for the periods ended December 31, 2017</b>	<b>\$ 30</b>	<b>\$ 121</b>
Higher (lower) water sales	(2)	5
Higher wastewater customer rates	-	3
Other	1	2
Increase (decrease) in Adjusted EBITDA	(1)	10
<b>Adjusted EBITDA for the periods ended December 31, 2018</b>	<b>\$ 29</b>	<b>\$ 131</b>

U.S. Operations' Adjusted EBITDA decreased by \$1 million for the three months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to lower water sales volumes resulting from higher precipitation and lower temperatures.

U.S. Operations' Adjusted EBITDA increased by \$10 million for the twelve months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to higher wastewater customer rates and higher water sales volumes in the higher tiered rate blocks.

Year ended December 31,	2018	2017
<b>Water sales volumes (megalitres)</b>		
Water sales for Arizona and New Mexico	87,097	85,434
Wholesale (by EPCOR 130)	2,888	2,577
<b>Total</b>	<b>89,985</b>	<b>88,011</b>

Arizona and New Mexico water sales volumes increased in 2018 compared with 2017 primarily due to above

average temperatures and customer growth in 2018. EPCOR 130 water volumes increased in 2018 compared to 2017 due to increased volumes related to take or pay wholesale customer contracts.

Year ended December 31,	2018	2017
<b>U.S. natural gas distribution volumes (thousands of cubic feet)</b>		
Natural gas distribution volumes	311,681	120,272

Natural gas distribution volumes increased in 2018 compared with 2017 primarily due to twelve months of Hughes' volumes in 2018 compared to seven months of volumes in 2017.

### Capital Spending and Investment

(\$ million)			
Years ended December 31,	2018	2017	2016
Water Services segment	\$ 290	\$ 210	\$ 132
Distribution and Transmission segment	175	241	281
Energy Services segment	2	4	4
U.S. Operations segment	120	101	74
Others	29	10	11
<b>Total capital spending</b>	<b>616</b>	<b>566</b>	<b>502</b>
Collus acquisition	25	-	-
Hughes acquisition	-	46	-
Investment in Vista Ridge project	12	-	-
Natural Resource Gas Limited asset acquisition	-	22	-
Blue Water and Cross County Water Supply Corporation acquisition	-	-	48
Willow Valley Water Company acquisition	-	-	3
<b>Total acquisitions and investments</b>	<b>37</b>	<b>68</b>	<b>51</b>
<b>Total capital spending and investment</b>	<b>\$ 653</b>	<b>\$ 634</b>	<b>\$ 553</b>

In 2018, 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. Total capital spending and investment increased by \$19 million for the twelve months ended December 31, 2018, compared with the corresponding period in 2017, primarily due to higher spending in the Water Services segment due to twelve months of capital spending for Drainage on various projects in 2018 compared to four months of capital spend in 2017, the Rossdale Clarifier Upgrade project, Water Main Renewals in the city of Edmonton and Gold Bar Stainless Chain Replacement project. This was partially offset by lower spending on the Hydrovac Sanitary Grit Treatment Facility and the Light Rail Transit Relocation projects in the city of Edmonton, as the majority of the work for both of these projects was completed in 2017, as well as, lower spending on Network Private Developer Transmission Mains project. For the Distribution and Transmission segment, capital spending was lower due to the Advanced Meter Infrastructure project and the Work Centre Redevelopment project, both of which were substantially completed in 2017. This was partially offset by higher spending on the Rossdale Switchgear Addition project, New Underground and Aerial Line Reconfigurations project and Franchise Driven Relocations and Conversions project. In Others, the increased capital spending was primarily due to commencement of work on the Customer Information System Replacement project.

## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION - ASSETS

(\$ millions)	December 31, 2018	December 31, 2017	Increase (decrease)	Explanation of material changes
Cash and cash equivalents	\$ 32	\$ 338	\$ (306)	Refer to Consolidated Statements of Cash Flows section.
Trade and other receivables	431	552	(121)	Decrease primarily due to payments received on long-term loans receivable from Capital Power (\$174 million), partially offset by increase in contributions receivables from the City for various capital projects and higher electricity trade receivables and accrued revenues due to higher prices and volumes.
Inventories	19	17	2	
Other financial assets	94	91	3	
Deferred tax assets	130	90	40	Increase due to recognition of non-capital loss carry-forward balances and current year non-capital losses.
Property, plant and equipment	9,582	8,963	619	Increase primarily due to capital expenditures, acquisition of Collus, and favorable foreign currency valuation adjustments, partially offset by depreciation expense, asset disposals and retirements.
Intangible assets and goodwill	368	293	75	Increase primarily due to capital expenditures, acquisition of Collus, acquisition of O&M rights for Vista Ridge project and favorable foreign currency valuation adjustments, partially offset by amortization and retirements.

## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION – LIABILITIES AND EQUITY

(\$ millions)	December 31, 2018	December 31, 2017	Increase (decrease)	Explanation of material changes
Trade and other payables	417	384	33	Increase is primarily due to higher accrued electricity costs primarily due to higher prices, higher transmission system access service charges payable, higher capital accruals and higher accruals on natural gas purchases, partially offset by lower accrued interest and lower holdback payables.
Loans and borrowings (including current portion)	2,700	2,866	(166)	Decrease primarily due to repayment of long-term debt (\$443 million), partially offset by issuance of long-term debt (\$200 million), assumed debt on acquisition of Collus (\$16 million), issuance of short-term debt (\$38 million) and unfavorable foreign currency valuation adjustments on U.S. dollar denominated debt.
Deferred revenue (including current portion)	3,532	3,281	251	Increase primarily due to customer and developer contributions received, deferred revenue liability assumed on acquisition of Collus and unfavorable foreign currency valuation adjustments, partially offset by deferred revenue recognized.
Provisions (including current portion)	119	116	3	
Other liabilities (including current portion)	144	146	(2)	
Deferred tax liabilities	53	39	14	Increase due to utilization of net operating loss carryforwards against current period net income in the U.S. and deferred tax liabilities recognized on the Collus acquisition.
Equity attributable to the Owner of the Company	3,691	3,512	179	Increase due to comprehensive income for the period, partially offset by dividends paid.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(\$ millions)				
<b>Cash inflows (outflows)</b>				
<b>Three months ended</b>			<b>Increase</b>	
<b>December 31,</b>	<b>2018</b>	<b>2017</b>	<b>(decrease)</b>	<b>Explanation</b>
Operating	\$ 186	\$ 263	\$ (77)	Decrease primarily due to lower funds from the change in non-cash operating working capital and lower funds from operating activities including higher interest payments.
Investing	(263)	(230)	(33)	Decrease primarily due to investment in Vista Ridge project in 2018 compared to no investment in 2017, higher payments for business acquisitions in 2018 compared to 2017 and higher capital expenditures.
Financing	87	254	(167)	Decrease primarily due to lower proceeds from issuance of long-term debt and higher repayment of long-term debt, partially offset by lower repayments of short-term debt and lower dividend payments to the City.
Opening cash and cash equivalents	22	51	(29)	
Closing cash and cash equivalents	\$ 32	\$ 338	\$ (306)	

(\$ millions)				
<b>Cash inflows (outflows)</b>				
<b>Twelve months ended</b>				
<b>December 31,</b>	<b>2018</b>	<b>2017</b>	<b>Increase</b>	<b>Explanation</b>
			<b>(decrease)</b>	
Operating	\$ 546	\$ 526	\$ 20	Increase primarily due to higher funds from operating activities, including twelve months of funds from Drainage operations in 2018 compared to four months in 2017, partially offset by higher interest payments and lower funds from the change in non-cash operating working capital.
Investing	(478)	(585)	107	Increase primarily due to higher payments received on long-term loans receivable from Capital Power and lower business acquisitions and long-term investment in 2018, partially offset by higher capital expenditures, higher payment of Drainage transition cost compensation, and lower funds from the change in non-cash investing working capital.
Financing	(374)	206	(580)	Decrease primarily due to higher repayment of long-term debt, lower proceeds from issuance of long-term debt and higher dividend payments to the City in 2018, partially offset by higher proceeds from issuance of short-term debt.
Opening cash and cash equivalents	338	191	147	
Closing cash and cash equivalents	\$ 32	\$ 338	\$ (306)	

### **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 in 2019 with a combination of cash on hand, cash flow from operating activities, the issuance of commercial paper, public or private debt offerings and availability of committed credit facility described below under Financing.

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 for 2019 include \$750 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)	2019	2020	2021	2022	2023	2024 and thereafter	Total
Distribution and Transmission segment capital projects <sup>1</sup>	\$ 74	\$ 26	\$ 4	\$ 1	\$ -	\$ -	\$ 105
Developer funded sanitary and stormwater capital projects <sup>2</sup>	30	23	-	-	-	-	53
Sanitary sewer rehabilitation and upgrade projects <sup>3</sup>	10	15	-	-	-	-	25
Water Services power contracts <sup>4</sup>	6	6	3	-	-	-	15
Water purchase and transportation of water agreements <sup>5</sup>	7	3	3	3	3	2	21
Billing and customer care services agreement <sup>6</sup>	4	3	3	-	-	-	10
Loans and borrowings <sup>7</sup>	70	33	222	35	32	2,322	2,714
Interest payments on loans and borrowings	122	120	119	111	109	1,661	2,242
Drainage transition cost compensation <sup>8</sup>	17	13	10	6	-	-	46
Contingent consideration <sup>9</sup>	5	47	4	-	-	-	56
Operating leases, net <sup>10</sup>	10	10	9	7	7	63	106
Other	9	-	-	-	-	-	9
<b>Total contractual obligations</b>	<b>\$ 364</b>	<b>\$ 299</b>	<b>\$ 377</b>	<b>\$ 163</b>	<b>\$ 151</b>	<b>\$ 4,048</b>	<b>\$ 5,402</b>

- 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 commitments to rehabilitate and upgrade the sanitary sewers at the Groat Road area of the city of Edmonton.
- 4 The Company has commitments to purchase power for its Edmonton water treatment plants and distribution sites, wastewater treatment plants and sanitary and stormwater collection sites. The agreements expire on or before December 31, 2021. Under the terms of the agreements, the Company is committed to purchase minimum contracted quantities of electricity at a fixed price. There are no early termination or cancellation clauses in these agreements.
- 5 Water Arizona maintains agreements with the Central Arizona Water Conservation District for the purchase and transportation of water. These agreements are for terms of 100 years expiring at the end of 2107. Under the terms of these agreements, the Company is committed for the amount of water ordered in the fall of each year

to be purchased and transported the following year.

- 6 The Company has entered into an agreement for billing and customer care services for U.S. Operations. The contract term is for ten years, expiring on August 31, 2021.
- 7 In November 2018, the Company issued public debentures totaling \$200 million maturing in 2048 at an interest rate of 3.95%. In addition, the Company also assumed \$16 million in third party debt (consisting of \$8 million payable to the Town of Collingwood and \$8 million of bank loans) on the acquisition of Collus. Subsequent to the acquisition, the Company fully settled the \$8 million of bank loans. For additional information on loans and borrowing refer the audited consolidated financial statements of EPCOR Utilities Inc.
- 8 The Company has a commitment to compensate the City for stranded costs, including liabilities retained by the City, related to the transfer of Drainage. Out of the total \$75 million commitment, the Company has paid \$29 million to the City, with the remaining \$46 million due over the next four years.
- 9 On acquisition of the Blue Water and Cross County Water Supply Corporation assets, the Company committed to pay Blue Water a fee which is contingent on securing new long-term contracts for the supply of water. This fee is capped at US\$32 million with no time limit for payment of the fee. In addition, on the acquisition of Hughes, the Company committed to pay a fee to the previous owners of Hughes based on the addition of new customer connections above a minimum of 600 incremental customer connections over the period of six years from the date of acquisition. The fee is capped at US\$8 million.

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.

- 10 In 2007, the Company entered into a long-term agreement to lease commercial space in a new office tower in Edmonton, Canada, primarily for its head office (head office lease). The agreement, which became effective in the fourth quarter of 2011, has an initial lease term of approximately 20 years, expiring on December 31, 2031, and provides for three successive five-year renewal options.

Under the terms of the head office lease, the Company's annual lease commitments, net of annual payments to be paid to the Company by Capital Power and another company under the sub-leases receivable are as follows:

(\$ millions)	Minimum lease payable
January 1, 2019 through December 31, 2022	\$ 6
January 1, 2023 through December 31, 2023	7
January 1, 2024 through December 31, 2031	8

All of the Company's operating lease obligations for premises, net of subleases receivable, are included in the contractual obligations table above. The Company has evaluated and determined that the operating leases presented in the above table will fall under the definition of lease under IFRS 16 *Leases*, which will be effective from January 1, 2019. Accordingly, effective January 1, 2019, the Company will recognize lease liability and right-of-use asset for those leases on the consolidated statement of financial position and they will cease to be presented as commitment from the effective date, except to the extent that any of the leases meet allowed practical expedients under IFRS 16 for non-recognition of lease liability and right-of-use asset.

As at February 14, 2019, there were three common shares of the Company outstanding, all of which are owned by the City. Consistent with EPCOR's commitment to the City, EPCOR's dividend to the City increased from \$153 million in 2017 to \$166 million in 2018. EPCOR's dividend to the City increased to \$171 million in 2019 and will remain at \$171 million until such time as the EPCOR Board recommends that it be changed. These increases have been approved by the Shareholder in accordance with the EPCOR Dividend Policy.

In the normal course of business, EPCOR provides financial support and performance assurances, including guarantees, letters of credit and performance bonds, to third parties in respect of its subsidiaries. At December 31, 2018, total guarantees of \$455 million (2017 - \$421 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, 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.

In November 2018, the Company issued public debentures totaling \$200 million maturing in 2048 at an interest rate of 3.95%. The public debentures are unsecured direct obligations of the Company and, subject to statutory preferred exemptions, rank equally with all other unsecured and unsubordinated indebtedness of the Company. The debentures are redeemable by the Company prior to maturity at the greater of par and a price specified under the terms of the debenture.

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:

(Unaudited, \$ millions) December 31, 2018	Expiry	Total facilities	Letters of credit issued	Banking Commercial paper issued	Net amounts available
<b>Committed</b>					
Syndicated bank credit facility <sup>1</sup>	November 2022	\$ 600	\$ -	\$ 38	\$ 562
<b>Uncommitted</b>					
Bank credit facilities <sup>2</sup>	No expiry	200	80	-	120
Bank credit facility	No expiry	25	-	-	25
Bank credit facility	April 2019	14	-	-	14
Total uncommitted		239	80	-	159
<b>Total credit facilities</b>		<b>\$ 839</b>	<b>\$ 80</b>	<b>\$ 38</b>	<b>\$ 721</b>

(Unaudited, \$ millions) December 31, 2017	Expiry	Total facilities	Letters of credit and other facility draws	Net amounts available
<b>Committed</b>				
Syndicated bank credit facility <sup>1</sup>	November 2022	\$ 600	\$ -	\$ 600
<b>Uncommitted</b>				
Bank credit facilities <sup>2</sup>	No expiry	200	66	134
Bank credit facility	No expiry	25	-	25
Total uncommitted		225	66	159
<b>Total credit facilities</b>		<b>\$ 825</b>	<b>\$ 66</b>	<b>\$ 759</b>

<sup>1</sup> The Company's \$600 million committed syndicated bank credit facility is entirely available and primarily used for backstopping EPCOR's commercial paper program. The committed syndicated bank credit facility 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 syndicated bank credit facility gives the Company the

option each year to re-price and extend the terms of the facility by one or more years subject to agreement with the lending syndicate. The Company regularly monitors market conditions and may elect to enter into negotiations to extend the maturity dates. At December 31, 2018, commercial paper totaling \$38 million was issued and outstanding (December 31, 2017 - \$nil).

- <sup>2</sup> 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, 2018, letters of credit totaling \$80 million have been issued and outstanding (December 31, 2017 - \$66 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, 2018, the available amount remaining under this Canadian base shelf prospectus was \$1.80 billion (December 31, 2017 - \$2 billion). The Canadian base shelf prospectus expires in December 2019.

If the economy 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 reduce capital expenditures and operating costs.

## Credit Ratings

Years ended December 31,	2018	2017	2016
<b>Credit ratings</b>			
Standard & Poor's Rating Services:			
Long-term debt	A-	A-	A-
DBRS Limited:			
Short-term debt	R-1 (low)	R-1 (low)	R-1 (low)
Long-term debt	A (low)	A (low)	A (low)

In September 2018, Standard & Poor's Ratings Services confirmed its A- / stable long-term corporate credit and senior unsecured debt ratings and DBRS confirmed its A (low) / stable senior unsecured debt and R-1 (low) / stable short-term 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 syndicated 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 facility causing a significant loss of access to liquidity or result 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, 2018 and 2017 were as follows:

	Actual 2018	Financial Covenant 2018	Actual 2017	Financial Covenant 2017
Modified consolidated net tangible assets to consolidated net tangible assets <sup>1</sup>	100%	> or = 80%	100%	> or = 80%
Consolidated senior debt to consolidated capitalization ratio <sup>2</sup>	42%	< or = 75%	45%	< or = 75%
Interest coverage ratio <sup>3</sup>	5.02	> or = 1.75:1.00	5.04	> or = 1.75:1.00
Debt issued by subsidiaries to consolidated net tangible assets <sup>4</sup>	-	< or = 12.5%	6.6%	< 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 2019, EPCOR will focus on the completion of integration of Drainage and Collus, as well as other operations which have recently been acquired by the Company. In addition, we will continue 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 be ancillary to our existing operations and will enhance our environmental performance.

On August 20, 2018, EPCOR agreed to acquire 100% of the stock in Rio Verde Utilities Inc. (Rio Verde) in Arizona, U.S., subject to regulatory approval by the ACC. Rio Verde is located northeast of Scottsdale and the Greater Phoenix metropolitan area and just 16 kilometers north of the Company's Chaparral service area in Fountain Hills. Rio Verde regulated operations include around 2,200 water and 1,900 wastewater service connections and irrigated water service for five golf courses. On January 16, 2019, the ACC approved the filing for change in control of the Rio Verde. After completion of the remaining closing formalities, the Company expects to close the transaction by end of February 2019.

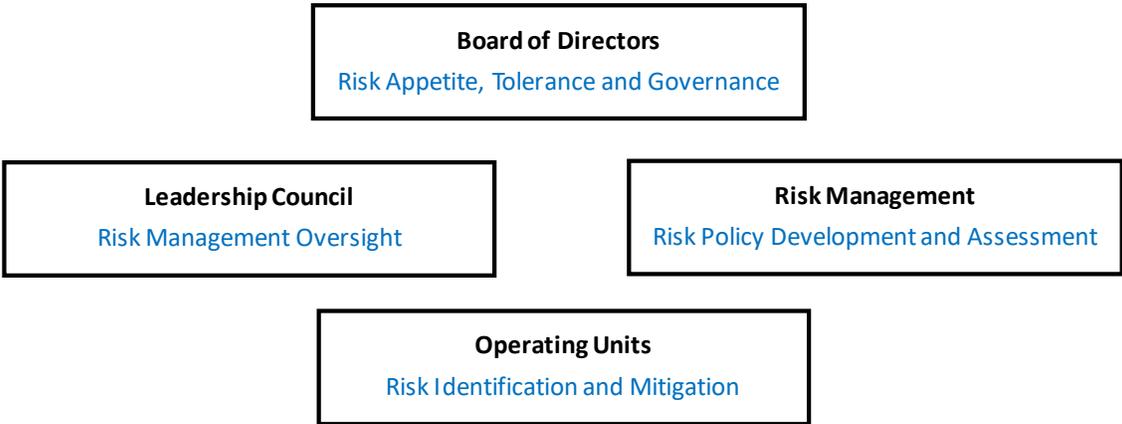
EPCOR was previously awarded franchises by two municipalities and one township in the Southern Bruce region of Ontario near Kincardine to build, own and operate a natural gas distribution system. On April 12, 2018, EPCOR received an OEB decision awarding certificates of public convenience and necessity related to these franchise areas. EPCOR has filed a leave to construct application with the OEB and for approval of the franchise agreements. In a separate application, EPCOR has also filed with OEB for approval of the rates. The OEB has placed these applications in abeyance until the government of the Province of Ontario confirms the process under which funding will be made available for natural gas expansion projects. Subject to obtaining OEB approvals, timely interconnection of the natural gas transmission system and confirmation of the availability of funding for natural gas expansion projects and details of the program to provide such funds from the Province of Ontario, the initial phase

of the natural gas distribution system is expected to be operational by second half of 2020, with the system substantially complete in 2021.

EPCOR is proposing to build a new solar farm just south of its existing E.L. Smith Water Treatment Plant (E.L. Smith WTP). The proposed solar farm will generate “green” energy to help power the existing E.L. Smith WTP and its water treatment and distribution processes, while reducing its greenhouse gas emissions. The solar farm is expected to have a peak generation capacity of approximately 12 megawatts. All significant government approvals are currently expected to be received in the second quarter of 2019, which will allow construction to be completed in the first half of 2020.

**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 2016 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 general ERM framework and strategy, 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 compliance 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 services 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.

The Company's Ethics Policy includes procedures which provide for confidential disclosure of any wrong-doing relating to accounting, reporting and auditing matters. The policy prohibits retaliation against any person making a complaint. During 2018, 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 serious, as assessed at December 31, 2018. No new risks have arisen since the end of 2017. However, the relative ranking of a number of the risks was revised, with Weather and Climate change being the most significant change in ranking.

### **New Business Integration Risk**

EPCOR plans to grow its utility infrastructure business across various investment types and North American geographies. The Company has been accomplishing this 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 new to us. This 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 businesses into EPCOR.

Integration of the Drainage business, which was transferred to EPCOR from the City in September 2017, and the Company's new electricity distribution business located in Collingwood, Ontario, which was acquired in October 2018, will be completed by the end of 2019. Integration of the Company's Ontario and Texas natural gas distribution businesses, acquired in 2017, was completed in 2018. Failing to successfully integrate new businesses could have long-term adverse effects on the Company, including reputational impact.

### **Health and Safety Risk**

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 operations 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 surface 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.

In Arizona, we obtain water from surface water and ground water sources. Surface water primarily comes from the Central Arizona Project canal to treat and sell to customers. 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 health, safety and environment (HSE) risks through a management system and measure HSE 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, safety and environment practices within the industry. At the end of 2018, all of our Edmonton water, wastewater and electricity transmission and distribution operations remain OHSAS 18001 registered.

### **Political and Legislative Risk**

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 as required.

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. The MCC Regulation will expire on June 30, 2021. In advance of the MCC Regulation's expiry, EPCOR will work with the Government of Alberta to extend the exemption past June 30, 2021, or to permanently exempt EPCOR from the MGA, as failing to have the exemption could impair EPCOR's ability to achieve its strategic objectives.

## **Regulatory 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 when 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 EPCOR Water Services and Wastewater Treatment Bylaw. EPCOR's sanitary and stormwater collection services to customers within Edmonton are rate regulated by Edmonton City Council pursuant to the EPCOR Drainage Services Bylaw. Our ability to fully recover operating and capital costs and to earn a fair return is dependent upon achieving the performance targets prescribed in the bylaws, maintaining cost increases 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 PBR structure for electricity distribution utilities in Alberta. Under PBR, EPCOR's annual electricity distribution rates are set by a formula that is generally equal to last year's rate plus an inflation factor less a productivity factor plus a provision for additional approved capital additions. Certain capital projects may be applied-for annually in a separate capital application. 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 PBR formula or approved in a separate capital application. The Next Generation PBR framework, effective January 1, 2018, sets rates to December 31, 2022.

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 to permit the regulated Energy Services' RRO customer services business to recover forecast costs of providing service plus earn a fair 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.

## **Strategy Execution Risk**

Our growth strategy is dependent on the development, acquisition and operation of linear infrastructure for municipal, commercial and industrial customers in Canada and the U.S. Opportunities may be impacted by depressed oil prices and any weakening of Canadian and U.S. economies in the future. This could slow or delay the Company's growth plans.

Such growth is dependent on opportunities in the marketplace which will be impacted by the willingness of parties to sell such assets, political and public sentiment regarding third party ownership and competitiveness of EPCOR's cost of capital. These risks could result in delays or curtailment of EPCOR's growth plans.

Business development projects, including acquisitions, can take a relatively long period of time to execute, exposing such projects to event and external factor risks that may emerge and thereby alter project economics or completion.

For each new business development project, EPCOR seeks to ensure project success by addressing project risks, including events and external factors, as part of its due diligence process and project execution.

### **Information Technology Related Security Risks**

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 or extortion or otherwise disrupt operations. We take measures to reduce the risk of malicious corruption or failure of these systems, data and the hardware and network infrastructure on which they 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.

### **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 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 which 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 interactions 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 expense, 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 allowed return on equity 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 expenses. It is not always possible to achieve the allowed return.

### **Business Interruption Risks**

A variety of intentional, accidental or natural occurrences could cause interruption of EPCOR's operations including failure of plant equipment, electricity transmission or distribution lines, water, sanitary and stormwater collection systems or natural gas pipelines, or any of the industrial control systems utilized throughout operations. 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.

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

### **Weather and Climate-change Risk**

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. Seasonal weather events can cause damage to electricity distribution and transmission equipment and wires, temporarily disrupting the reliable supply of power to customers and can cause unpredictability in the demand for power or natural gas. 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, disrupting service to customers.

Climate-change could cause extreme weather events such as urban flooding and result in damage to the Company's electricity transmission and distribution system assets in Edmonton. Urban flooding could also result in damage to the Company's reputation, where in Edmonton, EPCOR is responsible for stormwater management. EPCOR is developing a long-term Stormwater Integrated Resource Plan for Edmonton that will prioritize infrastructure investments to help mitigate the impact of urban flooding events.

Flooding of the North Saskatchewan River valley could damage electrical equipment associated with our three large treatment plants and two electricity substations and result in the facilities being inoperable for up to several months to perform repairs. We are in the process of reviewing options to mitigate the Company's exposure to flooding of the North Saskatchewan River valley.

Climate-change in the form of long-term / permanent 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 10% of the Company's total revenues. 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 the customer demand for water and electricity, or increased temperatures during winter months reducing customer demand for natural gas. 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 such risk.

Climate-change could lead to government policy decisions and the development of new technology to promote water conservation or exploitation of electric vehicles, for example. 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. Rapid exploitation of electric vehicles could strain the reliability of the Company's electricity transmission and distribution system in the short term, but provide an opportunity in the longer term to invest in infrastructure to increase the capacity of EPCOR's electricity transmission and distribution systems.

Financial exposures associated with climate-related events are partly mitigated through our insurance programs.

### **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 is facing the demographic shift where a large number of employees are expected to retire over the next few years. Failure to secure sufficient qualified technical and leadership talent may impact EPCOR's operations or increase expenses.

We believe that we employ good human resource practices and in 2018, we were named a top 70 employer in Alberta, by Mediatrix Canada Inc. and U.S. Operations was selected by The Phoenix Business Journal as one of the best places to work. We continue to monitor developments and review our human resource strategies so that we have an adequate supply of labor and management.

### **Electricity Price and Volume Risk**

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 amount of electricity to be economically hedged, the hedging method 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 economically hedge the RRO requirements and incorporate the price into customer rates for the applicable month. Fixed volumes of electricity are economically hedged using financial contracts-for-differences which are entered into in advance of the month in which the electricity (load) is consumed by the RRO customers. The volume of electricity economically hedged in advance is based on load (usage) forecasts for the consumption month. When consumption varies from forecast consumption patterns (e.g. when the volume of electricity economically hedged is short of actual load requirements or greater than the actual load requirements (long), EPCOR is exposed to prevailing market prices. Exposure to variances in electricity volume can be exacerbated by other events such as unexpected generation plant outages and unusual weather patterns which could impact electricity spot market prices.

Under contracts-for-differences the Company agrees to exchange, with a single creditworthy and adequately secured counterparty, the difference between the AESO electricity spot market price and the fixed contract price for a specified 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 Risk**

Development, construction and acquisition of water and wastewater treatment facilities, sanitary and stormwater infrastructure and electricity transmission and distribution 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 and wastewater 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 that have an established track record of infrastructure design and construction. 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 risks by performing detailed project analysis and due diligence prior to and during development, construction or acquisition, and by entering into appropriate contracts for various services to be provided as required. Our ability to complete projects successfully depends upon numerous factors such as weather, civil disobedience, availability of skilled labor, strikes and regulatory matters.

### **Environment Risk**

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 laws, regulations and operating approvals which are designed to reduce the impacts on the environment. An environmental event could materially and adversely impact EPCOR's business, prospects, reputation, financial condition, operations or cash flow. Furthermore, such incidents could result in spills or emissions in excess of those permitted by law, regulations or operating approvals.

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 with 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 these regulations and 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.

To the best of our knowledge we comply, in all material respects, with the laws, regulations and operating approvals affecting our facilities, and minimize the potential for incidents by incorporating environmental management practices in our strategy, policies, processes and procedures. To achieve this, we require each facility to have an environmental emergency response plan which is based on the ISO 14001 standard. These plans encompass the identification of the scope, objectives, training and stewardship of our environmental responsibility. 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 Edmonton waterworks system (including the

Rossdale water treatment plant and E.L. Smith WTP) achieved EnviroVista Champion status as of June 2011. At the end of 2018, our Regina wastewater and Britannia mine water run-off operations in addition to all of our Edmonton water, wastewater, sanitary and stormwater, electricity transmission and distribution and transportation services operations, remain ISO 14001 registered.

The primary sources of EPCOR's greenhouse gas emissions relate to powering and heating our treatment plants and building facilities, and operating our vehicle and equipment fleet. The Company is proactive in seeking ways to reduce its greenhouse gas footprint and is currently considering constructing 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.

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 conditions, operations or cash flows.

### Credit Risk

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

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.

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

Exposures to credit risk in our rate-regulated and non-rated-regulated businesses are generally limited to amounts due from customers for 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 the 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,	2018	2017
RRO and default supply customers <sup>1</sup>	\$ 155	\$ 126

<sup>1</sup> EPCOR monitors credit risk for this portfolio at the gross exposure level rather than by individual customer account.

The year-over-year increase in exposure primarily relates to higher customer rates.

EPCOR is also exposed to the risk of non-payment for water, electricity distribution and transmission, natural gas, sanitary and stormwater services provided to rate-regulated and non-rate regulated customers, as summarized below. Exposures represent a 60-day potential accounts receivable value for this portfolio.

(\$ millions) <b>December 31,</b>	<b>2018</b>	<b>2017</b>
Unrated customers	\$ 176	\$ 162
Rated customers <sup>1</sup>	44	39

<sup>1</sup> Rated customers have investment grade credit ratings which are based on the Company's internal criteria and analyses, which take into account, among other factors, the investment grade ratings of external credit rating agencies when available.

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 Risk**

EPCOR's internally generated 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. The inability of the Company 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 Operating Activities and Liquidity in 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. EPCOR's financial risks are governed by a Board-approved financial exposure management policy, which is administered by EPCOR's Treasurer.

### **Billing Error Risk**

The customer consumption data used to bill utility customers is voluminous and the sources and types of customer billing data are varied, requiring large, complex systems to process customer billings. In addition, the Company relies on third parties to provide customer meter data in certain circumstances and to produce bills for its U.S. customers. All of this contributes to the potential for billing errors caused by poor customer consumption data quality, billing system computational errors, incorrect customer rates being used or transactions and adjustments being applied incorrectly to customer accounts. The Company applies numerous manual and automated controls to ensure the quality of customer billings including a routine to identify various exceptions in the electricity meter data used to produce customer bills.

The Company is planning on replacing its main customer billing system in 2020. While the replacement project will include various procedures and controls to check the new system's accuracy, billing accuracy will be a key implementation risk of this large, complex system.

### **Foreign Exchange Risk**

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.

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.

### **General Economic Conditions, Business Environment and Other Risks**

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, market competition, risks associated with technology, general economic and business conditions, EPCOR's ability to make capital investments and the amounts of capital investments, risks associated with existing and potential future lawsuits and other regulations, assessments and audits (including income tax) against EPCOR and its subsidiaries, political and economic conditions in the geographic regions in which EPCOR and its subsidiaries operate, difficulty in obtaining necessary regulatory approvals, a significant decline in EPCOR's reputation 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, 2018. 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.

(\$ millions, except as otherwise noted)			
	<b>Change</b>	<b>Annual cash flow</b>	<b>Annual net income</b>
Increase in RRO customers	+2.0%	+0.7	+0.7
Decrease in RRO customers	-2.0%	-0.7	-0.7
Increase in Water Services segment water volumes	+5.0%	+15	+15
Decrease in Water Services segment water volumes	-5.0%	-15	-15
Increase in U.S. Operations segment water volumes	+5.0%	+3	+3
Decrease in U.S. Operations segment water volumes	-5.0%	-3	-3

### **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, 2018. Based on their knowledge and exercise of reasonable diligence, they have concluded that these materials 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 International Accounting Standards Board and the International Financial Reporting Interpretations Committee, the application of which is effective for periods beginning on or after January 1, 2019. Those which may be relevant to the Company and may impact the accounting policies of the Company are set out below. The Company does not plan to adopt these standards early.

IFRS 16 - Leases (IFRS 16), which replaces IAS 17 – Leases (IAS 17) and related interpretations, combines the existing dual accounting model of operating and finance leases into a single lessee accounting model. Under the new lessee accounting model, a lessee will recognize right-of-use assets and lease liabilities on the statement of financial position initially measured at the present value of unavoidable future lease payments. IFRS 16 will also result in expenses being higher at the beginning of a lease and lower towards the end of a lease, even when payments are consistent throughout the term. Lessors will continue to use dual lease accounting model and the classification will determine how and when a lessor will recognize lease revenue and what assets will be recorded.

There are two methods prescribed for adoption of the new standard: (1) a full retrospective approach with a restatement of all prior periods presented, or (2) a modified retrospective approach with a cumulative-effect adjustment recognized in the opening retained earnings as of the date of adoption. The Company will adopt IFRS 16 using the modified retrospective approach with the cumulative effect of the adjustment, if any, recognized as of January 1, 2019, subject to allowable and elected practical expedients. On initial adoption of the new standard, the Company intends to use the following recognition exemptions and practical expedients, where applicable:

- not apply the requirements of the standard to short-term leases,
- treat existing operating leases with a remaining term of less than 12 months at January 1, 2019 as short-term leases,
- not apply the requirements of the standard to low value leases,
- apply a single discount rate to a portfolio of leases with reasonably similar characteristics,
- adjust right-of-use assets at the date of initial application by the amount of any provision for onerous leases recognized in the consolidated statements of financial position immediately before the date of initial application,
- exclude initial direct costs relating to existing leases from the measurement of the right-of-use asset.

On adoption of IFRS 16, the lease liabilities will be measured at the present value of the future lease payments under each contract, discounted using the incremental borrowing rate for the corresponding legal entity. The right-of-use assets will be measured at amounts equal to respective lease liabilities, subject to certain adjustments allowed under IFRS 16. The right-of-use assets will be amortized on a straight-line basis over the remaining term of each related lease contract.

The Company has substantially completed its review of existing contracts that could potentially be classified as leases under IFRS 16 in order to identify the contracts that will be impacted by the implementation of the new standard. The Company is currently finalizing its analysis to quantify the impact of the adoption of IFRS 16 on its consolidated financial statements. Based on the analysis completed to date, the Company expects to have a material impact on its consolidated statements of financial position primarily as a result of the recognition of right-of-use assets and lease liabilities with respect to its leases for land and buildings (including office spaces) as well as recording lease receivables related to subleases under some of the Company's lease contracts.

The ongoing impact of the application of IFRS 16 to the Company's lease contracts on the consolidated statements of comprehensive income is not expected to be material as the amortization of right-of-use assets and finance expenses on lease liabilities recognized under IFRS 16 will mostly be offset, by reduction in rental expense and operating lease expense, which are currently recognized in net income.

The Company does not expect any material adjustment to the opening balance of retained earnings on January 1, 2019 on the initial application of IFRS 16. Based on the analysis completed to date the Company is expecting to recognize the right-of-use assets of \$92 million, lease receivables of \$40 million, and lease liabilities of \$132 million on the consolidated statement of financial position. The actual impact of adopting the standard on January 1, 2019, may differ from these estimates as the Company continues to review its calculations and may refine certain inputs therein, such as discount rates and lease terms. These balances, including the election to apply certain practical expedients, are subject to change until presented in its first published consolidated financial statements after the date of initial application.

As a result of the adoption of the new standard, the Company will be required to include significant disclosures in the consolidated financial statements based on the prescribed requirements. These new disclosures will include information regarding the judgements used in determining discount rates and terms of leases including optional periods. The Company will include required disclosures in its 2019 first quarter condensed consolidated interim financial statements.

IFRIC 23 – *Uncertainty over Income Tax Treatments* is effective for annual periods commencing on or after January 1, 2019. The interpretation provides guidance on the recognition and measurement of current and deferred tax assets and liabilities under IAS 12 – *Income Taxes* when there is uncertainty over income tax treatments. The Company does not expect a material impact on initial application of the interpretation. However, the interpretation may impact the Company's recognition, measurement and disclosure of uncertain tax treatments in the future.

## **CRITICAL ACCOUNTING ESTIMATES**

In preparing the consolidated financial statements, management necessarily 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 \$49 million at the end of each month in 2018 (2017 - \$33 million). These estimates varied from \$40 million to \$58 million (2017 - \$28 million to \$39 million). Adjustments of estimated revenues to actual billings were not material for any month in 2018 and 2017.

### **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 certain disclosures. Significant judgment is applied in the determination of fair values including the choice of discount rates, estimating future cash flows, and determining goodwill. Following are the descriptions of the key fair value methodologies relevant for 2018.

Fair values of financial instruments are based on quoted market prices when these instruments are traded in active markets. In 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 undiscounted 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 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 long-lived assets are subject to rate-regulation. Similarly, the assessment of the useful lives of our long-lived assets did not change since many of our distribution and transmission assets and water assets are amortized based on rates approved by the applicable regulator. Our valuation models for estimating the fair value of long-lived asset impairments 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 provision matrix which uses historical rates of bad debts in relation to the aged accounts receivable balances by customer group for RRO and default customer bases and current economic conditions (including forward looking information). These analyses did not reveal any significant changes in our assessment of the recoverability of accounts receivable at December 31, 2018.

### **OTHER COMPREHENSIVE INCOME**

For the three and twelve months ended December 31, 2018 and 2017, the Company's transactions in other comprehensive income included the following:

(\$ millions)	Three months ended December 31,		Twelve months ended December 31,	
	2018	2017	2018	2017
Re-measurement of net defined benefit plans	\$ 6	\$ (5)	\$ 6	\$ (5)
Fair value loss on available-for-sale beneficial Interest in sinking fund	-	-	-	(1)
Fair value gain on available-for-sale investment in Capital Power reclassified to net income	-	-	-	(1)
Unrealized gain (loss) on foreign currency translation	28	2	43	(30)
<b>Other comprehensive income (loss)</b>	<b>\$ 34</b>	<b>\$ (3)</b>	<b>\$ 49</b>	<b>\$ (37)</b>

## RELATED PARTY BALANCES AND TRANSACTIONS

The Company provides utility services to key management personnel 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 printing services and supplies, mobile equipment services, public works and various other services pursuant to service agreements. Sales 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 the audited consolidated financial statements for the years ended December 31, 2018 and 2017.

## QUARTERLY RESULTS

(Unaudited, \$ millions)		
Quarters ended	Revenue	Net income
December 31, 2018	\$ 466	\$ 107
September 30, 2018	465	55
June 30, 2018	426	68
March 31, 2018	401	65
December 31, 2017	572	87
September 30, 2017	534	75
June 30, 2017	474	56
March 31, 2017	455	38

Events for the past eight quarters compared to the same quarter of the prior year that have significantly impacted net income included:

- December 31, 2018, fourth quarter results included higher income tax recovery due to recognition of non-capital loss carry-forward balances, higher distribution revenues due to higher customer rates, higher EPSP margins, higher transmission system access service charge net collections, lower finance expense due to lower average debt outstanding and lower interest rates, and no losses on sale of surplus land. Partially offsetting these increases were lower water and wastewater revenues, unfavorable fair value adjustments related to financial electricity purchase contracts and higher depreciation expense due to asset additions for 2018.
- September 30, 2018, third quarter results included lower EPSP margins, higher unfavorable fair value adjustments related to financial electricity purchase contracts, lower transmission system access service charge net collections, higher finance expense due to the additional debt assumed upon the transfer of Drainage, as

well as, higher depreciation expense due to the transfer of Drainage and asset additions for 2017 and 2018. Partially offsetting these decreases were three months of income from Drainage in 2018 compared to one month in 2017, higher water and wastewater revenues, higher electricity distribution customer rates and no losses on sale of surplus land in 2018.

- June 30, 2018, second quarter results included income from Drainage and Hughes, higher water and wastewater revenues, lower water treatment costs for operations in the city of Edmonton, higher electricity distribution customer rates, higher favorable fair value adjustments related to financial electricity purchase contracts. Partially offsetting these increases were lower EPSP margins, lower transmission system access service charge net collections, higher interest expense due to the additional debt assumed upon the transfer of Drainage, as well as, higher depreciation expense due to the transfer of Drainage and asset additions for 2017 and 2018.
- March 31, 2018, first quarter results included income from Drainage and Hughes, higher water and wastewater revenues, lower water treatment costs for operations in the city of Edmonton, Encor customer growth, unfavorable fair value adjustments related to financial electricity purchase contracts in 2017 and higher transmission system access service charge net collections. Partially offsetting these increases were lower EPSP margins, higher interest expense due to the additional debt assumed upon the transfer of Drainage, as well as, higher depreciation expense due to the transfer of Drainage and 2017 asset additions.
- December 31, 2017, fourth quarter results included lower transmission system access service charge net collections, lower EPSP margins, higher depreciation expense due to asset additions, no fair value gain on sale of investment in Capital Power, no favorable fair value adjustments related to interest rate swaps in 2017 and higher financing expenses. Partially offsetting these decreases were higher water, wastewater and electricity distribution customer rates, income from the Drainage operations, higher income related to industrial services contracts, higher water volumes in U.S. due to above average temperatures, lower income taxes and higher favorable changes in the fair value of financial electricity purchase contracts.
- September 30, 2017, third quarter results included lower EPSP margins, higher depreciation expense due to asset additions, lower income from industrial services contracts primarily due to the termination of the Suncor financing and operating agreements in 2016, no fair value gain on sale of investment in Capital Power, no dividend income due to the sale of Capital Power shares and lower favorable fair value adjustments related to financial electricity purchase contracts. Partially offsetting these decreases were higher water, wastewater and electricity distribution customer rates, higher transmission system access service charge net collections and no unfavorable fair value adjustments related to interest rate swaps.
- June 30, 2017, second quarter results included lower income related to industrial services contracts, lower EPSP margins, loss on sale of surplus land, lower water and wastewater volumes due to higher precipitation in the city of Edmonton, higher water treatment costs due to poor river quality conditions in the North Saskatchewan River and no dividend income due to the sale of Capital Power shares. Partially offsetting these decreases were favorable fair value adjustments related to financial electricity purchase contracts in 2017 and unfavorable fair value adjustments related to interest rate swaps in 2016 with no corresponding transaction in the second quarter of 2017, higher water, wastewater and electricity transmission customer rates and higher transmission system access service charge net collections.
- March 31, 2017, first quarter results included unfavorable fair value adjustments related to financial electricity purchase contracts and no dividend income due to the sale of Capital Power shares, lower transmission system access service charge net collections, lower gains as a result of sales of surplus land in the first quarter of 2016, lower income related to industrial services contracts and lower EPSP margins. Partially offsetting these decreases were higher water, wastewater and electricity distribution and transmission customer rates and an unfavorable fair value adjustment related to interest rate swaps in the first quarter of 2016.

## Fourth Quarter Business Segment Information

The business segment information for the corresponding period has been revised to correspond with the new business segments. Additionally the comparative information relating to operating expenses has also been revised, where applicable, to conform to current year presentation.

Three months ended December 31, 2018

	Water Services	Distribution & Transmission	Energy Services	US Operations	Other	Intersegment Elimination	Consolidated
External revenues	\$ 149	\$ 131	\$ 112	\$ 58	\$ 16	\$ -	\$ 466
Inter-segment revenue	-	3	4	-	-	(7)	-
Total revenues and other income	149	134	116	58	16	(7)	466
Energy purchases and system access fees	-	-	97	2	10	-	109
Other raw materials and operating charges	25	12	-	12	2	1	52
Staff costs and employee benefits expenses	29	20	7	8	5	(1)	68
Depreciation and amortization	41	23	1	12	5	-	82
Franchise fees and property taxes	7	19	-	3	-	-	29
Other administrative expenses	8	5	7	3	7	(7)	23
Operating expenses	110	79	112	40	29	(7)	363
Operating income (loss) before corporate charges	39	55	4	18	(13)	-	103
Corporate income (charges)	(9)	(5)	(1)	(1)	16	-	-
Operating income	30	50	3	17	3	-	103
Finance recoveries (expenses)	(18)	(16)	(1)	(10)	15	-	(30)
Income tax recovery (expense)	1	-	-	(3)	36	-	34
Net income	\$ 13	\$ 34	\$ 2	\$ 4	\$ 54	\$ -	\$ 107
Capital additions	\$ 102	\$ 54	\$ 1	\$ 56	\$ 19	\$ -	\$ 232

Three months ended December 31, 2017

	Water Services	Distribution & Transmission	Energy Services	US Operations	Other	Intersegment Elimination	Consolidated
External revenues	\$ 155	\$ 129	\$ 227	\$ 57	\$ 4	\$ -	\$ 572
Other income	-	-	-	-	3	-	3
Inter-segment revenue	-	54	3	-	-	(57)	-
Total revenues and other income	155	183	230	57	7	(57)	575
Energy purchases and system access fees	-	58	201	-	1	(52)	208
Other raw materials and operating charges	24	13	-	11	1	(1)	48
Staff costs and employee benefits expenses	31	19	6	8	13	(1)	76
Depreciation and amortization	37	24	2	12	3	-	78
Franchise fees and property taxes	8	20	-	3	-	-	31
Other administrative expenses	10	4	7	4	9	(3)	31
Operating expenses	110	138	216	38	27	(57)	472
Operating income (loss) before corporate charges	45	45	14	19	(20)	-	103
Corporate income (charges)	(10)	(7)	(4)	(1)	22	-	-
Operating income	35	38	10	18	2	-	103
Finance recoveries (expenses)	(20)	(15)	(1)	(9)	12	-	(33)
Income tax recovery	1	-	-	13	3	-	17
Net income	\$ 16	\$ 23	\$ 9	\$ 22	\$ 17	\$ -	\$ 87
Capital additions	\$ 98	\$ 69	\$ 1	\$ 42	\$ 4	\$ -	\$ 214

## 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 in 2019.	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.
EPCOR’s projected cash requirements for capital spending and investment projects for 2019 include \$750 million to \$950 million for investment in existing businesses and new business development.	EPCOR is able to complete its 2019 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.
EPCOR’s projected cash requirements for 2019 include \$171 million for common share dividends.	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:

<b>Material 2018 Objectives Previously Disclosed</b>		<b>Actual Result</b>	<b>Explanation of Material Differences from Objectives</b>
EPCOR's expected cash requirement for investment in existing businesses and new business development for 2018 is \$625 million to \$725 million.	\$625 million to \$725 million	\$616 million capital expenditures and \$37 million business acquisitions and investment	Within the range
Transfer of Drainage to EPCOR For the first full year of operations, capital spending, net of contributions, is expected to be approximately \$120 million to \$200 million.	\$120 million to \$200 million	\$104 million	Capital spending was lower primarily due to deferral of project expenditures related to third party land acquisitions and to align planned flood mitigation projects with SIRP that is currently under development
EPCOR's projected cash requirements for 2018 include \$166 million for common share dividends.	\$166 million	\$166 million	No change

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

<b>ACC</b> means Arizona Corporation Commission	<b>MCC</b> means Municipally Controlled Corporation
<b>Adjusted EBITDA</b> earnings before finance expenses, income tax recovery (expense), depreciation and amortization, changes in the fair value of derivative financial instruments and transmission system access service charge net collections	<b>MCC Regulations</b> means Municipally Controlled Corporations Regulation
<b>AESO</b> means Alberta Electric System Operator	<b>MGA</b> means <i>Bill 21: the Modernized Municipal Government Act</i>
<b>AUC</b> means the Alberta Utilities Commission	<b>OEB</b> means Ontario Energy Board
<b>Capital Power</b> means Capital Power Corporation and its directly and indirectly owned subsidiaries including Capital Power L.P., except otherwise noted or the context otherwise indicates	<b>PBR</b> means Performance Based Regulation
<b>Collus</b> means Collingwood PowerStream Utility Services Corp.	<b>Rio Verde</b> means Rio Verde Utilities Inc.
<b>Drainage</b> means drainage utility services within the city of Edmonton	<b>Rossdale</b> means Rossdale Water Treatment Plant
<b>Drainage Bylaw</b> means Bylaw 18100 EPCOR Drainage Services Bylaw	<b>RRO</b> means Regulated Rate Option
<b>E.L. Smith WTP</b> means E.L. Smith Water Treatment Plant	<b>RRT</b> means Regulated Rate Tariff
<b>EPEA</b> means <i>Environmental Protection and Enhancement Act</i>	<b>SAIDI</b> means System Average Interruption Duration Index
<b>EPSP</b> means Energy Price Setting Plan	<b>SIRP</b> means Stormwater Integrated Resource Plan
<b>Gold Bar</b> means Gold Bar Wastewater Treatment Facility	<b>U.S. EPA</b> means U.S. Environmental Protection Agency
<b>HSE</b> means Health, Safety and Environment	<b>Vista Ridge</b> means Vista Ridge LLC
<b>Hughes</b> means Hughes Gas Resources, Inc.	<b>the City</b> means The City of Edmonton

## ADDITIONAL INFORMATION

Additional information relating to EPCOR, including the Company's 2018 Annual Information Form, is available on SEDAR at [www.sedar.com](http://www.sedar.com).