Consolidated Financial Statements of

EPCOR UTILITIES INC.

Years ended December 31, 2018 and 2017

Management's responsibility for financial reporting

The preparation and presentation of the accompanying consolidated financial statements of EPCOR Utilities Inc. are the responsibility of management and the consolidated financial statements have been approved by the Board of Directors. In management's opinion, the consolidated financial statements have been prepared within reasonable limits of materiality in accordance with International Financial Reporting Standards. The preparation of financial statements necessarily requires judgment and estimation when events affecting the current year depend on determinations to be made in the future. Management has exercised careful judgment where estimates were required, and these consolidated financial statements reflect all information available to February 14, 2019. Financial information presented elsewhere is consistent with that in the consolidated financial statements.

To discharge its responsibility for financial reporting, management maintains systems of internal controls designed to provide reasonable assurance that the Company's assets are safeguarded, that transactions are properly authorized and that relevant financial information is reliable, accurate and available on a timely basis. The internal control systems are monitored by management, and evaluated by an internal audit function that regularly reports its findings to management and the Audit Committee of the Board of Directors.

The consolidated financial statements have been audited by KPMG LLP, the Company's external auditors. The external auditors are responsible for auditing the consolidated financial statements and expressing their opinion on the fairness of the consolidated financial statements in accordance with International Financial Reporting Standards. The auditors' report outlines the scope of their audit and states their opinion.

The Board of Directors, through the Audit Committee, is responsible for ensuring management fulfills its responsibilities for financial reporting and internal controls. The Audit Committee, which is composed of independent directors, meets regularly with management, the internal auditors and the external auditors to satisfy itself that each group is discharging its responsibilities with respect to internal controls and financial reporting. The Audit Committee reviews the consolidated financial statements and management's discussion and analysis and recommends their approval to the Board of Directors. The external auditors have full and open access to the Audit Committee, with and without the presence of management. The Audit Committee is also responsible for reviewing and recommending the annual appointment of the external auditors and approving the annual external audit plan.

On behalf of management,

Stuart Lee
President and Chief Executive Officer

Tony Scozzafava
Senior Vice President and Chief Financial Officer

February 14, 2019

EPCOR UTILITIES INC.
Consolidated Financial Statements

Years ended December 31, 2018 and 2017

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INDEPENDENT AUDITORS' REPORT

To the Shareholder of EPCOR Utilities Inc.

Opinion

We have audited the consolidated financial statements of EPCOR Utilities Inc. (the Entity), which comprise:

- the consolidated statements of financial position as at December 31, 2018 and December 31, 2017
- the consolidated statements of comprehensive income for the years then ended
- the consolidated statements of changes in equity for the years then ended
- the consolidated statements of cash flows for the years then ended
- and notes to the consolidated financial statements, including a summary of significant accounting policies

(Hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of the Entity as at December 31, 2018 and December 31, 2017, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "***Auditors' Responsibilities for the Audit of the Financial Statements***" section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. Other information comprises:

- the information included in Management's Discussion and Analysis filed with the relevant Canadian Securities Commissions.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information included in the Management's Discussion and Analysis filed with the relevant Securities Commissions as at the date of this auditors' report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditors' report. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Entity's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

- Provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Entity to express an opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

The engagement partner on the audit resulting in this auditors' report is Ernest Trevor Hammond.

KPMG LLP

Chartered Professional Accountants

Edmonton, Canada
February 14, 2019

EPCOR UTILITIES INC.

Consolidated Statements of Comprehensive Income
(In millions of Canadian dollars)

Years ended December 31, 2018 and 2017

	2018	2017
Revenues and other income:		
Revenues (note 6)	$ 1,758	$ 2,035
Other income	2	12
	1,760	2,047
Operating expenses:		
Energy purchases and system access fees (note 6)	360	804
Other raw materials and operating charges	191	170
Staff costs and employee benefits expenses (note 7)	319	281
Depreciation and amortization (note 7)	299	236
Franchise fees and property taxes	119	112
Other administrative expenses (note 7)	88	88
	1,376	1,691
Operating income	384	356
Finance expenses (note 8)	(121)	(115)
Fair value gain on available-for-sale investment in Capital Power reclassified from other comprehensive income	-	1
Income before income taxes	263	242
Income tax recovery (note 9)	32	14
Net income for the year – all attributable to the Owner of the Company	295	256
Other comprehensive income (loss):		
Item that will not be reclassified to net income:		
Re-measurements of net defined benefit plans[1]	6	(5)
Items that have been or may subsequently be reclassified to net income:		
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	43	(30)
	43	(32)
	49	(37)
Comprehensive income for the year - all attributable to the Owner of the Company	$ 344	$ 219

[1] For the years ended December 31, 2018 net of income tax expense of $1 million (2017 - $1 million net of income tax recovery).

The accompanying notes are an integral part of these consolidated financial statements

EPCOR UTILITIES INC.

Consolidated Statements of Financial Position
(In millions of Canadian dollars)

December 31, 2018 and 2017

	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents (note 10)	$ 32	$ 338
Trade and other receivables (note 11)	431	552
Inventories (note 12)	19	17
	482	907
Non-current assets:		
Other financial assets (note 13)	94	91
Deferred tax assets (note 14)	130	90
Property, plant and equipment (note 15)	9,582	8,963
Intangible assets and goodwill (note 16)	368	293
	10,174	9,437
TOTAL ASSETS	$ 10,656	$ 10,344
LIABILITIES AND EQUITY		
Current liabilities:		
Trade and other payables (note 17)	$ 417	$ 384
Loans and borrowings (note 18)	70	442
Deferred revenue (note 19)	67	60
Provisions (note 20)	30	25
Other liabilities (note 21)	46	50
	630	961
Non-current liabilities:		
Loans and borrowings (note 18)	2,630	2,424
Deferred revenue (note 19)	3,465	3,221
Deferred tax liabilities (note 14)	53	39
Provisions (note 20)	89	91
Other liabilities (note 21)	98	96
	6,335	5,871
Total liabilities	6,965	6,832
Equity attributable to the Owner of the Company:		
Share capital (note 22)	798	798
Accumulated other comprehensive income	98	49
Retained earnings	2,795	2,665
Total equity – all attributable to the Owner of the Company	3,691	3,512
TOTAL LIABILITIES AND EQUITY	$ 10,656	$ 10,344

Approved on behalf of the Board,

Janice G. Rennie
Director and Chair of the Board

Vito Culmone
Director and Chair of the Audit Committee

The accompanying notes are an integral part of these consolidated financial statements

EPCOR UTILITIES INC.

Consolidated Statements of Changes in Equity
(In millions of Canadian dollars)

Years ended December 31, 2018 and 2017

	Share capital (note 22)	Accumulated other comprehensive income (loss) Available-for-sale financial assets	Cumulative translation account	Employee benefits account	Retained earnings	Equity attributable to the Owner of the Company
Equity at December 31, 2016	$ 24	$ 2	$ 94	$ (10)	$ 2,562	$ 2,672
Net income for the year	-	-	-	-	256	256
Other comprehensive loss:						
Re-measurements of net defined benefit plans	-	-	-	(5)	-	(5)
Fair value gain on available-for-sale investment in Capital Power reclassified to net income	-	(1)	-	-	-	(1)
Fair value loss on available-for-sale beneficial interest in sinking fund	-	(1)	-	-	-	(1)
Unrealized loss on foreign currency translation	-	-	(30)	-	-	(30)
Total comprehensive income (loss)	-	(2)	(30)	(5)	256	219
Capital contribution from the Owner	774	-	-	-	-	774
Dividends	-	-	-	-	(153)	(153)
Equity at December 31, 2017	$ 798	$ -	$ 64	$ (15)	$ 2,665	$ 3,512
Impact of changes in accounting policies (note 3(t))	-	-	-	-	1	1
Adjusted equity at December 31, 2017	798	-	64	(15)	2,666	3,513
Net income for the year	-	-	-	-	295	295
Other comprehensive income:						
Re-measurements of net defined benefit plans	-	-	-	6	-	6
Unrealized gain on foreign currency translation	-	-	43	-	-	43
Total comprehensive income	-	-	43	6	295	344
Dividends	-	-	-	-	(166)	(166)
Equity at December 31, 2018	$ 798	$ -	$ 107	$ (9)	$ 2,795	$ 3,691

The accompanying notes are an integral part of these consolidated financial statements

EPCOR UTILITIES INC.

Consolidated Statements of Cash Flows
(In millions of Canadian dollars)

Years ended December 31, 2018 and 2017

	2018	2017
Cash flows from (used in) operating activities:		
Net income for the year	$ 295	$ 256
Reconciliation of net income for the year to cash from (used in) operating activities:		
Interest paid	(134)	(116)
Finance expenses (note 8)	121	115
Income taxes recovered (paid)	5	(4)
Income tax recovery (note 9)	(32)	(14)
Depreciation and amortization (note 7)	299	236
Change in employee benefits provisions	6	2
Contributions received (note 19)	76	48
Deferred revenue recognized (note 19)	(66)	(38)
Fair value change on derivative instruments (note 11)	3	(1)
Fair value gain on available-for-sale investment in Capital Power reclassified from other comprehensive income	-	(1)
Other	-	(5)
Net cash flows from operating activities before non-cash operating working capital changes	573	478
Changes in non-cash operating working capital (note 23)	(27)	48
Net cash flows from operating activities	546	526
Cash flows from (used in) investing activities:		
Acquisition or construction of property, plant and equipment and intangible assets[1]	(616)	(566)
Business acquisition (note 5)	(25)	(68)
Investment in Vista Ridge project (note 13)	(12)	-
Proceeds on disposal of property, plant and equipment	2	6
Changes in non-cash investing working capital (note 23)	15	31
Net payments received on other financial assets (note 13)	179	14
Payment of Drainage transition cost compensation to the City (note 21)	(21)	(8)
Net proceeds on sale of available-for-sale investment in Capital Power	-	6
Net cash flows used in investing activities	(478)	(585)
Cash flows from (used in) financing activities:		
Net issuance of short-term loans and borrowings (note 24)	38	-
Proceeds from issuance of long-term loans and borrowings (note 24)	200	400
Repayment of long-term loans and borrowings (note 24)	(443)	(37)
Debt issuance costs (note 24)	(1)	(2)
Net refunds to customers and developers (note 24)	(2)	(2)
Dividends paid	(166)	(153)
Net cash flows from (used in) financing activities	(374)	206
Increase (decrease) in cash and cash equivalents	(306)	147
Cash and cash equivalents, beginning of year	338	191
Cash and cash equivalents, end of year	$ 32	$ 338

1 Interest payments of $7 million (2017 – $6 million) have been capitalized and included in acquisition or construction of property, plant and equipment and intangible assets.

1. Nature of operations

EPCOR Utilities Inc. (the Company or EPCOR) builds, owns and operates electrical, natural gas and water transmission and distribution networks, water and wastewater treatment facilities and sanitary and stormwater systems and infrastructure. The Company also provides electricity, natural gas and water products and services to residential and commercial customers.

The Company operates in Canada and the United States (U.S.) with its registered head office located at 2000, 10423 - 101 Street NW, Edmonton, Alberta, Canada, T5H 0E8.

The common shares of EPCOR are owned by The City of Edmonton (the City). The Company was established by Edmonton City Council under City Bylaw 11071.

2. Basis of presentation

(a) Statement of compliance

These consolidated financial statements have been prepared by management in accordance with International Financial Reporting Standards (IFRS). These consolidated financial statements were approved and authorized for issue by the Board of Directors on February 14, 2019.

(b) Basis of measurement

The Company's consolidated financial statements are prepared on the historical cost basis, except for its derivative financial instruments, long-term investment, contingent consideration and beneficial interest in the sinking fund held with the City, which are measured at fair value.

3. Significant accounting policies

The accounting policies set out below have been applied consistently to all years presented in these consolidated financial statements unless otherwise indicated.

(a) Basis of consolidation

These consolidated financial statements include the accounts of EPCOR and its wholly owned subsidiaries at December 31, 2018 and 2017. Subsidiaries are entities controlled by the Company. The Company controls an entity when it is exposed to, or has rights to, variable returns from the performance of the entity and has the ability to affect those returns through its control over the entity. Subsidiaries are fully consolidated from the date on which EPCOR obtains control, and continue to be consolidated until the date that such control ceases to exist. All intercompany balances and transactions have been eliminated on consolidation. The financial statements of the subsidiaries are prepared for the same reporting period as EPCOR, using consistent accounting policies.

These consolidated financial statements are presented in Canadian dollars. The functional currency of EPCOR and its Canadian subsidiaries is the Canadian dollar; the functional currency of U.S. subsidiaries is the U.S. dollar. All the values in these consolidated financial statements have been rounded to the nearest million except where otherwise stated.

(b) Changes in significant accounting policies

The Company adopted new accounting standards and amendments to various accounting standards effective January 1, 2018, which resulted in changes to these financial statements. The changes from adoption of the new and revised standards are summarized below.

The Company adopted IFRS 9 - *Financial Instruments* (IFRS 9), which replaces IAS 39 – *Financial instruments: Recognition and Measurement* and IFRS 15 - *Revenue from Contracts with Customers* (IFRS 15), which replaces IAS 11 – *Construction Contracts* and IAS 18 – *Revenue* and related interpretations, using the modified retrospective approach with the cumulative effect of any adjustments recognized in the opening balance of retained earnings as of January 1, 2018. The comparative information has not been restated and continues to be reported under previous accounting standards. The Company's updated accounting policies resulting from implementation of the new standards, along with analysis of the changes from the previous accounting policies, are set out in notes 3(e), 3(o), 3(s) and 3(t).

(c) Business combinations and goodwill

Business combinations are accounted for using the acquisition method. The determination of whether or not an acquisition meets the definition of business combination under IFRS requires judgment and is assessed on a case-by-case basis. The consideration for an acquisition is measured at the fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed at the date of acquisition in exchange for control of the acquired business. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are recognized in net income. Transaction costs that the Company incurs in connection with a business combination, other than those associated with the issue of debt or equity securities, are expensed as incurred.

Identifiable assets acquired and liabilities assumed in a business combination are measured initially at their fair values at the date of acquisition. Any contingent consideration payable is measured at fair value at the acquisition date. If the contingent consideration is classified as equity then it is not re-measured and settlement is accounted for within equity. Subsequent changes in the fair value of contingent consideration that is not classified as equity are recognized in net income.

Goodwill is measured as the excess of the fair value of the consideration transferred less the fair value of the identifiable assets acquired and liabilities assumed. Subsequently, goodwill is measured at cost less accumulated impairment losses, if any. Goodwill is reviewed for impairment annually or more frequently if events or changes in circumstances indicate the carrying amount may be impaired. Impairment is determined by assessing the recoverable amount of the cash-generating unit (CGU) to which goodwill relates. Where the recoverable amount of the CGU is less than the carrying amount, an impairment loss is recognized.

(d) Business combinations under common control

A ‘business combination involving entities or businesses under common control’ is a business combination in which all of the combining entities or businesses are ultimately controlled by the same party or parties both before and after the business combination, and that control is not transitory. Business combinations involving entities or businesses under common control are outside the scope of IFRS 3 - *Business Combinations* and currently there is no IFRS guidance on accounting for business combinations involving entities or businesses under common control. The Company has elected to account for common control transactions using book value accounting; this requires the Company to recognize the transferred assets and liabilities at their respective carrying amounts. The difference between the fair value of consideration due and the net carrying amount of the assets and liabilities acquired is recorded as an adjustment to equity. The Company accounts for common control transactions prospectively from the date of acquisition.

(e) Revenue recognition

Effective January 1, 2018, the Company recognizes revenue when it transfers control over a promised good or service, a performance obligation under the contract, to a customer and where the Company is entitled to consideration resulting from completion of the performance obligation. Depending on the terms of the contract with the customer, revenue recognition can occur at a point in time or over time. When a performance obligation is satisfied, revenue is measured at the transaction price that is allocated to that performance obligation. For contracts where non-cash consideration is received, revenue is recognized and measured at the fair value of the non-cash consideration.

Customer contracts may include the transfer of multiple goods and services. Where the Company determines that the multiple goods and services are not distinct performance obligations, they are treated as single performance obligation.

Revenue is classified as energy and water sales, provision of services, construction revenue and other commercial revenue depending on the nature of each distinct performance obligation.

Contract costs for obtaining a customer contract are expensed as incurred unless they create an asset related to future contract activity that the Company expects to recover.

Significant judgement may be required to determine the number of distinct performance obligations within a contract and the allocation of transaction price to multiple performance obligations in a contract, and to determine whether the Company acts as a principal or agent for certain performance obligations. When multiple performance obligations are identified in a contract, the transaction price is allocated based on the stand-alone selling price of each performance obligation. If stand-alone selling price is not observable, the Company estimates the stand-alone selling price for each distinct performance obligation based on the related expected cost plus margin. The Company is acting as a principal when the Company controls the goods or services before transfer to the customer. The Company is acting as an agent when it is obliged to arrange for the provision of the goods and services by another party, that are not controlled by the Company before transfer to the customer. When the Company acts as an agent, the revenue is recognized net of any related costs incurred.

The Company's principal sources of revenue and methods applied to the recognition of these revenues in these consolidated financial statements are as follows:

Energy and water sales

The contracts with customers for the supply of each of electricity, natural gas and water goods consist primarily of perpetual contracts that are effective until terminated by the customer or the Company. The Company provides a series of distinct goods, which are simultaneously received and consumed by the customers. Each of the performance obligations is satisfied over time using the output method for recognition of revenue, i.e. the units of each good supplied to the customer.

Revenues are calculated based on the customer's usage of the goods during the period, at the applicable rates as per the terms of the respective contracts. Customers are generally billed on a monthly basis and payment is generally due within 30 days of billing the customer.

Provision of services

The contracts with customers for each of electricity and natural gas transmission and distribution services, sanitary and stormwater collection and wastewater treatment services consist primarily of perpetual contracts that are effective until terminated by the customer or the Company. The Company provides a series of distinct services, which are simultaneously received and consumed by the customers. Each of the performance obligations is satisfied over time using the output method for recognition of revenue, i.e. quantifiable services rendered to the customer.

Revenues are calculated based on the services provided to the customer during the period, at the applicable rates as per the terms of the respective contracts. These revenues include an estimate of the value of services provided to the customers in the reporting period and billed subsequent to the reporting period. Customers are billed generally within a month and payment is generally due within 30 days of billing the customer.

Certain water services contracts include multiple services including operation, maintenance and renewal maintenance of water and wastewater infrastructure, each of which the Company typically constitutes distinct performance obligations. Each of the performance obligations in these contracts relate to the provision of a series of distinct services, which are simultaneously received and consumed by the customers. Performance obligations under these contracts are satisfied over time using both input and output methods, depending on the nature of each distinct performance obligation.

Construction revenue

Revenue from the construction of water and wastewater treatment plants and other project upgrades and expansions provided to customers is recognized when control of the promised goods or services is transferred to the customer. Performance obligations under these contracts are satisfied over time using the input or output method, depending on the contract with customer.

Revenue from construction services includes the initial amount of the transaction price included in the contract plus any expected variable consideration, claims and incentive payments, to the extent it is probable that they will result in consideration receivable and can be reliably measured. Satisfaction of the performance obligation is estimated based on an assessment of progress towards its completion, costs incurred and the total projected cost of fulfilling the performance obligations under a construction contract. These estimates may result in the recognition of unbilled receivables as a contract asset when revenues are earned prior to billing the amount to customers while a contract liability is recognized when consideration received under the contract exceeds the revenue recognized to date. When the satisfaction of the performance obligation cannot be measured reliably, contract revenue is recognized only to the extent of contract costs incurred that are probable to be recoverable, until such time the Company can reliably measure the outcome of the performance obligation.

Revenues earned under finance leases

Revenues earned from arrangements where the Company leases water, wastewater and other assets to customers are accounted for as finance leases. Revenues earned under these contracts are included within other commercial revenue (note 6). There is no change in the policy for revenues earned under finance leases as a result of the implementation of IFRS 15.

Other commercial revenue

Other commercial revenue is comprised of revenue from the financing of project upgrades and expansions for customers and is recognized over the term of each contract using the effective interest method based on the fair value of the loan calculated at inception for each contract. There is no change in the policy for other commercial revenue as a result of the implementation of IFRS 15.

IFRS 15 implementation impact

Prior to January 1, 2018, revenue was recognized to the extent that it was probable that economic benefits would flow to the Company for the provision of goods or services and when the revenue could be reliably measured. Revenues were measured at the fair value of the consideration received or to be received, excluding discounts, rebates and sales taxes or duty.

The implementation of IFRS 15 effective January 1, 2018, did not result in any adjustment to the opening balance of retained earnings or to the presentation of the consolidated statement of financial position.

The implementation of IFRS 15 had an impact on the accounting policies with respect to contributions from customers and developers. Prior to January 1, 2018 contributions from both customers and developers were initially recorded as deferred revenue when received and were recognized as revenue on a straight-line basis over the estimated economic useful lives of the assets to which they relate. On implementation of IFRS 15, contributions received from customers where the Company has an ongoing performance obligation to the customer are within the scope of IFRS 15. These contributions continue to be presented as deferred revenue when received and subsequently recognized as revenue as described in note 3(o). Contributions from developers are not within the scope of IFRS 15 as they do not give rise to a contract with the customer. Currently there is no specific IFRS guidance on accounting for contributions received from developers. The Company has developed an accounting policy for the initial recognition of such contributions and subsequent recognition of the related revenue, as described in note 3(o).

The implementation of IFRS 15 also had an impact on the presentation of revenue from collection of provincial transmission system access service charges and collection of distribution and transmission charges on behalf of the Alberta Electric System Operator and distribution companies, respectively. Prior to January 1, 2018, both of these items were presented as revenue, with all related costs presented as operating expenses within energy purchases and system access fees. On implementation of IFRS 15, the Company has determined that it is acting as an agent when fulfilling both of these obligations, as the Company does not obtain control of the respective services before they are transferred to the customers. Therefore, revenue related to both of these obligations is being presented net of the related costs paid to the corresponding service providers. The impact of the change in the presentation of revenue due to the implementation of IFRS 15 is described in note 6.

(f) Other income

Other income consist of interest income on long-term and short-term investments. Interest income relating to short-term investments and cash deposits is recognized over time, taking into account the applicable interest rates.

(g) Income taxes

Under the Income Tax Act (Canada) (ITA), a municipally owned corporation is subject to income tax on its taxable income if the income from activities for any relevant period that was earned outside the geographical boundaries of the municipality exceeds 10% of the corporation's total income for that period. As a result of these and other provisions, certain Canadian subsidiaries of the Company are taxable under the ITA and provincial income tax acts. The U.S. subsidiaries are subject to income taxes pursuant to U.S. federal and state income tax laws.

Current income taxes are measured at the amount expected to be recovered from or payable to the taxation authorities based on the tax rates that are enacted or substantively enacted by the end of the reporting period.

Deferred tax assets and liabilities are recognized for the deferred tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted or substantively enacted rates of tax expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the date of enactment or substantive enactment. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries except where the Company is able to control the timing of the reversal of the temporary differences, and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with investments in subsidiaries are only recognized to the extent that the temporary difference will reverse in the foreseeable future and the Company judges that it is probable that there will be sufficient taxable income against which to utilize the benefits of the temporary differences. Deferred tax assets and liabilities are not recognized if the temporary difference results from the initial recognition of goodwill arising from a business combination or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither taxable income nor accounting income.

Current and deferred taxes are recognized in profit or loss except to the extent that they relate to items recognized directly in equity or in other comprehensive income.

(h) Cash and cash equivalents

Cash and cash equivalents include cash and short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

(i) Inventories

Small parts and other consumables, the majority of which are consumed by the Company in the provision of its goods and services to customers, are valued at the lower of cost and net realizable value. Cost includes the purchase price, transportation costs and other costs to bring the inventories to their present location and condition. The costs of inventory items that are interchangeable are determined on an average cost basis. For inventory items that are not interchangeable, cost is assigned using specific identification of their individual costs. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. Previous write-downs of inventories from cost to net realizable value can be fully or partially reversed if supported by economic circumstances. The Company estimates the value of inventory that is expected to be used in the construction of property, plant and equipment (PP&E) and reports this value as construction work in progress under PP&E.

(j) Lease arrangements

At the inception of an arrangement entered into for the use of an asset, the Company determines whether such an arrangement is, or contains, a lease. A specific asset is the subject of a lease if fulfillment of the arrangement is dependent on the use of the specific asset and the arrangement conveys a right to use the asset. An arrangement conveys the right to use the asset if the right to control the use of the underlying asset is transferred. Where it is determined that the arrangement contains a lease, the Company classifies the lease as either a finance or operating lease dependent on whether substantially all the risks or rewards of ownership of the asset have been transferred.

Where the Company is the lessor, finance income related to leases or arrangements accounted for as finance leases is recognized in a manner that produces a constant rate of return on the net investment in the lease. The net investment in the lease is the aggregate of net minimum lease payments and unearned finance income discounted at the interest rate implicit in the lease. Unearned finance income is deferred and recognized in net income over the lease term.

Where the Company is the lessee, leases or other arrangements that transfer substantially all of the benefits and risks of ownership of property to the Company are classified as finance leases. All other arrangements that are determined to contain a lease are classified as operating leases. Rental payments under arrangements classified as operating leases are expensed on a straight-line basis over the term of the lease. Lease incentives received are recognized as an integral part of the total lease expense, over the term of the lease.

(k) Property, plant and equipment

PP&E are recorded at cost, net of accumulated depreciation and accumulated impairment losses, if any.

Cost includes contracted services, materials, direct labor, directly attributable overhead costs, borrowing costs on qualifying assets and decommissioning costs. Where parts of an item of PP&E have different estimated economic useful lives, they are accounted for as separate items (major components) of PP&E.

The cost of major inspections and maintenance is recognized in the carrying amount of the item if the asset recognition criteria are satisfied. The carrying amount of a replaced part is derecognized. The costs of day-to-day servicing are expensed as incurred.

Depreciation of cost less residual value is charged on a straight-line basis over the estimated economic useful lives of items of each depreciable component of PP&E, from the date they are available for use, as this most closely reflects the expected usage of the assets. Land and construction work in progress are not depreciated. Estimating the appropriate economic useful lives of assets requires judgment and is generally based on estimates of life characteristics of similar assets. The estimated economic useful lives, methods of depreciation and residual values are reviewed annually with any changes adopted on a prospective basis.

The ranges of estimated economic useful lives for PP&E assets used are as follows:

Water treatment and distribution, and wastewater collection and treatment	2 – 95 years
Energy transmission and distribution	3 – 67 years
Retail systems and equipment	4 – 20 years
Corporate information systems and equipment	2 – 15 years
Leasehold improvements	5 – 20 years

Gains or losses on the disposal of PP&E are determined as the difference between the net disposal proceeds and the carrying amount at the date of disposal. The gains or losses are included within depreciation and amortization.

(l) Capitalized borrowing costs

The Company capitalizes interest during construction of a qualifying asset using the weighted average cost of debt incurred on the Company's external borrowings or specific borrowings used to finance qualifying assets. Qualifying assets are considered those that take a substantial period of time to construct.

(m) Intangible assets

Intangible assets with finite lives are stated at cost, net of accumulated amortization and impairment losses, if any. The cost of a group of intangible assets acquired in a transaction, including those acquired in a business combination that meet the specified criteria for recognition apart from goodwill, is allocated to the individual assets acquired based on their relative fair value.

Customer rights represent the costs to acquire the rights to provide electricity services to particular customer groups for a finite period of time. Other rights represent the costs to acquire the rights, for finite periods of time, to access electricity delivery corridors, to the supply of water, to provide sewage treatment and transportation services, to withdraw groundwater, to provide operating and maintenance services for water infrastructure and to the supply of potable water for emergency and peak purposes. Customer and other rights are recorded at cost at the date of acquisition. Subsequent expenditures are capitalized only when it increases the future economic benefit in the specific asset to which it relates.

The cost of intangible software includes the cost of license acquisitions, contracted services, materials, direct labor, along with directly attributable overhead costs and borrowing costs on qualifying assets.

Amortization of the cost of finite life intangible assets is recognized on a straight-line basis over the estimated economic useful lives of the assets, from the date they are available for use, as this most closely reflects the expected usage of the asset. Work in progress is not amortized. The estimated economic useful lives and methods of amortization are reviewed annually with any changes adopted on a prospective basis.

The estimated economic useful lives for intangible assets with finite lives are as follows:

Customer rights	20 years
Software	2 – 20 years
Other rights	12 – 60 years
Water rights	100 years

Certificates of convenience and necessity (CCN) represent the costs to acquire the exclusive rights for the Company to serve within its specified geographic areas in the U.S. for an indefinite period of time. CCN are not amortized but are subject to review for impairment at the end of each reporting period.

Gains or losses on the disposal of intangible assets are determined as the difference between the net disposal proceeds and the carrying amount at the date of disposal. The gains or losses are included within depreciation and amortization.

(n) Service concession arrangements

Service concession arrangements are contracts between the Company and government entities and can involve the design, build, finance, operation and maintenance of public infrastructure in which the government entity controls (i) the services provided by the Company and (ii) significant residual interest in the infrastructure. Service concession arrangements are classified in one of the following categories:

(i) financial asset
The Company recognizes a financial asset arising from service concession arrangement when it has an unconditional right to receive a specified amount of cash or other financial asset over the life of the arrangement. The financial asset is measured at the fair value of consideration received or receivable. When the Company delivers more than one category of activities in a service concession arrangement, the consideration received or receivable is allocated by reference to the relative fair value of the activity, when amounts are separately identifiable.

(ii) intangible asset
The Company recognizes an intangible asset arising from service concession arrangement when it has a right to charge for usage of the public infrastructure. The intangible asset, recognized as consideration for providing construction or upgrade services under a service concession arrangement, is measured at fair value upon initial recognition. Subsequent to initial recognition, the intangible asset is measured at cost less accumulated amortization and impairment losses, if any.

Revenue under the service concession arrangements is recognized as per the revenue recognition policy of the Company described in note 3(e) by reference to each activity when the amount of revenue is separately identifiable.

The accounting for investment in contracts with government entities requires the application of judgment in determining if they fall within the scope of IFRIC 12 – Service Concession Arrangements (IFRIC 12). Additional judgment also needs to be exercised when determining, among other things, the classification to be applied to the service concession asset (i.e. financial asset or intangible asset), allocation of consideration between revenue generating activities, classification of cost incurred on such concessions and the effective interest rate to be applied to the service concession asset. Contracts falling under IFRIC 12 require use of estimates over the term of the arrangement, and therefore any change in the long-term estimates could result in significant variation in the amounts recognized under service concession arrangements.

(o) Deferred revenue

Certain assets are contributed by customers or constructed using non-refundable cash contributions from customers. Non-refundable customer contributions, which are used to provide ongoing goods or services to these customers, are recorded as deferred revenue. The deferred revenue is initially recorded at the fair value of contributed assets, or the amount of cash contributions received, and is recognized as revenue on a straight-line basis over the estimated lives of the contracts with the customers. Where contracts with customers are perpetual and the related contributed asset is used to provide ongoing goods or services to customers, the life of the contract is estimated to be equivalent to the economical useful life of the asset to which the contribution relates.

Certain assets are acquired or constructed using non-refundable government grants. Government grants are recorded as deferred revenue and are recognized as revenue on a straight-line basis over the estimated economic useful lives of the assets to which they relate.

Certain assets are contributed by developers or acquired or constructed using non-refundable cash contributions from developers. Currently there is no specific IFRS guidance on accounting for contributions received from developers. The Company has developed an accounting policy for the initial recognition of such contributions and subsequent recognition of the related revenue. These contributions are recorded as deferred revenue, at the fair value of the contributed assets or the amount of cash contribution received, and are recognized as revenue on a straight-line basis over the estimated economic useful lives of the assets to which the contribution relates.

(p) Provisions

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The increase in the provision due to the passage of time is recognized as a financing expense over the estimated period until settlement of the obligation. Significant judgment is required to determine whether a past event results in a liability that is recognized in the statement of financial position. In addition, quantifying such a provision also involves a certain amount of estimation in respect of the amount and timing of outflows of economic benefits and therefore it is possible that the assumptions used in measuring the provision may differ from future outcomes and the impact of such variations could be material.

The Company recognizes a decommissioning provision in the period in which a legal or constructive obligation is incurred. A corresponding asset for the decommissioning cost is added to the carrying amount of the associated PP&E, and is depreciated over the estimated useful life of the asset.

The Company may receive contributions from customers, homebuilders, real estate developers, and others to fund construction necessary to extend service to new areas. Certain of these contributions may be refunded over a limited period of time as new customers begin to receive service or other contractual obligations are fulfilled. The portion of contributions that are estimated to be refunded in the future are recorded as provisions. The remaining contributions are classified as deferred revenue.

(q) Employee benefits

The employees of the Company are either members of the Local Authorities Pension Plan (LAPP) or other defined benefit or defined contribution pension plans.

The LAPP is a multi-employer defined benefit pension plan. The trustee of the plan is the Alberta President of Treasury Board and Minister of Finance and the plan is administered by a Board of Trustees. The Company and its employees contribute to the plan at rates prescribed by the Board of Trustees to cover costs and an unfunded liability under the plan. The rates are based on a percentage of the pensionable salary. The most recent actuarial report of the plan discloses an actuarial excess. It is accounted for as a defined contribution plan as the LAPP is not able to provide information that reflects EPCOR's specific share of the defined benefit obligation or plan assets that would enable the Company to account for the plan as a defined benefit plan. Accordingly, the Company does not recognize its share of any plan surplus or deficit.

The Company maintains additional defined contribution and defined benefit pension plans to provide pension benefits to certain management employees and employees who are not otherwise served by the LAPP, including employees of new or acquired operations. Employees not otherwise served by LAPP comprise less than 15% of total employees (2017 – 14%). The cumulative employee benefits account in other comprehensive income represents the cumulative impact of actuarial gains and losses, and return on plan assets excluding interest income from the Company's defined benefit pension plans.

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability for short-term employee benefits is recognized for the amount expected to be paid if the Company has a legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

The Company recognizes the contribution payable to a defined contribution plan as an expense and a liability in the period during which the service is rendered.

(r) Derivative financial instruments

The Company uses various risk management techniques to reduce its exposure to movements in electricity prices, interest rates and foreign currency exchange rates. These include the use of derivative financial instruments such as forward contracts or contracts-for-differences and interest rate swaps. Such instruments may be used to establish a fixed price for electricity, fixed interest rates for borrowings or fixed foreign currency rates for anticipated transactions denominated in a foreign currency. Embedded derivatives are separated from the host contract and accounted for as a derivative if certain criteria are met.

The Company sells electricity to customers under a Regulated Rate Tariff (RRT). As part of 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 a regulatory approved Energy Price Setting Plan (EPSP). Under the EPSP, the Company manages its exposure to fluctuating wholesale electricity spot prices and consumption volume by entering into financial electricity purchase contracts in advance of the month of consumption in order to economically hedge the price of electricity under a well-defined risk management process set out in the EPSP. Under these instruments, the Company agrees to exchange, with a single creditworthy and adequately secured counterparty, the difference between the Alberta Electric System Operator (AESO) market price and the fixed contract price for a specified volume of electricity for the forward months, all in accordance with the EPSP. The Company may enter into additional financial electricity purchase contracts outside the EPSP to further economically hedge the price of electricity.

Interest rates swaps are used by the Company to manage interest rate risks associated with long-term loans and borrowings and result in securing fixed interest rates over the term of the loans and borrowings against the floating interest rate.

Foreign exchange forward contracts may be used by the Company to manage foreign exchange exposures, consisting mainly of U.S. dollar exposures, resulting from anticipated transactions denominated in foreign currencies.

All derivative financial instruments are recorded at fair value as derivative assets or derivative liabilities on the statement of financial position, to the extent they have not been settled, with all changes in the fair value of derivatives recorded in net income. At initial recognition, transaction costs attributable to the derivative financial instruments are recognized in net income.

The fair value of derivative financial instruments reflects changes in the electricity prices, interest rates and foreign exchange rates. Fair value is determined based on exchange or over-the-counter price quotations by reference to bid or asking price, as appropriate, in active markets. Fair value amounts reflect management's best estimates using external readily observable market data, such as forward prices, interest rates, foreign exchange rates and discount rates for time value. It is possible that the assumptions used in establishing fair value amounts will differ from future outcomes and the impact of such variations could be material.

(s) Non-derivative financial instruments

Financial assets are identified and classified based on the business model used by the Company for managing those financial assets, as one of the following: at amortized cost, at fair value through other comprehensive income, or at fair value through profit or loss. Prior to January 1, 2018, financial assets were identified and classified as one of the following: measured at fair value through profit or loss, loans and receivables, or available-for-sale financial assets. Non-derivative financial assets that were not classified in any of the above categories were designated as available-for-sales financial assets. Financial liabilities continue to be classified as measured at fair value through profit or loss or at amortized cost, as there is no change in classification of financial liabilities under IFRS 9.

Financial assets and financial liabilities are presented on a net basis when the Company has a legally enforceable right to offset the recognized amounts and intends to settle on a net basis or to realize the asset and settle the liability simultaneously.

At amortized cost

Cash and cash equivalents, other financial assets and trade and other receivables except for derivative assets and long-term investment, which are classified as financial assets measured at fair value through profit or loss, are classified as financial assets measured at amortized cost. These financial assets are recognized initially at fair value plus directly attributable transaction costs, if any. After initial recognition, they are measured at amortized cost when they are held for collection of cash flows, where those cash flows solely represent payments of principal and interest using the effective interest method less any impairment as described in note 3(t). The effective interest method calculates the amortized cost of a financial asset and allocates the finance income over the term of the financial asset using an effective interest rate. The effective interest rate is the rate that discounts estimated future cash receipts through the expected life of the financial asset, or a shorter period when appropriate, to the gross carrying amount of the financial asset.

The Company’s trade and other payables, debentures and borrowings, refundable contributions from customers and developers and other liabilities, except for contingent consideration and derivative liabilities which are classified as financial liabilities measured at fair value through profit or loss, are classified as financial liabilities measured at amortized cost and recognized on the date at which the Company becomes a party to the contractual arrangement. Financial liabilities are derecognized when the contractual obligations are discharged, cancelled or expire. Financial liabilities are initially recognized at fair value including discounts and premiums, plus directly attributable transaction costs, such as issue expenses, if any. Subsequently, these liabilities are measured at amortized cost using the effective interest rate method.

At fair value through other comprehensive income

Financial assets that are held for collection of contractual cash flows and for selling, where the assets’ cash flows solely represent payments of principal and interest, are classified as financial assets at fair value through other comprehensive income. These financial assets are initially recognized at fair value plus directly attributable transaction costs. Subsequent to initial recognition, these financial assets are measured at fair value with unrealized gains and losses recognized in other comprehensive income, except for the recognition of impairment losses, reversal of impairment losses, interest income and foreign exchange gains and losses, which are recognized in net income. On de-recognition of the financial asset, the cumulative gain or loss previously recognized in other comprehensive income is reclassified to net income. Interest income from these financial assets is recognized as other income using the effective interest rate method. As of December 31, 2018, the Company does not have any financial assets, classified at fair value through other comprehensive income.

At fair value through profit or loss

Financial instruments at fair value through profit or loss include instruments that are designated as financial instruments at fair value through profit or loss or those financial instruments that do not meet the criteria for classification under any other category.

Upon initial recognition, directly attributable transaction costs are recognized in net income as incurred. Changes in fair value of financial instruments measured at fair value through profit or loss are recognized in net income.

The Company's beneficial interest in the sinking fund with the City was classified as a financial asset at fair value through profit or loss under IFRS 9. Prior to January 1, 2018, the beneficial interest in the sinking fund with the City was classified as available-for-sale asset, which was re-designated at fair value through profit or loss on implementation of IFRS 9. Since there was no accumulated gain or loss in other comprehensive income relating to the beneficial interest in the sinking fund, re-designation of beneficial interest in the sinking fund did not have any impact on opening balance of retained earnings. The Company's beneficial interest in the sinking fund with the City was fully settled in September 2018.

The following table summarizes the classification and measurement for each class of the Company's financial assets and financial liabilities up to December 31, 2017 and subsequent to adoption of IFRS 9 effective January 1, 2018.

	Up to December 31, 2017	Effective January 1, 2018	Fair value hierarchy
Measured at fair value			
Long-term investment	-	Fair value through profit or loss	Level 3
Derivative assets / liabilities - designated	Fair value through profit or loss	Fair value through profit or loss	Level 1
Beneficial interest in sinking fund	Available for sale	Fair value through profit or loss	Level 1
Other liabilities			
Contingent consideration – designated	Fair value through profit or loss	Fair value through profit or loss	Level 3
Measured at amortized cost			
Cash and cash equivalents	Loans and receivables	Amortized cost	Level 1
Trade and other receivables excluding derivative assets	Loans and receivables	Amortized cost	Level 3
Other financial assets excluding long-term investment	Loans and receivables	Amortized cost	Level 2
Trade and other payables excluding derivative liabilities	Other financial liabilities	Amortized cost	Level 3
Loans and borrowings excluding beneficial interest in sinking fund	Other financial liabilities	Amortized cost	Level 2
Other liabilities			
Customer deposits	Other financial liabilities	Amortized cost	Level 3
Drainage transition cost compensation	Other financial liabilities	Amortized cost	Level 2

The financial instruments of the Company that are recorded at fair value have been classified into levels using a fair value hierarchy. A Level 1 valuation is determined by unadjusted quoted prices in active markets for identical assets or liabilities. A Level 2 valuation is based upon inputs other than quoted prices included in Level 1 that are observable for the instruments either directly or indirectly. A Level 3 valuation for the assets and liabilities are not based on observable market data.

(t) Impairment of financial assets

The Company uses the "expected credit loss" (ECL) model for calculating impairment and recognizes ECL as a loss allowance for financial assets measured at amortized cost or at fair value through other comprehensive income. At each reporting date, the Company measures the loss allowance for financial assets, except for trade receivables without significant financing component, at an amount equal to the lifetime ECL to determine if the credit risk on that financial asset has increased significantly since initial recognition. If the credit risk on a financial asset has not increased significantly since initial recognition, the Company measures the loss allowance for that financial asset at an amount equal to 12-month ECL.

For trade receivables without significant financing component, the Company applies the simplified approach and uses a provision matrix, which is based on the Company's historical credit loss experience for trade receivable, current market conditions and future expectations, to estimate and recognize the lifetime ECL. Trade and other receivables that are not assessed for impairment individually are assessed for impairment on a collective basis taking into consideration the unique risk factors associated with each customer group.

Prior to January 1, 2018, the Company was using objective evidence as the criteria to recognize impairment losses on financial assets. On implementation of IFRS 9 effective January 1, 2018, the Company changed the criteria for recognition of an impairment loss to utilize the ECL model as described above, which resulted in a reduction in the ECL on trade receivables of $1 million. This has been adjusted in opening balance of retained earnings.

(u) Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment. Non-financial assets include PP&E, intangible assets and goodwill. For PP&E and intangible assets with definite useful lives, the recoverable amount is estimated when an indication of impairment exists. For goodwill and intangible assets that have indefinite useful lives or that are not yet available for use, the recoverable amount is estimated at least once each year.

The recoverable amount of an asset or CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (CGU). For the purposes of goodwill impairment testing, goodwill acquired in a business combination is allocated to the CGU, or the group of CGUs, that is expected to benefit from the synergies of the combination. This allocation is subject to an operating segment ceiling test and reflects the lowest level at which that goodwill is monitored for internal reporting purposes.

The Company's corporate assets do not generate separate cash inflows. If there is an indication that a corporate asset may be impaired, then the recoverable amount is determined for the CGU to which the corporate asset belongs.

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in net income. Impairment losses recognized in respect of CGUs are allocated first to reduce the carrying amount of any goodwill allocated to the units, and then to reduce the carrying amounts of the other assets in the unit (group of units) on a pro rata basis.

An impairment loss in respect of goodwill is not reversed. In respect of other non-financial assets, impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a fundamental change, since the date of impairment, which may improve the financial performance of the non-financial asset. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized.

(v) Foreign currency transactions and translation

Foreign currency transactions

Transactions denominated in currencies other than the Canadian dollar are translated at exchange rates in effect at the transaction date. At each reporting date, monetary assets and liabilities denominated in foreign currencies are translated at the exchange rate in effect at the end of the reporting period. Other non-monetary assets and liabilities are not retranslated unless they are carried at fair value. The resulting foreign exchange gains and losses are included in net income.

Foreign operations translation

On consolidation, the assets and liabilities of foreign operations that have a functional currency other than Canadian dollars are translated into Canadian dollars at the exchange rates in effect at the end of the reporting period. Revenues and expenses are translated at the average monthly exchange rates prevailing during the period. The resulting translation gains and losses are deferred and included in the cumulative translation account in accumulated other comprehensive income. The cumulative deferred translation gains or losses on the foreign operations are reclassified to net income, only on disposal of the foreign operations.

(w) Segment reporting

An operating segment is a component of the Company that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Company's other components. Transactions between segments are made under terms that approximate market value. The results for all operating segments, for which discrete financial information is available, are reviewed regularly by the Company's executive management to assess its performance and make decisions about resources to be allocated to the segment.

Segment results that are reported to management include items directly attributable to the segment as well as those that can be allocated on a reasonable and consistent basis. Unallocated items comprise mainly corporate assets, head office expenses and income tax assets and liabilities.

Segment capital expenditure is the total cost incurred during the period to acquire or construct PP&E and intangible assets other than goodwill. The Company uses judgment in identification and aggregation of business segments. The Company aggregates business segments when they offer similar products and services, have similar business processes, use similar methods to distribute the goods and services, have similar customer bases and operate under similar regulatory environments.

(x) Standards and interpretations not yet applied

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* 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.

4. Use of judgments and estimates

The preparation of the Company's consolidated financial statements in accordance with IFRS requires management to make judgments in the application of accounting policies, and estimates and assumptions that affect the reported amounts of income, expenses, assets and liabilities as well as the disclosure of contingent assets and liabilities at the date of the consolidated financial statements.

(a) Judgments

Information about critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the consolidated financial statements are included in notes:

Note 3(c) – Business combinations and goodwill
Note 3(e) – Revenue recognition
Note 3(n) – Service concession arrangements
Note 3(p) – Provisions

(b) Estimates

The Company reviews its estimates and assumptions on an ongoing basis, uses the most current information available and exercises careful judgment in making these estimates and assumptions. Adjustments to previous estimates, which may be material, are recorded in the period in which they become known. Actual results may differ from these estimates.

Assumptions and uncertainties that have a significant risk of resulting in a material adjustment within the next financial year include:

Revenues and energy purchases and system access fees

By regulation, electricity wire service providers in Alberta have four months to submit the final electricity load settlement data after the month in which such electricity was consumed. The data and associated processes and systems used by the Company to estimate electricity sales revenues and electricity purchase costs, including unbilled consumption, are complex. The Company's estimation procedures will not necessarily detect errors in underlying data provided by industry participants including wire service providers and load settlement agents.

Fair value measurement

For accounting measures such as determining asset impairments, purchase price allocations for business combinations, recording financial assets and liabilities, and the recording and disclosure of certain non-financial assets, the Company is required to estimate the fair value of certain assets or obligations. Estimates of fair value may be based on readily determinable market values or on depreciable replacement cost or discounted cash flow techniques employing estimated future cash flows based on a number of assumptions and using an appropriate discount rate. Financial instruments, other than those classified at amortized cost, are recorded at fair value which may require the use of estimated future prices.

Deferred taxes

Significant estimation is required in determining the provision for income taxes. Recognition of deferred tax assets in respect of deductible temporary differences and unused tax losses and credits is based on management's estimation of future taxable profit against which the deductible temporary differences and unused tax losses and credits can be utilized. The actual utilization of these deductible temporary differences and unused tax losses and credits may vary materially from the amounts estimated.

5. Business transfer and acquisitions

Collingwood PowerStream Utility Services Corp.

On October 1, 2018, the Company acquired 100% of the issued and outstanding common shares of Collingwood PowerStream Utility Services 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 assumption of $16 million in third-party debt, consisting of $8 million payable to the Town of Collingwood and $8 million of bank loans. Subsequent to the acquisition, the Company fully repaid the $8 million of bank loans. As of December 31, 2018, $3 million of the total cash consideration remains outstanding and is recorded within trade and other payables.

Collus is primarily involved in the distribution of electricity through its wholly owned subsidiary to over 17,000 service connections within the areas of Collingwood, Stayner and Creemore (Clearview Township) plus the Town of 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.

The preliminary fair value of assets acquired of $41 million and liabilities assumed of $30 million, primarily consist of PPE, intangible assets and third party debt assumed.

Transfer of Drainage Utility Services from the City of Edmonton

The City transferred its Drainage Utility Services (Drainage) to EPCOR on September 1, 2017 pursuant to an Asset and Liability Transfer Agreement. The Drainage business is comprised of the sanitary drainage utility and the stormwater drainage utility which provide sanitary and stormwater collection and conveyance, as well as bio solids management and disposal.

The transfer of Drainage was a business combination involving a business under common control as it did not result in a change in the ultimate control of the Drainage business. Consistent with the Company's policy for business combinations under common control, book value accounting has been applied to the transaction and therefore all assets and liabilities have been initially recognized at their carrying amounts as recorded by the City, on the date of transfer, adjusted to align with IFRS. As of September 1, 2017, the adjusted carrying amounts of the transferred assets and liabilities were summarized as follows:

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Book value of net assets transferred:		
Trade and other receivables	$	90
Inventories		1
Property, plant and equipment		3,552
Intangible assets		1
Total assets		3,644
Trade and other payables		(39)
Deferred revenue		(2,152)
Other liabilities		(3)
Total liabilities		(2,194)
Net assets	$	1,450
Consideration:		
Promissory note	$	604
Transition cost compensation		72
Total consideration	$	676

The difference of $774 million between the adjusted carrying amount of the net assets transferred of $1,450 million less the fair value of consideration due of $676 million was recognized in equity as a capital contribution received from the City.

During the year, the Company finalized its analysis of the assets transferred and liabilities assumed pursuant to the transfer of Drainage from the City on September 1, 2017. As a result, the balances of property, plant and equipment and capital contribution received from the City have each been reduced by $14 million compared to amounts previously reported.

The trade and other receivables included trade receivables of $14 million due from customers and $10 million from related parties of Drainage. Trade and other receivables also included a balance of $66 million due from the City, being the Drainage utility's cash on hand on the date of transfer.

Property, plant and equipment primarily consist of sanitary and stormwater collection and treatment facilities. Property, plant and equipment included construction work in progress of $108 million and land of $238 million.

Trade and other payables include trade payables, accrued liabilities, accrued interest and amounts due to employees.

Deferred revenue represents cash contributions and contributed assets received from customers and developers as well as grants received from government authorities. Deferred revenue is recognized as revenue over the lives of the respective assets to which the contributions or grants relate.

Other liabilities primarily consist of deposits from customers and contractors.

The promissory note of $604 million represents the fair value of an obligation to the City, which mirrors the principal and interest payment obligations of debentures issued by the City in respect of the Drainage business. This long-term debt bears interest at a weighted average rate of approximately 3.41% and will be fully settled by June, 2042. During the term of the obligation, blended payments of principal and interest are due at various times throughout each year.

As per the terms of the Asset and Liability Transfer, the Company is required to pay transition cost compensation of $75 million to the City over time to compensate the City for stranded costs, including liabilities retained by the City, related to the transfer. On the date of the transfer, the Company paid $8 million to the City and recognized the present value of the remaining transition cost compensation liability of $64 million within other liabilities on the consolidated statements of financial position.

On the date of transfer of Drainage, the Company also assumed commitments for capital and construction projects of $119 million, which are expected to be complete by the end of 2020.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Hughes Gas Resources, Inc.

On June 1, 2017, the Company acquired 100% of the common shares of Hughes Gas Resources, Inc. (Hughes), a natural gas distribution, transmission and services holding company with four wholly owned subsidiaries operating northwest of Houston, Texas, for total consideration of $54 million (US$40 million) and the assumption of $14 million (US$10 million) in third party debt.

Hughes is primarily involved in the distribution of natural gas to approximately 4,300 customer connections through its rate regulated subsidiary Hughes Natural Gas, Inc. which owns and operates a 354 kilometer natural gas distribution network. Other subsidiaries include Alamo Pipeline, LLC, the owner and operator of a rate regulated natural gas transmission pipeline which transports natural gas from suppliers to Hughes Natural Gas, Inc. through its 51 kilometer pipeline. These operations are regulated by the Railroad Commission of Texas. The acquisition also included two unregulated subsidiaries, Pinehurst Utility Construction, LLC (infrastructure contractor) and Goliad Midstream Energy, LLC (intermediary company for negotiation of natural gas supply contracts).

The purchase price was allocated to the assets acquired and liabilities assumed based on their fair values on the date of acquisition, in Canadian dollars as follows:

Fair value of net assets acquired:		
Trade and other receivables	$	2
Property, plant and equipment		66
Intangible assets		1
Trade and other payables		(1)
Loans and borrowings		(14)
Net assets acquired at fair value	$	54
Consideration:		
Cash	$	46
Contingent consideration		8
Total consideration	$	54

The intangible assets of $1 million represent the fair value of a franchise agreement with the City of Magnolia for the distribution of natural gas.

Loans and borrowings of $14 million represent the fair value of third party debt assumed by the Company as part of the transaction. Subsequent to the acquisition date, the Company repaid all of the assumed third party debt.

Contingent consideration with a fair value of $8 million was recognized at the date of acquisition. The contingent consideration consists of the Company’s commitment to pay a fee, with a cap of US$8 million, to the previous owners of Hughes on the addition of new customer connections above a minimum of 600 incremental customer connections over a period of up to six years from the date of closing.

The transaction has been accounted for using the acquisition method in conformance with IFRS 3 – *Business Combinations* with the results of operations included in the consolidated financial statements from the date of acquisition.

Management used assumptions and estimates about future events in the determination of fair values. The assumptions and estimates with respect to the determination of the fair value of property, plant and equipment, intangible assets and contingent consideration required the most judgment. The key assumptions in determination of fair value included future regulatory rates, discount rate, future growth rates and expected additional customer connections for supply of natural gas. Based on those assumptions and estimates, the purchase price was allocated to the identified assets and liabilities, including contingent consideration. The fair values were estimated by applying standard valuation techniques. For property, plant and equipment, a replacement cost estimate was prepared by an external consultant and the fair value was then determined internally by making adjustments for functional and economic obsolescence. The fair value of contingent consideration was based on management’s expectations for the addition of new customer connections over the period of six years from the date of acquisition, discounted to present value.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Natural Resources Gas Limited:

On November 1, 2017, the Company assumed operations and acquired substantially all of the natural gas distribution assets of Natural Resource Gas Limited for cash consideration of $22 million and now distributes and sells natural gas to over 8,700 residential, commercial and industrial customers in the counties of Elgin, Middlesex, Oxford and Norfolk in southwestern Ontario. The distribution system consists of approximately 640 kilometers of natural gas distribution mains. The operations are regulated by the OEB under a price cap incentive cost-of-service rate setting framework.

6. Revenues

Revenues disaggregated by major goods or services, excluding intersegment revenues, are as follows:

Year ended December 31, 2018	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Consolidated
Energy and water sales	$ 218	$ -	$ 393	$ 180	$ 15	$ 806
Provision of services	396	447	21	62	8	934
Construction revenue	9	-	-	-	3	12
Other commercial revenue	6	-	-	-	-	6
	$ 629	$ 447	$ 414	$ 242	$ 26	$ 1,758

Year ended December 31, 2017	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Consolidated
Energy and water sales	$ 214	$ -	$ 824	$ 156	$ 1	$ 1,195
Provision of services	237	501	13	69	3	823
Construction revenue	11	-	-	-	-	11
Other commercial revenue	6	-	-	-	-	6
	$ 468	$ 501	$ 837	$ 225	$ 4	$ 2,035

As explained in note 3(e), the Company implemented IFRS 15 using the modified retrospective approach and as such the balances for the comparative period have not been restated. Had the Company continued using the previous policy for recognition of revenue, revenue from energy and water sales for the year ended December 31, 2018 would have been higher by $636 million and revenue from the provision of services would have been higher by $75 million, with a corresponding increase in operating expenses under energy purchases and system access fees by $711 million.

Revenue from contracts with customers expected to be recognized in future periods related to performance obligations that are unsatisfied or partially satisfied at the reporting date are as follows:

	2019	2020	2021	2022	2023	2024 and thereafter	Total
U.S. operations water supply commercial contracts[1]	$ 8	$ 9	$ 9	$ 9	$ 10	$ 287	$ 332
Contract liabilities - contributions received from customers, developers and government grants[2]	64	64	64	64	64	3,174	3,494
Total	$ 72	$ 73	$ 73	$ 73	$ 74	$ 3,461	$ 3,826

1. The Company has contracts for supply of water to a city and certain commercial customers in the state of Texas. Under these contracts the customers have committed to take or pay for a contracted quantity of water. The terms of these contracts range between 20 to 42 years.

2. At December 31, 2018, the Company had $3,494 million of contract liabilities recorded as deferred revenue in the consolidated statements of financial position related to contributions received from customers, developers and government grants. Revenue will be recognized in future periods related to this balance, as described in note 3(o), over

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

periods ranging up to 95 years.

The Company has numerous contracts with customers for supply of each of electricity, natural gas and water as well as provision of sanitary and stormwater collection and wastewater treatment services. These contracts are perpetual with no agreed fixed term and can be terminated at any time either by customer or by the Company. Under the terms of the contracts, in case of termination of these contracts, the Company has the right to receive payment for the performance completed to the termination date.

7. Expense analysis

		2018		2017
Included in staff costs and employee benefits expenses				
Post-employment defined contribution plan expense	$	44	$	39
Post-employment defined benefit plan expense		5		6
Included in depreciation and amortization				
Depreciation of property, plant and equipment		269		205
Amortization of intangible assets		21		19
Loss on disposal of assets		9		12
		299		236
Included in other administrative expenses				
Operating lease expenses		15		15
Lease recoveries through sub-lease		(5)		(5)

8. Finance expenses

		2018		2017
Interest on loans and borrowings	$	(128)	$	(121)
Capitalized interest (note 15)		7		6
	$	(121)	$	(115)

9. Income tax recovery

		2018		2017
Current income tax recovery	$	-	$	5
Deferred income tax recovery (expense)				
Relating to origination and reversal of temporary differences		(3)		(18)
Change in tax rates		-		20
Recognition of previously unrecognized deferred tax assets		35		7
		32		9
Total income tax recovery	$	32	$	14

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Income taxes differ from the amounts that would be computed by applying the federal and provincial income tax rates as follows:

	2018	2017
Income before taxation	$ 263	$ 242
Income tax at the statutory rate of 27% (2017 - 27%)	(71)	(65)
(Increase) decrease resulting from:		
Income exempt from income taxes at statutory rates	66	60
Change in recognition of deferred tax assets	35	7
Change in tax rates on deferred taxes	-	20
Effect of lower (higher) tax rate in the U.S.	1	(4)
Other	1	(4)
Total income tax recovery	$ 32	$ 14

In the fourth quarter of 2018, as part of a strategic review, the Company undertook an internal corporate and debt restructuring. As a result, the Company revised its estimates of future taxable income and recorded a $35 million income tax recovery related to the recognition of previously unrecognized non-capital losses.

On December 22, 2017, the U.S. Tax Cuts and Jobs Act was enacted in the U.S. Consequently, effective January 1, 2018 the U.S. federal corporate tax rate has been reduced from 35% to 21%. The change resulted in a deferred tax recovery of $20 million in 2017 related to the re-measurement of deferred tax assets and liabilities of the Company's U.S. Operations.

10. Cash and cash equivalents

	2018	2017
Cash on deposit	$ 32	$ 181
Cash equivalents	-	157
	$ 32	$ 338

Restricted balances

Under certain agreements between the Company and the Natural Gas Exchange (NGX) for the purchase of electricity derivative financial instruments, the Company established separate bank accounts through which the settlement of the electricity derivative financial contracts are processed in conjunction with letters of credit and cash as collateral. As security for the payment and performance of its obligations, the Company assigned a first ranking security interest on the balance of these accounts to the NGX. The Company's use of this cash is restricted to these purposes. At December 31, 2018, $15 million (2017 - $4 million) of the cash on deposit balance was held in these bank accounts.

11. Trade and other receivables

	2018	2017
Trade receivables	$ 259	$ 224
Accrued revenues	165	141
Gross accounts receivable	424	365
ECL allowance (note 27)	(5)	(5)
Net accounts receivable	419	360
Income tax recoverable	2	6
Prepaid expenses	7	7
Derivative assets	-	1
	428	374
Current portion of long-term receivables (note 13)	3	178
	$ 431	$ 552

Details of the aging of accounts receivable and analysis of the changes in the ECL allowance is provided in note 27.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Derivative assets (liabilities)

Derivative financial instruments consist of electricity price forward contracts, which are held for the purpose of electricity price risk management. The derivative financial instruments used for risk management purposes as described in note 27 consist of the following:

		2018		2017
Electricity price forward contracts				
Fair value	$	(11)	$	-
Cash paid to counterparty		9		1
Net fair value	$	(2)	$	1
Net notional buys				
Terawatt hours of electricity		1.2		1.1
Range of contract terms (in years)		0.1 to 0.3		0.1 to 0.3

The fair value of electricity derivative financial instruments reflects changes in the forward electricity prices, net of cash payments to or from the counterparty. During the course of the contract, daily payments are made to or received from the counterparty to settle the fair value of the contracts.

Fair value is determined based on quoted exchange index prices by reference to bid or asking price, as appropriate, in active markets. Fair value amounts reflect management's best estimates using external readily observable market data such as forward electricity prices. It is possible that the assumptions used in establishing fair value amounts will differ from future outcomes and the impact of such variations could be material.

Changes in fair value on electricity derivative financial instruments are recorded in energy purchases and system access fees.

Derivative liabilities are included within Trade and other payables (note 17).

12. Inventories

During the year ended December 31, 2018, $22 million (2017 - $25 million) was expensed to other raw materials and operating charges.

No significant inventory write-downs were recognized in the years ended December 31, 2018 or 2017. No significant reversals of previous write-downs were recorded in the years ended December 31, 2018 or 2017.

At December 31, 2018 or 2017, no inventories were pledged as security for liabilities.

13. Other financial assets

		2018		2017
Long-term loans receivable from Capital Power	$	-	$	174
Long-term receivables from service concession arrangements		80		83
Long-term investment		7		-
Finance lease receivables		1		1
Loans and other long-term receivables		8		10
Other		1		1
		97		269
Less: current portion (included in trade and other receivables) (note 11)		3		178
	$	94	$	91

Long-term loans receivable from Capital Power

On July 9, 2009, EPCOR received $896 million in long-term loans receivable from Capital Power as part of the consideration on the sale of the power generation business. These loans effectively mirrored certain long-term debt obligations of EPCOR.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

During the year, the Company received the remaining balance of $174 million. Included in other income is $1 million in interest received on these loans (2017 - $10 million).

Service concession arrangements

The Company has executed service concession arrangements to design, build, upgrade, finance, operate and maintain, under public private partnerships, wastewater treatment facilities with the City of Regina and water and wastewater treatment facilities with Her Majesty the Queen in Right of Alberta for Kananaskis Village. The consideration under the service concession arrangements constitute rights to financial assets and have been classified as financial assets and recorded as a long-term receivable under other financial assets. The significant terms of the arrangement are summarized below:

(a) **City of Regina**

EPCOR entered into an agreement with the City of Regina to operate and maintain an existing facility and design, build, finance, operate and maintain a new wastewater treatment facility under a public private partnership, for which the contract was signed in July 2014. In August 2014, EPCOR took over the operations of the existing wastewater treatment plant and the construction of the new plant was completed in December 2017. The contract includes operation of both facilities for a term of 30 years. As of December 31, 2018, an amount of $76 million (2017 - $78 million) has been recorded as a financial asset which will be recovered along with financing cost at the interest rate established in the arrangement over the remaining life of the arrangement.

(b) **Kananaskis Village**

The Company won a bid to design, build, finance, upgrade, operate and maintain the water and wastewater treatment facilities in Kananaskis Village in October 2012. The arrangement includes operation of the facilities for a term of 10 years after completion of construction. The construction of the new facility was completed in August 2014 following which the Company started operating and maintaining the facility. At December 31, 2018, an amount of $4 million (2017 - $5 million) has been recognized as a financial asset pertaining to Kananaskis Village, which will be recovered along with financing cost at the interest rate established in the arrangement over the remaining life of the arrangement.

The aggregate amount of revenues relating to construction services for financial assets under service concession arrangements for the year ended December 31, 2018, is $nil (2017 - $2 million). There was no operating income from construction services in both years.

Long-term investment

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 the Vista Ridge project for a cash consideration of $24 million (US$18 million).

The project's production well field is located near the EPCOR 130 project 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.

The purchase consideration was allocated based on their fair values on the date of acquisition, in Canadian dollars as follows:

Fair value of assets acquired:		
Investment in Vista Ridge LLC	$	7
Intangible assets (note 16)		17
Assets acquired at fair value	$	24

As per the terms of agreement, the Company paid 50% of the consideration ($12 million (US$9 million)) on the date of acquisition. The remaining 50% of the consideration ($12 million (US$9 million)), will be settled on commencement of commercial operations and has been recognized as a liability within other liabilities (note 21).

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

14. Deferred tax assets / liabilities

Deferred tax assets are attributable to the following:

	2018	2017
Losses carried forward	$ 108	$ 71
Investment in partnerships	10	8
Canadian resource expenditures	8	8
Provisions	16	17
Deferred revenue	79	67
Other items	11	12
Tax assets	232	183
Set off by deferred tax liabilities	(102)	(93)
Net deferred tax assets	$ 130	$ 90

Deferred tax liabilities are attributable to the following:

	2018	2017
Other financial assets	$ 1	$ 1
Intangible assets and goodwill	21	14
Property, plant and equipment	133	117
Tax liabilities	155	132
Set off by deferred tax assets	(102)	(93)
Net deferred tax liabilities	$ 53	$ 39

The changes in temporary differences during the years ended December 31, 2018 and 2017 were as follows:

	Balance, beginning of 2018	Recognized in net income	Recognized in Other Comprehensive income	Recognized on business acquisition	Foreign currency valuation adjustment and other	Balance, end of 2018
Losses carried forward	$ 71	$ 35	$ -	$ -	$ 2	$ 108
Investment in partnerships	8	2	-	-	-	10
Canadian resource expenditures	8	-	-	-	-	8
Provisions	17	-	(1)	-	-	16
Deferred revenue	67	5	-	1	6	79
Other financial assets	(1)	-	-	-	-	(1)
Intangible assets and goodwill	(14)	(5)	-	(1)	(1)	(21)
Property, plant and equipment	(117)	(4)	-	(2)	(10)	(133)
Other items	12	(1)	-	-	-	11
	$ 51	$ 32	$ (1)	$ (2)	$ (3)	$ 77

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

	Balance, beginning of 2017	Recognized in net income	Recognized in Other comprehensive income	Foreign currency valuation adjustment and other	Balance, end of 2017
Losses carried forward	$ 83	$ (10)	$ -	$ (2)	$ 71
Investment in partnerships	6	2	-	-	8
Canadian resource expenditures	8	-	-	-	8
Provisions	8	8	-	1	17
Deferred revenue	108	(33)	-	(8)	67
Other financial assets	(1)	-	-	-	(1)
Intangible assets and goodwill	(18)	2	-	2	(14)
Property, plant and equipment	(172)	42	-	13	(117)
Other items	16	(2)	1	(3)	12
	$ 38	$ 9	$ 1	$ 3	$ 51

The Company has the following deductible temporary differences for which no deferred tax assets have been recognized:

	2018	2017
Non-capital losses	$ -	$ 129
Capital losses	279	279

The Company also has taxable temporary differences of $251 million (2017 - $198 million), associated with investments in subsidiaries, for which no deferred tax liability has been recognized. In addition, no deferred tax liability has been recognized in respect of unremitted earnings of subsidiaries as the Company is in a position to control the timing of the reversal of temporary difference and it is probable that such differences will not be reversed in the foreseeable future.

The non-capital losses expire between the years 2028 and 2038.

The Company has recognized deferred tax assets in the amount of $130 million (2017 - $90 million), the utilization of which is dependent on future taxable profits in excess of the profits arising from the reversal of existing taxable temporary differences. The recognition of these deferred tax assets is based on taxable income forecasts that incorporate existing circumstances that will result in positive taxable income against which non-capital loss carry-forwards can be utilized as well as management’s intention to implement specific income tax planning strategies that will allow for the offset of remaining deductible temporary differences against future earnings of taxable entities within the consolidated group.

Deferred tax assets have not been recognized in respect of $279 million (2017 - $279 million) of capital losses as it is not probable that future taxable capital gains will be available against which the Company can utilize the benefits of these losses. These losses do not expire.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

15. Property, plant and equipment

	Construction work in progress	Land	Water treatment & distribution, wastewater collection & treatment	Energy transmission & distribution	Retail systems & equipment	Corporate information systems & other	Total
Cost							
Balance, beginning of 2018	$ 213	$ 283	$ 8,137	$ 2,790	$ 4	$ 60	$ 11,487
Additions[1]	582	15	175	4	-	8	784
Additions through business acquisitions	-	-	-	25	-	-	25
Disposals and retirements	-	-	(32)	(9)	(1)	-	(42)
Transfers into service	(506)	-	340	165	-	1	-
Transfers	(2)	-	-	-	-	-	(2)
Foreign currency valuation adjustments	6	1	99	5	-	-	111
Balance, end of 2018	293	299	8,719	2,980	3	69	12,363
Accumulated depreciation							
Balance, beginning of 2018	-	-	1,803	694	1	26	2,524
Depreciation	-	-	176	85	1	7	269
Disposals and retirements	-	-	(24)	(6)	(1)	-	(31)
Foreign currency valuation adjustments	-	-	19	-	-	-	19
Balance, end of 2018	-	-	1,974	773	1	33	2,781
Net book value, end of 2018	$ 293	$ 299	$ 6,745	$ 2,207	$ 2	$ 36	$ 9,582

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

	Construction work in progress	Land	Water treatment & distribution, wastewater collection & treatment	Energy transmission & distribution	Retail systems & equipment	Corporate information systems & other	Total
Cost							
Balance, beginning of 2017	$ 157	$ 48	$ 3,764	$ 2,466	$ 2	$ 58	$ 6,495
Additions[1]	534	5	91	3	-	4	637
Additions through business acquisitions	-	-	-	83	-	-	83
Transfers under common control transaction	108	238	4,074	-	-	-	4,420
Disposals and retirements	-	(8)	(28)	(23)	(1)	(6)	(66)
Transfers into service	(578)	-	305	266	3	4	-
Transfers	(5)	-	-	-	-	-	(5)
Foreign currency valuation adjustments	(3)	-	(73)	(5)	-	-	(81)
Others	-	-	4	-	-	-	4
Balance, end of 2017	213	283	8,137	2,790	4	60	11,487
Accumulated depreciation							
Balance, beginning of 2017	-	-	848	637	1	26	1,512
Transfers under common control transaction[2]	-	-	868	-	-	-	868
Depreciation	-	-	120	78	1	6	205
Disposals and retirements	-	-	(20)	(21)	(1)	(6)	(48)
Foreign currency valuation adjustments	-	-	(13)	-	-	-	(13)
Balance, end of 2017	-	-	1,803	694	1	26	2,524
Net book value, end of 2017	$ 213	$ 283	$ 6,334	$ 2,096	$ 3	$ 34	$ 8,963

1 Additions include non-cash contributed assets of $205 million (2017 - $97 million) and cash contributions of $76 million (2017 - $48 million).

2 As explained in note 5, the Company finalized its analysis of the assets transferred from the City during the year, which resulted in increase in accumulated depreciation at the date of transfer of asset by $14 million compared to amounts previously reported.

Borrowing costs capitalized during the year ended December 31, 2018, were $7 million (2017 – $6 million) (note 8). The weighted average rates used to determine the borrowing costs eligible for capitalization ranged from 3.38% to 5.86% (2017 - 3.38% to 5.85%).

There are no security charges over the Company’s property, plant and equipment.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

16. Intangible assets and goodwill

	Goodwill	Customer rights[2]	Other rights	CCN	Software	Total
Cost						
Balance, beginning of 2018	$ 50	$ 51	$ 80	$ 84	$ 163	$ 428
Additions through acquisition[1]	-	-	18	-	20	38
Additions through business acquisitions	17	-	6	-	-	23
Disposals and retirements	-	-	-	-	(7)	(7)
Change in construction work in progress	-	-	4	-	12	16
Transfers	-	-	-	-	2	2
Foreign currency translation adjustments	4	-	6	7	-	17
Balance, end of 2018	71	51	114	91	190	517
Accumulated amortization						
Balance, beginning of 2018	-	43	10	-	82	135
Amortization	-	3	1	-	17	21
Disposals and retirements	-	-	-	-	(7)	(7)
Balance, end of 2018	-	46	11	-	92	149
Net book value, end of 2018	$ 71	$ 5	$ 103	$ 91	$ 98	$ 368

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

	Goodwill	Customer rights[2]	Other rights	CCN	Software	Total
Cost						
Balance, beginning of 2017	$ 52	$ 51	$ 78	$ 89	$ 174	$ 444
Additions through acquisition	-	-	-	-	18	18
Additions through business acquisitions	2	-	2	-	-	4
Transfers under common control transaction	-	-	-	-	6	6
Internally generated additions	-	-	-	-	2	2
Disposals and retirements	-	-	-	-	(40)	(40)
Change in construction work in progress	-	-	4	-	(2)	2
Transfers	-	-	-	-	5	5
Foreign currency translation adjustments	(4)	-	(4)	(5)	-	(13)
Balance, end of 2017	50	51	80	84	163	428
Accumulated amortization						
Balance, beginning of 2017	-	41	8	-	102	151
Transfers under common control transaction	-	-	-	-	5	5
Amortization	-	2	2	-	15	19
Disposals and retirements	-	-	-	-	(40)	(40)
Balance, end of 2017	-	43	10	-	82	135
Net book value, end of 2017	$ 50	$ 8	$ 70	$ 84	$ 81	$ 293

1 Additions through acquisition of other rights include operating and maintenance rights of $17 million related to Vista Ridge project (note 13).

2 Company's customer rights consist of rights to operate in the FortisAlberta Service territory, which will expire on December 31, 2020.

There are no security charges over the Company's intangible assets.

For purposes of impairment testing, CCN has been allocated to CGUs as follows:

	2018	2017
Cash-generating unit:		
U.S. operations segment – Water Arizona	$ 89	$ 82
U.S. operations segment – Others	2	2
	$ 91	$ 84

For purposes of impairment testing, goodwill acquired through business combinations has been allocated to CGUs as follows:

	2018	2017
Cash-generating unit:		
U.S. operations segment – Water Arizona	$ 43	$ 39
Others	28	11
	$ 71	$ 50

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

The most recent review of goodwill was performed in the fourth quarter for each CGU.

Key assumptions used in value-in-use calculations

The future cash flows of the underlying businesses are relatively stable since they relate primarily to ongoing electricity, natural gas and water supply in a rate-regulated environment. In the case of CGUs operating under a rate-regulated environment, revenues are set by the regulators to cover operating costs and to earn a return on the rate base, which is set at the regulator's approved weighted average cost of capital for the underlying utility. For non-regulated CGUs, revenues are estimated based on long-term water supply contracts executed with the customers, which include escalation in rates and volumes over the term of the contracts.

The calculation of value in use for the CGUs is most sensitive to the following assumptions:

Discount rates

The discount rates used ranged from 5.03% - 8.50% (2017 – 6.52% - 6.55%), which were estimated based on the weighted average cost of capital for the CGUs, which, in the case of rate-regulated businesses, are the approved rate of return on capital allowed by the regulators. These rates were further adjusted to reflect the market assessment of any risk specific to the CGU for which future estimates of cash flows have not been adjusted.

Timing of future rate increases

Revenue growth is forecast at 1.85% to 11.63% per annum (2017 – ranging between 2.14% to 3.81%). In the case of rate-regulated businesses, if future rate filings are delayed then rate increases and increased cash flows from revenues would be affected.

Sensitivity to changes in assumptions

Assumptions have been tested using reasonably possible alternative scenarios. For all scenarios considered, the recoverable value remained above the carrying amount of the CGU.

17. Trade and other payables

	2018	2017
Trade payables	$ 263	$ 243
Accrued liabilities	112	93
Accrued interest	21	30
Due to employees	18	18
Income tax payable	1	-
Derivative liabilities	2	-
	$ 417	$ 384

Details of the derivative liabilities are provided in trade and other receivables (note 11).

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

18. Loans and borrowings

	Effective interest rate	Principal payment terms	2018	2017
Long-term loans and borrowings				
Municipal debt obligations				
Obligation to the City, net of sinking fund				
At 8.50%, due in 2018[1]	11.04%	Annual installments	$ -	$ 6
At 7.01%, due between 2019 and 2023[1]	7.01%	Annual installments	10	12
At 5.20%, due between 2019 and 2034[2]	5.36%	Bi-annual installments	53	58
At 3.41%, due between 2019 and 2042[3]	3.41%	Periodic installments	559	588
			622	664
Obligation to the Town of Collingwood				
At 3.97% due between 2019 and 2043[4]	3.97%	Periodic installments	8	-
			630	664
Public debentures				
At 5.80%, due in 2018	6.02%	Due at maturity	-	400
At 6.80%, due in 2029	7.05%	Due at maturity	150	150
At 5.65%, due in 2035	5.88%	Due at maturity	200	200
At 6.65%, due in 2038	6.83%	Due at maturity	200	200
At 5.75%, due in 2039	5.88%	Due at maturity	200	200
At 4.55%, due in 2042	4.65%	Due at maturity	300	300
At 3.55%, due in 2047	3.62%	Due at maturity	400	400
At 3.95%, due in 2048	4.03%	Due at maturity	200	-
			1,650	1,850
Private debt notes				
Bonds at 3.74%, due in 2021	3.80%	Due at maturity	188	173
Bonds at 3.94%, due between 2019 and 2029	4.01%	Monthly installments	1	1
Bonds at 5.00%, due in 2041	5.08%	Due at maturity	153	141
Bonds at 3.63% due in 2041	3.71%	Due at maturity	54	50
			396	365
			2,676	2,879
Other borrowings				
Debt issuance costs			(14)	(13)
Total long-term loans and borrowings			2,662	2,866
Short-term debt – commercial papers			38	-
Total loans and borrowings			2,700	2,866
Less: current portion			70	442
			$ 2,630	$ 2,424

Obligation to the City

1. Debentures were initially issued by the City, on behalf of the Company, pursuant to the City Bylaw authorization. The outstanding debentures are a direct, unconditional obligation of the City. The Company’s obligation to the City matches the City’s obligation pursuant to those debentures and at December 31, 2018 debt obligations totaling $10 million (2017 - $18 million net of sinking fund) are due to the City. During the year, one of the debentures payable to the City matured along with the sinking fund, which was fully settled in September 2018.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

2. In 2009, the City transferred the Gold Bar wastewater treatment plant (Gold Bar) to EPCOR. Pursuant to the Gold Bar asset transfer agreement, EPCOR issued $112 million of long-term debt to the City representing EPCOR's proportionate share of the City's debt obligations in respect of Gold Bar assets.
3. In 2017, the City transferred the Drainage business to the Company. Pursuant to the transfer of Drainage business, the Company issued a promissory note to the City having fair value of $604 million on the date of transfer (note 5).

The obligation to the City will rank at least equal to all current and future senior unsecured debt that may be issued by the Company.

Obligation to the Town of Collingwood

4. As part of the Collus acquisition (note 5), the Company assumed long-term debt of $8 million payable to the Town of Collingwood. The debt is fully secured by the assets of the Collus utility.

Public debentures

During the year, the Company issued public debentures totaling $200 million maturing in 2048 at an interest rate of 3.95% (2017 - $400 million maturing in 2047 at an interest rate of 3.55%). 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.

Private debt notes

The private debt notes consists of all notes issued in U.S. dollars. These notes 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 private debt notes are redeemable by the Company prior to maturity at the greater of par and a price specified under the terms of the private debt notes.

19. Deferred revenue

	2018	2017
Balance, beginning of year	$ 3,281	$ 1,041
Contributions received	280	133
Revenue recognized	(66)	(38)
Transfers from provisions	9	10
Recognized on business acquisition	4	-
Recognized on transfer of business	-	2,152
Foreign currency valuation adjustments	24	(17)
	3,532	3,281
Less: current portion	67	60
Balance, end of year	$ 3,465	$ 3,221

Contributions received include cash contributions of $76 million (2017 - $48 million), accruals for contributions receivable $9 million (2017 - $nil) and non-cash contributions of $195 million (2017 - $85 million).

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

20. Provisions

	2018	2017
Contributions from customers and developers[1]	$ 19	$ 19
Post-employment benefit obligation	54	57
Other long-term employee benefit obligation	22	18
Short-term employee benefit obligation	21	20
Other	3	2
	119	116
Less: current portion	30	25
	$ 89	$ 91

1 During the year, the Company received non-cash contributed assets of $10 million (2017 - $12 million).

Post-employment benefits

Total cash payments for pension benefits for the year ended December 31, 2018, consisting of cash contributed by the Company to the LAPP, other defined contribution and benefit plans, and cash payments directly to beneficiaries for their unfunded pension plan, were $48 million (2017 - $42 million). Total contributions expected to be paid in 2019 to the LAPP, other defined contribution and benefit plans, and cash payments directly to beneficiaries for their unfunded pension plan are $45 million.

Other long-term employee benefits

Other long-term employee benefits consist mainly of obligations for benefits provided to employees on long-term disability leaves.

21. Other liabilities

	2018	2017
Customer deposits	$ 30	$ 29
Drainage transition cost compensation	45	65
Contingent consideration	49	43
Vista Ridge consideration payable (note 13)	12	-
Leasehold inducements	8	9
	144	146
Less: current portion	46	50
	$ 98	$ 96

Drainage transition cost compensation

The Drainage transition cost compensation represents the Company's commitment to the City to pay for the stranded cost including liabilities retained by the City relating to Drainage business (note 5). The change in the liability for Drainage transition cost compensation is as follows:

	2018	2017
Balance, beginning of the year	$ 65	$ -
Fair value of transition cost compensation recognized on transfer of Drainage	-	72
Payment during the year	(21)	(8)
Unwinding of interest included within finance expenses	1	1
	$ 45	$ 65

Contingent consideration

The contingent consideration is the present value of the Company's commitment to pay approximately US$34 million on securing newly executed long-term contracts for the supply of water by EPCOR 130 Project Inc. and finalization of certain pending agreements with third parties, and approximately US$8 million on securing additional customer connections for natural gas by Hughes (note 5). The Company is reasonably certain that it will be required to settle this commitment by way of cash payments and has accordingly recognized the liability for contingent consideration in the consolidated statements of financial position. The changes in the liability for contingent consideration are as follows:

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

	2018	2017
Balance, beginning of the year	$ 43	$ 36
Recognized on business acquisition	-	8
Payment during the year	(1)	-
Unwinding of interest included in finance expenses	3	2
Foreign currency valuation adjustments	4	(3)
Balance, end of the year	$ 49	$ 43

22. Share capital

Authorized shares

Unlimited number of voting common shares without nominal or par value.

Issued shares

Three common shares to the City.

Capital contributions

Share capital includes capital contributions received from the City. As of December 31, 2018, the Company had accumulated capital contributions of $798 million (2017 - $798 million). As explained in note 5, during the year the Company finalized its analysis of the assets transferred and liabilities assumed pursuant to the transfer of Drainage from the City effective September 1, 2017, which resulted in a decrease of $14 million in the capital contribution received from the City compared to the amount previously reported.

23. Changes in non-cash working capital

	2018	2017
Trade receivables (note 11)	$ (55)	$ (65)
Prepaid expenses (note 11)	-	(1)
Inventories	(2)	(3)
Trade and other payables excluding derivative liabilities (note 17)	31	85
	$ (26)	$ 16

	2018	2017
Included in specific items on consolidated statements of cash flows:		
Interest paid	$ (9)	$ -
Income taxes expense (recovered)	5	(9)
Contributions received	(9)	-
Business acquisition	-	(2)
	(13)	(11)
Transfers under common control transaction (note 5)	-	(52)
Adjustment to opening trade receivables on implementation of IFRS 9 (note 3(t))	(1)	-
Operating activities	(27)	48
Investing activities	15	31
	$ (26)	$ 16

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

24. Changes in liabilities arising from financing activities:

	At December 31, 2017	Issued or received	Redemptions, repayments or payments	Foreign currency valuation adjustment	Other	At December 31, 2018
Long-term loans and borrowings (including current portion):						
Obligation to the City, net of sinking fund	$ 664	$ -	$ (35)	$ -	$ (7)	$ 622
Obligation to the Town of Collingwood	-	-	-	-	8	8
Public debentures	1,850	200	(400)	-	-	1,650
Private debt notes	365	-		31	-	396
Other bank loans	-	-	(8)	-	8	-
Debt issuance costs	(13)	(1)	-	-	-	(14)
Total long-term loans and borrowings (including current portion)	$ 2,866	$ 199	$ (443)	$ 31	$ 9	$ 2,662
Short-term loans and borrowings	$ -	$ 1,909	$ (1,871)	$ -	$ -	$ 38
Contributions from customers and developers	$ 19	$ 1	$ (3)	$ 1	$ 1	$ 19

	At December 31, 2016	Issued or received	Redemptions, repayments or payments	Foreign currency valuation adjustment	Other	At December 31, 2017
Long-term loans and borrowings (including current portion):						
Obligation to the City, net of sinking fund[1]	$ 91	$ -	$ (24)	$ -	$ 597	$ 664
Public debentures	1,450	400	-	-	-	1,850
Private debt notes	390	-	(13)	(26)	14	365
Debt issuance costs	(11)	(2)	-	-	-	(13)
Total long-term loans and borrowings (including current portion)	$ 1,920	$ 398	$ (37)	$ (26)	$ 611	$ 2,866
Short-term loans and borrowings	$ -	$ 461	$ (461)	$ -	$ -	$ -
Contributions from customers and developers	$ 21	$ 1	$ (3)	$ (2)	$ 2	$ 19

1. Other includes $604 million debt obligation assumed by the Company on transfer of Drainage operations from the City (note 5).

25. Related party balances and transactions

Compensation of key management personnel

	2018	2017
Short-term employee benefits	$ 5	$ 5
Post-employment benefits	1	1
Other long-term benefits	3	2
	$ 9	$ 8

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

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.

Other related party transactions

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.

The following summarizes the Company's related party transactions with the City except for the transfer of Drainage and related transactions which have been disclosed in detail in note 5:

		2018		2017
Consolidated Statements of Comprehensive Income				
Revenues (a)	$	84	$	87
Other raw materials and operating charges (b)		21		16
Other administrative expenses (c)		3		3
Franchise fees and property taxes (d)		110		104
Finance expense (e)		26		15

(a) Included within revenues are energy and water sales of $5 million (2017 - $4 million), provision of service including the wastewater and stormwater services of $3 million (2017 - $nil), maintenance, repair and construction services of $72 million (2017 - $76 million) and customer billing services of $4 million (2017 - $7 million).

(b) Includes certain costs of waste management and planning services, mobile equipment services, public works and various other services pursuant to service agreements.

(c) Incudes certain costs of cash processing service, corporate services for Drainage operations and various other services pursuant to service agreements.

(d) Includes franchise fees of $61 million at 0.39 cents per kilowatt hour of electric distribution sales volume for direct connect customers and 0.81 cents per kilowatt hour for all other customers (2017 - $63 million at 0.43 cents per kilowatt hour of electric distribution sales volume for direct connect customers and 0.84 cents per kilowatt hour for all other customers), franchise fees of $22 million at 8% (2017 - $21 million at 8%) of qualifying revenues of water services and waste water services, franchise fees of $9 million at 8% (2017 - $3 million at 8%) of qualifying revenue of sanitary services, property taxes of $18 million (2017 - $16 million) on properties owned within the City municipal boundaries and business tax of $nil (2017 - $1 million).

(e) Interest expense on the obligation to the City at interest rates ranging from 3.41% to 8.50% (2017 - 3.41% to 8.50%).

The following summarizes the Company's related party balances with the City:

		2018		2017
Consolidated Statements of Financial Position				
Trade and other receivables	$	63	$	46
Property, plant and equipment (f)		68		50
Intangible assets (g)		4		4
Trade and other payables		24		44
Loans and borrowings (note 18)		622		664
Deferred revenue (h)		60		44
Other liabilities (note 21)		45		65

(f) During the year, the City transferred contributed assets (including land) of $37 million (2017 - $37 million) and contributions (including accruals) of $23 million (2017 - $7 million) for various Drainage projects to the Company. In addition, the City provided services of $8 million (2017 - $6 million) for capital construction for electric and water distribution infrastructure and sanitary and stormwater infrastructure.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

(g) Cost for various flood mitigation projects paid to the City.

(h) Contributions received and accrued during the year for capital projects.

26. Financial instruments

Fair value

The carrying amounts of cash and cash equivalents, trade and other receivables (excluding derivative financial assets), current portion of other financial assets, trade and other payables (excluding derivative financial liabilities) and certain other liabilities (including customer deposits) approximate their fair values due to the short-term nature of these financial instruments.

The carrying amounts and fair values of the Company's remaining financial assets and liabilities are as follows:

	2018		2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Non-current portion of other financial assets[1]	$ 86	$ 98	$ 90	$ 99
Long-term investment in Vista Ridge (note 13)	7	7	-	-
Derivative liabilities (assets) (notes 11 and 17)	2	2	(1)	(1)
Long-term loans and borrowings (note 18)				
Loans and borrowings excluding beneficial interest in sinking fund	2,700	2,939	2,960	3,326
Beneficial interest in sinking fund	-	-	(94)	(94)
Other liabilities (note 21)				
Contingent consideration	49	49	43	43
Drainage transition cost compensation	45	45	65	65

1 Excluding long-term investment in Vista Ridge and finance lease receivables of $8 million (2017 - $1 million).

Other financial assets

The fair values of the Company's long-term loans and receivables are based on the estimated interest rates implicit in comparable loan arrangements plus an estimated credit spread based on the counterparty risks at December 31, 2018 and 2017.

Derivative liabilities (assets)

The fair value of the Company's financial electricity purchase contracts is determined based on exchange index prices in active markets and are based on the external readily observable market data such as forward electricity prices.

It is possible that the fair value amounts will differ from future outcomes and the impact of such variations could be material.

Derivative assets are presented within trade and other receivables whereas derivate liabilities are presented within trade and other payables in the consolidated statements of financial position.

Loans and borrowings

The fair value of the Company's long-term public debt is based on the pricing sourced from market data as of December 31, 2018 and 2017. The fair value of the Company's remaining long-term loans and borrowings is based on determining a current yield for the Company's debt at December 31, 2018 and 2017. This yield is based on an estimated credit spread for the Company over the yields of long-term Government of Canada bonds for Canadian dollar loans and U.S. Treasury bonds for U.S. dollar loans that have similar maturities to the Company's debt. The estimated credit spread is based on the

Company's indicative spread as published by independent financial institutions. The Company's long-term loans and borrowings (including the current portion) include City debentures, which were partially offset by payments made by the Company into the sinking fund. The Company's beneficial interest in the sinking fund was fully settled in September 2018.

Short-term loans and borrowings are measured at amortized cost and their carrying value approximate their fair value due to the short-term nature of these financial instruments.

Contingent consideration

The contingent consideration is payable in U.S. dollars and payment is mainly dependent on securing newly executed long-term contracts for the supply of water by EPCOR 130 Project Inc. and additional customer connections for natural gas by Hughes Natural Gas Inc., the timing of which is uncertain. The fair value of the Company's contingent consideration is determined based on the expected timing of securing new contracts and customer connections and the resulting cash flows are then discounted at risk adjusted discount rates. Any change in the timing of execution of new contracts, discount rate or foreign exchange rate can have a material impact on the fair value of contingent consideration.

Timing of securing new contracts / additional customer connections

If the timing of securing new contracts / additional customer connections is advanced by two years then the fair value of the contingent consideration will increase by $6 million (2017 - $6 million). Alternatively, if the timing of securing new contracts / additional customer connections is delayed by two years then the fair value of the contingent consideration will decrease by $5 million (2017 - $4 million).

Discount rate

A 50 basis point increase in discount rate will change the fair value of the contingent consideration by $nil (2017 - $ nil). Alternatively 50 basis point decrease in discount rate will increase the fair value of contingent consideration by $1 million (2017 - $1 million).

Foreign exchange rate

A 10% change in the foreign exchange rate will change the fair value of the contingent consideration by $5 million (2017 - $4 million).

Drainage transition cost compensation

The transition cost compensation is payable in installments to the City to compensate for stranded costs related to the transfer of the Drainage business. The carrying value of the Drainage transition cost compensation represents the present value of the liability, discounted using interest rates prevailing at the time of initial recognition of liability. The fair value of the Drainage transition cost compensation is determined based on the future cash outflows discounted at risk adjusted interest rates prevailing at December 31, 2018 and 2017.

27. Financial risk management

Overview

The Company is exposed to a number of different financial risks arising from business activities and its use of financial instruments, including market risk, credit risk, and liquidity risk. The Company's overall risk management process is designed to identify, assess, measure, manage, mitigate and report on business risk which includes financial risk. Enterprise risk management is overseen by the Board of Directors and senior management is responsible for fulfilling objectives, targets, and policies approved by the Board of Directors. EPCOR's Director, Audit and Risk Management provide the Board of Directors with an enterprise risk assessment quarterly. Risk management strategies, policies and limits are designed to help ensure the risk exposures are managed within the Company's business objectives and risk tolerance. The Company's financial risk management objective is to protect and minimize volatility in earnings and cash flow.

Financial risk management including foreign exchange risk, interest rate risk, liquidity risk and the associated credit risk management is carried out by the centralized Treasury function in accordance with applicable policies. The Audit Committee of the Board of Directors, in its oversight role, performs regular and ad-hoc reviews of risk management controls and procedures to help monitor compliance.

Market risk

Market risk is the risk of loss that results from changes in market factors such as electricity prices, foreign currency exchange rates and interest rates. The level of market risk to which the Company is exposed at any point in time varies depending on market conditions, expectations of future price or market rate movements and the composition of the Company's financial assets and liabilities held, non-trading physical asset and contract portfolios, and trading portfolios. The Company's financial exposure management policy is approved by the Board of Directors and the associated procedures and practices are designed to manage the foreign exchange and interest rate risk throughout the Company.

To manage the exposure related to changes in market risk, the Company may use various risk management techniques including derivative financial instruments such as forward contracts, contracts-for-differences or interest rate swaps. Such instruments may be used for an anticipated transaction to establish a fixed price denominated in a foreign currency or to secure electricity price or to secure fixed interest rates.

The sensitivities provided in each of the following risk discussions disclose the effect of reasonable changes in relevant prices and rates on net income at the reporting date. The sensitivities are hypothetical and should not be considered to be predictive of future performance or indicative of earnings on these instruments. The Company's actual exposure to market risks is constantly changing as the Company's portfolio of debt, foreign currency and commodity contracts changes. Changes in fair values or cash flows based on market variable fluctuations cannot be extrapolated since the relationship between the change in the market variable and the change in fair value or cash flows may not be linear. In addition, the effect of a change in a particular market variable on fair values or cash flows is calculated without considering interrelationships between the various market rates or mitigating actions that would be taken by the Company.

Electricity price and volume risk

EPCOR sells electricity to regulated rate option (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 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, EPCOR is exposed to prevailing market prices when the volume of electricity economically hedged is short of actual load requirements or greater than the actual load requirements (long). Exposure to variances in electricity volume can be exacerbated by other events such as unexpected generation plant outages and unusual weather patterns.

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 in advance of the consumption date, 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.

At December 31, 2018, holding all other variables constant, a $5 per megawatt hour increase / decrease in the forward electricity spot price would increase / decrease net income by approximately $6 million (2017 - $5 million). In preparing the sensitivity analysis, the Company compared average AESO electricity spot prices to the forward index price for the past 24 months. Based on historical fluctuations, the Company estimates that the fair value of the contracts could increase or decrease by up to $16 million (2017 - $6 million) with a corresponding change to net income.

Foreign exchange risk

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

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

The Company's financial exposure management policy attempts to minimize material 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 on commitments denominated in U.S. dollars or other currencies. The Company coordinates and manages foreign exchange risk centrally by identifying opportunities for naturally occurring opposite movements and then dealing with any material residual foreign exchange risks.

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

At December 31, 2018, holding all other variables constant, a 10% change in U.S. dollar exchange rate would change the private debt balance by $40 million (2017 - $36 million).

Interest rate risk

The Company is exposed to changes in interest rates on its cash and cash equivalents, and floating-rate short-term loans and obligations. The Company is also exposed to interest rate risk from the possibility that changes in the interest rates will affect future cash flows or the fair values of its financial instruments. Interest rate risk associated with short-term loans and borrowings is immaterial due to its short-term maturity. At December 31, 2018 and 2017, all long-term debt was fixed rate.

Credit risk

Credit risk is the possible financial loss associated with the inability of counterparties to satisfy their contractual obligations to the Company, including payment and performance. The Company's credit risk management policy is approved by the Board of Directors and the associated procedures and practices are designed to manage the credit risks associated with the various business activities throughout the Company. Credit and counterparty risk management procedures and practices generally include assessment of individual counterparty creditworthiness and establishment of exposure limits prior to entering into a transaction with the counterparty. Exposures and concentrations are subsequently monitored and are regularly reported to senior management. Creditworthiness continues to be evaluated after transactions have been initiated, at a minimum, on an annual basis. To manage and mitigate credit risk, the Company employs various credit mitigation practices such as master netting agreements, pre-payment arrangements from retail customers, credit derivatives and other forms of credit enhancements including cash deposits, parent company guarantees, and bank letters of credit.

Maximum credit risk exposure

The Company's maximum credit exposure is represented by the carrying amount of the following financial assets:

	2018	2017
Cash and cash equivalents[1] (note 10)	$ 32	$ 338
Trade and other receivables[1 & 2] (note 11)	419	360
Other financial assets[3] (note 13)	90	269
	$ 541	$ 967

1 This table does not take into account collateral held. At December 31, 2018, the Company held cash deposits of $30 million (2017 - $29 million) as security for certain counterparty accounts receivable and derivative contracts. The Company is not permitted to sell or re-pledge this collateral in the absence of default of the counterparties providing the collateral.

2 The Company's maximum exposures related to trade and other receivables by major credit concentration is comprised of $327 million (2017 - $275 million) related to rate-regulated customer balances. At December 31, 2018, the Company held credit enhancements to mitigate credit risk on trade and other receivables in the form of letters of credit of $5 million (2017 - $1 million), performance bonds of $10 million (2017 - $1 million) and parental guarantees of $254 million (2017 - $254 million).

3 Excluding long-term investment in Vista Ridge.

Credit quality and concentrations

The Company is exposed to credit risk on outstanding trade receivables associated with its energy and water sales activities and agreements with the AESO and on electricity supply agreements with wholesale and retail customers. The Company is also exposed to credit risk from its cash and cash equivalents, derivative instruments and long-term financing arrangements receivable.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

The credit quality of the Company's trade and other receivables, by major credit concentrations, cash and cash equivalents, and other financial assets at December 31, 2018 and 2017, was as follows:

	2018		2017	
	Investment grade or secured[1,2] %	Unrated %	Investment grade or secured[1,2] %	Unrated %
Trade and other receivables				
Rate-regulated customers[3]	11	66	10	65
Non rate-regulated customers	14	9	6	19
Total trade and other receivables	25	75	16	84
Cash and cash equivalents	100	-	100	-
Loans and other long-term receivables	100	-	100	-

1 Credit ratings 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.

2 Certain trade receivables and other financial assets are considered to have low credit risk as they are either secured by the underlying assets, secured by other forms of credit enhancements, or the counterparties are local or provincial governments.

3 Rate-regulated customer trade receivables include energy sales and distribution and transmission, water sales, collection and conveyance of sanitary and stormwater, treatment of wastewater, rate-regulated and default electricity supply receivables. Under the Electric Utilities Act (Alberta), the Company provides electricity supply in its service area to residential, agricultural and small commercial customers at regulated rates and to those commercial and industrial customers who have not chosen a competitive offer and consume electricity under default supply arrangements.

Rate-regulated customer credit risk

Credit risk exposure for residential and commercial customers under regulated energy and water supply rates is generally limited to amounts due from customers for energy and water consumed but not yet paid for. The Company mitigates credit risk from counterparties by performing credit checks and on higher risk customers, by taking pre-payments or cash deposits. The Company monitors credit risk for this portfolio at the gross exposure level.

Trade and other receivables and ECL allowance

Trade and other receivables consist primarily of amounts due from retail customers including commercial customers, other retailers, government-owned or sponsored entities, regulated public utility distributors, and other counterparties. Commercial customer contracts provide performance assurances through letters of credit, irrevocable guarantees and bonds. For other retail customers, represented by a diversified customer base, credit losses are generally low and the Company provides for an allowance for lifetime ECL.

The Company calculates the ECL on accounts receivable using a provision matrix approach, which is based on the company's historical credit loss experience and current economic conditions (including forward-looking information) for accounts receivables to estimate the ECL. The provision matrix specifies fixed provision rates depending on the number of days that a trade receivable is due or past due in each business unit. The total ECL at December 31, 2018 is $5 million (2017 - $5 million).

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

The gross amounts of trade receivables and corresponding ECL allowance was as follows:

December 31, 2018		Gross accounts receivables		Expected credit loss allowance		Net accounts receivables
Current[1]	$	376	$	1	$	375
Outstanding 31 to 60 days		22		-		22
Outstanding 61 to 90 days		9		1		8
Outstanding more than 90 days		17		3		14
	$	424	$	5	$	419

December 31, 2017		Gross accounts receivables		Allowance for doubtful accounts		Net accounts receivables
Current[1]	$	327	$	-	$	327
Outstanding 31 to 60 days		16		-		16
Outstanding 61 to 90 days		9		2		7
Outstanding more than 90 days		13		3		10
	$	365	$	5	$	360

1 Current amount represents trade and other receivables outstanding up to 30 days. Amounts outstanding for more than 30 days are considered past due.

During the year, the Company recognized $9 million (2017 - $7 million) ECL as expense in profit or loss account relating to customer amounts that the Company determined may not be fully collectable. ECL allowance is determined by each business unit considering the unique factors of the business unit's trade and other receivables. Write-offs are determined either by applying specific risk factors to customer groups' aged balances in trade and other receivables or by reviewing material accounts on a case-by-case basis. Reductions in trade and other accounts receivable and the related ECL allowance is recorded when the Company has determined that recovery is not possible.

The change in the ECL allowance was as follows:

		2018		2017
Balance, beginning of year	$	5	$	5
Opening adjustment on implementation of IFRS 9 (note 3(t))		(1)		-
		4		5
Additional allowances created		9		7
Recovery of receivables		2		1
Receivables written off		(10)		(8)
Balance, end of year	$	5	$	5

At December 31, 2018, the Company held $25 million (2017 – $30 million) of customer deposits for the purpose of mitigating the credit risk associated with trade and other receivables from residential and business customers.

Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company's liquidity is managed centrally by the Company’s Treasury function. The Company manages liquidity risk through regular monitoring of cash and currency requirements by preparing short-term and long-term cash flow forecasts and by matching the maturity profiles of financial assets and liabilities to identify financing requirements. The financing requirements are addressed through a combination of committed and demand revolving credit facilities and financings in public or private debt capital markets.

In the normal course of business, the Company provides financial support and performance assurances including guarantees, letters of credit and surety bonds to third parties in respect of its subsidiaries. The Company has revolving extendible credit facilities, which are used principally for the purpose of backing the Company's commercial paper program and providing letters of credit, as outlined below:

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

December 31, 2018	Expiry	Total facilities	Banking commercial paper issued	Letters of credit and other facility draws	Net amounts available
Committed					
Syndicated bank credit facility[1]	November 2022	$ 600	$ 38	$ -	$ 562
Uncommitted					
Bank credit facilities[2]	No expiry	200	-	80	120
Bank credit facility	No expiry	25	-	-	25
Bank credit facility	April 2019	14	-	-	14
Total uncommitted		239	-	80	159
		$ 839	$ 38	$ 80	$ 721

December 31, 2017	Expiry	Total facilities	Banking commercial paper issued	Letters of credit and other facility draws	Net amounts available
Committed					
Syndicated bank credit facility[1]	November 2022	$ 600	$ -	$ -	$ 600
Uncommitted					
Bank credit facilities[2]	No expiry	200	-	66	134
Bank credit facility	No expiry	25	-	-	25
Total uncommitted		225	-	66	159
		$ 825	$ -	$ 66	$ 759

1 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 term 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).

2 The Company's uncommitted bank credit facility consists of five bilateral credit facilities (totaling $200 million) which are restricted to letters of credit. At December 31, 2018 letters of credit totaling $80 million have been issued and outstanding (2017 - $66 million) to meet the credit requirements of electricity market participants and to meet conditions of certain service agreements.

The Company has credit ratings of A- and A (low), assigned by Standard and Poor's and DBRS Limited, respectively.

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 (2017 - $2 billion). The Canadian base shelf prospectus expires in December 2019.

The undiscounted cash flow requirements and contractual maturities of the Company's non-derivative financial liabilities, including interest payments, are as follows:

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

At December 31, 2018:

	2019	2020	2021	2022	2023	2024 and thereafter	Total contractual cash flows
Trade and other payables[1]	$ 396	$ -	$ -	$ -	$ -	$ -	$ 396
Loans and borrowings[2]	70	33	222	35	32	2,322	2,714
Interest payments on loans and borrowings	122	120	119	111	109	1,661	2,242
Other liabilities[3]	51	73	15	7	1	4	151
	$ 639	$ 226	$ 356	$ 153	$ 142	$ 3,987	$ 5,503

At December 31, 2017:

	2018	2019	2020	2021	2022	2023 and thereafter	Total contractual cash flows
Trade and other payables[1]	$ 354	$ -	$ -	$ -	$ -	$ -	$ 354
Loans and borrowings[2]	442	32	33	207	34	2,131	2,879
Interest payments on loans and borrowings	131	112	111	109	102	1,547	2,112
Other liabilities[3]	50	23	58	15	7	4	157
	$ 977	$ 167	$ 202	$ 331	$ 143	$ 3,682	$ 5,502

1 Excluding accrued interest on loans and borrowings of $21 million (2017 - $30 million).
2 Excluding debt issuance costs of $14 million (2017 - $13 million).
3 Includes undiscounted liabilities for contingent consideration and Drainage transition cost compensation.

The Company's undiscounted cash flow requirements and contractual maturities in the next twelve months of $639 million (2017 - $977 million) are expected to be funded from operating cash flows, commercial paper issuance and the Company's credit facilities. In addition, the Company may issue medium-term notes or other instruments to fund its obligations or investments. The key factors in determining whether to issue medium-term notes are the cash requirements of the business, the expected interest rates for medium-term notes, the estimated demand by investors for EPCOR debt and the general state of debt capital markets.

28. Capital management

The Company’s primary objectives when managing capital are to safeguard the Company’s ability to continue as a going concern, pay dividends to its shareholder in accordance with the Company’s dividend policy, maintain an investment grade credit rating, and to facilitate the acquisition or development of projects in Canada and the U.S. consistent with the Company's growth strategy. The Company manages its capital structure in a manner consistent with the risk characteristics of the underlying assets. This overall objective and policy for managing capital remained unchanged in the current year from the prior year.

The Company manages capital through regular monitoring of cash and currency requirements by preparing short-term and long-term cash flow forecasts and reviewing monthly financial results. The Company matches the maturity profiles of financial assets and liabilities to identify financing requirements to help ensure an adequate amount of liquidity.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

The Company considers its capital structure to consist of long-term and short-term debt net of cash and cash equivalents and shareholder's equity. The following table represents the Company's total capital:

	2018	2017
Long-term Loans and borrowings (including current portion) (note 18)[1]	$ 2,714	$ 2,879
Cash and cash equivalents (note 10)	(32)	(338)
Net debt	2,682	2,541
Total equity	3,691	3,512
Total capital	$ 6,373	$ 6,053

1 Excluding debt issuance costs of $14 million (2017 - $13 million).

EPCOR has the following externally imposed financial covenants on its capital as a result of its credit facilities and outstanding debt:

- Maintenance of modified consolidated net tangible assets to consolidated net tangible assets ratio, as defined in the debt agreements, of not less than 80% (2017 - 80%);
- Maintenance of consolidated senior debt to consolidated capitalization ratio, as defined in the debt agreements, of not more than 75% (2017 - 75%) ;
- Maintenance of interest coverage ratio, as defined in the debt agreements of not less than 1.75 to 1.00 is not applicable as the Company has a debt rating of investment grade; and
- Limitation on external debt issued by subsidiaries.

These capital restrictions are defined in accordance with the respective agreements. For the years ended December 31, 2018 and 2017, the Company complied with all externally imposed capital restrictions.

29. Commitments, contingencies and guarantees

Commitments

The following represent the Company's commitments not otherwise disclosed in these consolidated financial statements:

At December 31, 2018:

	2019	2020	2021	2022	2023	2024 and thereafter	Total
Distribution and Transmission segment capital projects[1]	$ 74	$ 26	$ 4	$ 1	$ -	$ -	$ 105
Developer funded sanitary and stormwater capital projects[2]	30	23	-	-	-	-	53
Sanitary sewer rehabilitation and upgrade projects[3]	10	15	-	-	-	-	25
Water Services power contracts[4]	6	6	3	-	-	-	15
Water purchase and transportation of water agreements[5]	7	3	3	3	3	2	21
Billing and customer care services agreement[6]	4	3	3	-	-	-	10
Operating leases payable[7]	16	15	14	12	12	95	164
Other	9	-	-	-	-	-	9
	$ 156	$ 91	$ 27	$ 16	$ 15	$ 97	$ 402

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

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 plant 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 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 ten years, expiring on August 31, 2021.

7 Represents the Company's gross future operating leases payable for its head office, other office premises and leases of equipment and vehicles.

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 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 discussed below, are as follows:

	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

The Company has sub-leased a portion of the space under its head office lease to Capital Power under the same terms and conditions as the Company's lease with its landlord.

Effective November 1, 2013, the Company also sub-leased a portion of the space under its head office lease to a third party. The term of the sub-lease to the third party expires on October 31, 2023 with two renewal options of four years each.

Approximate future payments to the Company under the sub-leases receivable are as follows:

	Minimum lease receivable	
	2018	2017
Within one year	$ 5	$ 5
After one year but not more than five years	21	21
More than five years	32	37
	$ 58	$ 63

Contingencies

The Company and its subsidiaries are subject to various legal claims that arise in the normal course of business. Management believes that the aggregate contingent liability of the Company arising from these claims is immaterial and therefore no provision has been made.

Guarantees

The Company in the normal course of business issues payment guarantees and performance assurance bonds on behalf of its subsidiaries to meet the conditions of the agreements with third parties. At December 31, 2018, guarantees totaling $455 million (2017 - $421 million) have been issued to various third parties.

30. Segment disclosures

The Company operates in the following reportable business segments, which follow the organization, management and reporting structure within the Company.

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 includes the provision of design, build, finance, operating and maintenance services for municipal and industrial customers in Western Canada.

Distribution and Transmission

Distribution and Transmission is involved in the transmission and distribution of electricity within 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 for other municipal and commercial customers in Alberta.

Energy Services

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

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.

Other

Other includes all of the remaining business segments of the Company, which do not meet the criteria of a reportable business segment. Other primarily includes Ontario natural gas and electricity distribution businesses, financing income on the long-term receivable from Capital Power and the cost of the Company's net unallocated corporate office expenses.

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Year ended December 31, 2018	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
External revenues	$ 629	$ 447	$ 414	$ 242	$ 26	$ -	$ 1,758
Other income	-	-	-	-	2	-	2
Inter-segment revenue	-	11	15	-	1	(27)	-
Total revenues and other income	629	458	429	242	29	(27)	1,760
Energy purchases and system access fees	-	-	341	6	13	-	360
Other raw materials and operating charges	98	48	-	46	6	(7)	191
Staff costs and employee benefits expenses	134	86	29	32	43	(5)	319
Depreciation and amortization	144	88	6	46	15	-	299
Franchise fees and property taxes	32	78	-	8	1	-	119
Other administrative expenses	30	16	25	13	19	(15)	88
Operating expenses	438	316	401	151	97	(27)	1,376
Operating income (loss) before corporate charges	191	142	28	91	(68)	-	384
Corporate income (charges)	(33)	(22)	(8)	(6)	69	-	-
Operating income	158	120	20	85	1	-	384
Finance recoveries (expenses)	(78)	(61)	(4)	(42)	64	-	(121)
Income tax recovery (expense)	3	-	-	(10)	39	-	32
Net income	$ 83	$ 59	$ 16	$ 33	$ 104	$ -	$ 295
Capital additions	$ 290	$ 175	$ 2	$ 120	$ 29	$ -	$ 616

(Tabular amounts in millions of Canadian dollars unless otherwise indicated)

Year ended December 31, 2017	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
External revenues	$ 468	$ 501	$ 837	$ 225	$ 4	$ -	$ 2,035
Other income	-	-	-	-	12	-	12
Inter-segment revenue	-	202	12	-	-	(214)	-
Total revenues and other income	468	703	849	225	16	(214)	2,047
Energy purchases and system access fees	-	250	746	-	1	(193)	804
Other raw materials and operating charges	81	48	-	44	2	(5)	170
Staff costs and employee benefits expenses	103	83	27	32	40	(4)	281
Depreciation and amortization	88	86	6	43	13	-	236
Franchise fees and property taxes	25	79	-	8	-	-	112
Other administrative expenses	27	16	26	14	17	(12)	88
Operating expenses	324	562	805	141	73	(214)	1,691
Operating income (loss) before corporate charges	144	141	44	84	(57)	-	356
Corporate income (charges)	(24)	(25)	(10)	(6)	65	-	-
Operating income	120	116	34	78	8	-	356
Finance recoveries (expenses)	(66)	(57)	(3)	(40)	51	-	(115)
Fair value gain on available-for-sale investment in Capital Power reclassified from other comprehensive income	-	-	-	-	1	-	1
Income tax recovery	4	-	-	2	8	-	14
Net income	$ 58	$ 59	$ 31	$ 40	$ 68	$ -	$ 256
Capital additions	$ 210	$ 241	$ 4	$ 101	$ 10	$ -	$ 566

The Company's assets and liabilities by lines of business at December 31, 2018 and 2017 are summarized as follows:

December 31, 2018	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
Total assets	$ 6,331	$ 2,362	$ 221	$ 1,468	$ 3,938	$ (3,664)	$ 10,656
Total liabilities	4,844	1,590	202	1,194	2,799	(3,664)	6,965

December 31, 2017	Water Services	Distribution & Transmission	Energy Services	U.S. Operations	Other	Intersegment Elimination	Consolidated
Total assets	$ 6,074	$ 2,256	$ 184	$ 1,253	$ 3,532	$ (2,955)	$ 10,344
Total liabilities	4,685	1,514	168	1,034	2,386	(2,955)	6,832

Non-current assets by geography

	2018	2017
Canada	$ 8,743	$ 8,224
U.S.	1,431	1,213
	$ 10,174	$ 9,437