



Exhibit 5 – Cost of Capital and Capital Structure

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5	2	1	LT Intercompany Note – Credit Agreement



5.0 COST OF CAPITAL AND CAPITAL STRUCTURE

5.1 Cost of Capital

1. As outlined in EB-2010-0018, ENGLP's approved capital structure consists of 4% short-term debt with a return of 2.07%, 56% long-term debt with a return of 7.67% and 40% equity with a return of 9.85%. ENGLP proposes to continue with the current deemed capital structure for the period covering January 1, 2020 to December 31, 2024.

2. Evidence presented in this Exhibit is consistent with the Board's guidelines provided in the Report of the Board on Cost of Capital for Ontario's Regulated Utilities (the 2009 Report):

- The proposed cost of capital parameters used for equity, short term debt, and long term debt are equal to those identified in the Board's letter dated November 22, 2018¹ (the "2019 Cost of Capital"). These parameters are applicable for cost of service applications with rates that have effective dates in 2019.
- Historical debt sourced through affiliates of ENGLP is at rates no greater than the Board's prescribed interest rate at the period of time the debt was initiated.
- The long-term cost of debt uses the weighted average cost of debt when considering additions in 2019 and 2020.

3. ENGLP will update its cost of capital parameters to reflect future Board issued cost of capital parameters for rates with effective dates in 2020 prior to implementing the rates stemming from the Board's decision in this Application.

4. ENGLP is proposing no deviation from the Board's policy documented in the 2009 Report. Table 5.1-1 below summarizes the weighted average costs of capital.

¹ <https://www.oeb.ca/sites/default/files/Ltr-2018-Cost-of-Capital-Update-20171123.pdf>



**Table 5.1-1
 2020 Cost of Capital**

Capital Component	A Mid-Year Capital Structure / Rate Base Amount	B Ratio	C Cost Rate	D Return Component (WACC)	E Return Amount
1 Equity	6,542,301	40.00%	8.98%	3.59%	587,499
2 LT Debt	9,159,221	56.00%	3.85%	2.15%	352,296
3 ST Debt	654,230	4.00%	2.82%	0.11%	18,449
4 Total	16,355,752	100.00%		5.86%	958,244

Cost of Equity

5. For the purposes of preparing this Application, ENGLP has used the cost of capital parameters issued by the Board on November 23, 2018 which reflects a return on equity of 8.98%. If appropriate, ENGLP will update the return on equity to reflect future Board issued cost of capital parameters for cost of service rate applications with rates that have effective dates in 2020 prior to the issuance of the Board’s decision for this Application.

**Table 5.1-2
 Cost of Equity**

	A 2019 B	B 2020 T
1 Mid-year Rate Base	15,265,770	16,355,752
2 Equity % in Rate Base	40.00%	40.00%
3 Mid-year Equity Balance	6,106,308	6,542,301
4 Cost of Equity	8.98%	8.98%
5 Cost of Equity	548,346	587,499

Short-Term Cost of Debt

6. For the purposes of preparing this Application, ENGLP has used the cost of capital parameters issued by the Board on November 23, 2018 which reflects a return on short term debt of 2.82%. Short-term debt is typically used by ENGLP to finance capital projects. ENGLP will borrow all future short-term debt requirements from its parent company EPCOR Utilities Inc. (“EUI”). Short-term debt is typically refinanced the following year with a combination of cash, equity, and long-term debt that maintains a capital structure as close to the approved capital structure as possible. If appropriate, ENGLP will update the return on short-term debt to reflect future Board issued cost of capital parameters for cost of service rate applications with rates that have effective dates in 2020 prior to the issuance of the Board’s decision for this Application.



**Table 5.1-3
 Cost of Short-term Debt**

	A 2019 B	B 2020 T
1 Mid-year Rate Base	15,265,770	16,355,752
2 ST Debt % in Rate Base	4.00%	4.00%
3 Mid-year ST Debt Balance	610,631	654,230
4 ST Debt Interest Rate	2.82%	2.82%
5 Cost of ST Debt	17,220	18,449

Long-Term Debt

7. On November 29, 2017, ENGLP borrowed \$8.66 million from its parent company, EPCOR Utilities Inc., a copy of which is included in Exhibit 5, Tab 2, Schedule 1. The term of this note is 30 years with an interest rate of 3.83%. The derivation of the interest rate is as follows:

**Table 5.1-4
 Long-Term Cost of Debt – Promissory Note from Affiliate**

	A Dated	B Value
1 GoC 30 Year Rate	29-Nov-17	2.23%
2 ENGLP Credit Spread		1.55%
3 Transaction Fee		0.05%
4 Total Rate		3.83%

8. The credit spread of 1.55% is based on market rates observed in November 2017. ENGLP’s credit spread is based on a top-down internal credit analysis conducted by EPCOR’s Treasury group and is consistent with the process undertaken for all subsidiaries. The analysis considered many items including qualitative factors such as business and industry risk as well as quantitative factors such as financial and liquidity risk. Given ENGLP’s stable industry and scope of operations, the analysis results in a strong investment grade credit rating of BBB. This rating will be assessed periodically overtime to ensure its validity.

9. ENGLP targets a capitalization ratio consistent with current Board policy. The capital requirements of the business, as described in Exhibit 2, will be financed in part with long-term debt sourced from EUI on similar terms to that of the existing Promissory Note. The cost of new long-term debt issuances in this application is 4.13% which is consistent with the Board’s Cost



of Capital Parameters issued on November 22, 2018. If appropriate, ENGLP will update the cost of long-term debt to reflect future Board issued cost of capital parameters for cost of service rate applications with rates that have effective dates in 2020 prior to the issuance of the Board’s decision for this Application.

10. ENGLP expects to add \$0.998 million of new long-term debt in 2020 Test Year. When combined with the existing \$8.66 million promissory note, the weighted average cost of long-term debt in 2020 is estimated to be 3.85%. This is shown in Table 5.1-5 below:

**Table 5.1-5
 Weighted Average Cost of Long-Term Debt**

	A 2017 A	B 2018 F	C 2019 B	D 2020 T
1 Opening Balance		8,660,000	8,660,000	8,660,000
2 Borrowing		0	0	998,442
3 Repayment		0	0	0
4 Ending Balance	8,660,000	8,660,000	8,660,000	9,658,442
5 Mid-year Balance		8,660,000	8,660,000	9,159,221
6 Interest Expense		331,678	331,678	352,296
7 Weighted Average Interest Rate		3.83%	3.83%	3.85%

5.2 Capital Structure

11. Table 5.2-1 below summarizes the elements of the capital structure last approved by the Board in EB-2010-0018.

**Table 5.2-1
 Board Approved Cost of Capital for 2011 Test Year (EB-2010-0018)**

Capital Component	A Mid-year Balance	B % of Rate Base	C Cost Rate	D Requested Return
1 Long-term Debt	7,663,620	56.00%	7.67%	587,800
2 Short-term Debt	547,401	4.00%	2.07%	11,331
3 Total Debt	8,211,022	60.00%		599,131
4 Common Equity	5,474,014	40.00%	9.85%	539,190
5 Total Rate Base	13,685,036	100.00%		1,138,321

12. ENGLP is not proposing any deviations from the previously approved deemed capital structure of 40% equity, 56% long-term debt, and 4% short term debt. Since acquiring the assets of NRG in November 2017, there has been no material deviation in the financing of rate base assets as it relates to this capital structure.



13. Tables 5.2-2 to 5.2-4 detail the capital structure proposed by ENGLP in this Application.
14. Since acquiring the assets in November 2017, ENGLP has no preferred shares, has not retired any long-term debt, nor has it initiated any buy-back of units.
15. Table 5.2-5 provides the historical capital structure of the utility for periods 2011–2017 (October – September fiscal year) prior to ENGLP’s acquisition of the assets. Included in this table are ENGLP’s estimates of the effective annual cost of debt as well as the return on equity to the prior owner of the utility. Neither the debt of nor the definitive financial records of the utility were transferred to ENGLP at financial close. As such details regarding the historical cost of debt to the utility cannot be confirmed by ENGLP. ENGLP has estimated the effective annual cost of debt using historical RRR filings.

**Table 5.2-2
 Summary of Proposed Cost of Capital in 2020 Test Year (\$)**

	A	B	C	D
Capital Component	Mid-year Balance	% of Rate Base	Cost Rate	Requested Return
1 Long-term Debt	9,159,221	56.00%	3.85%	352,296
2 Short-term Debt	654,230	4.00%	2.82%	18,449
3 Total Debt	9,813,451	60.00%		370,745
4 Common Equity	6,542,301	40.00%	8.98%	587,499
5 Total Rate Base	16,355,752	100.00%		958,244

**Table 5.2-3
 Summary of Cost of Capital in 2019 Bridge Year (\$)**

	A	B	C	D
Capital Component	Mid-year Balance (\$0,000s)	% of Rate Base	Cost Rate	Requested Return
1 Long-term Debt	8,548,831	56.00%	3.83%	327,420
2 Short-term Debt	610,631	4.00%	2.82%	17,220
3 Total Debt	9,159,462	60.00%		344,640
4 Common Equity	6,106,308	40.00%	8.98%	548,346
5 Total Rate Base	15,265,770	100.00%		892,986



Table 5.2-4
Summary of Cost of Capital in 2018 Forecast

Capital Component	A Mid-year Balance	B % of Rate Base	C Cost Rate	D Requested Return
1 Long-term Debt	7,633,337	56.00%	3.83%	292,357
2 Short-term Debt	545,238	4.00%	2.29%	12,486
3 Total Debt	8,178,576	60.00%		304,843
4 Common Equity	5,452,384	40.00%	9.00%	490,715
5 Total Rate Base	13,630,960	100.00%		795,557

Table 5.2-5
Historical Capital Structure

	A September 2011	B September 2012	C September 2013	D September 2014	E September 2015	F September 2016	G September 2017
1 Approved Capital Structure							
2 Short-Term Debt	4%	4%	4%	4%	4%	4%	4%
3 Long-Term Debt	56%	56%	56%	56%	56%	56%	56%
4 Equity	40%	40%	40%	40%	40%	40%	40%
5 Capital Structure							
6 Short-Term Debt	0%	0%	0%	0%	3%	4%	8%
7 Long-Term Debt	55%	51%	48%	44%	54%	57%	52%
8 Equity	45%	49%	52%	56%	43%	39%	40%
9 Capitalization							
10 Short-Term Debt	0	0	0	0	370,325	502,683	1,000,634
11 Long-Term Debt	7,482,094	6,810,759	6,348,457	5,762,361	6,601,097	7,029,867	6,813,193
12 Equity	6,080,016	6,582,000	6,969,950	7,399,289	5,286,595	4,747,340	5,283,876
13 Total Capitalization	13,562,110	13,392,758	13,318,407	13,161,650	12,258,017	12,279,890	13,097,703
14 Realized ROE	4.44%	11.38%	6.96%	9.33%	-3.65%	9.22%	7.02%
15 Cost of Debt	6.30%	2.75%	3.50%	3.26%	2.39%	2.12%	3.21%

EPCOR Natural Gas Limited Partnership

PROMISSORY NOTE

To be Dated November 29, 2017

To Mature November 29, 2047

FOR VALUE RECEIVED the undersigned, EPCOR NATURAL GAS Limited Partnership, an Ontario limited partnership, (the “**Borrower**”) hereby promises to pay to the order of EPCOR Utilities Inc. (the “**Lender**”) at the City of Edmonton, Alberta, the Principal Sum, such Principal Sum to be payable per attached Schedule A. tomorrow

1. **Loan**

The Borrower and the Lender acknowledge that this promissory note (this “**Note**”) is being executed and delivered by the Borrower in favour of the Lender.

2. **Use of Proceeds**

The net proceeds will be used for general corporate purposes.

3. **Principal Sum**

For the purposes hereof “Principal Sum” shall mean the sum of \$8,660,000.00 in the lawful money of Canada (Canadian EIGHT MILLION SIX HUNDRED AND SIXTY THOUSAND AND ZERO CENTS).

4. **Term and Maturity**

The term of the loan is 30 years with final maturity date of November 29, 2047.

5. **Repayment**

The Borrower agrees to repay the Principal Sum in accordance with Schedule A.

6. **Prepayment**

The Borrower may, upon five (5) business days’ written notice to the Lender, prepay all or any part of the Principal Sum outstanding at the greater of the Canada Yield Price and the Principal Sum, whichever the Lender determines, together with accrued and unpaid interest to the date of prepayment. “Canada Yield Price”, for the purposes of this Note, means the price, equal to the net present value of all scheduled payments of interest (other than accrued and unpaid interest) and principal, using as a discount rate the sum of the Canada Yield and 50 basis points. “Canada Yield”, for the purposes of this Note, means, on any date, the arithmetic average (rounded to the nearest 1/100 of 1%) of the respective percentages determined by two Reference Dealers to be the yield to maturity, determined on such date in accordance with generally accepted financial practice, assuming semi-annual compounding, which a non-callable Government of Canada Bond would carry if issued, in Canadian dollars in Canada at 100% of its principal amount, on such date with a term to maturity approximately equal to the remaining term to maturity of this Note. A “Reference Dealer”, for the purposes of this Note, means any nationally recognized Canadian investment dealer selected by the Lender.

7. Interest

The Borrower agrees to pay interest at the rate of 3.83% per annum and payable semi-annually and in arrears, on May 29 and November 29 of each year commencing on May 29, 2018, in accordance with Schedule A. Upon default in payment of any payment when due hereunder, in addition to any other remedy of the Lender, the undersigned covenants to pay interest on the entire unpaid balance of the principal amount and accrued interest and on subsequent overdue interest at the rate aforesaid, both before and after judgment, until paid in full.

8. Representation and Warranties of the Borrower

The Borrower represents and warrants:

- a) it is a corporation incorporated under the laws of Ontario, and that it is duly registered or qualified to carry on business in all jurisdictions where the nature of its properties, assets or its business makes such registration or qualification necessary;
- b) the execution and delivery of this Note have been duly authorized by all necessary actions and does not (i) violate any law, regulation or rule by which it is bound, (ii) violate any provision of its constituting documents, by-laws or any unanimous shareholder agreement to which it is subject or (iii) result in a breach of, a default under, or the creation of any encumbrance on its properties and assets or under any agreement or instrument to which it is a party or by which it or any of its properties and assets may be bound or affected; and
- c) no event has occurred which constitutes, or which with giving of notice, lapse of time or other condition would constitute, a default having a material adverse effect on its financial condition under or in respect of any agreement, undertaking or instrument to which it or any of its properties or assets may be subject.

9. Covenants of the Borrower

- a) *Payment of Obligations.* The Borrower will duly and punctually pay all sums of money due and payable by it under this Note.
- b) *Maintenance of Existence.* The Borrower will take such action to preserve and maintain its existence and all of the material rights, qualifications, authorizations, privileges, licenses and franchises which are necessary in the normal conduct of its business, except where the failure to preserve and maintain such rights, qualifications, authorizations, privileges, licenses and franchises would not have a material adverse effect on the Borrower.
- c) *Other Information.* The Borrower will promptly provide to the Lender all information regarding the financial condition, business, property and operations of the Borrower that the Lender may reasonably request from time to time.
- d) *Records Access.* The Borrower will keep proper and adequate records and books of account in which true and complete entries are made in accordance with generally accepted accounting principles applied on a consistent basis, and upon reasonable notice, the Borrower will permit representatives of the Lender to examine, copy, make abstracts and audit relevant portions of its books, accounts and records, in each case, at the Borrower's expense.

- e) *Compliance with Constating Documents and Law.* The Borrower will comply at all times and in all respects with its constating documents and by-laws and with all applicable laws and environmental standards, except where the failure to so comply with such Applicable Law would not have material adverse effect on the Borrower.
- f) *Payment of Taxes.* The Borrower will pay all taxes, rates and assessments, government charges or levies lawfully levied, assessed or imposed upon the Borrower or upon its properties or any part thereof, as and when the same become due and payable, except to the extent and for so long as the Borrower shall contest in good faith its obligation to do so, provided that in such case the Borrower shall satisfy the Lender that any such contestation will involve no forfeiture of any material part of the assets of the Borrower and that it will exhibit to the Lender, when required, the receipts and vouchers establishing such payment.
- g) *Notice of Default.* The Borrower will, upon obtaining knowledge thereof, provide prompt notice in writing to the Lender of any default of any of its obligations under this Note.
- h) *Notice of Litigation.* The Borrower will provide the Lender with prompt notice in writing of any action, suit, litigation or other proceeding which is commenced or, to the knowledge of any senior officer of the Borrower after due inquiry, threatened against the Borrower which would have a material adverse effect on the financial condition of the Borrower.

10. **Waiver of Demand, etc.**

The Borrower hereby waives presentment, demand, protest and notice of any kind in connection with the delivery, acceptance, performance and enforcement of the Note.

11. **Default**

This Note shall become and be due and payable as hereafter provided if any one or more of the following events (herein called "**Events of Default**") shall have occurred and be continuing:

- (a) if default shall be made in the due and punctual payment of the principal or interest of this Note when and as the same shall become due and payable whether at the maturity hereof, by acceleration or otherwise, and such default shall have continued unremedied for a period of fourteen (14) days after written notice thereof has been given to the Borrower by the Lender;
- (b) if default shall be made in the performance or observance of any of the covenants, agreements or conditions contained in the Note and the default shall have continued unremedied for a period of thirty (30) days after written notice thereof has been given to the Borrower by the Lender;
- (c) if the Borrower defaults under any debt in excess of \$1,000,000 and as a result of which all such debt becomes due and payable immediately, or the creditor is entitled to exercise any remedies against the Borrower;
- (d) if the Borrower shall admit in writing its inability to pay its debts generally as they become due; file a petition in bankruptcy or a petition to take advantage of any insolvency act; make an assignment for the benefit of its creditors; consent to the appointment of a receiver of itself or of the whole or any substantial part of its property; on a petition in bankruptcy filed against it; or file a petition or answer seeking reorganization or arrangement under Canadian bankruptcy laws;

- (e) if a court of competent jurisdiction shall enter an order, judgement or decree appointing without consent of the Borrower, a receiver of the Borrower or of the whole or any substantial part of the property of the Borrower or approving a petition filed against the Borrower or seeking reorganization or arrangement of the Borrower under any applicable law or statute of Canada or any province thereof, and the order, judgement or decree shall not be vacated or set aside or stayed with thirty (30) days from the date of the entry thereof;
- (f) if under the provisions of any other law for the relief or aid of debtors, and court of competent jurisdiction shall assume custody and control of the Borrower or of the whole or any substantial part of the property of the Borrower and custody or control shall not be terminated or stayed within thirty (30) days from the date of assumption of custody or control; or
- (g) if there is a change in ownership of the Borrower.

The Principal Sum and all interest accrued and remaining outstanding at the time of such Event of Default, upon notice in writing given by the Lender to the Borrower, shall immediately become due and payable by the Borrower to the Lender, provided that such acceleration of the indebtedness of the Borrower to the Lender with respect the Event of Default listed in item (d) shall be effective immediately upon the occurrence of such Event of Default without the necessity of such notice being such by the Lender to the Borrower. The Lender may proceed to protect and enforce its right either by suit in equity and/or by action and law, whether for the specific performance of any covenant or agreement contained in this Note or in Aid of the exercise of any power granted in the Note, or proceed to enforce the payment of this Note or to enforce any other legal or equitable rights of the Lender.

12. Notices

All notices and demands provided for herein shall be in writing and shall be personally delivered or mailed by prepaid registered mail to the Borrower at 2000, 10423 101 Street, Edmonton, Alberta, T5H 0E8 or to such other address as either party may from time to time designate to the other party by notice in the aforesaid manner. Any notice or demand so personally delivered shall be deemed to have been validly and effectively given and received on the date of such delivery. Any notice or demand so mailed shall be deemed to have been validly and effectively given and received on the fifth day following the date of mailing.

13. Assignment

Neither the Borrower nor the Lender may assign any of their respective rights or obligations hereunder without the prior written consent of the Borrower (in the case of any assignment by the Lender) or the Lender (in the case of any assignment by the Borrower).

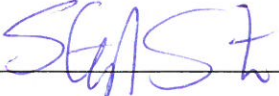
In addition, the Lender acknowledges that the Borrower may be amalgamated (any such amalgamated company being herein called "Amalco"). Upon such amalgamation Amalco shall possess, and be subject to, all rights, privileges, liabilities and obligations of the Borrower hereunder and all references to the Borrower shall be deemed to refer to "Amalco".

14. Governing Law

This Note shall be construed, interpreted and enforced in accordance with, and the rights and obligations of the parties shall be governed by the laws of the Province of Alberta and the federal laws of Canada applicable therein and each party hereby irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of such province and all courts competent to hear appeals therefrom.

The undersigned agrees to the foregoing terms. DATED and executed as of the 29th day of November 2017.

EPCOR Natural Gas Limited Partnership, by its general partner, EPCOR
Ontario Utilities Inc.

Per: 

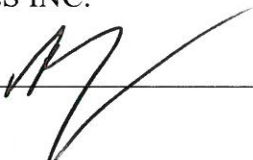
Steve Stanley
Senior Vice President Commercial Services

Per: 

Katy Brown
Controller

The undersigned agrees to the foregoing terms. DATED and executed as of the 29th day of November 2017.

EPCOR UTILITIES INC.

Per: 

Guy Bridgeman
Senior Vice President & Chief Financial Officer

Per: 

Pamela Zrobek
Treasurer

Schedule A - Payment Schedule for Promissory Note to EPCOR Utilities Inc.

issued by

EPCOR Natural Gas Limited Partnership, by its general partner, EPCOR Ontario Utilities Inc.

Cdn.\$8.66 Million 30 Year Note @ 3.83% Due Nov 29, 2047

<u>Date</u>	<u>Opening Principal</u>	<u>Interest Rate</u>	<u>Total Payment</u>	<u>Principal Payment</u>	<u>Interest Payment</u>	<u>Closing Principal</u>
29-Nov-17	8,660,000	3.83%	-	-	-	8,660,000
29-May-18	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-18	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-19	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-19	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-20	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-20	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-21	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-21	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-22	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-22	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-23	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-23	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-24	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-24	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-25	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-25	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-26	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-26	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-27	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-27	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-28	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-28	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-29	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-29	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-30	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-Nov-30	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000
29-May-31	8,660,000	3.83%	(165,839)	-	(165,839)	8,660,000