Exhibit 2: Rate Base and Utility System Plan

2.1 Overview

1. The purpose of this evidence is to confirm the rate base during the 10-year rate stability period that is supported by the revenue requirement as established by the Board's Southern Bruce Expansion Decision. The capital expenditures detailed in this Exhibit are those necessary to construct and maintain the system detailed in EPCOR's CIP and leave to construct application (EB-2018-0263). As the Southern Bruce system is a greenfield system it has no existing capital assets. The rate base values in this Exhibit will also establish a frame of reference for EPCOR's rate base in future rate applications that address the period subsequent to the rate stability period.

2. The forecasted rate base that serves the Southern Bruce communities is broken down by gross plant, accumulated depreciation and working capital. The rate base for the year 2028 is projected to be $54.9M. The projected rate base is calculated as EPCOR's average in-service gross fixed assets and working capital during the year offset by the accumulated depreciation of those fixed assets. EPCOR uses the half-year rule for calculating the average in-service fixed assets. Table 2-1 below summarizes EPCOR's rate base during the 2019 to 2028 rate stability period. The projected continuity schedules by major fixed asset groups are provided in Exhibit 2 Tab 1 Schedule 2.

Table 2-1 Summary of Projected Utility Rate Base (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Fixed Assets**										
Row 3	Gross Book Value	21,124	51,724	62,733	65,176	66,884	68,126	68,778	69,162	69,762	70,287
Row 4	Accumulated Depreciation	-296	-1,305	-2,872	-4,616	-6,418	-8,262	-10,131	-12,014	-13,921	-15,850
Row 5	Net Book Value	20,828	50,418	59,861	60,560	60,466	59,865	58,647	57,148	55,841	54,436
Row 6											
Row 7	**Allowance for Working Capital**										
Row 8	Working Capital	93	244	326	381	419	454	467	473	479	504
Row 9											
Row 10	**Rate Base**										
Row 11	Rate Base	20,920	50,663	60,186	60,940	60,885	60,319	59,114	57,621	56,320	54,940

2.2 Gross Fixed Assets and Accumulated Depreciation

1. The total gross fixed assets at the end of 2028 are projected to be $92.7M. The majority of this amount is expected to be deployed in 2019 and 2020 as EPCOR constructs the bulk of the system infrastructure. EPCOR intends to focus its capital expenditures in fixed asset on natural gas distribution functions and is not contemplating owning assets for upstream functions including transmission and storage. EPCOR will be making a contribution in aid of construction capital as determined by Union that supports Union's Owen Sound Transmission Reinforcement and the Dornoch Meter and Regulator Station. The summarized continuity schedule of all fixed asset is provided in Table 2-2.

Table 2-2: Projected Fixed Assets Including External Funded Fixed Assets (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	58,124	83,528	86,596	88,413	90,013	90,897	91,316	91,665	92,516
Row 4	Capital Expenditure	57,200	24,882	2,873	1,639	1,422	716	255	185	677	33
Row 5	Interest During Construction	778	374	45	27	24	13	6	5	13	3
Row 6	Capitalized Overhead	146	148	150	152	153	155	157	159	161	163
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	58,124	83,528	86,596	88,413	90,013	90,897	91,316	91,665	92,516	92,715
Row 10											
Row 13	**Accumulated Depreciation**										
Row 14	Opening Balance	0	-811	-2,749	-5,048	-7,417	-9,833	-12,283	-14,752	-17,230	-19,745
Row 15	Depreciation	-811	-1,939	-2,299	-2,368	-2,416	-2,451	-2,468	-2,478	-2,515	-2,524
Row 16	Retirement	0	0	0	0	0	0	0	0	0	0
Row 17	Closing Balance	-811	-2,749	-5,048	-7,417	-9,833	-12,283	-14,752	-17,230	-19,745	-22,269
Row 18											
Row 19	Net Fixed Assets	57,313	80,779	81,548	80,997	80,180	78,614	76,564	74,435	72,771	70,446

2. On December 8, 2017, a sister company of EPCOR, EPCOR Southern Bruce Inc. was awarded a grant of up to $22M from the Infrastructure Ontario Natural Gas Grant Program ("NGGP"). This grant funding was intended to be used to fund construction of the system. See Exhibit 1, External

Funding, for additional details. The summarized continuity schedule of the external funded fixed assets is provided in Table 2-3.

Table 2-3: Projected External Funded Fixed Assets (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	15,876	22,329	22,329	22,329	22,329	22,329	22,329	22,329	22,329
Row 4	Grant Funding	15,642	6,358	0	0	0	0	0	0	0	0
Row 5	Reduction in Interest During Construction	234	95	0	0	0	0	0	0	0	0
Row 6	Retirement	0	0	0	0	0	0	0	0	0	0
Row 7	Closing Balance	15,876	22,329	22,329	22,329	22,329	22,329	22,329	22,329	22,329	22,329
Row 8											
Row 9	**Accumulated Depreciation**										
Row 10	Opening Balance	0	-218	-731	-1,321	-1,911	-2,502	-3,092	-3,682	-4,272	-4,862
Row 11	Depreciation	-218	-513	-590	-590	-590	-590	-590	-590	-590	-590
Row 12	Retirement	0	0	0	0	0	0	0	0	0	0
Row 13	Closing Balance	-218	-731	-1,321	-1,911	-2,502	-3,092	-3,682	-4,272	-4,862	-5,452
Row 14											
Row 15	Net Fixed Assets	15,658	21,598	21,008	20,417	19,827	19,237	18,647	18,057	17,467	16,877

3. As detailed in Exhibit 3, EPCOR has adjusted its revenue requirement to exclude the value of external funding and has not included any externally funded assets in the calculation of the rate base from which it earns a return. The continuity schedule of fixed assets net of the externally funded assets is provided in Table 2-4.

Table 2-4: Projected Fixed Assets Net of Externally Funded Fixed Assets (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	42,248	61,199	64,267	66,084	67,684	68,568	68,987	69,336	70,187
Row 4	Capital Expenditure	41,558	18,524	2,873	1,639	1,422	716	255	185	677	33
Row 5	Interest During Construction	544	279	45	27	24	13	6	5	13	3
Row 6	Capitalized Overhead	146	148	150	152	153	155	157	159	161	163
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	42,248	61,199	64,267	66,084	67,684	68,568	68,987	69,336	70,187	70,386
Row 10											
Row 13	**Accumulated Depreciation**										
Row 14	Opening Balance	0	-592	-2,018	-3,727	-5,505	-7,331	-9,192	-11,070	-12,958	-14,883
Row 15	Depreciation	-592	-1,425	-1,709	-1,778	-1,826	-1,860	-1,878	-1,888	-1,925	-1,934
Row 16	Retirement	0	0	0	0	0	0	0	0	0	0
Row 17	Closing Balance	-592	-2,018	-3,727	-5,505	-7,331	-9,192	-11,070	-12,958	-14,883	-16,817
Row 18											
Row 19	Net Fixed Assets (Year End)	41,656	59,181	60,540	60,579	60,352	59,377	57,917	56,378	55,304	53,569
Row 20	Net Fixed Assets (Mid-year)	20,828	50,418	59,861	60,560	60,466	59,865	58,647	57,148	55,841	54,436

4. The mid-year net fixed assets funded by EPCOR are projected to be $54.4M by 2028, which reconciles with the net book value of fixed assets used for the calculation of rate base in row 5 of Table 2-1.

5. Continuity schedules of fixed assets by major asset groups are provided in Exhibit 2 Tab 1 Schedule 2.

6. The average in-service net fixed assets in year 2019 are projected to be $20.8M and are mainly composed of the high pressure steel mainline connecting the Dornoch Meter and Regulator Station to north of Kincardine, the mainline system bypass around Kincardine, the distribution mains, service lines, meters and the measuring stations in the municipality of Kincardine.

7. The average in-service net fixed asset in year 2020 is projected to be $50.4M. The increase in net fixed asset is mainly due to the construction of the mainline from the north of Kincardine to

Lucknow, the distribution mains, service lines, meters and the measuring stations in the municipalities of Arran-Elderslie and Huron-Kinloss.

8. The projected increases in average in-service net fixed assets from 2021 to 2028 are mainly due to the growth in customers, which require additional distribution mains, service lines and meters. The increase in rate base is offset by the depreciation of in-service fixed assets.

2.3 Working Capital

1. Working capital is the funding necessary to support ongoing business activities. It arises as a result of the timing differences between the rendering/incurrence of services/expenses and receiving/making the payments. Given that EPCOR has no operating history, it is proposing that working capital during the rate stability period be 7.5% of its non-distribution costs and distribution related OM&A expenses as allowed by the OEB for electricity distributors[1]. This percent is consistent with the value EPCOR used in determining its revenue requirement during the CIP process. Table 2-5 details the projected working capital over the rate stability period. EPCOR proposes to conduct a lead lag study at the time of its rate application for the period after the rate stability period.

Table 2-5: Projected Working Capital Requirements (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1	Working Capital for Non-distribution Costs	26	99	156	202	233	255	262	266	269	272
Row 2	Working Capital for O&M	66	145	170	178	186	199	205	207	210	232
Row 3	Working Capital Requirement	93	244	326	381	419	454	467	473	479	504
Row 4											
Row 5	Working Capital as % of Rate Base	0.44%	0.48%	0.54%	0.62%	0.69%	0.75%	0.79%	0.82%	0.85%	0.92%

[1] Handbook for Utility Rate Applications, Appendix 3: Rate-setting Policies, October 13, 2016, page 6.

2.4 Capitalization Policy

Topic	Capitalization	Number	FA-004
Category	Property, Plant and Equipment Other Intangible Assets	Revision Number	4
Issued by	Accounting Standards Committee	Issued and Effective	23-Sep-04
Approved by	Corporate Controller	Revised	June 24, 2015

Purpose and Scope

1. The capitalization policy functions as a guide in respect of what should be recognized as a tangible asset or intangible asset other than goodwill. The intent is to ensure that the fixed assets are properly reported in the financial statements in accordance with International Financial Reporting Standards (IFRS).

2. This policy refers to capitalization of tangible assets and intangible assets other than goodwill, primarily software.

Definitions and Background

Asset - "a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity"[2]

Property, Plant and Equipment (PP&E) - "tangible items that: are held for use in the production or supply of goods and services, for rental to others, or for administrative purposes and; are expected to be used during more than one period."[3]

Capital Asset Contributions – are transfers from customers of items of property, plant and equipment that must be used either to connect those customers to a network or to provide them with ongoing access to supply of goods or services, or to do both. Alternatively, cash may be received from customers for the acquisition or construction of such of property, plant and equipment. Such capital asset contributions are recorded as deferred revenue.

[2] IFRS Framework for the Preparation and Presentation of Financial Statements F.49(a)
[3] IAS 16.6

Capital Spares – major spare parts and stand-by equipment qualify as PP&E when an entity expects to use them during more than one period, or if the spare part can be used only in connection with an item of PP&E they are capitalized.

Capitalized Interest – all interest attributable to a qualifying asset prior to the point in time when the asset is substantially complete and ready for productive use.

Cost - " is the amount of cash or cash equivalents paid or the fair value of the other consideration given to acquire an asset at the time of its acquisition or construction or, where applicable, the amount attributed to that asset when initially recognised in accordance with the specific requirements of other IFRSs, e.g. IFRS 2 *Share-based Payment*."[4] The cost of an asset may include site preparation costs incurred to remove a previous asset when it is located at the site of the replacement asset.[5]

Capital work-in-progress (CWIP) – an account that includes all costs of capital projects that are incomplete or not yet in service at year-end. Capitalized interest, if any, is included in CWIP.

Qualifying asset – "an asset that necessarily takes a substantial period of time to get ready for its intended use or sale."[6] For EPCOR, a qualifying asset is determined as a capital project that takes over 6 months to construct or get ready for use.

3. Useful life – "is:

   i. the period over which an asset is expected to be available for use by an entity; or

   ii. the number of production or similar units expected to be obtained from the asset by the entity."[7]

4. The useful life can be either physical or economic. For example, the end of physical life will generally be reached when the asset is no longer capable of performing its intended function

[4] IAS 16.6
[5] IAS 16.17(b)
[6] IAS 23.5
[7] IAS 16.6

because of physical wear. The end of the economic life of an asset is generally reached when a replacement asset is more economical to use than the current asset in place.

Detailed Capitalization Criteria

5. An asset comes into existence when the expenditure results in a tangible item with a useful life greater than one year.

6. An expenditure that results in extending the original life of an existing asset should be capitalized.

7. A cost incurred to ensure that an asset reaches its projected life (i.e. normal O&M) will not be capitalized. Such a cost is an expense of the period.

8. An expenditure should be capitalized if it enhances the capacity or efficiency of an existing asset.

9. An expenditure which is determined to be an asset under FA-005 – Project Development Costs Policy should be capitalized.

10. Related components purchased simultaneously with the intention of connecting them for use (e.g. computers) will be capitalized as a single asset if the combined cost exceeds the capitalization dollar threshold. Unrelated projects should not be grouped together so as to meet or exceed the threshold outlined in Capitalized Dollar Threshold below.

Capitalized Dollar Threshold

11. All projects meeting the capitalization criteria should be capitalized if the cost exceeds $5,000.

12. All land has to be capitalized regardless of the amount.

Capital Spares

13. Capital spares which meet the definition in Capital Spares above and exceed $5,000 should be capitalized.

Capital Work in Progress (CWIP)

14. An asset is transferred to PPE when it moves into service. This occurs when an asset "is available for use, i.e. when it is in the location and condition necessary for it to be capable of operating in the manner intended by management."[8]

15. As noted in Depreciation and Amortization Policy FA-007 paragraph 5.4, the half year rule may be used for calculating depreciation. If this is the case, a July 1 date is used as the in service date for calculating depreciation.

Capitalized Interest

16. Capitalized interest is calculated for all business units.

17. Capitalized interest is added to the value of the asset.

18. Capitalized interest is only computed on qualifying assets. Interest should be calculated on a periodic basis as determined by the respective business unit controller's professional judgement, but as a minimum on a quarterly basis.

19. Capitalization of interest ceases when an item of property, plant and equipment is substantially complete and ready for productive use.

References

- IFRS – Framework
- IFRS - IAS 16 – Property, Plant and Equipment
- IFRS - IAS 23 – Borrowing Costs
- IFRS - IAS 38 – Intangible Assets

[8] Source: IFRS Section 16.55

2.5 Project Development Cost Policy

Topic	Project Development Costs	Number	FA-005
Category	Property, Plant and Equipment & Other Intangible Assets		
Issued by	Accounting Standards Committee	Issued and Effective	Sep 23, 2004
Approved by	Corporate Controller	Revised	Oct 9, 2011

Purpose

1. The accounting objective for project development costs (including preliminary feasibility research, site inspections, permitting, etc.) is to properly classify such costs as either an asset or an expense, given the nature and tenure of the particular project.

2. IAS 16.7 states that the cost of an item of property, plant and equipment (PP&E) shall be recognised as an asset if, and only if:

    i. it is probable that future economic benefits associated with the item will flow to the entity; and

    ii. the cost of the item can be measured reliably.

3. This policy provides guidance as to how the project development stages meet the recognition criteria.

Scope

4. This policy applies to costs incurred by EPCOR Utilities Inc. and its subsidiaries (EUI) in connection with developing an asset or the acquisition of an asset (property, plant and equipment and intangible assets such as software). Normally, costs related to the project will occur over a period of time and the project itself may terminate at any time if it is determined that it will not provide sufficient future economic benefits.

5. Assets that are capitalized in connection with this policy are subject to the capitalization criteria in the FA-004 Capitalization and Acquisition Costs policy. Similar criteria will apply to intangible assets such as software.

Types of Projects

6. EUI undertakes a variety of types of projects. The types that are contemplated in this policy or other policies and the business units that undertake them are as follows:

7. Customer acquisition projects (Energy Services, Water Services) – refer to separate policy (FA-002 Customer Acquisition Costs policy).

8. PP&E/plant asset projects.

9. Information system (IS) projects including the development, betterment or acquisition of software for internal use.

10. Business process reengineering projects which could also include an element of development, betterment or acquisition of equipment and/or software for internal use.

Definitions

Assessment stage – prior to time when construction, development or acquisition of specific PP&E or software becomes probable.

Pre-acquisition stage – construction, development or acquisition of specific PP&E or software is probable but has not yet occurred.

Acquisition or construction or application development stage – acquisition has occurred or development or construction has commenced but PP&E or software is not yet substantially complete and ready for its intended use.

In-service or post-implementation/operation stage – subsequent to when PP&E or software is substantially complete and ready for its intended use.

Probable – likely to occur, management estimate of greater than 80% for projects where management can make an assessment. For projects requiring regulatory approval, it is not likely that management can make this assessment as they have no control over the outcome.

Directly identifiable costs include only:

i. incremental direct costs incurred in transactions with independent third parties related to specific assets,

ii. certain costs directly related to specified activities (such as employee payroll and payroll benefit-related costs and inventory used directly in the construction or installation of assets) performed by the entity for the specific asset, and payments to obtain an option to acquire an asset.

Policy

11. Assessment stage costs, except for payment to obtain an option to acquire an asset, should be charged to expense as incurred.

12. Pre-acquisition and acquisition-or-construction stage costs should be charged to expense as incurred unless the costs are directly identifiable with the specific asset.

13. Costs related to assets that are incurred during the in-service stage, including costs of normal, recurring, or periodic repairs and maintenance activities, should be charged to expense as incurred unless the costs are incurred for (1) the acquisition of additional assets or (2) the replacement of the existing asset.

14. Capitalized pre-acquisition costs should be included in the cost of the specific asset upon its acquisition or development. If it becomes no longer probable that the specific asset will be acquired or developed, the pre-acquisition stage costs previously capitalized related to the specific asset should be reduced to the lower of cost or fair value less cost to sell. Normally, the fair value of those pre-acquisition stage costs (excluding option costs) is zero (that is, the costs of the asset would be charged to expense), unless management, having the authority to approve the action, has committed to a plan to sell the asset and the proceeds can be reasonably estimated. This determination would be made at each quarterly and annual reporting period.

15. Refer to FA-004 Capitalization policy for capitalization criteria including thresholds.

16. Refer to Exhibit 2 Tab 1 Schedule 3, PP&E/Plant Asset Projects Capitalization/Expense Matrix Appendix A, for further guidance in applying these policy statements.

17. The cost of business process reengineering activities, whether performed by employees or by third parties, should be expensed as incurred. This also applies when the business process reengineering

activities are performed in conjunction with the acquisition, development or implementation of software for internal use.

18. Costs of the acquisition, construction or development of property, plant and equipment of a business process reengineering project should be accounted for in accordance with the policy for PP&E/Plant Asset Projects as above and with the capitalization criteria in FA-004 Capitalization policy.

19. Costs of activities directly attributable to the development, betterment or acquisition of software for internal use, should be accounted for on a stage or time-line basis as follows:

    i. IS software application development stage costs should be charged to expense as incurred unless the costs are directly identifiable with specific software in which case the costs can be capitalized.

    ii. IS software application post-implementation/operation stage costs should be expensed as incurred.

20. Refer to Exhibit 2 Tab 1 Schedule 3, IS Projects Capitalization/Expense Matrix Appendix B, for further guidance in applying these policy statements

References

- IAS 16 – Property, Plant and Equipment
- IAS 38 – Intangible Assets

2.6 Capitalization of Overhead

1. Capital overhead includes the cost of certain supporting functions which are capitalized and charged to capital projects. These functions include, senior management oversight, supervision, project governance, accounting, and dedicated health and safety resources. Capital overhead recoveries reflect a transfer from operating expenses to capital projects as indirect costs. The capital overhead allocation is meant to allocate employee costs, for employees who support capital projects that do not directly charge time to a specific capital project.

2. The capital overhead rate will be calculated by dividing the capital overhead cost pool by the total direct labour transfers made to capital projects for the business unit. The capital overhead pool will be made up of employee costs that support capital projects but do not directly charge to a specific capital project. Direct labour will be used as the cost driver, because this more accurately reflects higher overhead for projects that require the most internal labour and supervision.

3. Given that EPCOR's Southern Bruce system has no operating history to draw on in order to determine a burden rate to use in the forecasting capitalization of overhead, EPCOR used the following approach in its CIP.

4. During the rate stability period, EPCOR expects to have one FTE who will augment the project management of our construction partner during the initial period of system build out and then manage construction and maintenance capital during the remainder of the rate stability period. The cost associated with this FTE has been capitalized as overhead which is then allocated to all distribution fixed assets proportionately to the direct capital cost of the fixed asset. Table 2-6 below summarizes the projected direct capital cost and the capitalized overhead.

Table 2-6: Direct Capital Cost and Capitalized Overhead (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Capital Cost Type	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1	Direct Capital Cost	57,200	24,882	2,873	1,639	1,422	716	255	185	677	33
Row 2	Capitalized Overhead	146	148	150	152	153	155	157	159	161	163
Row 3	Sum	57,346	25,030	3,023	1,791	1,576	872	413	344	838	197

2.7 Capital Expenditures

Overview

5. The purpose of this evidence is to provide an overview of EPCOR's capital budget from 2019 to 2028. With the exception of the Contribution in Aid of Construction ("CIAC") to Union, this capital budget reflects the values used when EPCOR developed its revenue requirement as included in its CIP. The CIAC to Union represents the contribution Union has requested related to the Owen Sound Transmission Reinforcement and Dornoch Meter and Regulator Station. The value of the contribution is as detailed in Table 2-7 below.

Table 2-7: Contribution in Aid of Construction to Union Gas (Thousands of Dollars)

		Col. 1
	Description	Cost
Row 1	Advancement Costs of Owen Sound Reinforcement	3,339
Row 2	Direct Assignment Costs of the Owen Sound System (7% of the project cost)	3,829
Row 3	*Total Union Costs*	**7,168**
Row 4		
Row 5	Upfront Capital: Aid to PI 1.0	2,363
Row 6	Upfront Capital: Transfer Station Cost	2,935
Row 7		
Row 8	**Total Upfront Capital Paid by EPCOR**	**5,298**

Table 2-8 summarizes the capital budget by major fixed asset groups.

Table 2-8: Summary of Capital Budget (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Asset Group	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1	CIAC to Union - Owen Sound Reinforcement	2,363	0	0	0	0	0	0	0	0	0
Row 2	CIAC to Union - Station	2,935	0	0	0	0	0	0	0	0	0
Row 3	Distribution Mains - Metallic	36,824	0	0	0	0	0	0	0	0	0
Row 4	Distribution Land Rights	26	26	0	0	0	0	0	0	0	0
Row 5	Distribution Mains - Plastic	11,144	19,878	124	126	130	147	194	162	160	93
Row 6	Distribution Services Plastic	1,804	2,966	2,116	1,248	1,085	543	164	137	135	78
Row 7	Distribution Meters	573	941	677	416	361	181	55	46	45	26
Row 8	Distribution Measuring and Regulating Equipt.	1,209	895	106	0	0	0	0	0	0	0
Row 9	Vehicles	468	0	0	0	0	0	0	0	499	0
Row 10	Machinery and Equipment	0	323	0	0	0	0	0	0	0	0
Row 11	Sum	57,346	25,030	3,023	1,791	1,576	872	413	344	838	197

Treatment of Construction Work in Progress

6. Consistent with EPCOR's capitalization policy, the costs associated with the construction of fixed assets that are not yet in service are recognized in the Construction Work in Progress account ("CWIP"). Interest during Construction ("IDC") accumulates at the OEB prescribed rate for the time the qualified capital work is incomplete. Fixed assets that are substantially complete and available for use are removed from CWIP.

7. Each calendar year, the capital projects budgeted for that year are expected to begin and complete construction within the year. Therefore, the capital expenditures would be added into and removed from the CWIP account in the year they are spent. Construction seasons are expected to span approximately eight months, from the beginning of April to the end of November. For the purpose of forecasting EPCOR's capitalized IDC during the rate stability period, IDCs from all Capital Expenditures are assumed to be accumulated at the OEB prescribed rate for six months to reflect that construction of the more expensive high pressure mainline assets will take place early the construction season. The fixed assets coming into service will have gross book values equaling their Capital Expenditure and the associated IDC. External funding reduces the EPCOR's Capital Expenditure and the IDC associated with the reduction.

Key Drivers

8. The capital budgets for 2019 and 2020 are mainly driven by the construction of the high pressure main line that supplies gas from the Dornoch Meter and Regulator Station to the serviced communities, the main line system bypass, contribution in aid of construction to Union for its Oven Sounds Reinforcement project, the distribution mains in the serviced communities, and customer related capital including service lines and meters. The capital budgets for 2021 to 2028 are mainly driven by distribution mains, service lines and meters required to complete new customer connections.

2.8 Utility System Plan

1. EPCOR has developed an initial Utility System Plan ("USP") and included it in this Application as Exhibit 2 Tab 2 Schedule 1. The initial USP details EPCOR's asset management policy, strategy and objectives as well as customer engagement activities and a description of its investment planning process. As a greenfield project, by necessity the majority of EPCOR's capital spending activities over the 10-year rate stability period are focused on constructing the distribution system as outlined in its CIP and leave to construct application[9] and connecting customers to that system. The communities to be covered by the system are as determined by the Board's Southern Bruce Expansion Decision and the customer connections are as detailed in EPCOR's CIP and included in Exhibit 3.

2. As a new utility, the historical information, metrics, and analysis that would typically form a material segment of a USP, and serve as the basis for forward looking capital spending plans, do not yet exist. The basis of this initial UPS is the system as formed the basis of the Board's Southern Bruce Expansion Decision and EPCOR's leave to construct application (EB-2018-0263). For this reason, EPCOR is proposing that it file an enhanced USP in 2025 that would be supported by 5 full years of data, including several years after initial system construction and rapid customer growth. This would allow EPCOR to develop sections of the plan including an engineering plan that would highlight potential system enhancements, how additional investments would be selected and prioritized, including addressing potential customer concerns and areas that might require strengthening as well as linkages and trade-offs between capital projects and ongoing OM&A spending.

Asset Management Plan

3. The USP includes EPCOR's initial asset management plan, including asset management philosophy, strategy and objectives as well as an overview of the assets to be managed. In EPCOR's enhanced USP, which it is proposing to file in 2025, the asset management plan will include a more detailed

[9] EB-2018-0263

asset registry of the system as built and how this registry will be used to plan for new and renewal capital and maintenance expenditures.

Service Quality and Reliability Performance

4. As a greenfield system EPCOR does not have any historical years from which to draw data regarding its service quality performance and measurement requirements. Exhibit 1 Tab 2 Schedule 2 includes EPCOR's proposal for a scorecard that would measure the utility's quality and reliability performance.

Fixed Asset Continuity Schedules by Major Asset Group

Table 2-9: CIAC to Union – Owen Sound Reinforcement

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	2,363	2,363	2,363	2,363	2,363	2,363	2,363	2,363	2,363
Row 4	Capital Expenditure	2,363	0	0	0	0	0	0	0	0	0
Row 5	Interest During Construction	0	0	0	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	0	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	0	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	2,363	2,363	2,363	2,363	2,363	2,363	2,363	2,363	2,363	2,363
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-23	-70	-116	-162	-209	-255	-301	-348	-394
Row 13	Depreciation	-23	-46	-46	-46	-46	-46	-46	-46	-46	-46
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-23	-70	-116	-162	-209	-255	-301	-348	-394	-440
Row 16											
Row 17	Net Asset	2,340	2,294	2,247	2,201	2,155	2,108	2,062	2,016	1,969	1,923

Table 2-10: CIAC to Union - Station

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	2,935	2,935	2,935	2,935	2,935	2,935	2,935	2,935	2,935
Row 4	Capital Expenditure	2,935	0	0	0	0	0	0	0	0	0
Row 5	Interest During Construction	0	0	0	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	0	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	0	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	2,935	2,935	2,935	2,935	2,935	2,935	2,935	2,935	2,935	2,935
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-39	-116	-193	-270	-348	-425	-502	-579	-656
Row 13	Depreciation	-39	-77	-77	-77	-77	-77	-77	-77	-77	-77
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-39	-116	-193	-270	-348	-425	-502	-579	-656	-734
Row 16											
Row 17	Net Asset	2,896	2,819	2,742	2,664	2,587	2,510	2,433	2,355	2,278	2,201

Table 2-11: Distribution Mains – Metallic

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	25,913	25,913	25,913	25,913	25,913	25,913	25,913	25,913	25,913
Row 4	Capital Expenditure	36,720	0	0	0	0	0	0	0	0	0
Row 5	Interest During Construction	382	0	0	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	104	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	-11,292	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	25,913	25,913	25,913	25,913	25,913	25,913	25,913	25,913	25,913	25,913
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-370	-1,111	-1,851	-2,591	-3,332	-4,072	-4,812	-5,553	-6,293
Row 13	Depreciation	-370	-740	-740	-740	-740	-740	-740	-740	-740	-740
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-370	-1,111	-1,851	-2,591	-3,332	-4,072	-4,812	-5,553	-6,293	-7,034
Row 16											
Row 17	Net Asset	25,543	24,803	24,062	23,322	22,581	21,841	21,101	20,360	19,620	18,880

Table 2-12: Distribution Land Rights

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	19	37	37	37	37	37	37	37	37
Row 4	Capital Expenditure	26	26	0	0	0	0	0	0	0	0
Row 5	Interest During Construction	0	0	0	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	0	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	-8	-8	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	19	37	37	37	37	37	37	37	37	37
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	0	-1	-1	-2	-2	-3	-4	-4	-5
Row 13	Depreciation	0	0	-1	-1	-1	-1	-1	-1	-1	-1
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	0	-1	-1	-2	-2	-3	-4	-4	-5	-5
Row 16											
Row 17	Net Asset	18	37	36	35	35	34	34	33	32	32

Table 2-13: Distribution Mains – Plastic

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	7,842	21,850	21,976	22,104	22,236	22,385	22,582	22,747	22,909
Row 4	Capital Expenditure	11,113	19,759	118	116	117	121	120	87	84	16
Row 5	Interest During Construction	116	206	2	2	2	2	3	2	2	1
Row 6	Capitalized Overhead	32	119	6	11	13	26	74	75	76	77
Row 7	Grant Funding	-3,417	-6,076	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	7,842	21,850	21,976	22,104	22,236	22,385	22,582	22,747	22,909	23,002
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-91	-436	-946	-1,459	-1,974	-2,493	-3,016	-3,543	-4,074
Row 13	Depreciation	-91	-345	-510	-513	-516	-519	-523	-527	-531	-534
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-91	-436	-946	-1,459	-1,974	-2,493	-3,016	-3,543	-4,074	-4,608
Row 16											
Row 17	Net Asset	7,751	21,414	21,030	20,646	20,262	19,892	19,566	19,204	18,835	18,395

Table 2-14: Distribution Services – Plastic

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	1,269	4,279	6,427	7,694	8,795	9,347	9,513	9,651	9,788
Row 4	Capital Expenditure	1,799	2,948	2,012	1,143	979	447	101	73	70	13
Row 5	Interest During Construction	19	44	32	19	16	8	2	2	2	1
Row 6	Capitalized Overhead	5	18	105	106	106	97	62	63	64	65
Row 7	Grant Funding	-553	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	1,269	4,279	6,427	7,694	8,795	9,347	9,513	9,651	9,788	9,867
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-16	-85	-219	-396	-602	-828	-1,064	-1,304	-1,547
Row 13	Depreciation	-16	-69	-134	-177	-206	-227	-236	-240	-243	-246
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-16	-85	-219	-396	-602	-828	-1,064	-1,304	-1,547	-1,792
Row 16											
Row 17	Net Asset	1,254	4,194	6,208	7,299	8,193	8,518	8,449	8,348	8,241	8,075

Table 2-15: Distribution Meters

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	581	1,536	2,223	2,645	3,012	3,196	3,252	3,298	3,343
Row 4	Capital Expenditure	571	936	643	381	326	149	34	24	23	4
Row 5	Interest During Construction	9	14	10	6	5	3	1	1	1	0
Row 6	Capitalized Overhead	2	6	34	35	35	32	21	21	21	22
Row 7	Grant Funding	0	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	581	1,536	2,223	2,645	3,012	3,196	3,252	3,298	3,343	3,370
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-11	-52	-124	-218	-327	-446	-570	-696	-824
Row 13	Depreciation	-11	-41	-72	-94	-109	-119	-124	-126	-128	-129
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-11	-52	-124	-218	-327	-446	-570	-696	-824	-953
Row 16											
Row 17	Net Asset	570	1,485	2,099	2,428	2,686	2,750	2,681	2,602	2,520	2,417

Table 2-16: Distribution Measuring and Regulating Equipment

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	851	1,482	1,589	1,589	1,589	1,589	1,589	1,589	1,589
Row 4	Capital Expenditure	1,206	890	101	0	0	0	0	0	0	0
Row 5	Interest During Construction	13	9	2	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	3	5	5	0	0	0	0	0	0	0
Row 7	Grant Funding	-371	-274	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	851	1,482	1,589	1,589	1,589	1,589	1,589	1,589	1,589	1,589
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-16	-59	-116	-175	-234	-292	-351	-410	-469
Row 13	Depreciation	-16	-43	-57	-59	-59	-59	-59	-59	-59	-59
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-16	-59	-116	-175	-234	-292	-351	-410	-469	-528
Row 16											
Row 17	Net Asset	835	1,423	1,473	1,415	1,356	1,297	1,238	1,179	1,120	1,061

Table 2-17: Vehicles

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	475	475	475	475	475	475	475	475	982
Row 4	Capital Expenditure	468	0	0	0	0	0	0	0	499	0
Row 5	Interest During Construction	7	0	0	0	0	0	0	0	7	0
Row 6	Capitalized Overhead	0	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	0	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	475	475	475	475	475	475	475	475	982	982
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	-26	-79	-132	-185	-237	-290	-343	-396	-477
Row 13	Depreciation	-26	-53	-53	-53	-53	-53	-53	-53	-81	-83
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	-26	-79	-132	-185	-237	-290	-343	-396	-477	-559
Row 16											
Row 17	Net Asset	448	396	343	290	237	185	132	79	505	422

Table 2-18: Machinery and Equipment

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Description	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1											
Row 2	**Gross Fixed Assets**										
Row 3	Opening Balance	0	0	328	328	328	328	328	328	328	328
Row 4	Capital Expenditure	0	323	0	0	0	0	0	0	0	0
Row 5	Interest During Construction	0	5	0	0	0	0	0	0	0	0
Row 6	Capitalized Overhead	0	0	0	0	0	0	0	0	0	0
Row 7	Grant Funding	0	0	0	0	0	0	0	0	0	0
Row 8	Retirement	0	0	0	0	0	0	0	0	0	0
Row 9	Closing Balance	0	328	328	328	328	328	328	328	328	328
Row 10											
Row 11	**Accumulated Depreciation**										
Row 12	Opening Balance	0	0	-10	-29	-48	-68	-87	-106	-126	-145
Row 13	Depreciation	0	-10	-19	-19	-19	-19	-19	-19	-19	-19
Row 14	Retirement	0	0	0	0	0	0	0	0	0	0
Row 15	Closing Balance	0	-10	-29	-48	-68	-87	-106	-126	-145	-164
Row 16											
Row 17	Net Asset	0	319	299	280	261	241	222	203	183	164

Project Development Policy

Table 2-19: Project Development Policy Appendix A – PP&E/Plant Asset Projects

Appendix A – PP&E/Plant Asset Projects Project Development Costs Capitalization/Expense Matrix		
Accounting Treatment	Stages and Characteristics	Plant Asset Projects Phases and Characteristics
Expense as incurred except for payments to obtain an option to acquire PP&E	**Assessment stage** (prior to time when acquisition of specific asset becomes probable). Typically includes costs of consideration of alternatives, feasibility studies costs and costs of other activities occurring prior to decision to select specific asset.	**Phase I** (25 per cent likelihood of succeeding). Includes costs of customer contact, plant configuration, preliminary estimates, engineering and economic modelling with the preparation of a memorandum of understanding and a preliminary business case. **Phase II** (50 per cent likelihood of succeeding). Includes costs of detailed study of proposal including engineering design, permitting, capital cost estimates, fuel management, power sales, market forecasts, financing, etc. with the preparation of a letter of understanding and a detailed business case.
Expense as incurred unless the costs are directly identifiable with the specific asset	**Pre-acquisition stage** (acquisition of specific asset is **probable** but has not yet occurred). Typically includes costs such as surveying, zoning, engineering studies, design layouts, traffic studies, etc. (these costs may also occur in preliminary stages).	**Phase III** (80 per cent likelihood of succeeding). Includes costs of very detailed review such as filing for permits, contractor requests for proposals (RFPs) and requests for qualifications (RFQs) with executed documents and agreements as the final result.
Capitalize costs directly identifiable with specific asset	**Acquisition or construction stage** (acquisition has occurred or construction has commenced but PP&E is not yet substantially complete and ready for its intended use). Costs of acquisition, construction or installation of PP&E, engineering work, design work, etc.	

Appendix A – PP&E/Plant Asset Projects Project Development Costs Capitalization/Expense Matrix		
Expense as incurred except for acquisition of additional components or replacements/ betterments	**In-service stage** (subsequent to when PP&E is substantially complete and ready for its intended use). Replacements, additions to existing PP&E, repairs and maintenance.	

Table 2-20: Project Development Policy Appendix B – IS Projects

Appendix B – IS Projects Project Development Costs Capitalization/Expense Matrix		
Accounting Treatment	Stages and Characteristics	Stages and Characteristics
Expense as incurred	**Business process reengineering activities** • Preparation of request for proposal • Current state assessment – the process of documenting the current business process, except as it related to current software structure. • Process reengineering – the effort to reengineer business processes to increase efficiency and effectiveness. • Restructuring work force – the effort to determine what employee make-up is necessary to operate the reengineered business processes.	
Expense as incurred	**Assessment software project stage activities** (prior to time when development, betterment or acquisition of software becomes probable): • Conceptual formulation of alternatives. • Evaluation of alternatives. • Determination of needed technology. • Final selection of alternatives.	**Assessment/planning stage** • Needs and risk assessment, cost benefit analysis and feasibility study. • Project concept document for management approval – time and cost budgets. • Definition of users' needs, business and performance requirements. • Assessment of needed technology and hardware. • Formulation, benchmarking, evaluation, selection of alternatives. • Business, project, budget and resource planning and strategic decisions.
Expense as incurred unless the costs are directly identifiable with specific software	**Pre-acquisition stage activities** (development or acquisition of software is probable but has not yet occurred): Project charter for probable specific software.	

Appendix B – IS Projects Project Development Costs Capitalization/Expense Matrix		
Capitalize costs directly identifiable with the specified software	**Application development stage activities** (acquisition has occurred or development has commenced but software is not substantially complete and ready for its intended use): • Design of chosen path, including software configuration and software interface. • Coding. • Installation to hardware. • Testing including parallel processing phase. • Data conversion costs to develop or obtain software that allows for access of old data by new system.	**Application development stage** • Definition of functional and system specifications including current sate assessment relating to the current software structure. • Design of chosen path, including software configuration and software interface. • Construction and coding. • Testing. • Installation to hardware. • Costs to develop or obtain software that allows for access or conversion of old data by the new system – migration of old data to new system.
Expense as incurred	**Post-implementation/operation stage activities** (subsequent to when software is substantially complete and ready for its intended use): • Training of users. • Application maintenance. • Ongoing support.	**Operation stage** • Training and procedure manuals • Application maintenance (that is not a betterment). • User administration activities. • Communication and change management. • Ongoing support/warranty • Process of creating or converting data, i.e. purging, cleansing, mapping, reconciling, balancing.
Capitalize (per PP&E project development costs policy/ matrix)	**Acquisition of PP&E** • Purchase of new computer equipment, office furniture or work stations. • Reconfiguration of work area – architect fees and hard construction costs.	

Utility System Plan

1. Overview

1.1 Utility System Plan Overview

1. The Utility System Plan (USP) is a consolidated, standalone document outlining the utility's asset management approach and capital expenditure plan. The USP provides interested stakeholders with the information required to determine if a utility is meeting the objectives outlined under the Ontario Energy Board's (OEB) Renewed Regulatory Framework (RRF). These objectives, as described by the OEB in the *Handbook for Utility Rate Applications* (2016), are:

    i. Customer Focus: Utilities are expected to demonstrate value for money by delivering genuine benefits to customers and by providing services in a manner which is responsive to customer preferences.

    ii. Operational Effectiveness: Utilities are expected to demonstrate ongoing continuous improvement in their productivity and cost performance while delivering on system reliability and quality objectives.

    iii. Public Policy Responsiveness: Utilities are expected to consider public policy objectives in their business planning and to deliver on the obligations required of regulated utilities.

    iv. Financial Performance: Utilities are expected to demonstrate sustainable improvements in their efficiency and in doing so will have the opportunity to earn a fair return.

2. The USP typically summarizes capital expenditures for a 10-year period, five historical years including the bridge year and a five year forecast including the test year.

3. EPCOR Natural Gas Limited Partnership (EPCOR) has prepared this initial USP in advance of construction of the proposed Southern Bruce Project, a natural gas distribution utility that will serve the Municipality of Arran-Elderslie, the Municipality of Kincardine and the Township of Huron-Kinloss. As a new utility, the historical information, metrics, and analysis that would typically form a material segment of a USP, and serve as the basis for forward looking capital spending plans, do not yet exist. Rather, the basis of this initial USP is the system as formed the basis of the Board's Southern Bruce Expansion Decision and EPCOR's leave to construct application (EB-2018-0263). For this reason, EPCOR is proposing that it file an enhanced USP in 2025 that would be supported by 5 full years of data, including several years after initial system construction and rapid customer

growth. This would allow EPCOR to develop sections of the plan including an engineering plan that would highlight potential system enhancements, how additional investments would be selected and prioritized, including addressing potential customer concerns and areas that might require strengthening as well as linkages and trade-offs between capital projects and ongoing OM&A spending.

1.2 Key Elements of the USP

4. The primary driver of capital expenditures during the 10-year stability period is the construction of the greenfield Southern Bruce distribution system as included in EPCOR's Common Infrastructure Plan (CIP) proposal (EB-2016-0137/0138/0139) and further detailed in its leave-to-construct application (EB-2018-0263). During the initial years of the rate stability period, EPCOR does not expect to incur material capital costs related to asset renewal.

1.3 Period Covered by the USP

5. This initial USP covers the 10-year rate stability period from January 1, 2019, through December 31, 2028. EPCOR proposes to provide an updated USP in 2025 which will reflect historical data and provide an updated forecast as of that date.

2. Coordinated Planning with Third Parties

2.1 Description of Consultations

1. EPCOR engaged in consultation with representatives of the Municipality of Arran-Elderslie, the Municipality of Kincardine, and the Township of Huron-Kinloss, and residents of those communities, starting in 2015. The intent of this ongoing consultation is to introduce EPCOR, understand the needs and expectations of potential customers and their representative's, obtain feedback as to certain project parameters and to update them as to the status of the project.

2. Consultation and engagement activities with potential customers and other stakeholders included:

    i. A project website: www.epcorsouthernbruce.com.

    ii. Six public information sessions starting in October 2015, held in the communities of Chelsey, Kincardine and Ripley.

    iii. Notices describing the project were published in the Kincardine Independent, Lucknow Sentinel, the Wingham Advance Times and the Grey Bruce This Week, The Post and the Kincardine News.

iv. 11,368 flyers in 2015 and 9,428 flyers in 2018 were delivered through Canada Post unaddressed ad mail.

v. A telephone survey in July 2017, conducted by the firm Innovative Research on EPCOR's behalf, targeting the municipalities of Arran-Elderslie, Kincardine and Huron-Kinloss.

3. EPCOR has maintained a customer care center in Kincardine since June 2017, encouraging community members to learn about, and provide feedback on the Project. EPCOR has been available to address questions in person, as well as through its customer care e-mail address (southernbruce@epcor.com). Through this local office, and through attending local events including Fall Fairs at Chesley, Ripley and Paisley, EPCOR engaged directly with potential customers, informing them of ECPOR's plans, proposed routing, and benefits of conversion. EPCOR also consulted directly with potential industrial and large agricultural customers to determine their level of interest in connecting to the system.

3. Asset Management Process

3.1 Asset Management Process Overview

1. The asset management process is the systematic approach a utility uses to inventory and monitor the condition of its physical assets, set target levels of service, evaluate risks, and use this information to make informed asset investment decisions.

2. EPCOR will implement an asset management framework consistent with ISO 55000 Standards for Asset Management and the more specific requirements of CSA Z662 Standard for Oil and Gas Pipeline Systems. The framework and asset management plans, founded on the principles of continuous improvement, will continue to evolve over time based on requirements and priorities.

Asset Management Philosophy, Strategy and Objectives

3. EPCOR recognizes that asset management is critical to achieving its business objectives and moving toward its vision of being a premier essential services company, trusted by our customers and valued by our shareholder. We are committed to managing assets in an optimal, sustainable, efficient, safe and environmentally responsible manner, meeting all applicable laws, regulations, standards and codes.

4. The utility will achieve this by focusing and continually improving upon the following principles:

i. Considering the entire lifecycle of the asset, seeking to minimize the total cost of acquiring, constructing, operating, maintaining, and disposing of assets while recovering that cost and earning a return on our investment.

ii. Assessing and managing risks in accordance with EPCOR's risk management framework to minimize the adverse impacts to public and worker safety, environment, regulatory compliance, reputation, and finances.

iii. Developing maintenance, operation, and reliability strategies as well as capital programs to ensure safe and reliable delivery of natural gas to our ratepayers.

iv. Developing and continuously improving upon a framework to ensure that asset management within EPCOR is integrated, sustainable, systematic, measured, and assessed.

v. Making asset management decisions based on complete, timely, and accurate asset data, using a holistic evaluation of alternatives that balance asset lifecycle cost, risk, and benefit while maintaining customer satisfaction.

vi. Building and maintaining asset management capabilities through the development and retention of the right mix of talented, competent, and motivated team members.

vii. Identifying and engaging public, industry, and government stakeholders in the management of our assets.

Components of the Asset Management Process

5. Through the asset management process, EPCOR endeavors to answer the following questions:

i. What is the current inventory of asset managed, what is the age and condition, and how much life remains?

ii. What are ratepayer's needs and expectations for natural gas service?

iii. Which assets are most critical to meeting the customer service goals and objectives?

iv. What are the linkages and trade-offs between capital and ongoing operations and maintenance spending?

v. What is the most prudent investment strategy?

6. The asset management focus of older, established utilities tends to be managing the challenges associated with the renewal of aging infrastructure. As a new utility, EPCOR's asset management activities will focus on implementing an asset management framework, and specific asset management strategies and plans, which optimize life cycle cost and value to the ratepayer. In its asset management plan, EPCOR will draw on the expertise and experience developed in its sister companies that own regulated electrical, water and wastewater assets.

7. A complete and accurate asset registry, or inventory, is key to the process. Existing utilities may lack this information (e.g. install date, detailed technical specifications) for older, legacy assets. As a new utility, EPCOR has the advantage of capturing and documenting the required information in a manner consistent with modern utility practices to better inform future decision making. EPCOR intends to have compiled an accurate asset registry when it files an enhanced USP in 2025 as proposed.

8. At its foundation, the asset management process is risk-based. EPCOR will proactively evaluate risk and criticality of the natural gas distribution assets and use this information in crafting maintenance and monitoring strategies. The utility will assess and manage risks in accordance with EPCOR's risk management framework and in keeping with the more specific requirements of a System Integrity Management Program under CSA Z662.

9. Ongoing condition monitoring of assets allows the utility to measure and track the effectiveness of the asset management strategies implemented and is an important component of the System Integrity Management Program. EPCOR will implement condition monitoring practices and programs based on risk and consistent with industry accepted practices.

3.2 Overview of Assets Managed

10. A map of the Southern Bruce Project, as proposed, is shown in Appendix 1 of this document.

Service Area Description

11. The Southern Bruce Project, as proposed, will provide natural gas service to the Municipality of Arran-Elderslie, the Municipality of Kincardine, and the Township of Huron-Kinloss. These three municipalities are all located in Bruce County, in southern Ontario. The system will serve the individual communities of Chesley, Paisley, Inverhuron, Tiverton, Kincardine, Lurgan Beach, Point Clark, Ripley, Lucknow and the Bruce Energy Centre.

12. Within its CIP proposal, EPCOR established connecting a total of 5,278 residential, commercial, agricultural and industrial customers over the 10-year rate stability period, January 1, 2019, through December 31, 2028.

System Description

13. The proposed facilities are comprised of a mainline of approximately 72 km of NPS 6 and NPS 8-inch steel pipe and approximately 45 km of NPS 6-inch medium-density polyethylene (MDPE) pipe. This mainline will be the backbone for service to the communities served. An additional 178 km of MDPE pipe will distribute natural gas to individual customers within these communities.

14. The NPS 8 steel mainline will interconnect with the existing high pressure Union Gas pipeline at the Dornoch Meter and Regulator Station. The mainline will be constructed of NPS 8-inch steel pipe from the Dornoch Station to the Bruce Energy Centre, NPS 6-inch steel pipe from the Bruce Energy Centre to Kincardine, and NPS 6-inch MDPE pipe from Kincardine to Point Clark to Lucknow. The steel sections will have a maximum allowable operating pressure (MAOP) of 2068 kPa (300 psi) and the MDPE sections will have a MAOP of 683 kPa (99 psi).

15. An EPCOR metering station (1) at Dornoch will measure flow from the Union Gas Dornoch Station. Pressure regulating stations (4) near Chelsey, Paisley, Tiverton, and Inverhuron will reduce the system pressure from the higher mainline pressure to a maximum distribution pressure of 683 kPa (99 psi), serving these communities. A regulating station (1) at Kincardine will reduce the pressure for distribution within Kincardine and the remainder of the system south. A station at the Bruce Energy Centre (1) will regulate pressure and meter flow to these customers.

16. Table 1 summarizes the proposed Southern Bruce Project assets:

Table 1 – Summary of Managed Assets

	Facility	Approximate Length (km)	Description
Pipelines	Dornoch to Bruce Energy Center	60	Steel NPS 8
	Bruce Energy Center to Kincardine	15	Steel NPS 6
	Kincardine to Lucknow	41	MDPE NPS 6
	Kincardine Bypass Line	4.5	MDPE NPS 6
	Community Distribution Piping	178	MDPE NPS 2 & 4
Stations	Facility	Description	
	Dornoch	Metering Station	
	Chelsey	Pressure Regulating Station	
	Paisley	Pressure Regulating Station	
	Bruce Energy Center	Pressure Regulating and Metering Station	
	Tiverton	Pressure Regulating Station	
	Inverhuron	Pressure Regulating Station	
	Kincardine	Pressure Regulating Station	

4. Capital Expenditure Plan

4.1 Capital Expenditure Plan Overview

1. Table 2 summarizes the 10-year capital budget by major fixed asset groups.

Table 2 – Summary of Capital Budget (Thousands of Dollars)

		Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10
	Asset Group	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Row 1	CIAC to Union - Owen Sound Reinforcement	2,363	0	0	0	0	0	0	0	0	0
Row 2	CIAC to Union - Station	2,935	0	0	0	0	0	0	0	0	0
Row 3	Distribution Mains - Metallic	36,824	0	0	0	0	0	0	0	0	0
Row 4	Distribution Land Rights	26	26	0	0	0	0	0	0	0	0
Row 5	Distribution Mains - Plastic	11,144	19,878	124	126	130	147	194	162	160	93
Row 6	Distribution Services Plastic	1,804	2,966	2,116	1,248	1,085	543	164	137	135	78
Row 7	Distribution Meters	573	941	677	416	361	181	55	46	45	26
Row 8	Distribution Measuring and Regulating Equipt.	1,209	895	106	0	0	0	0	0	0	0
Row 9	Vehicles	468	0	0	0	0	0	0	0	499	0
Row 10	Machinery and Equipment	0	323	0	0	0	0	0	0	0	0
Row 11	Sum	57,346	25,030	3,023	1,791	1,576	872	413	344	838	197

2. The capital budgets for 2019 and 2020 are primarily driven by the construction of the steel and MDPE mainline, regulating and metering stations, distribution mains in the communities to be

served, and customer related capital including service lines and meters. The capital budgets for 2021 through 2028 are primarily driven by additional distribution mains and services required to add additional customers.

3. The proposed construction schedule is targeted to begin in April 2019, with natural gas being distributed to Bruce Energy Centre, Tiverton and Kincardine for the 2019-2020 heating season. Natural gas is expected to be available in Lucknow, Inverhuron, Paisley, Chesley, Point Clark and Lurgan Beach for the 2020-2021 heating season.

4. The capital budget includes general plant spending on vehicles, machinery and equipment in 2019, 2020 and 2027. Four service vehicles are budgeted to be purchased in 2019 and replaced at their forecasted end of service life in 2027. Directional drilling and trenching equipment, used to install customer services, is budgeted to be purchased in 2020.

5. EPCOR is proposing to contract with Union Gas for upstream transportation capacity sufficient to address its gas supply needs for the first 10 years of operation. In addition to the capital costs outlined above, EPCOR will be expected to provide a contribution in aid of construction in the amount of $5.298 million related to the construction of Union's Dornoch Meter and Regulator Station and upstream transmission reinforcement.

4.2 Capital Expenditure Planning Process Overview

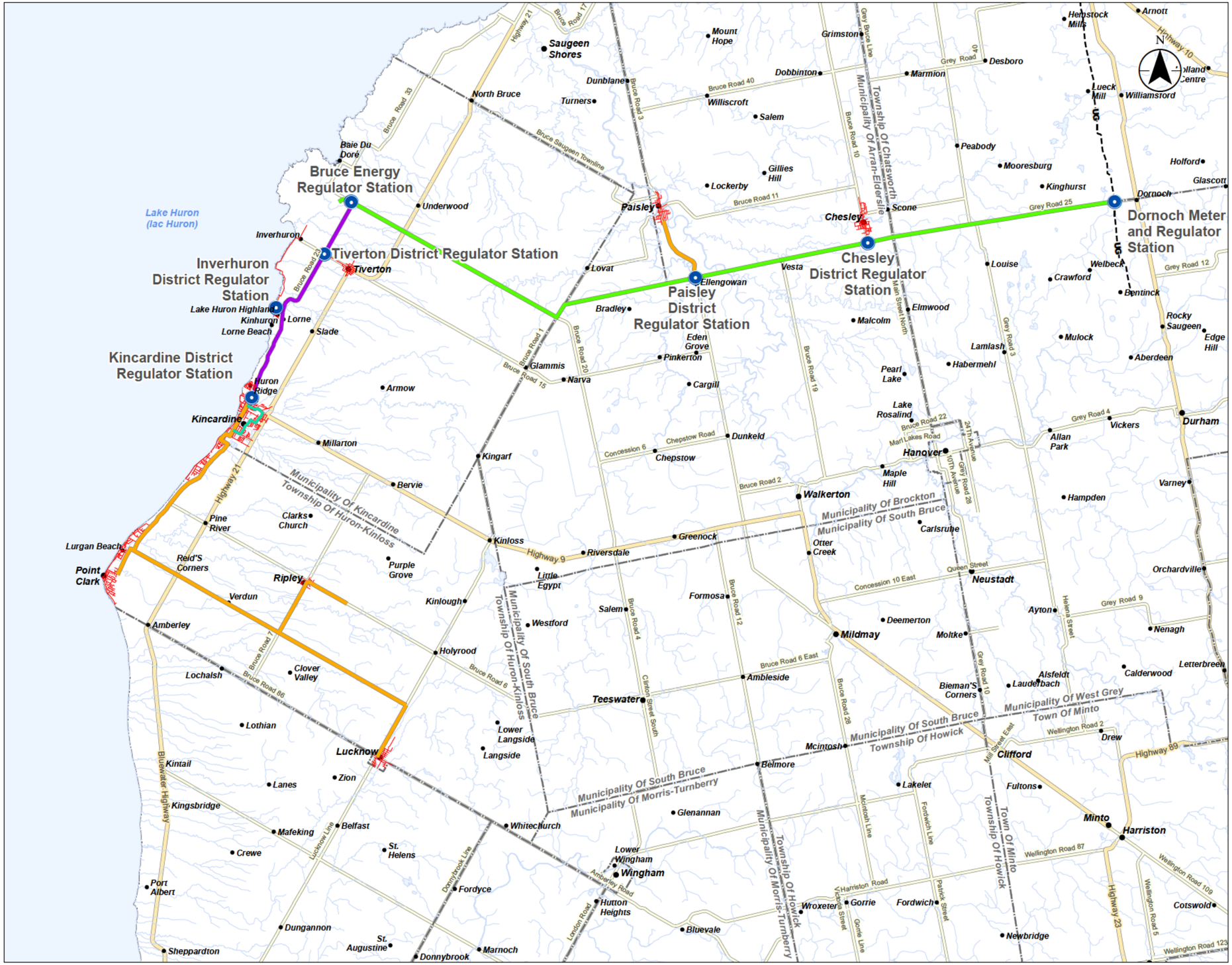
6. EPCOR was selected as the successful proponent to provide natural gas service to the Municipality of Arran-Elderslie, the Municipality of Kincardine and the Township of Huron-Kinloss through the OEB's competitive CIP process (EB-2016-0137/0138/0139). In the CIP proposal, EPCOR committed to holding controllable costs, including capital, at the proposed level through the 10-year rate stability period. The capital plan outlined in this USP is consistent with EPCOR's CIP proposal (EB-2016-0137/0138/0139) and its leave-to-construct application (EB-2018-0263).

7. EPCOR followed a rigorous process in developing the 10-year capital budget for the South Bruce Project that it was willing to commit to in the CIP process. This process has been refined over time and been proven in other bids that EPCOR has competed in. As an initial step in the process, the senior project team work collaboratively to confirm high level goals and risks, performance requirements, potential partners and potential cost efficiencies. A project capital budget was then developed that draws on the internal design and construction expertise EPCOR has acquired over decades of experience in constructing and maintaining utility infrastructure. In addition, EPCOR

works closely with trusted external partners, who will be completing system design and construction, with the understanding that they are committing to the construction budget being developed. The draft system capital budget is then reviewed in detail by a team of internal and external cross functional experts to ensure that each line item is acceptable and is aligned with the assumptions as agreed to during the initial phases of the CIP process. In advance of making the binding bid as detailed in its CIP, approval of EPCOR's Board was received. For upstream costs included in this Application that were not incorporated into the CIP values, EPCOR has relied on costs as communicated by Union as well as other market experts regarding cost of acquiring gas, storage and other operational requirements.

4.3 Capital Expenditure Summary

8. The USP typically summarizes capital expenditures for a 10-year period, five historical years including the bridge year and a five year forecast including the test year. As this USP has been prepared in advance of construction of the greenfield Southern Bruce Project, only forecasted capital expenditures are available. These are summarized in Table 2 above.



Stantec

EPCOR

Legend

- Pressure Regulator Station
- Distribution
- NPS 8 High Pressure Mainline System
- NPS 6 Kincardine Bypass
- NPS 6 High Pressure Mainline System
- NPS 6 Distribution Pressure Mainline System
- Expressway / Highway
- Major Road
- Union Gas Pipeline (Approximately)
- Municipal Boundary - Lower Tier

Notes

1 Coordinate System: NAD 1983 UTM Zone 17N
2 Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario 2016

Project Location
Counties Of Bruce
Grey and Huron

160950831
Prepared by SPE on 2018-09-15
Technical Review by BCC on 2017-10-06

Client/Project
EPCOR NATURAL GAS LIMITED PARTNERSHIP (ENGLP)
NATURAL GAS SERVICE SOUTHERN BRUCE

Figure No.
1

Title
Southern Bruce Mainline Route