

Capital Module Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.




Version 5.00

Utility Name	Greater Sudbury Hydro Inc.	
Assigned EB Number	EB-2019-0037	
Name of Contact and Title	Tiija, Luttrell, Supervisor - Regulatory	
Phone Number	705-675-0514	
Email Address	tiija.luttrell@gsuinc.ca	
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	COS	Rate Year 2020
Greater Sudbury Hydro Inc. is applying for:	ACM Approval	
Last COS OEB Application Number	EB-2012-0126	
The most recent complete year for which actual billing and load data exists	2018	
Current IPI	1.50%	
Stretch Factor Assigned to Middle Cohort*	III	
Stretch Factor Value	0.30%	
Price Cap Index	1.20%	

Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:

Revenues Based on 2020 Test Year Distribution Revenues
Revenues Based on 2018 Actual Distribution Revenues

Notes

-  Pale green cells represent input cells.
-  Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.
-  White cells contain fixed values, automatically generated values or formulae.

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While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.



Ontario Energy Board

Capital Module

Applicable to ACM and ICM

Greater Sudbury Hydro Inc.

Select the appropriate rate classes as they appear on your most recent Board-Approved Tariff of Rates and Charges, excluding the MicroFit Class.

How many classes are on your most recent Board-Approved Tariff of Rates and Charges?

6

Select Your Rate Classes from the **Blue Cells** below. Please ensure that a rate class is assigned to **each shaded cell**.

	Rate Class Classification
1	RESIDENTIAL
2	GENERAL SERVICE LESS THAN 50 kW
3	GENERAL SERVICE 50 TO 4,999 KW
4	UNMETERED SCATTERED LOAD
5	SENTINEL LIGHTING
6	STREET LIGHTING

Capital Module

Applicable to ACM and ICM

Greater Sudbury Hydro Inc.

Input the billing determinants associated with Greater Sudbury Hydro Inc.'s Revenues Based on 2020 Test Year Distribution Revenues. Input the current approved distribution rates. Sheets 4 & 5 calculate the NUMERATOR portion of the growth factor calculation.

2020 Test Year Distribution Revenues

Proposed Distribution Rates

Rate Class	Units	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW
RESIDENTIAL	\$/kWh	43,107	361,088,385		32.12	0.0000	0.0000
GENERAL SERVICE LESS THAN 50 kW	\$/kWh	4,182	134,331,187		22.42	0.0244	0.0000
GENERAL SERVICE 50 TO 4,999 KW	\$/kW	492	343,232,749	856,504	171.02	0.0000	5.4559
UNMETERED SCATTERED LOAD	\$/kWh	283	1,081,447		8.68	0.0131	0.0000
SENTINEL LIGHTING	\$/kW	359	389,166	1,062	5.18	0.0000	16.6389
STREET LIGHTING	\$/kW	9,941	7,342,584	20,511	5.58	0.0000	3.1083

Capital Module

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Greater Sudbury Hydro Inc.

Calculation of 2020 Revenue Requirement. No input required.

Rate Class	2020 Test Year Distribution Revenues			Proposed Distribution Rates			Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Revenues from Rates	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW								
	A	B	C	D	E	F	G	H	I	J	K = G / J	L = H / J	M = I / J	N
RESIDENTIAL	43,107	361,088,385		32.12	0.0000	0.0000	16,615,162	0	0	16,615,162	100.0%	0.0%	0.0%	60.4%
GENERAL SERVICE LESS THAN 50 KW	4,182	134,331,187		22.42	0.0244	0.0000	1,125,125	3,277,681	0	4,402,806	25.6%	74.4%	0.0%	16.0%
GENERAL SERVICE 50 TO 4,999 KW	492	343,232,749	856,504	171.02	0.0000	5.4559	1,009,702	0	4,673,000	5,682,702	17.8%	0.0%	82.2%	20.7%
UNMETERED SCATTERED LOAD	283	1,081,447		8.68	0.0131	0.0000	29,477	14,167	0	43,644	67.5%	32.5%	0.0%	0.2%
SENTINEL LIGHTING	359	389,166	1,062	5.18	0.0000	16.6389	22,315	0	17,671	39,986	55.8%	0.0%	44.2%	0.1%
STREET LIGHTING	9,941	7,342,584	20,511	5.58	0.0000	3.1083	665,649	0	63,754	729,404	91.3%	0.0%	8.7%	2.7%
Total	58,364	847,465,518	878,077				19,467,432	3,291,848	4,754,425	27,513,704				100.0%

Capital Module

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Greater Sudbury Hydro Inc.

Applicants Rate Base

2020 Test Year COS Rebasing

Average Net Fixed Assets

Gross Fixed Assets - Re-based Opening	\$ 221,328,495	A		
Add: CWIP Re-based Opening	\$ 2,184,568	B		
Re-based Capital Additions	\$ 9,665,007	C		
Re-based Capital Disposals	-\$ 3,395,932	D		
Re-based Capital Retirements		E		
Deduct: CWIP Re-based Closing	-\$ 2,184,568	F		
Gross Fixed Assets - Re-based Closing	\$ 227,597,570	G		
Average Gross Fixed Assets			\$ 224,463,033	H = (A + G) / 2

Accumulated Depreciation - Re-based Opening	\$ 124,836,435	I		
Re-based Depreciation Expense	\$ 4,727,922	J		
Re-based Disposals	-\$ 2,831,242	K		
Re-based Retirements		L		
Accumulated Depreciation - Re-based Closing	\$ 126,733,115	M		
Average Accumulated Depreciation			\$ 125,784,775	N = (I + M) / 2

Average Net Fixed Assets

\$ 98,678,258 O = H - N

Working Capital Allowance

Working Capital Allowance Base	\$ 119,215,315	P		
Working Capital Allowance Rate	7.5%	Q		
Working Capital Allowance			\$ 8,941,149	R = P * Q

Rate Base

\$ 107,619,406 S = O + R

Return on Rate Base

Deemed Short Term Debt %	4.00%	T	\$ 4,304,776	W = S * T
Deemed Long Term Debt %	56.00%	U	\$ 60,266,867	X = S * U
Deemed Equity %	40.00%	V	\$ 43,047,762	Y = S * V
Short Term Interest	2.82%	Z	\$ 121,395	AC = W * Z
Long Term Interest	4.14%	AA	\$ 2,495,048	AD = X * AA
Return on Equity	8.98%	AB	\$ 3,865,689	AE = Y * AB
Return on Rate Base			\$ 6,482,132	AF = AC + AD + AE

Distribution Expenses

OM&A Expenses	\$ 17,388,957	AG		
Amortization	\$ 4,404,632	AH		
Ontario Capital Tax	\$ -	AI		
Grossed Up Taxes/PILs	\$ 409,974	AJ		
Low Voltage	\$ -	AK		
Transformer Allowance	\$ 117,679	AL		
Property tax	\$ 268,803	AM		
		AN		
		AO		
			\$ 22,590,045	AP = SUM (AG : AO)

Revenue Offsets

Specific Service Charges	-\$ 219,234	AQ		
Late Payment Charges	-\$ 156,800	AR		
Other Distribution Income	-\$ 1,534,028	AS		
Other Income and Deductions	\$ 351,690	AT	-\$ 1,558,372	AU = SUM (AQ : AT)

Revenue Requirement from Distribution Rates

\$ 27,513,805 AV = AF + AP + AU

Rate Classes Revenue

Rate Classes Revenue - Total (Sheet 4) \$ 27,513,704 AW

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Greater Sudbury Hydro Inc.

Input the billing determinants associated with Greater Sudbury Hydro Inc.'s Revenues Based on 2018 Actual Distribution Revenues. This sheet calculates the DENOMINATOR portion of the growth factor calculation. Pro forma Revenue Calculation.

Rate Class	2018 Actual Distribution Revenues			Proposed Distribution Rates			Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue By Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	Billed Customers or Connections	Billed kWh	Billed kW	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW								
	A	B	C	D	E	F	G	H	I	J	K = G / J _{total}	L = H / J _{total}	M = I / J _{total}	N
RESIDENTIAL	42,890	375,861,349		32.12	0.0000	0.0000	16,531,522	0	0	16,531,522	59.7%	0.0%	0.0%	59.7%
GENERAL SERVICE LESS THAN 50 KW	4,132	138,106,022		22.42	0.0244	0.0000	1,111,673	3,369,787	0	4,481,460	4.0%	12.2%	0.0%	16.2%
GENERAL SERVICE 50 TO 4,999 KW	496	360,554,580	887,145	171.02	0.0000	5.4559	1,017,911	0	4,840,174	5,858,085	3.7%	0.0%	17.5%	21.2%
UNMETERED SCATTERED LOAD	292	1,134,622		8.68	0.0131	0.0000	30,415	14,864	0	45,278	0.1%	0.1%	0.0%	0.2%
SENTINEL LIGHTING	372	403,671	1,111	5.18	0.0000	16.6389	23,124	0	18,486	41,609	0.1%	0.0%	0.1%	0.2%
STREET LIGHTING	9,862	7,471,085	20,878	5.58	0.0000	3.1083	660,360	0	64,895	725,255	2.4%	0.0%	0.2%	2.6%
Total	58,044	883,531,329	909,134				19,375,004	3,384,650	4,923,555	27,683,209				100.0%

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Current Revenue from Rates

This sheet is used to determine the applicant's most current allocation of revenues (after the most recent revenue to cost ratio adjustment, if applicable) to appropriately allocate the incremental revenue requirement to the classes.

Rate Class	Proposed Base Rates in Current CoS Application			2020 Test Year Distribution Revenues			Current Base Service Charge Revenue	Current Base Distribution Volumetric Rate kWh Revenue	Current Base Distribution Volumetric Rate kW Revenue	Total Current Base Revenue	Service Charge % Total Revenue	Distribution Volumetric Rate % Total Revenue	Distribution Volumetric Rate % Total Revenue	Total % Revenue
	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Re-based Billed Customers or Connections	Re-based Billed kWh	Re-based Billed kW								
	A	B	C	D	E	F	G	H	I	J	L = G / J _{total}	M = H / J _{total}	N = I / J _{total}	O
RESIDENTIAL	32.12	0	0	43,107	361,088,385	0	16,615,162	0	0	16,615,162	60.39%	0.00%	0.00%	60.4%
GENERAL SERVICE LESS THAN 50 kW	22.42	0.0244	0	4,182	134,331,187	0	1,125,125	3,277,681	0	4,402,806	4.09%	11.91%	0.00%	16.0%
GENERAL SERVICE 50 TO 4,999 kW	171.02	0	5.4559	492	343,232,749	856,504	1,009,702	0	4,673,000	5,682,702	3.67%	0.00%	16.98%	20.7%
UNMETERED SCATTERED LOAD	8.68	0.0131	0	283	1,081,447	0	29,477	14,167	0	43,644	0.11%	0.05%	0.00%	0.2%
SENTINEL LIGHTING	5.18	0	16.6389	359	389,166	1,062	22,315	0	17,671	39,986	0.08%	0.00%	0.06%	0.1%
STREET LIGHTING	5.58	0	3.1083	9,941	7,342,584	20,511	665,649	0	63,754	729,404	2.42%	0.00%	0.23%	2.7%
Total							19,467,432	3,291,848	4,754,425	27,513,704				100.0%



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No Input Required.

Preliminary Materiality Threshold Calculation

$$\text{Threshold Value (\%)} = 1 + \left[\left(\frac{RB}{d} \right) \times (g + PCI \times (1 + g)) \right] \times ((1 + g) \times (1 + PCI))^{n-1} + 10\%$$

Cost of Service Rebasing Year	2020	
Price Cap IR Year in which Application is made	COS	<i>n</i>
Price Cap Index	1.20%	<i>PCI</i>
Growth Factor Calculation		
Revenues Based on 2020 Test Year Distribution Revenues	\$27,513,704	
Revenues Based on 2018 Actual Distribution Revenues	\$27,683,209	
Growth Factor	-0.31%	<i>g (Note 1)</i>
Dead Band	10%	
Average Net Fixed Assets		
Gross Fixed Assets Opening	\$ 221,328,495	
Add: CWIP Opening	\$ 2,184,568	
Capital Additions	\$ 9,665,007	
Capital Disposals	-\$ 3,395,932	
Capital Retirements	\$ -	
Deduct: CWIP Closing	-\$ 2,184,568	
Gross Fixed Assets - Closing	\$ 227,597,570	
Average Gross Fixed Assets	\$ 224,463,033	
Accumulated Depreciation - Opening		
Accumulated Depreciation - Opening	\$ 124,836,435	
Depreciation Expense	\$ 4,727,922	
Disposals	-\$ 2,831,242	
Retirements	\$ -	
Accumulated Depreciation - Closing	\$ 126,733,115	
Average Accumulated Depreciation	\$ 125,784,775	
Average Net Fixed Assets	\$ 98,678,258	
Working Capital Allowance		
Working Capital Allowance Base	\$ 119,215,315	
Working Capital Allowance Rate	8%	
Working Capital Allowance	\$ 8,941,149	
Rate Base	\$ 107,619,406	<i>RB</i>
Depreciation	\$ 4,727,922	<i>d</i>

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)	
Price Cap IR Year 2021	130%
Price Cap IR Year 2022	130%
Price Cap IR Year 2023	131%
Price Cap IR Year 2024	131%
Price Cap IR Year 2025	131%
Price Cap IR Year 2026	131%
Price Cap IR Year 2027	131%
Price Cap IR Year 2028	132%
Price Cap IR Year 2029	132%
Price Cap IR Year 2030	132%

Threshold CAPEX		<i>Threshold Value × d</i>
Price Cap IR Year 2021	\$ 6,158,715	
Price Cap IR Year 2022	\$ 6,167,243	
Price Cap IR Year 2023	\$ 6,175,847	
Price Cap IR Year 2024	\$ 6,184,527	
Price Cap IR Year 2025	\$ 6,193,285	
Price Cap IR Year 2026	\$ 6,202,120	
Price Cap IR Year 2027	\$ 6,211,035	
Price Cap IR Year 2028	\$ 6,220,028	
Price Cap IR Year 2029	\$ 6,229,102	
Price Cap IR Year 2030	\$ 6,238,256	

Note 1: The growth factor *g* is annualized, depending on the number of years between the numerator and denominator for the calculation. Typically, for ACM review in a cost of service and in the fourth year of Price Cap IR, the ratio is divided by 2 to annualize it. No division is normally required for the first three years under Price Cap IR.

