OTTAWA RIVER POWER CORPORATION

2019 IRM APPLICATION

EB-2018-0063

Submitted on: September 25, 2018

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IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, (Schedule B); **AND IN THE MATTER OF** an Application by Ottawa River Power Corporation to the Ontario Energy Board for an Order or Orders approving or fixing just and reasonable distribution rates and other service charges to be effective May 1, 2019.

1. APPLICANT

NAME:	Ottawa River Power Corporation
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2. APPLICATION

Ottawa River Power Corporation ("ORPC") hereby applies to the Ontario Energy Board (the "Board") for approval of its 2019 Distribution Rate Adjustments effective May 1, 2019. ORPC applies for an Order or Orders approving the proposed distribution rates and other charges as set out in Appendix B of this Application as just and reasonable rates and charges pursuant to Section 78 of the OEB Act.

Ottawa River Power Corporation has followed Chapter 3 of the Board's Filing Requirements for Transmission and Distribution Applications dated July 12, 2018 along with the Key References listed at Chapter 3 Incentive Rate-Setting Applications.

ORPC confirms that the billing determinants used in the model are from most recent reported RRR filings. The utility reviewed both the existing "Tariff Sheets" and billing determinants in the pre-populated worksheets and confirms that they are accurate.

In the preparation of this application, ORPC used the 2019 IRM Rate Generator issued on July 24, 2018. The rate and other adjustments being applied for and as calculated through the use of the above models include a Price Cap Incentive Rate-Setting ("Price Cap IR") option to adjust its 2019 rates (The Price Cap IR methodology provides for a mechanistic and formulaic adjustment to distribution rates and charges in the period between Cost of Service applications). The model also adjusts Retail Transmission Service Rates in accordance with Board Guideline G-2008-0001 - Electricity Distribution Retail Transmission Service Rates revised on June 28, 2012.

Along with revisions to its distribution rates, Ottawa River Power also seeks approval of the following matters:

- Continuance of the Specific Services charges and Loss Factors;
- Continuance of the MicroFit monthly charge;
- Continuance of the Smart Meter Entity charge;
- In compliance of the OEB's new rate design policy for residential customers, Ottawa River Power requests approval of a revised Minimum Fixed Charge of $21.34 up from previously Board Approved $18.88 and Volumetric Charge of $0.0034 down from previously Board Approved $0.0067;
- Disposition of Group 1 accounts as the outcome of the threshold test exceeded the $0.001 per kWh pre-set disposition threshold; and
- Approval of a new Rate Rider for revenue recovery relating to the Incremental Capital Module (ICM). This capital investment project consists of the construction of a new municipal substation in Almonte as the current substations are operating at capacity.

3. SCOPE OF APPLICATION

The Scope of this application under the Incentive Rate-Setting Mechanism for the 2019 rate year includes:

- 2019 IRM Rate Generator
- 2019 GA Analysis Work Form
- 2019 1595 Analysis Work Form
- 2019 Incremental Capital Module
- Proposed 2019 Tariff of Rates and Charges
- Customer Bill Impacts

4. CURRENT TARIFF SHEETS

The Tariff of Rate and Charges for rates currently in effect are presented in Appendix A.

5. PROPOSED TARIFF SHEETS

The Tariff of Rates and Charges proposed in this Application are presented in Appendix B.

6. EFFECTIVE DATE

Ottawa River Power Corporation requests an effective of May 1, 2019 for the Proposed Tariff of Rates and Charges.

In the event that the Board is unable to provide a Decision and Order in this Application for implementation by the Applicant as of May 1, 2019, ORPC requests that the Board issue an Interim Rate Order declaring the current Distribution Rates and Specific Service Charges as interim until the decided implementation date of the approved 2019 distribution rates. If the effective date does not coincide with the Board's decided implementation date for 2019 distribution rates and charges, Ottawa River Power requests to be permitted to recover the incremental revenue from the effective date to the implementation date.

7. FORM OF HEARING REQUEST

ORPC requests pursuant to Section 34.01 of the Board's Rules of Practice and Procedure that this application be disposed of by way of a written hearing.

8. NOTICE OF APPLICATION

Ottawa River Power attests that the utility, its shareholders and all its customer classes will be affected by the outcome of this application.

ORPC is proposing that its notice related to this Application appears in the following publications:

The Pembroke Observe, a local weekly newspaper, which is not a paid publication but is delivered to each home in Pembroke, Killaloe and Beachburg; and

The Gazette, which is a local weekly newspaper delivered in the area of The Township of Mississippi Mills serving the customers of Almonte Ward.

Ottawa River has been advised of circulation numbers of 14,000 in Pembroke and area and 6,000 in Carleton Place.

9. DISTRIBUTOR'S PROFILE

Ottawa River Power Corporation serves the urban communities of the City of Pembroke, the Township of Whitewater (Beachburg only), the Town of Mississippi Mills (Almonte Ward only) and the Township of Killaloe, Hagarty & Richards (Killaloe only). Three exceptions to this geographic description are located in the Town of Mississippi Mills. During 2008 Ottawa River Power Corporation applied to the Ontario Energy Board to have its service area amended to include the west half of Lot 14 in the Township of Ramsey. This amendment was granted by the OEB under order EB-2008-0094. During 2009 ORPC applied to the OEB for another service area amendment in the Town of Mississippi Mills. In June 2009 the OEB amended the service area of ORPC under order EB-2009-0019 to include Phase 1 of Sadler Estates Development (Part of Lot 16, Conc. 10). In 2015, the OEB amended the Almonte

area to include the property of Orchard View on 219 Patterson Street, East Part of Lot 14, Concession10, Almonte Ward, now in the Town of Mississippi Mills (EB-2015-0153).

ORPC has 490 kilometers of lines comprised of 364 kilometers of overhead lines and 126 kilometers of underground lines. ORPC's distribution plant includes eleven substations: eight at 4.16 KV and three at 12.4 KV. Eight substations are located in the City of Pembroke and three substations are located in the Town of Mississippi Mills. Ottawa River Power Corporation has 14 sub-transmission transformers and 1592 distribution transformers.

At the end of 2017 Ottawa River Power had approximately 11,100 customers comprised of 87% residential customers and 13% commercial customers including small businesses and industry. The balance of the utility's customer base is comprised of Sentinel Lighting, Street Lights and Unmetered Scattered Load.

Ottawa River Power has no customers designated as wholesale market participants. As well, the distributor does not have any Class A customers.

Ottawa River Power last filed for a Cost of Service application in 2015 for rates that became effective on July 1, 2016 (EB-2014-0195).

10. PRICE CAP ADJUSTMENT

As per Board policy (Chapter 3), distribution rates are to be adjusted according to the Price Cap model presented through the Board's Rate Generator model. The calculation would be based on the annual percentage change in the GDP-IPI index.

In accordance with the Report of the Board: Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors, Ottawa River Power Corporation has used an assigned Stretch Factor Group III to calculate its Price Cap. The following table shows OPRPC's factor to its Price Cap Adjustment.

Price Cap Parameters

Stretch Factor Group	III
Price Escalator	1.20%
Stretch Factor Value	0.30%
Productivity Factor	0.00%
Price Cap Index	0.90%

While the price factor adjustment under this application would apply to the fixed and volumetric distribution rates for Ottawa River Power, it would not affect the following:

- Rate adders and riders
- Low voltage service charges
- Retail Transmission Service Rates
- Wholesale Market Service Rate
- Rural Rate Protection Charge
- Standard Supply Service – Administrative Charge
- MicroFIT Service Charge
- Specific Service Charges
- Transformation and Primary Metering Allowances
- Smart Metering Entity Charge

11. REVENUE TO COST RATIO ADJUSTMENTS

Ottawa River Power is not proposing to adjust its revenue to cost ratios in this proceeding as its revenue to cost ratios were recently adjusted and set as part of the 2015 Cost of Service Application.

12. RATE DESIGN FOR RESIDENTIAL ELECTRICITY

In accordance with the new Rate Design for Residential Electricity policy issued on April 2, 2015, Ottawa River Power followed the approach set out in sheet 16 of the rate generator model to implement the third of five yearly adjustments to its Monthly Fixed Charge. The incremental fixed charge of $2.27, as calculated at cell F26 of Worksheet 16 of the IRM model, falls below the $4.00 threshold. ORPC notes that the actual incremental fixed charge between the existing fixed rate of $18.88 and the final proposed fixed rate of $21.34 is $2.46.

The table below shows the existing rates compared to the proposed rates. See Item 23 and Appendix C for detailed bill impacts.

Current vs Proposed Distribution Rates

Rate Class	Current MFC	Current Volumetric Charge	Proposed MFC	Proposed Volumetric Charge
Residential Service	18.88	0.0067	21.34	0.0034
General Service Less Than 50 kW Service	22.57	0.0128	22.77	0.0129
General Service Greater Than 50 kW Service	84.94	3.5179	85.70	3.5496
Unmetered Scattered Load Service	10.38	0.0035	10.47	0.0035
Sentinel Lighting Service	2.95	9.1292	2.98	9.2114
Street Lighting Service	2.39	13.0949	2.41	13.2128
MicroFIT SERVICE	5.40		5.40	

13. RTSR ADJUSTMENTS

Ottawa River Power is applying for an adjustment of its Retail Transmission Service Rates (RTSR) based on a comparison of historical transmission costs adjusted for new UTR levels and revenues generated from existing RTSRs. This approach is expected to minimize variances in the USoA Accounts 1584 and 1586.

OPRC used the RTSR Adjustment Worksheets embedded in the IRM Model, to determine the proposed adjustments to the RTSR approved in the 2016 Cost of Service application.

The Loss Factor applied to the metered kWh is the actual Board-approved 2016 Loss Factor.

The proposed adjustments of the RTSR are shown in the table below and the detailed calculations can be found in the 2019 IRM Model filed in conjunction with this application.

Proposed Network Service Rate

Rate Class	Unit	Current RTSR-Network	Proposed RTSR-Network
Residential Service	$/kWh	0.0063	0.0057
General Service Less Than 50 kW Service	$/kWh	0.0057	0.0051
General Service 50 To 4,999 kW Service	$/kW	2.3522	2.1167
Unmetered Scattered Load Service	$/kWh	0.0057	0.0051
Sentinel Lighting Service	$/kW	1.7828	1.6043
Street Lighting Service	$/kW	1.7739	1.5963

Proposed Line and Transformation Connection Service Rate

Rate Class	Unit	Current RTSR-Connection	Proposed RTSR-Connection
Residential Service	$/kWh	0.0048	0.0044
General Service Less Than 50 kW Service	$/kWh	0.0043	0.0039
General Service 50 To 4,999 kW Service	$/kW	1.7123	1.5721
Unmetered Scattered Load Service	$/kWh	0.0043	0.0039
Sentinel Lighting Service	$/kW	1.3518	1.2411
Street Lighting Service	$/kW	1.3239	1.2155

14. DEFERRAL AND VARIANCE ACCOUNTS

Ottawa River Power Corporation has completed the Board Staff's 2019 IRM Rate Generator – Tab 3 2017 Continuity Schedule and the threshold test at Tab 4 shows a claim per kWh of $0.0046. The Report of Board on Electricity Distributors' Deferral and Variance Account Review Report (the "EDDVAR Report") provides that during the IRM plan term, the distributor's Group 1 audited account balances will be reviewed and disposed if the pre-set disposition threshold of $0.001 per kWh (debit or credit) is exceeded. Ottawa River Power is therefore requesting disposition of all Group 1 accounts on May 1, 2019 to minimize future bill impacts. These Group 1 accounts include a residual balance from the 2013 deferral and variance accounts that was originally set for disposal in 2016. The following rate riders are proposed:

Rate Class	Unit	Disposition of GA Account (2019)	Disposition of Deferral/ Variance Accounts (2019)
Residential Service	$/kWh	0.0024	0.0034
General Service Less Than 50 kW Service	$/kWh	0.0024	0.0035
General Service 50 To 4,999 kW Service	$/kW	0.0024	1.1494
Unmetered Scattered Load Service	$/kWh	0.0024	0.0035
Sentinel Lighting Service	$/kW	0.0024	1.3238
Street Lighting Service	$/kW	0.0024	1.2762

15. SPECIFIC SERVICE CHARGE AND LOSS FACTORS

Ottawa River Power Corporation is applying to continue the current Specific Service Charges, and Loss Factors as approved by the Board (EB-2014-0165).

16. GLOBAL ADJUSTMENT PROCESS

ORPC does not have any Class A customers. For its Class B customers, Ottawa River Power reviews the general service accounts on an annual basis to determine which customers are eligible for the RPP. Accounts are also reviewed at the time that an account changes ownership. Any billing adjustments are done as part of the next billing period.

ORPC uses the Global Adjustment 2nd estimate rate posted on the IESO website for the settlement month. The variance between the estimate and the actual GA rate is recorded and reflected in RSVA GA 1589 on a monthly basis and reported to the OEB quarterly.

As an embedded distributor, Ottawa River Power completes the monthly submission through filing with Hydro One using a bottom up approach. ORPC starts with billed kwhrs for all customers extracted from the customer information system. The non RPP data is subtracted to calculate the RPP volume. This volume is multiplied by the Global Adjustment 2nd estimate and these values are submitted by the 5th business day of the following month to Hydro One. Once the Global Adjustment actual rate is released ORPC submits the adjustment.

In terms of Control and Oversight, Ottawa River follows an approach using reconciliation procedures to ensure accuracy and completeness for the settlement submission process where possible. All balances are audited and verified annually by ORPC's outside auditors. In addition, ORPC does regular bill testing for each class of customer, recalculates the various charges based on approved rates and ensures all correct general ledger accounts are used.

17. DISPOSITION OF LRAMVA

On March 31, 2010, the Minister of Energy and Infrastructure issued a directive (the "Directive") to the Board regarding electricity CDM targets to be met by licensed electricity distributors. The Directive required that the Board amend the licenses of distributors to add, as a condition of license, the requirement for distributors to achieve reductions in electricity demand through the delivery of CDM programs over a four-year period beginning January 1, 2011. Section 12 of the Directive required that the Board have regard to the objective that lost revenues that result from CDM Programs should not act as a disincentive to a distributor. On April 26, 2012, the Board issued Guidelines for Electricity Distributor Conservation and Demand Management ("CDM Guidelines"). In keeping with the Directive, the Board adopted a mechanism to capture the difference between the results of actual, verified impacts of authorized CDM activities undertaken by distributors between 2011 and 2014 and the level of activities embedded into rates through the distributors load forecast in an LRAM variance account.

In accordance with the Board's Guidelines for Electricity Distributor Conservation and Demand Management (EB-2012-0003) issued on April 26, 2012, at a minimum, distributors must apply for disposition of the balance in the LRAMVA at the time of their Cost of Service rate applications.

Distributors may apply for the disposition of the balance in the LRAMVA on IRM rate applications if the balance is deemed significant by the applicant.

Ottawa River Power disposed of the balance of 1568 up to 2014 in its Cost of Service application implemented in July 2016. As such ORPC is not seeking further disposition with this application.

18. TAX CHANGE

The IRM model indicates that the utility is subject to a tax rate change from its Cost of Service application in 2016 to the 2019 rate. The model indicates a tax sharing amount of $6,649 which did not provide a rate rater in any of the rate classes based on the allocated tax sharing. As such, Ottawa River Power will be looking to transfer the entire tax sharing amount into account 1595 for disposition at a later date.

19. ICM / Z-FACTOR

Ottawa River Power is not applying for recovery of Incremental Capital or Z-Factor in this proceeding.

20. GLOBAL ADJUSTMENT ANALYSIS WORK FORM

Ottawa River Power Corporation has completed the Global Adjustment (GA) analysis work form for 2015, 2016 and 2017. The work forms for 2015 and 2016 did not require any changes from the last work form filed on March 7, 2018. These forms calculate the expected GA variance between billed consumption and consumption adjusted for unbilled revenues. The total expected variance is then reconciled against the changes in the general ledger. ORPC's reconciling items for 2017 included:

- An adjustment for 2016 and 2017 unbilled revenues as the general ledger transactions are dated based on the billing date rather than the meter read date;
- An adjustment to remove a RPP True Up relating to the 2015 year that was included in 2017 transactions; and
- An adjustment to exclude the global adjustment on 2017 generation as this was remitted and settled after year end and included in 2018 transactions.

The unresolved remaining difference is 0.2% which is below the 1% maximum threshold therefore no further explanation is required.

21. 1595 ANALYSIS WORK FORM

Per the Chapter 3 Filing Requirements, distributors who meet the requirements for disposition of residual balances of Account 1595 sub-accounts must file the 1595 Analysis Work Form to assess if the residual balances proposed for disposition are reasonable.

Ottawa River Power was approved for Rate Riders in the 2013 IRM for rates effective May 1, 2013 to collect $326,584 from customers for the disposal of Group 1 accounts and return $57,359 to customers for the disposal of the Global Adjustment. The rates were effective from May 1, 2013 to April 30, 2014.

ORPC collected $317,679 from the customers for the Group 1 account disposal and returned $92,314 for the Global Adjustment disposal excluding carrying charges but did not dispose of the residual balance in its 2015 Cost of Service.

Variances between the denominator used in the rate rider calculation as approved by the OEB and the actual billed consumption that the rate rider was applied against composed the total amount to be collected from customers.

Ottawa River Power is requesting permission in this application to dispose of the remaining residual balance plus applicable carrying charges for a total of $48,256 for rates effective May 1, 2019.

22. INCREMENTAL CAPITAL MODULE RATE RIDER REQUEST

This section provides details of the 2019 incremental project totaling $1.8M. This capital expenditure is for the building of a new 44kV 5 MVA Substation in Almonte Ward in the Town of Mississippi Mills. Given current demand and continued growth, this expenditure is necessary for system and reliability purposes in order to continue to service this area. This is a prudent and sustainable investment which also meets long term planning requirements.

Background

Ottawa River Power Corporation is the amalgamation of four former utilities, namely, Pembroke Hydro, Beachburg Hydro, Killaloe Hydro and Almonte Hydro in 2000.

Ottawa River Power had a total of 9,868 residential and commercial customers when the utilities joined. Today there are 11,184. The majority of this growth has been in the Almonte service area which is located in the Town of Mississippi Mills. Almonte is approximately thirty kilometers from Kanata, the west side of the City of Ottawa, which makes it an attractive place to live.

A comparison of 2000 to 2017/2018 is helpful to see the growth in Almonte service area. Please note that the general service less than 50 and greater than 50 have been combined for comparison purposes. Many customers have transitioned from one of these classes to the others over the years. Streetlights, sentinel lights and unmetered scattered loads have been omitted as these have remained fairly stable over the years.

The **customer number** growth by area and by customer class is seen in the following tables:

Residential	**1999**	**2018**
Beachburg	346	448
Killaloe	314	307
Almonte	1837	2772
Pembroke	5807	6227
Total	8304	9754

Almonte has seen a 51% growth in residential customers

Gen Service	**1999**	**2018**
Beachburg	48	42
Killaloe	70	63
Almonte	270	306
Pembroke	1176	1019
Total	1564	1430

Almonte has seen a 48% growth in general service customers

With customer growth came increased consumption. There is not a direct correlation between increased customers and consumption, primarily due to conservation. The billed sales in k**whrs** is found in the following table with no adjustment C&DM:

Residential	**1999**	**2017**
Beachburg	3,960,443	4,315,928
Killaloe	2,731,223	2,526,311
Almonte	17,823,044	20,582,897
Pembroke	50,148,396	46,614,814
Total	74,663,106	74,039,950

Electricity usage in the Residential Class in Almonte has experienced a 15% increase.

Gen Service	**1999**	**2017**
Beachburg	1,791,731	1,612,606
Killaloe	2,649,664	2,674,298
Almonte	13,145,095	16,302,108
Pembroke	94,319,293	83,524,945
Total	111,905,783	104,113,957

Electricity usage in the General Service Categories has seen a 24% increase in Kwh

Estimate of Project

The following table contains an estimated breakdown of the capital expenditures for the project:

1	**Property Costs**			
	Sale Price	$ 84,000.00		
	Legal	$ 3,000.00		$ 87,000.00
2	**Engineering and Design**			
	Electrical Engineering	$ 95,000.00		
	Grounding	$ 25,000.00		
	Protection Study	$ 10,000.00		
	Environmental Screening	$ 5,000.00		
	Geotechnical Investigation	$ 15,000.00		
	Project Management	$ 30,000.00		$ 180,000.00
3	**Equipment**			
	Power Transformer 5 MVA	$ 260,000.00		
	Station Reclosures (3)	$ 105,000.00		
	44 kV PM Switches/Fuses	$ 60,000.00		
	S&C Switchgear	$ 125,000.00		
	Prefab Control Shack w/pad	$ 35,000.00		
	Station Service	$ 8,000.00		
	44 kV Cables/Terminators	$ 20,000.00		
	15 kV 500 MCM Cables/Terminators	$ 125,000.00		
	Solid Blade Riser Switches	$ 15,000.00		
	Scada RTU	$ 45,000.00		$ 798,000.00
4	**Civic Construction**			
	Construction Power	$ 8,000.00		
	Clearing, Grubbing, Grading	$ 60,000.00		
	Road Entrance	$ 10,000.00		
	Oil Containment	$ 15,000.00		
	Duct Banks	$ 120,000.00		
	Concrete Foundations	$ 75,000.00		
	Fence and Stone	$ 100,000.00		$ 388,000.00
5	**Electrical**			
	Grounding	$ 40,000.00		
	44 kV Dip Pole	$ 2,500.00		
	44 kV Riser Poles	$ 8,500.00		
	Installation of Transformer	$ 10,000.00		
	Installation of Reclosures	$ 12,000.00		
	Power & Control Cabling	$ 7,500.00		
	Station Service Panel	$ 5,000.00		
	Commissioning	$ 30,000.00		$ 115,500.00
6	**Miscellaneous**			
	Mobilization, bonding, insurance	$ 50,000.00		
	Fee & Permits	$ 5,000.00		$ 55,000.00
	Sub-Total			$1,623,500.00
	Contingency			$ 162,350.00
	Total			$1,785,850.00

This total estimate has been verified for reasonableness by Costello Utility Consultants who have built substations for a number of utilities over the years.

Details

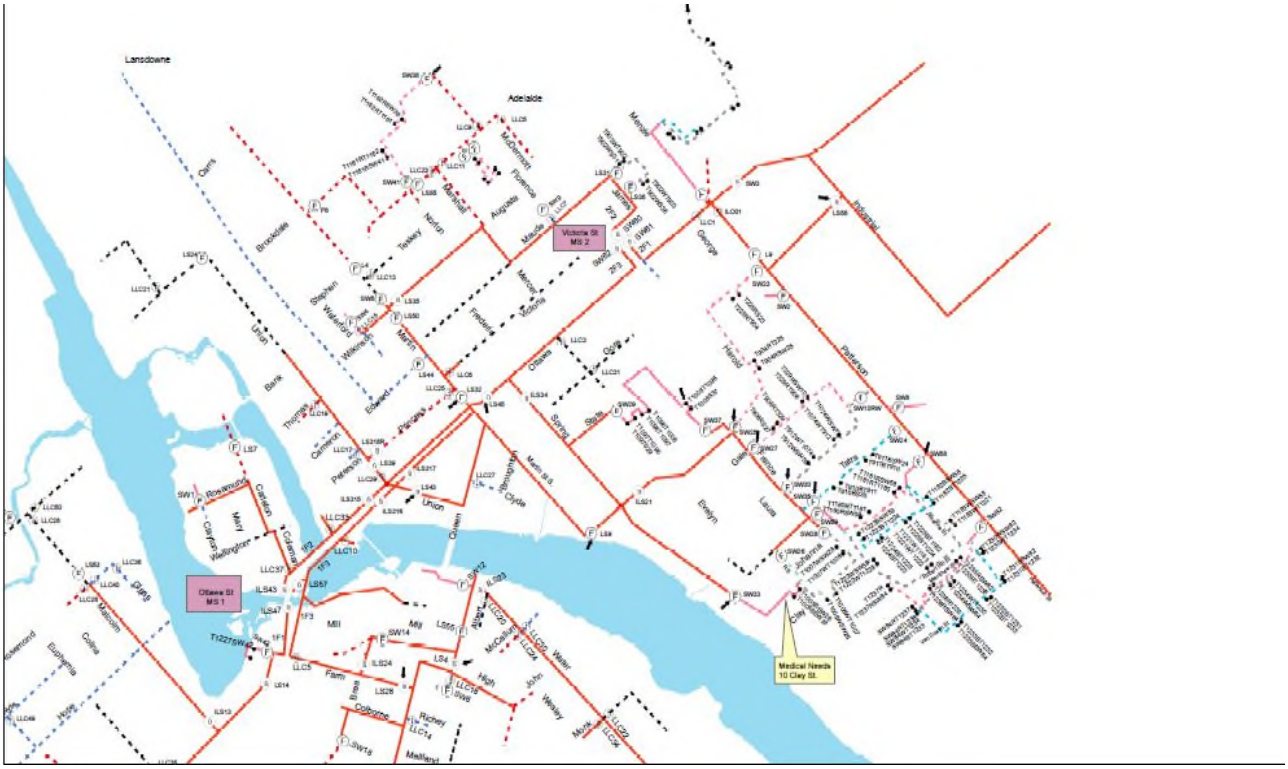
In 2017 a Substation Condition Assessment Study was commissioned by Ottawa River Power (Appendix D). With a new president appointed, this was a necessity to continue with the Distribution Plan as filed with its 2015 Cost of Service Application. The Assessment completed in 2017 found many substation deficiencies. Nine of its current substations are over forty years old. While the distribution system plan indicated that a substation could be built after 2020 in Almonte, this is proven to not be the case.

In the Executive summary of the Assessment Study it is stated "*The Almonte area is experiencing high load growth as the residential housing is booming due to close proximity to Ottawa. Two of the three existing stations require some or total replacement and one new station is required for growth.*"

Additionally, the present Almonte MS-3 Substation was constructed in 1965. It and the transformer are 52 years old. While Ottawa River Power does not replace solely based on age, this station poses a significant risk due to obsolete switchgear. Should this substation fail, parts will not be found. The addition of a new substation (MS-4) will enable ORPC to transfer some of MS-3's load and then to replace it in the future.

It is Ottawa River Power's conclusion that MS-4 Substation be built in the area of Almonte North where expansion has taken place and continues to take place. The Industrial area is also found in the north making this area ideal for the Substation. Please see the maps of Almonte North and Almonte South below:

Almonte North



Almonte South

Loading

Ottawa River Power has historically been a winter peaking utility. This has been changing since its inception in 2000 with winter peaks now just slightly above summer peaks.

Ottawa River Power does monthly inspections on all substations. These include station readings and monitoring station loads. In 2004, the total system load in Almonte was 8300 KW. In July 2018 Almonte reached their largest peak, hitting 11864 KW.

In the following charts you will see that MS 2 in Almonte (located in Almonte North Map), has gone from a 52% loading factor in 2004/2005 to a 90% loading factor in July 2018. As previously mentioned this is the area of Almonte with the most new development and the Industrial Park. This is where ORPC intends to build MS-4.

Presently, Ottawa River Power is unable to complete maintenance on any station in Almonte during winter or summer months. Scheduled maintenance is carefully planned in offseason. The complete load in Almonte during peak times is more than what two stations are able to handle. If one station was to go “down”, ORPC would be faced with trying to rent a mobile station. ORPC would not be able to shift a fully dropped load to the other two stations.

As the charts below indicate, Sub 2 & Sub 3 are getting close to maximum capacity.

Station Reading Summary Winter 2004/05						
Main MS1						
Feeder	**F1**	**F2**	**F3**	**Total**	Nom Voltage	4160
Feeder Capacity					Trans Rating	5000
Feeder Load -R	82	59	90	231	Trans Load	1806
-W	92	52	88	232	Loading %	36%
-B	56	138	95	289		
Victoria MS2						
Feeder	**F1**	**F2**	**F3**	**Total**	Nom Voltage	4160
Feeder Capacity					Trans Rating	5000
Feeder Load -R	95	125	140	360	Trans Load	2623
-W	88	120	110	318	Loading %	52%
-B	120	164	130	414		
King MS3						
Feeder	**F1**	**F2**		**Total**	Nom Voltage	4160
Feeder Capacity					Trans Rating	3000
Feeder Load -R	50	200		250	Trans Load	1861
-W	115	170		285	Loading %	62%
-B	100	140		240		

Station Readings July 4, 2018							
Main MS1							
Feeder	**F1**	**F2**	**F3**	**F4**	**Total**	Nom Voltage	4160
Feeder Capacity						Trans Rating	5000
Feeder Load -R	149	154	211		514	Trans Load	2683
-W	14	133	37		184	Loading %	54%
-B	173	117	129		419		
Victoria MS2							
Feeder	**F1**	**F2**	**F3**	**F4**	**Total**	Nom Voltage	4160
Feeder Capacity						Trans Rating	5000
Feeder Load -R	279	184	151		614	Trans Load	4518
-W	209	258	155		622	Loading %	90%
-B	233	234	178		645		
King MS3							
Feeder	**F1**	**F2**	**F3**	**F4**	**Total**	Nom Voltage	4160
Feeder Capacity						Trans Rating	3000
Feeder Load -R	169	179			348	Trans Load	2258
-W	156	143			299	Loading %	75%
-B	130	163			293		

Plan

Ottawa River Power has purchased a lot on Industrial Drive in Almonte for the construction of the new Substation 4. This location was chosen to relieve the pressure on Substation 2. It will also serve future growth in the North.

ORPC is currently working with Costello Utility Consultants who will do the electrical engineering and project management. The transformer is going out to tender by the end of September with the intention of the station being in full service by June 2019.

23. BILL IMPACTS

The table below shows the proposed bill impacts as calculated at Sheet 20 of the model.

Bill Impacts by Sub-Total

Table 2

RATE CLASSES / CATEGORIES *(eg: Residential TOU, Residential Retailer)*	Units	Sub-Total A		Sub-Total B		Sub-Total C	
		$	%	$	%	$	%
RESIDENTIAL SERVICE CLASSIFICATION - RPP	kWh	$ 0.61	2.4%	$ 3.46	11.7%	$ 2.67	7.0%
GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION - RPP	kWh	$ 1.65	3.1%	$ 9.25	14.9%	$ 7.16	8.6%
GENERAL SERVICE 50 to 4,999 kW SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 17.67	4.0%	$ 2,177.71	468.7%	$ 2,140.14	245.7%
SENTINEL LIGHTING SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 0.21	2.3%	$ 1.94	19.7%	$ 1.65	12.7%
STREET LIGHTING SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 58.69	0.9%	$ 431.85	6.3%	$ 381.80	5.2%
UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION - RPP	kWh	$ 1.73	3.3%	$ 26.33	33.4%	$ 20.06	14.2%
RESIDENTIAL SERVICE CLASSIFICATION - Non-RPP (Retailer)	kWh	$ 0.61	2.4%	$ 5.26	17.2%	$ 4.47	11.4%
RESIDENTIAL SERVICE CLASSIFICATION - RPP	kWh	$ 2.14	9.5%	$ 3.22	13.2%	$ 2.93	10.6%

The 10th percentile was calculated in the following manner

1) The utility produced a report which included *Residential Customer Number* and their *Monthly Consumptions*.
2) The report was then sorted by lowest to highest consumption.
3) The utility then calculates the 10th percentile threshold as being 284 kWh.
4) The report filtered out customers that had less than 12 months of consumption and those that used less than 50 kWh per month.

As per instructed by Board Staff, the bill impacts presented below are calculated based on the *dollar change in Sub-Total C – Delivery* divided by *total bill before tax and before the 8% Rebate at current rates*.

Total Bill Impacts

Table 2

RATE CLASSES / CATEGORIES *(eg: Residential TOU, Residential Retailer)*	Units	Total Total Bill $	Total Total Bill %
RESIDENTIAL SERVICE CLASSIFICATION - RPP	kWh	$ 2.80	2.6%
GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION - RPP	kWh	$ 7.52	2.8%
GENERAL SERVICE 50 to 4,999 kW SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 2,418.36	2.1%
SENTINEL LIGHTING SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 1.87	6.7%
STREET LIGHTING SERVICE CLASSIFICATION - Non-RPP (Other)	kW	$ 431.43	2.9%
UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION - RPP	kWh	$ 22.66	3.0%
RESIDENTIAL SERVICE CLASSIFICATION - Non-RPP (Retailer)	kWh	$ 5.05	3.6%
RESIDENTIAL SERVICE CLASSIFICATION - RPP	kWh	$ 3.07	5.6%

With the exception of the GS<50 which uses the typical 2000 kWh/month, the other classes were calculated using a monthly average consumption.

The following are appended to and form part of this Application

Appendix A	Current Tariff Sheet
Appendix B	Proposed Tariff Sheet
Appendix C	Bill Impacts
Appendix D	Substation Condition Assessment Report