



April 8, 2015

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Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto ON M4P 1 E4

Dear Ms. Walli:

Re: Ottawa River Power Corporation

**Response to Board Staff Interrogatories
Ottawa River Power Corporation
Application for an Exemption from Section 2.2.2 of the Standard Supply
Service Code and Section 3.2 of the Retail Settlement Code
EB-2015-0034**

In accordance with the Notice of Application and Written Hearing, please find enclosed Ottawa River Power Corporation's response to Board Staff Interrogatories filed in the above mentioned proceeding.

Kind regards,

A handwritten signature in black ink that reads "J. Donnelly". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Jane Donnelly, CPA, CMA
Chief Financial Officer

Ottawa River Power Corporation Response to

Board Staff Interrogatories

**Application for Exemptions from Section 3.2 of
the Retail Settlement Code and Section 2.2.2 of
the Standard Supply Service Code**

**Ottawa River Power Corporation
("Ottawa River")**

EB-2015-0034

1. Re: EB-2008-0289, Decision and Order issued July 22, 2009.

In that decision, the Board indicated that at the time of the filing of the utility's next application regarding the continuance of its arrangement with Brookfield Energy Marketing Inc. (Brookfield Energy) to supply power, the utility must file evidence demonstrating the continuation, and level, of benefits to customers. In this regard:

- a. Please provide a summary of avoided charges by category (e.g. transmission charges, network service rate, wholesale market service charge, etc.) for the past five years;

The following is a table of the avoided charges by category for the last five years:

	Wholesale	Transmission Network	Transmission Connection	Total Avoided Charges
2010	175,008.64	40,430.82	34,171.53	249,610.99
2011	182,949.39	45,736.35	36,934.26	265,620.00
2012	142,391.38	20,622.30	16,653.48	179,667.16
2013	171,409.81	47,688.71	34,879.33	253,977.85
2014	154,713.08	34,272.15	24,093.78	213,079.01
Total	826,472.31	188,750.33	146,732.38	1,161,955.02

- b. Please provide actual savings passed on to customers for the past five years and identify actual bill impact per year per residential customer;

The customers of Ottawa River Power have benefited from decreased transmission rates as well as rate riders credits due to the avoided charges above.

During Ottawa River Power's 2010 Cost of Service application, it was ordered to repay \$2,102,927 in wholesale market charges, \$299,894 in transmission network charges and \$1,500,786 in transmission connection charges. This was to be repaid to its

customers over a 28 month beginning January 1, 2011 and ending on April 30, 2012. These amounts had accumulated in variance accounts since Ottawa River Power's 2006 disposition. The residential portion of this equated to a rate rider credit of \$0.00842 per kWh. This equals \$6.74 on a residential customer's bill with consumption of 800 kWh or a 7.42% savings.

Further with its 2012 rates Ottawa River Power passed back to its customers the 2010 savings of \$243,000 from May 1, 2012 to April 30, 2013 representing a \$0.00305 credit rate rider for residential customers. With 2013 rates Ottawa River Power passed back the savings of \$264,000 representing a \$0.0033 rate rider credit for residential customers.

Additionally Ottawa River Power customers benefit from low transmission rates. As stated this is due to reduced transmission rates Ottawa River Power avoids by purchasing power from Brookfield Power.

		Transmission Network Rate	Transmission Connection Rate
Residential	per kWh	0.0063	0.0045
GS< 50	per kWh	0.0058	0.004
GS>50	per kW	2.3683	1.5959
Sentinel Lights	per kW	1.7951	1.2596
Street Lights	per kW	1.7860	1.2338
Unmetered	per kWh	0.0058	0.004

- c. Please identify what percentage of savings from the contractual agreement with Brookfield Energy has been passed on to Ottawa River's customers over the past five years.

Ottawa River Power has passed along approximately 44% (2010 and 2011) of the savings to its customers in the form of rate riders with its 2012 and 2013 rates. During the 2014 rate process the retail variance accounts did not meet the materiality threshold. The remaining 56% of savings will be passed along in the next rate application.

2. Re: OEB proceeding EB-2008-0289.

In that proceeding, Ottawa River stated that its customers had received a saving of \$495,955 in the five year period (from 2004 to 2008) and that savings resulted from the pricing mechanism outlined within the contractual agreement with Brookfield Energy versus settlement according to section 3.2 of the Retail Settlement Code.

- a. Please provide actual cost savings achieved from the contractual agreement with Brookfield Energy for the past five years (from 2009 to 2014).

The following are the actual cost savings achieved from the contractual agreement with Brookfield Energy since 2009. The avoided charges are greater in 2009. In August 2009, as per the agreement, Brookfield began charging Ottawa River Power a charge for wholesale market savings that had not been part of the original agreement.

	Total Avoided Charges
2009	353,749.68
2010	249,610.99
2011	265,620.00
2012	179,667.16
2013	253,977.85
2014	213,079.01
Total	1,515,704.69

3. Please provide actual delivery rates paid by Ottawa River to Brookfield Energy over the past five years. Please provide a comparison of the actual delivery rates with the regulated delivery rates Ottawa River would have paid to HONI in absence of the contractual agreement with Brookfield Energy.

The following chart indicates the rates paid to Brookfield Energy and the corresponding rates to Hydro One Networks Inc.:

		Wholesale Rate			Transmission Rates			
		To Brookfield	To HONI		To Brookfield	To HONI		
2009	January		0.0062		1.95	2.01		1.88
2009	February		0.0062		1.95	2.01		1.88
2009	March		0.0062		1.95	2.01		1.88
2009	April		0.0062		1.95	2.01		1.88
2009	May		0.0065		2.115	2.24		1.99
2009	June		0.0065		2.115	2.24		1.99
2009	July		0.0065		2.115	2.24		1.99
2009	August	0.002275	0.0065		2.115	2.24		1.99
2009	September	0.002275	0.0065		2.115	2.24		1.99
2009	October	0.002275	0.0065		2.115	2.24		1.99
2009	November	0.002275	0.0065		2.115	2.24		1.99
2009	December	0.002275	0.0065		2.115	2.24		1.99
2010	January	0.002275	0.0065		2.115	2.24		1.99
2010	February	0.002275	0.0065		2.115	2.24		1.99
2010	March	0.002275	0.0065		2.115	2.24		1.99
2010	April	0.002275	0.0065		2.115	2.24		1.99
2010	May	0.002275	0.0065		2.395	2.65		2.14
2010	June	0.002275	0.0065		2.395	2.65		2.14
2010	July	0.002275	0.0065		2.395	2.65		2.14
2010	August	0.002275	0.0065		2.395	2.65		2.14
2010	September	0.002275	0.0065		2.395	2.65		2.14
2010	October	0.002275	0.0065		2.395	2.65		2.14
2010	November	0.002275	0.0065		2.395	2.65		2.14
2010	December	0.002275	0.0065		2.395	2.65		2.14
2011	January	0.002275	0.0065		2.395	2.65		2.14
2011	February	0.002275	0.0065		2.395	2.65		2.14
2011	March	0.002275	0.0065		2.395	2.65		2.14
2011	April	0.002275	0.0065		2.395	2.65		2.14
2011	May	0.002275	0.0065		2.395	2.65		2.14
2011	June	0.002275	0.0065		2.395	2.65		2.14
2011	July	0.002275	0.0065		2.395	2.65		2.14
2011	August	0.002275	0.0065		2.395	2.65		2.14
2011	September	0.002275	0.0065		2.395	2.65		2.14
2011	October	0.002275	0.0065		2.395	2.65		2.14
2011	November	0.002275	0.0065		2.395	2.65		2.14
2011	December	0.002275	0.0065		2.395	2.65		2.14

		Wholesale Rate			Transmission Rates			
		To Brookfield	To HONI		To Brookfield	To HONI		
2012	January	0.002275	0.0063		2.395	2.65		2.14
2012	February	0.002275	0.0063		2.395	2.65		2.14
2012	March	0.002275	0.0063		2.395	2.65		2.14
2012	April	0.002275	0.0063		2.395	2.65		2.14
2012	May	0.002275	0.0063		2.395	2.65		2.14
2012	June	0.002275	0.0063		2.395	2.65		2.14
2012	July	0.002275	0.0063		2.395	2.65		2.14
2012	August	0.002275	0.0063		2.395	2.65		2.14
2012	September	0.002275	0.0063		2.395	2.65		2.14
2012	October	0.002275	0.0063		2.395	2.65		2.14
2012	November	0.002275	0.0063		2.395	2.65		2.14
2012	December	0.002275	0.0063		2.395	2.65		2.14
2013	January	0.002275	0.0063		2.755	3.18		2.33
2013	February	0.002275	0.0063		2.755	3.18		2.33
2013	March	0.002275	0.0063		2.755	3.18		2.33
2013	April	0.002275	0.0063		2.755	3.18		2.33
2013	May	0.00196	0.0056		2.755	3.18		2.33
2013	June	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	July	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	August	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	September	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	October	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	November	0.00196	0.0056		2.755	3.18	0.70	1.63
2013	December	0.00196	0.0056		2.755	3.18	0.70	1.63
2014	January	0.00196	0.0056		2.750	3.23	0.65	1.62
2014	February	0.00196	0.0056		2.750	3.23	0.65	1.62
2014	March	0.00196	0.0056		2.750	3.23	0.65	1.62
2014	April	0.00196	0.0056		2.750	3.23	0.65	1.62
2014	May	0.00196	0.0056		2.750	3.23	0.65	1.62
2014	June	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	July	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	August	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	September	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	October	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	November	0.00196	0.0057		2.750	3.23	0.65	1.62
2014	December	0.00196	0.0057		2.750	3.23	0.65	1.62

4. Please confirm whether or not the existing contract between Ottawa River and Brookfield Energy addresses the calculation of the delivery rates. If not, please explain how the delivery rates have been calculated and how these rates will be calculated going forward.

The existing contract between Ottawa River and Brookfield does address the calculation of the delivery rates. The wholesale market rate that is charged by Brookfield is calculated at 35% of the rate charged by Hydro One Networks Inc. The transmission rate charged by Brookfield is calculated at 50% of the transmission rates charged by Hydro One Networks Inc. The contract extension provides for the same calculations.

5. Please provide schedules A, B and C to the agreement.

SCHEDULE "A"

Information


1.0 Ownership

- 1.1 Pontiac owns wires and associated equipment (insulators, etc.), plus breakers "A1" (Z2H1D) & "B1" (COX5M) and their respective protection equipment on "A" and "B" 44 kv circuits in the City, with the exception of the metering which is owned by Ontario Hydro. In addition, the billing metering is owned by Ontario Hydro and used and interrogated by Ontario Hydro for billing purposes.
- 1.2 Pembroke owns pole lines in the City of Pembroke, the City loop and terminal stations 1 & 4 in the City of Pembroke.
- 1.3 Pontiac owns poles and lines east of the City of Pembroke limits to the Drive In Road on Pembroke Street East.

2.0 Operating Control

- 2.1 "Operating Control" is defined as the exclusive authority to perform, direct, or authorize the operation of specific devices. Assignment of Operating Control is based with Pembroke Administration.
- 2.2 In its capacity as Administrator of the Operating Control Pembroke acknowledges and agrees that:
 - A: Pontiac has remote control of "A1" and "B1" breakers and may operate under approval of the Pembroke Operator.
 - B: Pontiac may designate a remote operator or Operations Company who will carry out all the responsibilities of their operation under Pontiac's control in this Agreement.
 - C: Pembroke shall communicate with Pontiac or their designated operator with respect to any planned changes in the system where the changes may affect Pontiac's system.
- 2.3 44 KV Feeders
 - A: Pembroke Operator will have operating control of the two breakers A1 (Z2H1D) B1 (COX5M) and of the two disconnects A1 (R9H8Z) and B1 (Y9M8X).
 - B: All breakers and disconnects in the Province of Quebec are under the operating control of the Pontiac Operator.

3.0 Operation

- 3.1 Both "A" and "B" lines will normally operate in parallel only if the supply to Pembroke is greater than 1500 KW. If the supply to Pembroke is under 500 KW, then there shall only be a single line feed to Pembroke avoiding circulating currents.
 - 3.2 Due to the various supply arrangements that may be in place at the Pembroke transformer station, all load transfers between the 6M1 and 6M2 feeders must be approved by the Cheneaux GS Operators.
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- 3.3 Operation of gang operated switches on A1 (R9H8Z) and B1 (Y9M8X) will be carried out by Pembroke staff on the instructions of the Pontiac Operator.
- 3.4 Operation of gang switches and breakers in the Province of Quebec will be carried out by Pontiac Operators.

4.0 Planned Operation

- A. Pembroke Operators are responsible for coordinating all operations and outages to equipment under their control. Pembroke will advise Pontiac of any operation or outage that could impact the operation of the Pontiac system and/or stations.
- B. Pontiac is responsible for coordinating all operations and outages to equipment under their control. Pontiac will advise Pembroke Operators of any outages, or outage that could impact the operation of the Pembroke system.
- C. Whenever possible, four (4) days notice will be provided with respect to items (a) and (b) above.
- D. Each utility will inform the other of any change of electrical configuration in the 44 KV within their jurisdiction.
- E. Pontiac will make all reasonable efforts to reduce interruptions on the Ontario Hydro system that are caused by faults on Pontiac's 44 kv lines. For the purposes of this provision it is understood that Pembroke Hydro may consider three or more interruptions caused by Pontiac in one twelve month period to be unreasonable.

5.0 Servicing

- 5.1 Servicing and repair of that portion of the A and B lines located within the City of Pembroke shall be carried out by Pembroke crews at Pontiac's cost. No upgrades should be made without Pontiac's consent. Other works or breakers maintenance requested to be completed by Pontiac may be carried out by a Pembroke approved sub-contractor or by Pembroke staff at Pontiac's cost.
- 5.2 Servicing on the City tie-line outside the City of Pembroke between the Drive In Road and the City boundary will be maintained by Pembroke at their cost.
- 5.3 In the event that switching, tagging or clearing of either of A or B lines to perform work is required by Pontiac, no charges shall be levied against Pembroke.

6.0 Maintenance of Power Factor and Voltage

- 6.1 Pontiac agrees to maintain at all times a power factor in excess of 90%.
- 6.2 Pontiac shall maintain an operating voltage which will not negatively affect the Pembroke operation.

7.0 Upgrades

- 7.1 Each utility shall be responsible for the cost of any upgrades or renovations or any new construction required for their respective plants for the purposes of this Agreement.

8.0 Communications

- 8.1 Communications between Pembroke and Pontiac regarding the operation of their respective operating systems will be made between the respective operators.

- 8.2 Pembroke Operator will inform Pontiac whenever conditions occur affecting the supply to Pembroke. Normal contact is via telephone as per telephone numbers listed in Appendix "A" attached hereto and to be updated from time to time.
- 8.3 Information and instructions between Pembroke and Pontiac for operations and work protection shall be properly recorded. Communications involving work protections must be supported by appropriate documentation and copies faxed to Pembroke and Pontiac, as the case may be, whenever possible.

9.0 Work Protection

9.1 Definitions

A. Work Protection

Work protection is defined as a guarantee that an isolated/de-energized condition has been established for work and will continue to exist, except for authorized tests.

B. Condition Guarantee

Condition guarantee is defined as a guarantee issued in support of a Work Protection guaranteeing isolation/de-energization at points under the control of the issuer.

C. Hold Off

Hold off is defined as a procedure implemented by a controlling authority to limit operation of apparatus to facilitate work or reduce work hazards. Under no circumstances shall a Hold Off be used in place of a Work Protection. A Hold Off procedure shall not be used unless communications satisfactory to the issuer can be established.

D. Work Authority

Work Authority is defined as a person responsible and in charge of specific work/tests. It is the responsibility of the Work Authority to identify the need and arrange for adequate Work Protection.

9.2 Work Protection Procedures

- A. Pembroke and Pontiac shall provide their own protection for work on apparatus under their operating control.
- B. Personal protection tags (installed and removed by individual requesting protection), will be utilized in accordance with the worker's appropriate protection code.
- C. When a guarantee of isolation/de-energization is required, a request will be made to the appropriate controlling authority and the requested Condition Guarantee shall be issued in accordance with the controlling authority's own protection code; i.e. in Pembroke the EUSA code will be followed and in Waltham the Hydro Quebec code will be followed.
- D. Hold-Off practices established on circuits supplying Pembroke load will be issued by Pembroke in accordance with Pembroke's regulations. Communication with the Work Authority will be by Pembroke Operations and Pontiac Operations as required. On a request for Hold Off Protection to either Hydro Pontiac or Pembroke Hydro, the following steps shall be taken.

- i. The operator (either Hydro Pontiac or Pembroke Hydro) shall, on receipt of the request, notify the other operator and request protection.
- ii. When the protection is established (tagged and recorded) and only when completed, he shall then notify the requesting body that "Hold Off" protection has been established.
- iii. The requesting body for the "Hold Off" shall notify the designated utility operator that he originally requested the "Hold Off" protection from when he is ready to surrender the "Hold Off."
- iv. The operator shall then surrender the "Hold Off" to the other Utility and document.
- v. It is imperative that the requesting body should not surrender the hold off second hand.
- vi. Protection for Ontario Hydro crews shall be taken by the Chenaux Operators for any work being performed by Ontario Hydro.

10.0 Safety

- 10.1 When employees of either Pembroke or Pontiac or contractor are working on equipment owned by the other entity, they will continue to be governed by the requirements of the Ontario Occupation Health and Safety Act and the Electrical Utility Safety Association regulations.

11.0 Maintenance Responsibilities

- 11.1 Pembroke is fully responsible for routine and emergency maintenance and repairs on all equipment under their ownership except as provided for in this Agreement.
- 11.2 Pontiac is fully responsible for routine and emergency maintenance and repairs on all equipment under their ownership except as provided for in this Agreement.

12.0 Review of Operations

- 12.1 This operations agreement may be reviewed and modified if deemed necessary, at any time, by mutual agreement.
- 12.2 Attached hereto and marked as Appendix "A" to this Agreement is a listing of phone numbers and contact persons for the assistance of the operation of this Agreement.



SCHEDULE 'B'

PROCESS FOR CONNECTING AN EMBEDDED GENERATOR

PROTECTION REQUIREMENTS GUIDE

Maclaren Energy Inc. (embedded generator) should provide protection systems to cover the following conditions:

1. Internal faults to provide adequate protections to detect and isolate generator and station faults (details are not covered in this guide).
2. External faults such as distribution system or interconnected transmission system phase faults/ground faults.
3. Islanding/Abnormal Conditions
4. Additional Protection Features, such as Remote Trip and Generator end open signal, may be required in some applications.

This guide addresses protection requirements associated with items 2, 3 and 4.

External Faults

The protection system should be designed to provide full feeder coverage complete with a reliable DC supply. In some cases, redundancy in protection schemes may be required.

Normally, the following fault detection devices are required for synchronous generator(s) installation(s). For protection of induction generator, see section 4.1 in this document.

Ground Faults

When the HV winding of the embedded generator station transformer is wye connected with the neutral solidly grounded, then ground overcurrent (64) protection in the neutral is required to detect ground faults.

If the embedded generator station transformer HV winding connected to the Distributor system is ungrounded wye or delta, then ground undervoltage 64-27 and ground overvoltage 64-59 protections are required to detect ground faults.

Depending on size, type of generator and point of connection, a distributor may require the relaying system to be duplicated, complete with separate auxiliary trip relays and separately fused C supplies to ensure reliable protection operation and successful isolation of the embedded generator.



DC Remote Tripping/Transfer Tripping Between Embedded Generator
and Feeder Circuit Breaker

Remote or transfer tripping may be required between the embedded generator and the feeder circuit breaker because the embedded generator is connected at a critical location in the distribution system. This feature will provide for isolation of the embedded generator when certain faults or system disturbances are detected at the feeder circuit breaker location. The use of this feature may be restricted by physical limitations or economics.

Notes:

1. Maclaren Energy Inc. (embedded generator) is responsible for providing suitable embedded generator equipment to protect his plant and equipment for any conditions on the distributor and interconnected transmission systems such as reclosing, faults and voltage unbalance.
2. To incorporate the connection of embedded generator to the distribution system, the line/feeder protection including settings and breaker reclosing circuits must be reviewed and modified if necessary by the distributor or transmission authority. This process may be complex and may require significant time.
3. The embedded generator must submit a proposed single line diagram and protections for review to the distributor contact as identified by the distributor.
4. Based on the transformer connection proposed by embedded generator, additional significant protection cost may be incurred (e.g. delta HV transformer winding may require 3 phase HV breaker/recloser device). The embedded generator should not order the protection equipment and transformer until the station line diagram is reviewed and accepted by the distributor.

The purpose of the distributor review is to establish that the embedded generator electrical interface design meets the distributor requirements.

5. The protection schemes should incorporate adequate facilities for testing/maintenance.
6. Negative phase sequence (46) protection may be desirable for some applications to detect abnormal system condition as well as to protect the generator.
7. The embedded generator may be required to install utility grade relays for those protections which could affect the distributor or transmission authority system.

The embedded generator may be required to submit a Ground Potential Rise study for review by the distributor, if telecommunications circuits are specified for remote transfer trip protection.

SCHEDULE 'C'

METERING REQUIREMENTS

The Customer is responsible for supply, by a meter service, supply or other means, the following:

- a) MV90 4 quadrant compatible interval meter or IMO approved metering c/w approved C.T's and P.T.'s and installation.
- b) Supply ORPC daily hourly meter data in MDEF format, via email or website.
- c) Maintain MDEF files consistent with IMO requirements and good business practice.
- d) Dedicated phone line.
- e) Where practical, metering for embedded generators shall be installed at point of supply. If this is not possible, the distributor shall apply a loss factor.

In the event of a metering problem (i.e. blown C.T., etc.), repairs shall be completed within IMO guidelines.

