

Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:OTHER(1-SEC #1)ORG ORIGINAL Page 1 of 7

1	Response to School Energy Coalition Interrogatory Question #1						
2							
3	Reference: N/A						
4							
5	Question #1:						
6							
7	Attached is are two tables, the first comparing the most recent (2013) results of the						
8	twenty largest Ontario distributors, including the Applicant, and the second comparing						
9	the most recent results of the ten largest Ontario distributors, including the Applicant						
10	With respect to these comparison tables:						
11							
12	a) Please identify any distributors on either list that the Applicant feels are not						
13	appropriate comparators, and provide reasons for that conclusion.						
14							
15	b) With respect to the OEB three-year average efficiency assessment:						
16							
17	i. Please confirm that the Applicant's three year OEB efficiency						
18	assessment is 8^{th} out of the ten largest LDCs, and 13^{th} out of the						
19	twenty largest LDCs, at 4.5% over expected costs for 2011-2013.						
20							
21	ii. Please confirm that out of the ten largest, the Applicant only						
22	outperforms the two outliers, Toronto Hydro and Hydro One, and that						
23	on average the other large LDCs, other than the outliers, were able to						
24	keep their three year average efficiency at 7.46% below expected						
25	costs, more than 12% better than the Applicant.						
26							
27	iii. Please explain in detail the Applicant's strategy for improving on this						
28	performance, and describe how that strategy is implemented in the						
29	Application.						
30							



1	iv. Please provide details of all steps taken by the Applicant to determine
2	how the seven other distributors ahead of the Applicant in efficiency
3	have been able to achieve that performance, and how what the
4	Applicant has learned from those investigations has been
5	implemented in the Application.
6	
7	c) With respect to the 2013 OEB efficiency assessment:
8	
9	v. Please confirm that the Applicant's 2013 efficiency assessment, at
10	8.5% above expected costs, is again 8 th out of the ten largest LDCs,
11	but is 15 th out of the twenty largest LDCs.
12	
13	vi. Please confirm that, of all 73 LDCs, the 8.5% over expected costs of
14	the Applicant in 2013 was 54 th out of 73.
15	
16	vii. Please explain in detail the Applicant's strategy for reversing the
17	negative trend in efficiency, and describe how that strategy is
18	implemented in the Application.
19	
20	d) With respect to cost per customer and cost per km. of line:
21	
22	i. Please explain why, on the twenty LDC comparison, the
23	Applicant's cost per customer is 2.9% below the average of the
24	comparators other than the two outliers, but the Applicant's cost
25	per km. of line is 18.9% above the average of the others excluding
26	the outliers.
27	
28	ii. Please provide any data available to the Applicant that provides a
29	quantitative relationship between these differences and any
30	external factors (such as density, weather, vegetation cover, etc.)
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e) With respect to OM&A per customer and Distribution Revenue per customer:

- iii. Please confirm that Hydro Ottawa has both OM&A per customer and Distribution Revenue per customer higher than the other seven of the top ten LDCs (other than Toronto Hydro and Hydro One).
- iv. Please provide details of any data inconsistencies or other anomalies known to the Applicant that would make these comparisons incorrect.
- 12 v. Please confirm that the Applicant's growth in OM&A per customer, 13 at 59.77% since 2007, is the highest of any of the twenty largest 14 LDCs, including the outliers, and is more than double the average 15 of the other 19 large LDCs. Please explain the factors unique to 16 Hydro Ottawa that are the cause of this result.
- vi. Please confirm that the Applicant's growth in Distribution Revenue per customer, at 12.65% since 2007, is an average of 2.01% per year for those six years. Please explain why that rate is higher than the growth of the other large LDCs (excluding Toronto Hydro and Hydro One), at 1.44% per year. Please explain the factors 23 unique to Hydro Ottawa that are the cause of this result.
- 25 vii. Please provide any data or other information in the possession of 26 the Applicant explaining these relative numbers. Please provide 27 details of any strategy the Applicant has to bring its OM&A per 28 customer and Distribution Revenue per customer in line with the 29 other large distributors.
- 30



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1	f)	Please confirm that Hydro Ottawa's 2013 capital additions relative to
2		depreciation, at 350.4%, are higher than all of the other large LDCs except
3		Cambridge and Thunder Bay, and significantly higher than the average of all of
4		the large LDCs, at 233.15%. Please explain the factors unique to Hydro Ottawa
5		that were the cause of this high level of spending, but were not also applicable to
6		the other large LDCs.
7		
8		
9		
10	<u>Respo</u>	onse: (Supplied by PSE)
11		
12	a.	The answer depends on the objective and use of the comparison. Certainly each
13		distributor on the list has differences from Hydro Ottawa that would preclude any
14		one of them being considered appropriately comparable to Hydro Ottawa; in that
15		sense none of them would be a stand-alone "appropriate comparator."
16		
17	b.	
18		
19		i. Confirmed, if based on the OEB efficiency assessment. We note that the
20		four largest distributors (measured by total customers) are the bottom four
21		out of the ten largest LDCs for the OEB efficiency assessment. Out of the
22		four distributors with customers 300,000 or greater, the average OEB
23		efficiency assessment is +24.6% (compared to Hydro Ottawa's
24		assessment of +4.5%). For distributors greater than 200,000 customers,
25		the average is +17.9%. The top ten list that SEC provides contains
26		substantial evidence for a bias against the largest distributors in Ontario.
27		For this reason, including U.S. utilities into the econometric benchmarking
28		dataset is critical to providing a fair analysis for these few large outliers
29		within Ontario.
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- ii. Confirmed, if based on the OEB efficiency assessment. Again, we note
 the bottom four in this list also are the largest and only distributors above
 300,000 customers. This provides substantial evidence for a bias in the
 OEB efficiency assessment against the largest distributors.
- 6 iii. The appropriate efficiency finding is the one provided in PSE's 7 benchmarking report. The PSE benchmarking report uses a more 8 appropriate data set for a large distributor, such as Hydro Ottawa. It 9 provides a far more accurate and fair depiction of Hydro Ottawa's 10 efficiency level. In that report, Hydro Ottawa's 2011-2013 efficiency level 11 is 37% below the PSE benchmarks. In PSE's supplement evidence that 12 included an extreme temperature variable, Hydro Ottawa's 2011-2013 13 efficiency level is 45% below the PSE benchmarks. Both models provide 14 strong evidence of extremely strong cost performance and are statistically 15 significant at a 90% confidence level. While continuous improvement is 16 always a key objective, Hydro Ottawa believes system renewal and 17 improving reliability outcomes provides the best improvement focus for 18 customers. PSE's reliability benchmarking evidence provided a finding 19 that, while Hydro Ottawa cost levels are far lower than expected, reliability 20 levels are worse than expected and should be improved from a 21 benchmark perspective.
- 23The PSE cost/reliability balance figure (Figure 1-5) illustrates the situation24where Hydro Ottawa's total cost performance is very strong, yet SAIFI25performance is quite weak. This explains why improving Hydro Ottawa's26performance involves increasing spending to address the SAIFI27shortcomings.
- 28

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- c-f) See Hydro Ottawa's response to interrogatory IR:SEC-11b) iv).
- 1 2



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1	Response to School Energy Coalition Interrogatory Question #2
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 4]
4	
5	Question #2:
6	
7	Please provide evidence benchmarking the weather-related cost effects cited with the
8	costs of other Ontario LDCs in similar and diverse weather areas.
9	
10	
11	
12	Response:
13	
14	See Hydro Ottawa's response to interrogatory OEB Staff # 7 for Power System
15	Engineering's updated benchmarking evidence that includes a new appendix setting out
16	benchmarking total cost influence of extreme temperatures.
17	
18	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:A-2-1(1-SEC #3)ORG ORIGINAL Page 1 of 2

1	Response to School Energy Coalition Interrogatory Question #3					
2						
3	<u>Reference:</u> [Ex. A/2/1, p. 8]					
4						
5	Question #3:					
6						
7	Please provide a list of all of the "new customer services" to be implemented during the					
8	2016-2020 period. For each such new service, please provide:					
9						
10	a. The full initial and ongoing costs of implementing that new service.					
11						
12	b. Details of the benefits to the customers of that service.					
13						
14	c. All customer survey or other information showing the value customers place					
15	on the proposed new service.					
16						
17						
18	Response:					
19						
20	Please see Exhibit D, Tab 1, Schedule 6 Customer Service Strategy (2016 - 2020).					
21	This exhibit provides a list of the new customer service offerings and benefits. The					
22	decision to implement these new service offerings has been informed through market					
23	research, ongoing customer satisfaction surveys, the development of customer personas					
24	- along with a customer service strategic plan and a customer experience strategy.					
25						
26	Further, to assist in the identification of these new service offerings, Hydro Ottawa keeps					
27	a pulse on the industry through significant involvement with the Canadian Electricity					
28	Association, and the Electricity Distributor's Association and the Coalition of Large					
29	Distributors in Ontario. Beyond this, the company is an active speaker and participant in					
30	a number of industry conferences and events (CS Week, Chartwell, Oracle's Industry					
31	Connect, Distributech, etc.).					



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- 2 These combined efforts of listening to our customers and dovetailing their needs with
- 3 industry trends, processes and technology have allowed Hydro Ottawa to outline our
- 4 customer experience vision for 2020.
- 5
- 6 Costs to deliver this Customer Experience vision for the period of 2016-2020 are \$4.4M
- 7 of operating expense and \$2.6M in capital expenditure.



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1	Response to School Energy Coalition Interrogatory Question #4				
2					
3	<u>Reference:</u> [Ex. A/2/1, p. 11]				
4					
5	Question #4:				
6					
7	Please advise the source of the figure 245% in the original evidence. Please confirm				
8	that the Application is proposing the spending of 283% of depreciation in new capital				
9	over the five years 2016-2020.				
10					
11					
12					
13	Response:				
14					
15	The figure 245% in the original evidence was incorrect. Hydro Ottawa confirms that				
16	283% is the correct figure.				
17					



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1	Response to School Energy Coalition Interrogatory Question #5
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 13]
4	
5	Question #5:
6	
7	Please confirm that, based on current forecasts in Hydro Ottawa's possession, Hydro
8	Ottawa's cost of capital is expected to decline over the years 2016-2018, but increase for
9	the years 2019-2020. Please provide all cost of capital forecasts (debt or equity) in the
10	possession of Hydro Ottawa, including all internally generated cost of capital analyses,
11	covering all or any of the period 2016-2020.
12	
13	
14	
15	Response:
16	
17	Exhibit A-2-1, page 13 identifies the approach taken to update the cost of capital
18	parameters in 2018 for the years 2019 to 2020. As shown in Appendix 2-OA, the
19	weighted cost of capital increases slightly each year of the application from 5.89% in
20	2016 to 6.17% in 2020. Hydro Ottawa has used the rates in the cost of capital
21	parameters update for 2015 for ROE and Short Term Debt (to be updated for 2016 rates
22	to be published by the OEB in November 2015). For Long Term Debt it has used the
23	Consensus Long Term Forecast as per E-1-1 and provided in response to OEB-Q26.



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1	Response to School Energy Coalition Interrogatory Question #6
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 13]
4	
5	Question #6:
6	
7	Please confirm that Hydro Ottawa is not providing any new evidence on a productivity
8	factor specific to Hydro Ottawa. Please explain why the Applicant believes that the
9	average of the four expert opinions is to be preferred over the Board's decision to use
10	0% productivity.
11	
12	
13	
14	Response:
15	
16	See Hydro Ottawa's response to Interrogatory OEB Staff #7.
17	



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1	Response to School Energy Coalition Interrogatory Question #7
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 13 and I/1/2, p. 2 et seq.]
4	
5	Question #7:
6	
7	Please provide complete details on the revenue requirement impact of the Facilities
8	Implementation for each of 2016 through 2020 if the spending is in the amounts, and at
9	the times, currently forecast. Please provide full calculations of each year's revenue
10	requirement impact. Please advise how much of this impact, if any, is included in the
11	forecast revenue requirement and rates in the Application. Please calculate the rate
12	impact, by class and by year, of this additional revenue requirement.
13	
14	
15	
16	Response:
17	
18	Please see Interrogatory response to OEB Staff Question # 1.
19	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:A-2-1(1-SEC #8)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #8
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 23]
4	
5	Question #8:
6	
7	Please confirm that the Applicant is seeking a weighted average rate increase of 10.9%
8	in 2016, and 33.1% over the five years to 2020, plus Y factors and Z factors currently
9	expected to cause those rate increases to be larger.
10	
11	
12	
13	Response:
14	
15	Please see response to Ontario Energy Board Staff Interrogatory Question #1 for a
16	revised revenue requirement.
17	
18	As originally filed, Hydro Ottawa requested a revenue requirement from rates that is
19	10.9% higher than the 2015 revenue requirement from rates. Over the five year period
20	2016 to 2020 the average increase is 6.6%, the requested 2020 revenue requirement
21	from rates is 33.1% higher than the 2015 revenue requirement from rates.
22	
23	As stated in Exhibit A-2-1 Hydro Ottawa has proposed to reserve the right to file a Y
24	factor to adjust rates to reflect the construction of the administrative and operational
25	buildings. Also in Exhibit A-2-1 Hydro Ottawa proposes to reserve the right to file a Z
26	factor application to recover costs resulting from events or initiatives having a material
27	impact to Hydro Ottawa's cost or revenue structure.



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1	Response to School Energy Coalition Interrogatory Question #9
2	
3	<u>Reference:</u> [Ex. A/2/1, p. 24]
4	
5	Question #9:
6	
7	Please confirm that a typical school in Ottawa with a load of 100 kW pays an annual
8	distribution bill in 2015 of \$7,412.76 (\$260.82 per month fixed plus \$356.91 variable),
9	and under this Application would see that annual distribution bill increase in 2020 by
10	45.6% to \$10,791.60. Please confirm that the total cumulative increase in distribution
11	charges over the five years for that school is \$10,814.56. Please provide calculations to
12	show the expected impact on those figures of the Y factor proposed, any currently
13	forecast Z factor for Hydro One payments, and the current forecast of the impact of the
14	2019 and 2020 adjustments to inflation and cost of capital.
15	
16	
17	
18	Response:
19	
20	Please see Table 1 for a summary of Hydro Ottawa Limited's ("Hydro Ottawa") proposed
21	rates and bill impacts for a General Service ("GS") customer with a demand of 100 KW
22	and consumption of 51,100 kWh, rate class GS 50 to 1,499 KW. Total distribution
23	charge has been presented without regulatory assets ("RA").
24	
25	For Y factor impacts and revised rates please see response to Ontario Energy Board
26	Staff Interrogatory Question #1.
27	
28	Hydro Ottawa has no forecasted Z factor payments to Hydro One. Hydro Ottawa has
29	not updated its forecast for inflation as a result Table 1 reflects the most current forecast.
30	
31	



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Table 1 - Rate Impacts - GS 50 to 1,499 KW (100KW/51,100 kWh)

3

	2015	2016	2017	2018	2019	2020
Distribution Charge - Fixed	\$ 260.82	\$ 290.00	\$ 355.00	\$ 420.00	\$ 490.00	\$ 550.00
Distribution Charge - Variable	\$ 356.91	\$ 394.54	\$ 389.62	\$ 382.99	\$ 368.42	\$ 349.30
Distribution Charge - Total No RA	\$ 617.73	\$ 684.54	\$ 744.62	\$ 802.99	\$ 858.42	\$ 899.30
Change in Distribution Charge		\$ 66.81	\$ 60.08	\$ 58.37	\$ 55.43	\$ 40.88
% Distribution Increase		10.8%	8.8%	7.8%	6.9%	4.8%
Total Bill - not including taxes	\$7,135.22	\$7,135.22	\$7,251.98	\$7,310.35	\$7,365.78	\$7,406.67
Total Bill - including taxes	\$8,063.58	\$8,062.80	\$8,194.73	\$8,260.70	\$8,323.34	\$8,369.53
Change in Total Bill		-\$ 0.78	\$ 131.93	\$ 65.96	\$ 62.64	\$ 46.20
% Increase of Total Bill		-0.01%	1.64%	0.80%	0.76%	0.56%

4

5 This would result in a change in distribution charge of \$281.57, reflecting a 39.1%

6 increase. The total bill impact over 5 years would be \$305.95, reflecting a 3.7%

7 increase.



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1	Response to School Energy Coalition Interrogatory Question #10			
2				
3	Reference: [Ex. A/3]			
4				
5	Question #10:			
6				
7	With respect to the Applicant's customer engagement:			
8				
9	a) Please provide a breakdown of all costs incurred, or to be incurred, by the Applicant			
10	for customer engagement activities (including planning, implementation, regulatory			
11	compliance, and supervision) in each of 2014, 2015, and 2016 including but not			
12	limited to external costs such as consulting fees, and internal costs such as staff			
13	assigned to planning or implementation activities.			
14				
15	b) Please advise at what point in any of its surveying, polling and other customer			
16	engagement did the Applicant advise its customers that it was proposing a 33.1%			
17	rate increase, and ask them if they support or oppose a rate increase of that			
18	magnitude?			
19				
20				
21				
22	Response:			
23				
24	a. Please see Interrogatory Response to CCC Question #14.			
25				
26	b. No, Hydro Ottawa did not specifically advise customers that it was proposing a 33.1			
27	percent rate increase at any point in the customer engagement process.			
28				
20	While rote increases were not presented to customers as a new stars, the impact of			
29 20	While rate increases were not presented to customers as a percentage, the impact of			
30	Hydro Ottawa's proposed plan was presented in detail using actual dollar amounts. In			



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- every phase of the customer engagement process, customers were advised of both the
 estimated dollar amounts to which:
 - the average Hydro Ottawa customer currently pays in distribution costs; and
 - the proposed dollar increase on the average customer's distribution portion of their electricity bill.
- 5 6

3

4

In every phase of Hydro Ottawa's customer engagement, after presenting information on the average amount of dollars customers remit to Hydro Ottawa to cover distribution costs and the proposed rate increase, customers were asked INNOVATIVE's standard "social acceptance" question. The question asked customers to select one of the four options below that best reflected their opinion towards Hydro Ottawa's proposed rate increase:

- 13 1. The rate increase is reasonable and I support it.
- 14 2. I don't like it, but I think the rate increase is necessary.
- 15 3. The rate increase is unreasonable and I oppose it.
- 16 4. Don't know.



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1		Response to School Energy Coalition Interrogatory Question #11	
2			
3	Ref	erence: [Ex. A/4, Attach. I]	
4			
5	Qu	estion #11:	
6			
7	With respect to the 2014 Annual Report:		
8			
9	a)	P. 3. Please file the document "2012-2016 Strategic Direction: Creating Long Term	
10		Value" and any updates of that document.	
11			
12	b)	P. 7. Please provide a table showing the kwh. and kW per customer for each rate	
13		class for the period 2006-2020 (2006-2014 actuals, 2015-2020 forecasts).	
14			
15	c)	P. 10. Please provide a detailed breakdown of all costs and savings associated with	
16		getting 122,000 customers subscribed to MyHydroLink, and getting 86,000 signed	
17		up for e-billing. Please forecast those costs and savings, together with the numbers	
18		of customers subscribed and signed up, as the case may be, for the period 2016-	
19		2020.	
20			
21	d)	P. 16. Please provide the forecast of trades and technical requirements to 2024.	
22			
23	e)	P. 16. Please provide the document "Retiree and Older Worker Engagement	
24		Strategy" (also called elsewhere "Prime Time"), or, if it is not in one document, the	
25		reports, memoranda, presentations or other documents that together make up that	
26		formal strategy.	
27			
28	f)	P. 17. Please provide the most recent internal cost/benefit analysis (or update of	
29		that analysis) for the Facilities Rationalization Plan.	
30			



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1	g)	P. 41. Please provide a detailed explanation as to why "risks arising from negative
2		customer and media perceptionsmight become more prominent in the context of
3		Hydro Ottawa's application to the OEB for a rebasing of its rates for the years 2016-
4		2020".
5		
6	h)	P. 84. Please confirm that the refinancing of \$200 million of debt, previously at
7		4.930%, at a new rate of 2.614%, generates annual reductions in interest costs of
8		about \$4.6 million. Please confirm that this reduction is an offset to the other costs
9		that are increasing rates.
10		
11		
12	_	
13	Re	sponse:
14		
15	a.	Please refer to Hydro Ottawa's response to interrogatory IR:CCC #13.
16		
17	b.	Please refer to Attachment Att-SEC-Q11-C for the kWh and KW per average
18		customer or connection for 2012 to 2020. 2012 to 2014 are based on actual data
19		while 2015 to 2020 is based on forecast data.
20		
21	С.	The gateway to set a customer up on E-Billing is MyHydroLink (MHL), Hydro
22		Ottawa's customer web portal. Promotion of both of these services has
23		predominately been through ongoing customer interaction and through
24		promotional campaigns.
25		
26		Each customer that converts to E-Billing now enables Hydro Ottawa to reduce
27		operational expenses by \$11.09 per year (mainly in avoided postal fees).
28		
29		Hydro Ottawa is pleased to be among industry leaders with a 28% adoption rate
30		for E-Billing (over 91,000 customers). Hydro Ottawa is now realizing over \$1M of



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annualized operational cost avoidance through this program beyond what the costs would have been had the E-Billing solution not been put in place.

To the end of 2014, promotional costs associated with E-Billing totaled \$0.4M. Estimated net cost avoidance for this same timeframe totals \$2M.

While the number of MHL and E-Billing customers has not been formally
forecasted out to 2020, with close to 230,000 customers still receiving paper bills
there is the opportunity to realize an additional \$2.6M in annualized operational
cost avoidance if every customer could be converted to E-Billing - so the focus
continues on the promotion of "Go Paperless".

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Although this opportunity exists, it is anticipated that the effort to attract new customer conversions will continue to increase as the growth in E-Billing uptake slows over time. As an industry leader in this area, we continue to "break ground" on exploring the best ways to drive further adoption of MHL and E-Billing.

18

d. Hydro Ottawa's approach to addressing trades and technical requirements is
outlined in Exhibit D-1-7, which details its Workforce Planning Strategy and
associated workforce modelling. As outlined in this Exhibit (p. 11-12), Hydro
Ottawa's resourcing forecast from 2014 to 2020 projects a requirement for 76
new hires in its trades occupations in response to anticipated operational
demand for labour. Hydro Ottawa's long-range forecast of requirements
estimates an additional 24 new hires between 2021 to 2024.

- 26
- e. Please refer to attachment Att-SEC-Q11-A for a copy of Hydro Ottawa's Retiree
 and Older Worker Engagement Strategy.
- 29
- 30f.The cost/benefit analysis for Hydro Ottawa to construct new facilities was31performed in 2010 and 2011 and formed part of Hydro Ottawa's 2012 Cost of



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1 Service rate application. It was determined that constructing new facilities was 2 the superior economic option resulting in long term value to ratepayers as such 3 the Hydro Ottawa Board of Directors provided their approved to proceed with the 4 plan. Subsequently, Hydro Ottawa purchased two land parcels in 2012 and 2013 5 to be used for its Facilities Implementation Plan. The Board of Directors receives 6 updates on the status of the project but has not requested an update of the 7 original cost/benefit analysis. The latest update provided to the Hydro Ottawa 8 Board of Directors is included as Attachment Att-Sec-Q11-B.

10 The partial statement quoted by SEC is taken from the section of Hydro Ottawa's g. 11 Annual Report that lists all known or expected risks and uncertainties. In its 12 entirety the statement reads "Electrical utilities across Ontario are confronted with 13 risks arising from negative customer and media perceptions. These risks might 14 become more prominent in the context of Hydro Ottawa's application to the OEB 15 for a rebasing of its rates for the years 2016-2020." The statement of risks 16 arising from media and customer perception is not dissimilar to ones Hydro 17 Ottawa has included in its previous Annual Reports that point to potential 18 concerns regarding billing inaccuracies or issues from Hydro Ottawa's move to 19 monthly billing.

20

9

With respect to the substance of the quoted statement Hydro Ottawa notes that the risk of negative customer and media attention is more prominent due to Hydro Ottawa's rate application because the proposed rate increases are published in all local newspapers and typically garners attention of the media and politicians given the political attention surrounding energy prices.

26

The risk of negative customer and media attention is a risk borne by all publicand private entities.

- 29
- h. In February 2015, the Holding Company completed a \$375 million issuance in
 two tranches, a \$200 million 10-year tranche and a \$175 million 30-year tranche.



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1 The refinancing of the Hydro Ottawa \$200 million promissory note maturing in 2 February, 2015 was done in conjunction with the \$60 million outstanding on the 3 grid promissory note shown as Attachment E-1(B) and discussed in the response 4 to EP-Q42. The total of \$260 million was replaced by two new promissory notes 5 of \$138.7 million @ 2.724% and \$121.3 million @ 3.769% respectively as shown 6 in Appendix 2-OB for the 2015 table. These two new promissory notes reflect the 7 proration of the \$260 million refinancing between the new 10 and 30-year 8 tranches. Based on the foregoing, the \$260 million in refinancing successfully 9 reduced the interest costs by ~\$4.6 million in total annually. This reduction is 10 reflected in the overall revenue requirement of Hydro Ottawa.





Retiree and Older Worker Engagement Strategy

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Presented: April 8, 2013



OVERVIEW

Over the next decade Hydro Ottawa will experience a significant loss of older, experienced workers due to retirement eligibility. These workers possess a tremendous amount of experience and corporate memory. This challenge, combined with the existence of a skills shortage and tight labour market throughout the electrical industry, has increased the need to develop multiple responses to the aging workforce.

This report provides additional information on these issues and defines opportunities for strategies and programs designed to retain and engage our older workers and retirees, both to extend and preserve their valued contribution to Hydro Ottawa and also to ensure that an effective and vibrant knowledge transfer process is in place, organization wide.

SUMMARY OF RECOMMENDATIONS

- 1. Strategies to Delay Retirements Where Appropriate
- 1.1 Pursue work redesign opportunities for early dialogue with older workers to discuss and explore their interests and plan for their transition into retirement, as well as support knowledge transfer.
- 1.2 Pursue Phased Retirement options through the OMERS Pension Plan.
- 1.3 Offer targeted training and development to support older workers in adapting to technological changes as they are introduced.
- 1.4 Include aging and generational issues as components for diversity development, awareness and training.
- 2. How to Best Engage Employees Transitioning into Retirement
- 2.1 Better leverage ability for hiring overlaps with departing incumbents in unique positions.
- 2.2 Enhance knowledge transfer channels to support information exchange and mitigate risk.
- 2.3 Expand and formalize Pre-Retirement Planning Program and post-retirement offerings.
- 2.4 Formalize and communicate transitional and flexible work opportunities.

3. Post Retirement Engagement - Keeping Retirees Part of the Family

- 3.1 Establish and support a Retiree Association.
- 3.2. Provide formal opportunities for retirees to stay connected with Hydro Ottawa.
- 3.3. Communicate directly with retirees through paper or electronic newsletters.
- 3.4 Implement a 'Retiree Knowledge Network and On-Call Program.'
- 3.5. Allow employees the option of transferring their work cell phone numbers following retirement.
- 3.6 Establish a 'Retiree Resource Pool' to identify retirees interested in post-retirement employment.
- 3.7 Explore the development of a retiree link or portal as part of the Hydro Ottawa Internet Renewal Strategy.
- 3.8 Establish an 'Alumni Room' for Retirees and provide Retirees access to Hydrofit Facilities.

4. Policy, Procedure and Practice Review and Recommendations

- 4.1 Return of Hydro Ottawa Property Form
- 4.2 Memorial Donation and Floral Tribute Policy
- 4.3 Vacation Carry Over Provisions
- 4.4 Retirement Recognition Policy
- 4.5 Service Recognition Policy
- 4.6 Notices of Bereavement for Retirees
- 4.7 Extend Employee Discount Offerings to Retirees
- 4.8 Ensure Hydro Ottawa Events are Older Worker Friendly



BUSINESS IMPERATIVE

As part of ongoing workforce planning at Hydro Ottawa, demographic forecasting and analysis points to the potential for the retirement of almost 40% of the overall workforce – and almost 50% of the trades and technical workforce – within the next 10 years. With a specialized workforce and a continuing increase in the number of employees electing to retire from the organization at their earliest unreduced date of eligibility and at an earlier age, engaging older workers and retirees is key to ensuring operational capacity and continuity.

Hydro Ottawa's 2012-2016 Strategic Direction has identified the need to address these challenging workforce demographics through a concerted response.

To that end, Hydro Ottawa's Talent Management Strategy provides a comprehensive and integrated human resources management model upon which priorities and initiatives are aligned. The Talent Management Strategy centres around five key components of the employee experience in order to build performance and realize potential throughout the talent lifecycle of planning, attraction and acquisition, deployment, performance and development and exit and transition.



The development of a *Retiree and Older Worker Engagement Strategy* builds upon the existing programs and services offered within Hydro Ottawa's *Talent Management Strategy* by focusing on the "Exit and Transition" component of the Strategy:

Specifically over the last few years a number of key programs have been introduced or piloted to support older workers and retirees. Examples include:

- Occupational Athlete Program This program increases employee awareness of the personal risk of soft tissue injuries and communicates specific injury prevention opportunities. The program, first introduced in 2009, is comprised of a classroom session, followed by a participatory functional movement assessment and a personal report on body conditioning, which includes exercises to address identified risk areas. One-to-one consultation with a fitness specialist is also included. Our goal is to have all trades employees participate over a five-year period; as of 2012, almost 70% have been assessed.
- Benefits beyond age 65 for active employees With the retention of older workers as a driver, most insured benefits remain available to age 70.
- Transitional work opportunities are being piloted to support a phasing into retirement by working on a less that full time basis or moving into other roles which allows experienced employees to mentor new employees and transfer knowledge.
- Working part-time after retirement opportunities have become available for retirees to return to work on a part-time basis as instructors, trainers, technical specialists and project leads to supplement existing full time resources.



In addition, recent changes to Canada Pension Plan provisions now allow for the election of benefits from age 60, and without having to cease work to qualify. This amendment further supports the concept of phased retirement, and also serves to encourage older workers to remain in the workforce.

With a retiring workforce that maintains a large depository of both explicit and tacit knowledge, it is incumbent on Hydro Ottawa to explore strategies to retain and access the knowledge that will otherwise be departing the organization.

Older workers are important to the development of a diverse workforce and can also add particular value to customer relationships, particularly when experience is valued. Several organizations recently recognized by the American Association of Retired Persons (AARP) as Best Employers for Workers over 50, have found a link between customer satisfaction and having a workforce that reflects its customers over fifty years of age.

As a result, with a corresponding segment of our customer base aging, Hydro Ottawa can benefit from the contributions, experience and perspective of older workers to generate ideas, create products and deliver services that understand and effectively target the needs of this distinct group.

In particular, the purpose of the *Retiree and Older Worker Engagement Strategy* is to:

- Identify how to delay retirements from the organization where appropriate
- > Determine how the organization can best engage employees transitioning into retirement
- Explore how retirees can continue to be engaged after retirement and remain Ambassadors for Hydro Ottawa within the community
- Undertake a review of policies, practices, and procedures to identify where enhancements can be made to better serve older workers and formally keep retirees as part of the Hydro Ottawa Family.



DEVELOPMENT APPROACH

1. Environmental Scan and Best Practices Review

- A) In 2012, Hydro Ottawa completed an environmental scan and best practices review of the Top Employers for Canadians Over 40 (15 employers), the American Association of Retired Person's Best Employers for Workers over 50 (50 employers) and the following private and public sector companies, representing a broad range of industries and employer size:
 - Agriculture Financial Services Corporation (Crown Corporation)
 - Alta Gas Limited (Utility)
 - Office of the Auditor General (Government)
 - City of Calgary (Government)
 - CianBro Corporation (Construction)
 - Cornell University (Education)
 - City of Glendale, Arizona (Government)
 - Lee County Electric Cooperative (Utility)
- B) The following surveys and publications were also relied upon for research findings and relevant insights:
 - Labour Market Demand and Transitions in the Electricity Industry (2007) Electricity Sector Council
 - Harnessing the Power: Recruiting, Engaging and Retaining Mature Workers Conference Board of Canada (2008)
 - Canadian Business, "How to Retire Happy", July 18, 2011
 - Canadian Business, "Retirement Denied", April 16, 2012
 - Desjardins Life Insurance Retirement Survey 2012
- C) An industry specific benchmarking survey was developed on practices relating to older workers and retirees and distributed nationally through the Human Resources Committee of the Canadian Electricity Association and the Human Resources Council of the Electricity Distributors Association.

2. Working Group and Focus Groups

In addition to this research, employees nearing retirement and those who have recently retired were engaged to form a working group that guided the design of a Retiree and Older Worker Engagement Strategy. Focus groups with Directors, Managers and Supervisors were also conducted to inform and validate the proposed recommendations to shape the Retiree and Older Worker Engagement Strategy.

Overall, a number of key themes were identified from the research and deliberations, which effectively guided and served as a foundation for the strategy. These predominant ideas are as follows:

Older workers are an essential source of labour supply and a distinct employee segment of the workforce.



- Nearly 1 person in 4 in the labour force is projected to be 55 and over. (Statistics Canada, 2011)
- Increasing willingness by older workers to continue to work and contribute beyond retirement eligibility.
- Retirement is no longer a fixed point in time but rather is becoming a gradual transition from full time work to other options and opportunities.
- Loss of Corporate knowledge and experience is of significant concern.
- Knowledge transfer is a challenge for organizations.
- Older workers have key interests in how they work in the latter stages of their careers and after retirement and desire flexibility in work arrangements and scheduling.
- Leading programs for older workers include phased in retirement opportunities, retirement planning sessions, alternative and flexible work arrangements, access to fitness facilities, wellness initiatives, training and development opportunities targeted for mid to late career workers, mentorship assignments, alumni programs and organized social and volunteer opportunities that provide retirees with the opportunity to stay connected following retirement.

3. Union Consultation

The Union Management Advisory Council was consulted on the *Retiree and Older Worker Engagement Strategy* including the emerging strategy recommendations.



DETAILED RECOMMENDATIONS

The resulting recommendations leverage all insights from the above developmental approaches that, once approved, will form the basis of Hydro Ottawa's Retiree and Older Worker Engagement Strategy.

1. STRATEGIES TO DELAY RETIREMENTS WHERE APPROPRIATE

1.1 Pursue work redesign opportunities for early dialogue with older workers to discuss and explore their interests and plan for their transition into retirement, as well as support knowledge transfer.

Strive to engage late-career workers prior to their attainment of retirement eligibility in a discussion about their interests and potential alternate work assignments – such as different positions, projects, mentoring and training opportunities. These discussions should also anticipate and plan for knowledge transfer requirements. People Leaders should be provided with training to identify potential biases in supervision and better understand how to manage older workers and enhance their knowledge and comfort with discussions of this nature.

On the basis of these discussions, a plan could be developed to help meet individual and corporate needs. This acknowledges a cornerstone of older worker engagement as it will contribute to the worker feeling that their presence and contributions continue to be valued by the organization. A culture that values experience is a prerequisite for older worker engagement.

In support of this recommendation, strategic workforce planning consultations may also be leveraged to determine the individuals or occupational skill areas at risk, and to identify potential work assignments to match older workers interests with organizational needs.

1.2 Pursue Phased Retirement options through the OMERS Pension Plan.

The formalization of phased or transitional retirement programs will be investigated. Older workers desiring flexibility and meeting defined program eligibility should be afforded the opportunity to remain in the workforce and gradually reduce their work schedule over a defined period of time to provide for a gradual exit from the organization, rather than an abrupt and final departure into retirement.

Discussions should be pursued with OMERS and industry contacts to foster support and gain insight into the status of the development of phased retirement options offered under the OMERS Pension Plan.

In addition, informal phased retirement arrangements will be reviewed to determine if all existing provisions of the OMERS Pension Plan are being fully utilized to the advantage of the older worker. e.g. the definition and status of Continuous Full Time, the calculation of Best Five Year's Contributory earnings and attainment of Thirty Five Years maximum credited service.

1.3 Offer targeted training and development to support older workers in adapting to technological changes as they are introduced.

Target training initiatives and opportunities to provide support for mid to late career workers adapting to the changing workplace environment and to equip the older worker to better adapt to changing technological advances. Build consideration for change management process into the introduction of technology advances in the workplace.



1.4 Include aging and generational issues as components for diversity development, awareness and training.

Older workers are important to the development of a diverse workforce, with aging and generational differences legitimate diversity issues impacting the workplace need to be recognized, understood and addressed in program development.

2. HOW TO BEST ENGAGE EMPLOYEES TRANSITIONING INTO RETIREMENT

2.1 Better leverage ability for hiring overlaps with departing incumbents in unique positions.

Reinforce and clarify the flexibility and process to utilize the overlap provision for unique positions in order to hire an incumbent's replacement up to six months in advance of their retirement.

2.2 Enhance knowledge transfer channels to support information exchange and mitigate risk.

Older workers possess extensive technical knowledge and corporate history. Prior to their departure, it is important that steps are taken to ensure that this knowledge and corporate memory are shared with successors and others in similar occupations. Creating opportunities for this exchange will return the investment in the years that follow.

A formal mentorship program is scheduled to be launched in 2013, and could be leveraged to assign employees who are transitioning into retirement to successors or other employees in similar occupations in order to provide ongoing advice and assistance during the time of transition.

Leverage exit interviews to obtain the unique perspective of retiring employees, and to provide these departing employees with an additional opportunity to reflect on their career and preserve their contribution. Care must be taken to insure the employee is at ease and comfortable in sharing their experience and views.

2.3 Expand and formalize Pre-Retirement Planning Program and post-retirement offerings.

Expand and formalize the current Pre-Retirement Planning Program beyond the financial components to encompass additional seminars covering the psychological aspects of retirement, such as social/health/wellness, to assist employees in making an informed retirement decision and to better prepare retiring employees for a successful transition to retirement.

Target offerings of "Pension/Financial/Estate Planning" Seminars to begin in advance of earliest retirement date with invitations extended to spouses to participate in the sessions. Additional sessions covering the psychological aspects of retirement to be made available two years prior to retirement eligibility and to include a focus on "testing" participant's assumptions and ideas about retirement, in order to fully explore the level of personal "retirement readiness."

Explore the design and costs of a transitional assistance program for access by retirees for an eligibility period of up until one year post-retirement to offer psychological support for the transition.



2.4 Formalize and communicate transitional and flexible work opportunities.

Building on existing pilots of transitional work opportunities and current flexible work opportunities, develop a program that supports older workers in shaping the latter parts of their careers – by allowing them to stay in the workplace longer, but potentially at a different pace and /or job.

Criteria for participation would require employees to be within five years of retirement eligibility and maintain their status as a permanent employee, in accordance with insured benefit plan eligibility provisions.

Examples of opportunities include a reduction of hours or days worked on a weekly basis, (in accordance with OMERS Pension Plan and Insured Benefit Plan eligibility provisions), transitions to part-time work, and job sharing/telecommuting where appropriate and operationally feasible.

3. POST RETIREMENT ENGAGEMENT - KEEPING RETIREES PART OF THE FAMILY

An important goal of the implementation of the *Retiree and Older Worker Engagement Strategy* is to develop and introduce programs and opportunities that will foster a sense of community amongst retirees, their former co-workers and the organization and which will sustain the Retiree Group as an integral part of the fabric of the Hydro Ottawa Family.

3.1 Establish and support a Retiree Association.

A 'Retiree Association' should be established to plan and organize social and volunteer activities on behalf of post-amalgamation retirees. Liaison with Hydro Ottawa would be through a designated contact in Human Resources. In addition, members of the Retiree Association could be selected to serve on an 'Advisory Committee' for consultation to provide advice and ideas from their experience and perspective on specific issues the organization may be encountering.

Retiree volunteer involvement as Ambassadors for Hydro Ottawa should also be encouraged through the Retiree Association. Examples include the undertaking of charitable activities and presentations on behalf of Hydro Ottawa in schools and community associations, and by the sharing of knowledge to customers and other employers in the Ottawa Region requiring our services. An excellent example of a successful Retiree Volunteer Network is the SaskTel Pioneers. Formed over fifty years ago, the SaskTel Pioneers are an invaluable group of community ambassadors who offer their time and talents to over 100 community projects every year across the province. With support from our Retiree group, a similar association could be explored with Volunteer Ottawa to provide resources for community opportunities.

Future Retirees would be enrolled in the Association at the time of their retirement, and past retirees (including those from the Founding Utilities with retirements effective from 1995) would be actively canvassed for their interest in participating.

3.2. Provide formal opportunities for retirees to stay connected with Hydro Ottawa.

Invitations should be extended to retirees to attend select existing corporate and social events such as United Way Day, Volunteer Action Days, Special Needs Day, Open Houses, Employee Forum, Christmas Parties, and through the introduction of a new Retiree Appreciation Event, presented annually and similar in design to the End of Summer Student Appreciation Event This could be organized in conjunction with the Retiree Association.



3.3. Communicate directly with retirees through paper or electronic newsletters.

A Hydro Ottawa newsletter, with design and content compiled specifically for retirees, should be mailed to eligible retirees with a covering introductory letter beginning in 2013. Current Corporate and Customer Update Information could be leveraged together with messages from the President and Chief Executive Officer and Chief Human Resources Officer. Legislative and OMERS Pension Plan information and associated articles of interest could also be included. Each issue could include an accompanying cover letter used to solicit interest and members for the Retiree Association, or used by the Association itself to communicate with members.

3.4 Implement a 'Retiree Knowledge Network and On-Call Program.'

Retirees should be invited to indicate their willingness to provide advice and assistance to current employees. Employees would be able to contact retirees and tap into their specific areas of expertise from a contact list. Retiree Association Members could also be invited to Division/Group meetings and for lunch and learn sessions to discuss their work experience and provide their expertise and advice on specific topics of interest.

3.5. Allow employees the option of transferring their work cell phone numbers following retirement.

This would facilitate contact and also allow retirees to be easily accessible to their contacts established during their career.

3.6 Establish a 'Retiree Resource Pool' to identify retirees interested in post-retirement employment.

This would provide opportunities for retirees to apply and continue their association and contributions to Hydro Ottawa through ad-hoc part-time and temporary employment opportunities, for which they are qualified. Formalization of processes would be required, in accordance with the provisions of the Collective Agreements; together with assessments of all necessary safety and proficiency requirements for eligible trades workers.

3.7 Explore the development of a retiree link or portal as part of the Hydro Ottawa Internet Renewal Strategy.

An Internet link could direct retirees to information on Hydro Ottawa Retiree Programs and Opportunities and other areas of interest (Contact Directories, Change of Address, OMERS and Government Programs and Services etc.) In addition, this mechanism could be leveraged to establish a 'Retiree Outreach Care and Compassion Access Service' forum where retirees may identify if they require support or assistance with life challenges (e.g., eldercare, drives to medical appointments, help with chores around the house).

3.8 Establish an 'Alumni Room' for Retirees and provide Retirees access to Hydrofit Facilities.

Establish an Alumni Room in the new Hydro Ottawa main office, for use by retirees and the Retiree Association to meet. At other times it would be assigned as a regular meeting room for organization wide use. Over time the room would be decorated to include historical photos of Hydro Ottawa work and occupations, together with awards and plaques displaying the names of retirees. A backdrop of this nature could also serve as an effective location for select media events by the organization.

In addition, provide the opportunity for retirees to use the onsite fitness facilities in the new buildings, in accordance with application criteria and for use during regular office hours. To address any security



concerns, design considerations for the new facility could include direct access to the Alumni Room and fitness facilities from a secured area.

A fine example of a facility that has effectively combined an Alumni "presence" and tribute to those who have served, within a working office environment, is the Ottawa Police Association Building, located at 141 Catherine Street in Ottawa.

4. POLICY, PROCEDURE AND PRACTICE REVIEW AND RECOMMENDATIONS

A review of policies, procedures and practices as they relate to older workers and retiring employees was undertaken with proposed recommendations developed to increase their respect, relevance and support for the needs of these individuals.

4.1 Return of Hydro Ottawa Property Form

The Return of Hydro Ottawa Property Form should be revised to support an exit process that is more older worker friendly and respectful of the employee's contribution to the organization in recognition of their retirement.

Specifically, on the return of the Hydro Ottawa security access ID badge, keys and assigned equipment, the retiree would receive a membership card in the Retiree Association and an information brochure outlining the variety of programs, services and social/recreational opportunities, now available to them, as a Retiree of Hydro Ottawa.

4.2 Memorial Donation and Floral Tribute Policy

Revise the Memorial Donation and Floral Tribute Policy Directive (4b) to include the spouse of a retiree, where Hydro Ottawa becomes aware, in recognition of a retiree's contribution to the organization and the support role of their spouse during their career.

4.3 Vacation Carry Over Provisions

Discussions should be undertaken with the union regarding vacation carry over provisions specifically to support Transitional Retirement recommendation 2.4. Particularly, on the approval of an irrevocable election to retire under a transitional work schedule, a maximum of one year's annual leave credits could be carried forward, in addition to the current year's earned leave allotment, to be applied only to the transitional work schedule. This ability currently exists for management group employees.

4.4 Retirement Recognition Policy

The Policy should be revised to assign accountability for direct supervisors to work with a retiring employee on shaping their last day at Hydro Ottawa. In support of this accountability, the policy would be complemented by the development of a Best Practices Quick Guide on how to meaningfully recognize a departing employee on their last day at Hydro Ottawa. The process would also ensure an exploration of the retiree / departing employee's wishes concerning a retirement function to mark their contribution and to allow coworkers the opportunity to extend congratulations and wish them well.

A distinct Retiree Recognition Event would be presented once annually as opposed to recognition at the Employee Forum. Invitations for this could include spouses or a significant other.



4.5 Service Recognition Policy

Revise to clarify that retiring employees also receive recognition for service level attained, in addition to retirement recognition in the year of their retirement. This was completed and implemented in 2012.

4.6 Notices of Bereavement for Retirees

Upon formal notification of a Retiree's passing, Human Resources arranges for the appropriate Memorial or Floral Tribute and distributes a notice for posting on bulletin boards at all work locations. A review and expansion of this process to provide such information to retired employees so that they may honour their former colleagues and friends from Hydro Ottawa should be undertaken. For example, the ability to communicate easily with retirees would facilitate a timely sharing of bereavement notices with many who might not otherwise access such announcements in the local media.

4.7 Extend Employee Discount Offerings to Retirees

The Employee Discount Program should be extended to Retirees. The Retiree Association Membership Card would serve as confirmation of eligibility.

4.8 Ensure Hydro Ottawa Events are Older Worker Friendly

To help support the needs of older workers, actively review and ensure that Hydro Ottawa events are older worker friendly. For example, in 2012 attendance eligibility for the Children's Christmas Party and the Holiday Card Art Contest, and, in 2013, the application criteria for the Safety Scholarship Program were all extended to include grandchildren of active employees.


Hydro Ottawa Facilities Implementation Project Update

November 17, 2014









- Capital Forecast
- Other Considerations
- Timeline
- Resolution

Building Estimate/Budget



	Current Original Programme Ad Env't ^{5,6} (\$78.5M)		Original Programme (\$78.5M)		Original Programme (\$78.5M)		Land (Actual)	Total
	3 Existing Facilities	Area ^{1,2,3}	Estimated Cost					
Office	167,015 SF	186,000 SF	\$37.0M	\$4.0M		\$41.0M		
Ops Centres (Garage, Operations, WH and Industrial Space)	162,678 SF	165,000 SF	\$20.0M	\$2.1M		\$22.1M		
Land (Area)	29.25 Ac	32.3 Ac		N/A	41.36 Ac			
Land (Value) ⁴			\$15.0M		\$19.0M	\$19.0M		
Contingency ⁴	N/A	N/A	\$6.5M			\$6.5M		
Total	329,693 SF	351,000 SF	\$78.5M	\$6.1	\$19.0M	\$88.6M		

Notes:

1 Original Programme includes 166,000 SF Administrative Office Building plus 20,000 SF of office within the Operations Centres

2 Approximately 11% growth in office space over existing accommodates 30% staff growth due to efficiency of floor plates and furniture systems.

3 Operations Centres area is flat; growth will be in outside workers who can be accommodated in touchdown stations without significant additional square footage.

4 Original estimate of land costs included contingency of \$1.6 million for a total Contingency of \$8.1 million

5 Current Environment includes total Office facilities in three existing buildings. Operations and Industrial Space includes garage areas, warehouse, shops and general industrial space in three existing buildings.

6 Original programme provides approximately the same level of outside employee parking as currently existing. Actual land acquisition provides capacity to expand in future, if necessary.

7 Maple Grove (Kanata) Operations Centre is excluded from all calculations



- Industry sources (including cost consultants and developers) indicate that cost to build LEED Gold Class A Suburban Office building shell is now in the range of \$160 - \$180 PSF
- Industry estimates of annual incremental cost increase since 2010 range between 3 – 5% per annum
- StatsCan Capital Expenditure Price Statistics (April to June 2013) indicates average annual increase of approximately 2.5% (2010 – 2013)
- Original estimate (office building shell only) \$140 PSF
- Revised estimate (based on 3.5% annual increase) \$160 PSF
- Original estimate (industrial building shell) \$95 PSF
- Revised estimate (based on 2.5% annual increase) \$105 PSF

Note: Costing information also validated with information from Colliers' Ottawa office



Original Land Estimate						
Building	Acreage	Price Per Acre	Total			
Head Office	7 Acres	\$700,000	\$4,900,000			
East Ops	7.5 Acres	\$400,000	\$3,000,000			
South Ops	9.4 Acres	\$400,000	\$3,760,000			
WH & Meter Shop	8.4 Acres	\$400,000	\$3,360,000			
Total	32.3 Acres	\$465,000 / Avg	\$15,020,000			

Actual						
Hunt Club ¹	21.08 Acres	\$590,132	\$12,440,000			
201 Dibblee ²	20.28 Acres	\$325,000	\$6,591,000			
Total	41.36 Acres	\$460,130 / Avg	\$19,031,000			
 ¹ Hunt Club will be the new Head Office and East Operations Site ² 201 Dibblee will be the new South Operations, Warehouse & Meter Shop Site 						



Other Considerations

September 9, 2014







Comparable Office and Workstation Standards (SF)									
		Offices				Workstations			
	CEO	EMT	DIR	MGR	WS1	WS2	WS3	WS4	
Comp 1	300	225-200		150	80	64	48	15	
Comp 2	n/a	20	200		72	61	42-55	12	
HOL Current	n/a	225	150	150	80	64	48	n/a	
HOL Proposed	300	225	150	120	80	64	48	15	
Federal Govt.		200	150	100	48	32	16	n/a	



- Proposed 500 parking spaces for Admin Office (3:1,000 SF)
- City proposing to reduce parking allowance for buildings on LRT to 1.8:1000 SF in proximity to LRT and minimum 2:1000 SF in other cases (HOL sites not affected as per attached map)



Employee Demographics





%



HOL RESIDENCE DISTANCES FROM 3025 ALBION ROAD NORTH							
	0 – 15 km	15 – 25 km	25 – 60 km (HO)	> 60 km (HO)	25 – 75 km (Ops)	> 75 km (Ops)	Total
# of Employees	311	117	42	3	132	19	624
# of Employees	311	117	(HO) 42	(HO) 3	(Ops) 132	(Ops) 19	6

Note: Head office Employees all fall within the 0-60 km range,; the 25-75 km and over range represents Operations Centre staff only.

<1

Operations Centre Locations



 Hydro One Planning new site in Orleans (construction expected in 2015); no other sites within City limits







Timetable



Activity	Revised Timeframe October 2014
Dibblee Land Purchase	Closed December 2012
CLV Land Purchase	Closed April 22, 2013
Prepare Request for	Preliminary Draft May 2013
Qualification	
Engage Fairness Commissioner	May - October 2013
Request for Qualification and	December 2013 - May 2014
Shortlisting of DB Proponents	
Finalize Design Build RFP	September - December 2014
Design Build RFP Period	December 2014 - March 2015
RFP Evaluation and Award	April 2015 - June 2015
LOI to Design Builder(s)	July 2015

Head Office, East Operations and Trades Training Facility			
Design	August - October 2015		
Site Plan Approval and	November 2015 - June 2016		
Permitting			
Construction	July 2016 - January 2018		
Move In	February / March 2018		

South Operations, Warehouse and Fleet Centre			
Design	August - October 2015		
Site Plan Approval and	November 2015 - June 2016		
Permitting			
Construction	July 2016 - July 2017		
Move In	August / September 2017		





• BE IT RESOLVED:

That the Strategic Initiatives Oversight Committee (SIOC) recommend that the Board of Directors approve the budget and timetable for the Facilities Implementation Project as set out in the report of the Executive Director, Strategic Initiatives dated November 17, 2014

kWh and KW per average Customers/Connections

	2012 Actual	2013 Actual	2014 Actual	2015 Bridge	2016 Test Year	2017 Test Year	2018 Test Year	2019 Test Year	2020 Test Year
RESIDENTIAL	LUIZ Addul	2010 Actual	2014 Actual	2010 Bridge	Loro rest real	2017 TCSC TCur	2010 Test Tear	2010 1031 1041	2020 1031 1041
# of Customers	280,254	284,964	289,385	293,366	297,343	301,258	305,144	308,990	312,786
kWh	2,302,188,900	2,256,501,094	2,241,029,046	2,233,419,000	2,216,045,000	2,198,259,000	2,206,411,000	2,214,984,000	2,217,628,000
kW	N/A								
Customers per	1				I		1		
kWh	685	660	645	634	621	608	603	597	591
kW	N/A								
GENERAL SERVICE <50KW									
# of Customers	23,767	23,936	23,968	24,099	24,512	24,626	24,739	24,850	24,959
kW	702,023,932 N/A	720,479,340 N/A	714,958,854 N/A	703,279,000 N/A	720,300,000 N/A	710,890,000 N/A	709,791,000 N/A	704,193,000 N/A	039,744,000 N/A
Customers per									
kWh	2,464	2,508	2,486	2,439	2,469	2,426	2,391	2,361	2,336
kW	N/A								
GENERAL SERVICE 50-1999K	w								
# of Customers	3,416	3,408	3,514	3,549	3,296	3,323	3,351	3,380	3,408
kWh	2,982,426,722	3,006,131,060	2,925,639,578	2,957,727,000	2,954,441,000	2,907,445,000	2,875,422,000	2,852,593,000	2,835,387,000
kW	7,288,884	7,292,973	7,052,272	7,070,781	7,027,979	6,908,640	6,824,350	6,761,930	6,711,579
Customore	1		1						
customers per kWh	77 754	72 507	60 291	60 /50	74 609	77 012	71 507	70 220	60 333
kW	178	178	167	166	178	173	170	167	164
								-	
GENERAL SERVICE 1500-5000) KW								
# of Customers	74	76	87	88	76	76	76	76	76
kwn	1 864 369	857,551,218	1 874 998	1 885 562	1 885 562	877,400,000	1 885 562	914,569,000	935,554,000
KW .	1,004,505	1,000,071	1,074,990	1,003,302	1,003,302	1,003,302	1,003,302	1,003,302	1,003,302
Customers per									
kWh	980,747	940,297	835,507	836,403	946,611	962,061	981,764	1,002,817	1,025,827
kW	2,100	2,047	1,796	1,786	2,068	2,068	2,068	2,068	2,068
# of Customers	11	11	11	11	11	11	11	11	11
kWh	646,432,433	613,513,830	607,320,659	620,305,000	620,218,000	619,253,000	618,467,000	617,036,000	615,195,000
kW	1,178,836	1,135,342	1,117,860	1,121,629	1,121,449	1,119,726	1,118,300	1,115,702	1,112,342
	1				I				
Customers per	4 807 215	4 647 822	4 600 914	4 600 280	4 608 621	1 601 311	4 685 356	4 674 515	4 660 568
kW	8,931	8,601	8,469	8,497	4,050,021	8,483	8,472	8,452	8,427
STREETLIGHTING									
# of Connections	55,674	55,757	55,524	55,516	55,516	55,516	55,516	55,516	55,516
kwn	44,699,159	44,/6/,415	44,363,900	43,501,000	43,552,000	43,653,000	43,765,000	43,876,000	44,015,000
	120,002	123,317	122,070	120,111	120,111	120,111	123,111	123,111	123,111
Customers per									
kWh	67	67	67	65	65	66	66	66	66
kW	0.18	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18
UMSI									
# of Connections	3,384	3,376	3,438	3,444	3,477	3,525	3,573	3,621	3,669
kWh	17,594,132	17,054,550	16,412,499	16,651,000	16,651,000	16,651,000	16,651,000	16,651,000	16,651,000
kW	N/A								
Customore por					I				
kWh	433	421	398	403	399	394	388	383	378
kW	N/A								
SENTINEL LIGHTS		1				1	1		
# of Connections	61	57	57	57	55	51	47	43	39
kW	166	49,020	175	48,000	48,000	48,000	48,000	48,000	48,000
	100	100	1,5	210	210	210	210	210	210
Customers per									
kWh	82	72	74	70	73	78	85	93	103
ĸw	0.23	0.20	0.26	0.32	0.33	0.35	0.38	0.42	0.46
STANDBY									
# of Customers	2	2	2	2	2	2	2	2	2
kWh									
kW				4,800	4,800	4,800	4,800	4,800	4,800
Customers per	1	I					I		
kWh	NA								
kW	-	-	-	200	200	200	200	200	200



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:A-4-4(1-SEC #12)ORG ORIGINAL Page 1 of 2

1	Response to School Energy Coalition Interrogatory Question #12
2	
3	Reference: [Ex. A/4, Attach. D]
4	
5	Question #12:
6	
7	With respect to the Standard & Poors Rating Report:
8	
9	a) Please provide the most recent ratings report from this company.
10	
11	b) Please estimate the increase in the cost of debt to the electricity distribution
12	company resulting from each of:
13	
14	i. The "increasing exposure to non-related operations"; and
15	
16	ii. The two major capex programs listed on page 2.
17 18	
10	
20	Response:
21	
22	Exhibit A-4(D) is the DBRS rating report dated May 12. 2014 and not the S&P ratings
23	report which is Exhibit A-4(E). We have answered the questions assuming they refer to
24	the DBRS report.
25	
26	a. We have provided the most recent report from DBRS dated May 29, 2015 as Att-
27	SEC-Q12-A.
28	
29	b. i. Hydro Ottawa receives all of its financing through its parent company, the
30	Holding Company. The Holding Company has, and continues, to maintain a strong
31	investment grade credit rating of A (Stable) as confirmed in its most recent and past
32	ratings reports from S&P and DBRS. There has been no increase in the cost of debt to



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:A-4-4(1-SEC #12)ORG ORIGINAL Page 2 of 2

the electricity distribution company (Hydro Ottawa) as evidenced by the two tranche bond issuance in February 2015 by the Holding Company which achieved the lowest 10 and 30 year fixed coupon rates by a corporate creditor in Canadian history. These rates have been passed onto Hydro Ottawa and are reflected in the long term debt rates shown in Appendix 2-OB.

6

7 b.ii. The first capital program commented on in the DBRS report is the ongoing capital 8 requirements of Hydro Ottawa to ensure reliability of the system and meet customer 9 demands. The capital program funding requirement is addressed in this custom rate 10 application and is very important in ensuring not only the reliability of the distribution 11 system, but also the financial strength of the company. The credit rating agencies 12 recognize that large capital programs will increase borrowing requirements and 13 potentially pressure credit metrics if not recovered in a timely fashion. Hydro Ottawa's 14 additional forecast borrowing requirements for the five years 2016 to 2020 are shown in 15 Exhibit E-1-1, Table 1.

16 To date, there has not been an increase in the cost of debt to Hydro Ottawa as noted in17 b ii. above.

18

The second major capital spending identified in the report is the expansion of the Chaudière generating plant. This expansion is anticipated to be financed directly at the project level through non-recourse financing so therefore, would not impact the borrowing and cost of debt of Hydro Ottawa.

23

Rating Report

Hydro Ottawa Holding Inc.



Insight beyond the rating

Rating(s)

D S Is

ebt	Rating	Rating Action	Trend	
enior Unsecured Debt	А	Confirmed	Stable	
suer Rating	А	Confirmed	Stable	

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Rating Update

DBRS Limited (DBRS) has confirmed the Issuer Rating and the Senior Unsecured Debt rating of Hydro Ottawa Holding Inc. (Hydro Ottawa or the Company) at "A," both with Stable trends. The ratings reflect the Company's low business risk associated with its regulated electricity distribution business and reasonable financial risk profile. However, DBRS remains concerned over the Company's exposure to higher-risk non-regulated generation operations. Hydro Ottawa's business risk profile could be negatively affected should non-regulated earnings exceed the 20% threshold for the current rating (17.0% of 2014 EBIT).

Hydro Ottawa's business risk profile is supported by the reasonable regulatory framework in Ontario and the relatively stable earnings and cash flows from its regulated operations (approximately 83.0% of 2014 EBIT). In April 2015, the Company filed its Custom Incentive Regulation (CIR) application for the five-year period beginning 2016. In its application, Hydro Ottawa has proposed to recover its capital requirements on a five-year forecasted cost-of-service (COS) basis while operations, maintenance and administrative (OM&A) expenses will be recovered pursuant to a price cap adjustment. If approved, the Company will be able to recover its return on investments during the CIR period rather than through periodic rebasing, reducing regulatory risk. This will also provide Hydro Ottawa the annual increases necessary to help fund its ongoing heavy capital expenditures (capex) program. However, as the Company must forecast its capex and

OM&A expenses for a five-year period, earnings and cash flows could be negatively impacted by large unforeseen discrepancies between forecast and actual costs. This risk is partially mitigated by the ability of Hydro Ottawa to initiate a regulatory review if actual return on equity (ROE) is 300 basis points (bps) below the approved ROE.

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Earnings and cash flows from Hydro Ottawa's non-regulated segment are considered more volatile because of the greater associated volume risk. Following the in-service of the 29-megawatt (MW) expansion at Chaudière Falls in late 2017, earnings from the non-regulated segment will approach or even potentially breach the 20% threshold for the current rating category. Although earnings from regulated operations are expected to grow substantially following rebasing in 2016 (rate base of estimated \$923 million versus \$669 million approved in 2012), this growth may be outpaced by growth in earnings contributed by non-regulated operations. DBRS notes there are factors that could materially impact the earnings split between regulated and non-regulated operations, including the approval of the CIR application, ongoing distribution consolidation in Ontario and generation growth. However, should earnings from nonregulated operations exceed the 20% threshold, Hydro Ottawa's business risk profile could be negatively affected. Additionally, Hydro Ottawa's credit profile may be negatively impacted should the Company expand its non-regulated operations beyond its

Financial Information	For the year ended December 31					
(CA\$ millions)	2014	2013	2012	2011	2010	
Consolidated external debt	420	410	329	252	252	
Total debt in capital structure ¹	51.4%	51.6%	47.3%	41.7%	42.4%	
Cash flow/Total debt ¹	17.8%	17.8%	21.0%	29.1%	28.5%	
EBIT gross interest coverage (times) ¹	3.00	3.52	4.16	3.85	4.49	
Net income before extraordinary items	36	33	32	29	30	
Cash flow from operations	75	73	69	73	72	

1 Includes operating leases.

Issuer Description

Hydro Ottawa Holding Inc. is a holding company (wholly owned by the City of Ottawa) that wholly owns the following subsidiaries: (1) Hydro Ottawa Limited, a regulated electricity distributor (Hydro Ottawa's primary business); (2) Energy Ottawa Inc., a nonregulated power generation company also involved in energy management services; and (3) Telecom Ottawa Holding Inc.

Rating Update (CONTINUED)

current franchise area, or acquire assets that are exposed to merchant markets. Should these investments have a material impact on Hydro Ottawa's business and financial risk profiles, a negative rating action may occur.

Hydro Ottawa's financial risk profile is in the "A" rating range, supported by a reasonable balance sheet and strong credit metrics. The Company's key ratios continued to be commensurate with the current rating category. DBRS also notes that even without factoring in earnings and cash flow from the non-regulated operations, the Company's key credit metrics are still in the "A" rating range. Although the Company's debt ratios may deteriorate during this period of high capex in order to enhance the reliability of the system (applied for an average of approximately \$130 million per year for the CIR term) and expand generation capacity at Chaudière Falls, DBRS expects Hydro Ottawa to continue to have reasonable financial flexibility for the current rating category going forward.

Rating Considerations

Strengths

1. Stability from regulated business

Approximately 83% of the Company's EBIT in 2014 was contributed by its low-risk regulated distribution business, which operates under a reasonable regulatory framework. Earnings and cash flows have also been relatively stable, underpinned by a reasonable allowed ROE (9.42% for 2015) and full and timely recovery of purchased power costs.

2. Strong franchise

Hydro Ottawa is one of the largest municipally owned local distribution companies in Ontario, serving the densely populated areas within the City of Ottawa and the Village of Casselman. The majority of Hydro Ottawa's electricity sales are to residential customers, the federal government and the municipalities, universities, schools and hospitals (MUSH) sector, which have relatively stable year-over-year demand as they are less sensitive to economic cycles.

3. Long-term contracts for non-regulated power generation

Although Hydro Ottawa's non-regulated power generation business provides opportunities for earnings growth, it also entails higher business risk than the regulated distribution business. However, commodity price risk is mitigated by long-term contracts with creditworthy counterparties, such as the Independent Electricity System Operator (IESO; rated A (high) with a Stable trend by DBRS). The expansion at Chaudière Falls will have a 40-year contract with the IESO.

Challenges

1. Increasing exposure to higher-risk non-regulated business

DBRS considers the non-regulated business as higher risk than Hydro Ottawa's core regulated electricity distribution business. This is largely due to the greater volume risk associated with non-regulated operations. Although commodity price risk has been mitigated through long-term contracts, increasing exposure to the non-regulated segment could result in greater volatility in the Company's earnings and cash flows going forward. Furthermore, should Hydro Ottawa purchase assets that are outside its franchise area or are exposed to the merchant market, this may further increase the volatility of earnings contributed by this segment and weaken the Company's business and financial risk profile.

2. Large capital expenditures

The Company is in the midst of major capex programs to (1) enhance the reliability of the system and meet growing demographic demands and (2) construct a new 29 MW facility at Chaudière Falls. Over the CIR period, Hydro Ottawa has applied for an average gross capex of \$130 million per year. This is expected to result in the Company continuing to generate free cash flow deficits over the medium term.

3. No access to the equity markets

Hydro Ottawa's ownership structure (100% owned by the City of Ottawa) limits its ability to directly access the equity markets. As a result, Hydro Ottawa's cash flow deficits are being financed largely through its revolving credit facilities and debt issuances.

Corporate Structure



1 Total Senior Unsecured Debt is presented at face value.

2 The debt at Hydro Ottawa Limited is owed to Hydro Ottawa Holding Inc., mostly in the form of promissory notes.

3 Telecom Ottawa Holding Inc. does not maintain active operations.

4 \$71.3 million was owed to Hydro Ottawa Holding Inc., and \$5.5 million was owed to Integrated Gas Recovery Services Inc.

Earnings and Outlook

	For the Year ended December 31				
(Consolidated)	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
(CA\$ millions)					
Net revenues	1,012.3	976.4	900.8	840.1	799.6
Net sales	216.6	211.2	193.2	179.6	179.1
EBITDA	95.5	98.0	89.5	93.9	100.9
EBIT	55.9	57.7	52.4	48.5	56.5
Gross interest expense	18.6	16.4	12.6	12.6	12.6
Net income before non-recurring items	35.9	32.9	31.6	29.1	29.9
Reported net income	30.3	32.1	31.0	26.3	31.2
Return on equity	9.2%	8.8%	8.8%	8.4%	8.9%
Regulated rate base	669	669	669	546	546
Approved regulated return on equity	9.42%	9.42%	9.42%	8.57%	8.57%
Actual regulated return on equity	9.87%	9.44%	10.19%	9.08%	10.33%
EBIT by subsidiary (estimate)					
(CA\$ millions)	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>
Hydro Ottawa Limited	46.7	47.9	48.0	53.0	53.6
Energy Ottawa Inc.	9.6	10.8	4.7	5.7	4.1
Telecom Ottawa Holdings Inc.	0.0	0.0	0.0	0.0	0.3
	56.2	58.8	52.7	58.7	57.9
Hydro Ottawa Holding Inc. (non-cons.)	(0.3)	(1.1)	(0.3)	(2.7)	(1.2)
Hydro Ottawa Holding Inc. (consolidated)	55.9	57.7	52.4	56.0	56.7

2014 Summary

- Hydro Ottawa's EBITDA and EBIT were modestly lower in 2014 due to higher operating costs for the year. However, net income before non-recurring items increased due to lower payments in lieu of corporate income taxes.
- Earnings from both the regulated and non-regulated segments were largely in line with the previous year.
- Reported net income for the year was negatively impacted by a \$4 million impairment charge related to the decommissioning of two generating stations at Chaudière Falls in preparation for the expansion project.
- Non-regulated operations accounted for 17.0% of EBIT in 2014, down from 18.4% in 2013.

2015 Outlook

- Hydro Ottawa's earnings are expected to be slightly more volatile as a result of the Company's greater exposure to non-regulated operations.
- Earnings from the non-regulated generation business are typically more volatile as this sector is subject to greater volume risk.
- The regulated distribution business is expected to continue to provide relatively stable earnings.
- Going forward, DBRS expects the distribution segment to continue to contribute at least 80% of Hydro Ottawa's earnings. However, should non-regulated earnings exceed the 20% threshold for the current rating category, the Company's business risk profile could be negatively affected.

_	For the Year ended December 31					
(Consolidated)	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	
(CA\$ millions)						
Net income before non-recurring items	35.9	32.9	31.6	29.1	29.9	
Depreciation & amortization	39.6	40.3	37.1	45.4	44.4	
Deferred income taxes and other	(0.6)	(0.3)	0.5	(1.1)	(2.0)	
Cash flow from operations	75.0	73.0	69.2	73.5	72.2	
Dividends paid	(19.3)	(18.6)	(16.6)	(17.5)	(17.6)	
Capital expenditures	(102.1)	(113.9)	(96.4)	(78.0)	(60.7)	
Free cash flow (bef. working cap. changes)	(46.5)	(59.6)	(43.8)	(22.0)	(6.1)	
Changes in working capital	33.7	(23.5)	11.6	26.0	(2.1)	
Net free cash flow	(12.8)	(83.1)	(32.2)	4.0	(8.1)	
Acquisitions & long-term investments	0.0	0.0	(46.3)	0.0	0.0	
Net equity change	2.7	1.0	0.0	0.0	0.0	
Net debt change ²	10.2	79.9	77.1	(0.2)	0.2	
Other financing	(0.1)	2.2	(1.3)	(0.9)	4.4	
Change in cash ²	0.0	0.0	(2.9)	2.9	(3.5)	
Consolidated external debt	420	410	329	252	252	
Total debt in capital structure ¹	51.4%	51.6%	47.3%	41.7%	42.4%	
Cash flow/Total debt ¹	17.8%	17.8%	21.0%	29.1%	28.5%	
EBIT gross interest coverage (times) ¹	3.00	3.52	4.16	3.85	4.49	
Dividend payout ratio	53.8%	56.5%	52.5%	60.1%	58.9%	

1 Includes operating leases.

2 Adjusted for bank indebtedness.

2014 Summary

- Hydro Ottawa's debt-to-capital and cash flow-to-debt ratios remained largely unchanged from 2013. The Company's EBIT-interest coverage ratio fell largely due to higher interest expense for the year. However, all key credit metrics remain supportive of the current rating category.
- Cash flow from operations increased modestly largely due to the higher net income before non-recurring items for the year.
- Dividends of \$19.3 million were in line with the Company's dividend policy. Hydro Ottawa pays dividends equal to the greater of \$14 million or 60% of the previous year's net income.
- The Company continued to generate negative net free cash flow largely because of the high level of capex needed in the regulated distribution business to sustain the reliability of the system. This deficit was largely funded through incremental debt.

2015 Outlook

- DBRS expects cash flow from operations to be slightly more volatile as a result of the Company's greater exposure to non-regulated operations.
- DBRS anticipates elevated capex in 2015 as the Company continues to invest in renewing the infrastructure of the distribution system and continues construction on the new facility at Chaudière Falls.
- Free cash flow deficits are expected to persist over the medium term during this period of high capex. Free cash flow is also restricted by the Company's dividend policy. DBRS expects Hydro Ottawa to fund these deficits in a prudent manner in order to maintain key credit metrics in line with the current rating category.

Liquidity, Bank Lines and Long-Term Debt Maturities

Credit facilities as at Dec. 31, 2014

(CA\$ millions)	Amount	Drawn	Available	Expiry
Revolving operating credit line 1	75.00	-	75.00	1-Aug-17
Revolving credit line	100.00	-	100.00	1-Aug-17
Revolving operating credit line 2	150.00	37.00	113.00	1-Aug-15
Letters of credit and other guarantees	10.00	8.15	1.85	1-Aug-15
Commercial card facility	1.00	-	1.00	1-Aug-15
Total consolidated credit facilities	336.00	45.15	290.85	

- Hydro Ottawa's liquidity remained reasonable, reflecting stable cash flows and available credit facilities. As at December 31, 2014, the Company had drawn \$37 million in bankers' acceptances against its operating lines, and \$8.15 million in standby letters of credit.
- DBRS believes that the Company's liquidity is sufficient to finance its capex and working capital needs.
- Hydro Ottawa renewed its credit facility in 2014. The current facility is made up of the following five types of credit availability:
 - \$75 million three-year revolving operating line with two years remaining.

Long-Term Debt Maturity as at Dec. 31, 2014

- \$100 million three-year revolving operating line with two years remaining to fund capex and growth opportunities.
- \$10 million line to fund letters of credit and other guarantees, a decrease from \$17.5 million previously.
- \$1 million commercial card facility.
- A new \$150 million revolving operating line.
- The credit facility contains customary covenants and events of default, including a covenant to maintain the consolidated tangible net worth in excess of \$175 million at all times. It also requires the debt-to-capitalization ratio to be at or below 75% on a consolidated basis.

(CA\$ millions)	Amount	Rate	Maturity
Senior Unsecured Debentures, Series 2005-1	200.00	4.9%	Feb. 2015
Senior Unsecured Debentures, Series 2006-1	50.00	5.0%	Dec. 2036
Senior Unsecured Debentures, Series 2013-1	150.00	4.0%	May 2043
Total	400.00		
Less: Unamortized debt-issuance costs	(1.36)		
Total	398.64		

- On February 2, 2015, Hydro Ottawa issued \$375 million of Senior Unsecured Debentures (Series 2015-1 and Series 2015-2 debentures) with \$200 million at 2.614% maturing on February 3, 2025, and with \$175 million at 3.639% maturing on February 2, 2045. The net proceeds were used to refinance the Series 2005-1 debentures, its credit facilities and for general corporate purposes, including capex requirements.
- The trust indenture contains the following covenants for the Series 2006, Series 2013 and Series 2015 debentures:
 - Any additional indebtedness is subject to a 75% capitalization ratio test.
 - Negative pledge clause.
 - Restrictions on asset sales and amalgamations.

- An Integrated Gas Recovery Services Inc. (IGRS) promissory note of \$3.1 million was issued by PowerTrail Inc. to fund the construction of the gas collection and generation plant at the Trail Road landfill site. The note is unsecured and non-interest bearing. Hydro Ottawa repaid \$0.16 million in 2014 and intends to pay an additional \$0.74 million in 2015. IGRS does not intend to call the remaining \$1.46 million this year.
- Moose Creek LP issued a \$3.3 million ten-year unsecured promissory note to IGRS on December 31, 2014, after adjusting its financing and capital structure. The promissory note has an interest rate of 6.0%, with quarterly repayments, and will mature on December 31, 2024.

Generation Facilities

Fuel	Fuel Facility (Capacity (MW)	% of Total Capacity	Contract Expiry
Hydro	Chaudiére #2 Station	100%	8	17%	2030
	Chaudiére #4 Station	100%	8	17%	2030
	Grinder Station	100%	1	1%	2027
	Chaudiére Ottawa & Québec	100%	21	44%	2019
Total Hydro			38	78 %	
Landfill Gas	Trail Road Landfill	60%	6	12%	2027
	Moose Creek Landfill	50%	5	9%	2033
Total Landfill Gas			11	22%	
Total			48		

• Hydro Ottawa has power purchase agreements (PPAs) with the IESO for all of its generation facilities except for the three units of Chaudière Ottawa & Québec, which has a PPA with Hydro-Québec.

• In 2014, Hydro Ottawa generated 315,000 MW hours of electricity with total in-service capacity of 48 MW on December 31, 2014.

• The Trail Road and Moose Creek landfills gas-to-energy plants are joint ventures between Energy Ottawa Inc. and Integrated Gas Recovery Services Inc.

• Hydro Ottawa is currently expanding its generation capacity at Chaudière Falls through the construction of a new 29 MW facility. The new facility has a 40-year PPA with the IESO and is expected to be in-service Q4 2017.

Regulation

- Hydro Ottawa Limited (the LDC; a regulated subsidiary of Hydro Ottawa) is regulated by the Ontario Energy Board (OEB) under the Ontario Electricity Act, 1998.
- The LDC currently operates under the 3rd Generation IRM framework and is subject to a formula price cap that allows for an annual increase in distribution rates based on inflation less a productivity factor, which can be reset annually.
- Under the IRM framework, if the LDC's actual rate of ROE is 300 bps above or below the allowed ROE, the OEB will undertake a review, and earnings above 300 bps may be shared with customers.
- The IRM framework also allows the Company to file under the Incremental Capital Module (ICM) during the IRM period if the capex was material and determined to be necessary and prudently spent.
- The LDC is allowed to fully recover its purchased power costs (except doubtful accounts on power cost, which are manageable) in a timely fashion, eliminating its exposure to power price risk. DBRS views this as a positive factor in the current regulatory system in Ontario.
- Additionally, the LDC is allowed to file a COS application, which is expected every four years.
- In the rebasing year, subject to the OEB's approval, the LDC could be allowed to add prudently incurred capex that was already spent during the IRM period to its rate base. The Company last rebased in 2012.
- Beginning in January 2012, the OEB approved the following: ROE at 9.42%, deemed equity at 40% (both of which are reasonable), and the rate base of \$669 million. The OEB also allowed the LDC to invest appropriate capital amounts.
- In August 2014, the LDC filed an IRM application for 2015 electricity distribution rates, effective for January 1, 2015. The LDC proposed 2015 rates to be adjusted by a price cap adjustment.

- In December 2014, the OEB approved a price cap adjustment of 1.3%, which includes an inflation factor of 1.6% less a productivity factor of 0% and a stretch factor of 0.3%. DBRS views the price cap adjustment as reasonable.
- As per the Renewed Regulatory Framework, the LDC filed its 2016–2020 rate application in April 2015. Under the Custom IR framework, the LDC has applied for:
 - A rate-setting model where the LDC's capital requirements are recovered on a COS basis, but operating costs are recovered using a price cap formula.
 - Final rates for the 2016, 2017 and 2018 periods based on forecast revenue requirements of \$187 million, \$197 million and \$208 million, respectively.
 - 2019 and 2020 rates, based on forecast requirements of \$218 million and \$224 million, respectively, to be adjusted to reflect an updated inflation factor and updated cost of capital parameters in a later filing.
 - A five-year capex program of approximately \$654 million, with an average of \$130 million to be spent each year.
- If approved as requested, the LDC's rate base will increase from approximately \$923 million in 2016 to \$1,094 million in 2020.
- The OEB announced in April 2015 its policy to implement revenue decoupling for all local distribution companies in Ontario. Beginning 2016, the LDC will phase in a fixed monthly rate for its residential customers. Over the four-year period, the fixed monthly rate will increase gradually, so by 2019, all residential customers will be charged a fixed monthly fee for distribution services.
 - This policy is expected to reduce volume risk faced by the LDC as revenues from residential customers will no longer fluctuation as a result of weather sensitivities.

Assessment of Hydro Ottawa's Regulatory Environment

The chart below reflects DBRS's assessment of the current regulatory environment for Hydro Ottawa based on DBRS's methodology.

Criteria	Score	Analysis
(1) Deemed Equity	Excellent Good Satisfactory Below Average Poor	The OEB allows the LDC to have a deemed equity of 40%, which is consistent with the other electricity distribution companies in Ontario. As a result of the need to maintain the regulatory capital structure, Hydro Ottawa's leverage has been in line with the "A" rating range.
(2) Allowed ROE	Excellent Good Satisfactory Below Average Poor	The LDC has an allowed ROE of 9.42% for 2015. The difference in ROE between the LDC and other distribution companies is mainly due to the timing of the regulatory filings and the interest environment prevalent at that time.
(3) Energy Cost Recovery	Excellent Good Satisfactory Below Average Poor	There is no power price risk for the LDC as it is not responsible for purchasing power from generation facilities or the wholesale market. Power costs are passed on to rate payers at rates set by the OEB, and the LDC collects the payments from its customers on a monthly basis.
(4) Capital Cost Recovery	Excellent Good Satisfactory Below Average Poor	Under IRM, Some capital costs are pre-approved at the time of the COS application. Subsequent capital spending after the base year will not be approved until the next rate application and approval of the rate base. If incremental capital costs are significant, non-discretionary and prudent, the LDC can file under ICM to request for the recovery of the costs.
(5) COS versus IRM	Excellent Good Satisfactory Below Average Poor	The government of Ontario plays a significant role in the electricity sector in Ontario, given that the majority of the utilities are government owned (Hydro Ottawa is owned by the City of Ottawa). Further, stakeholders, such as the IESO, are also government owned. As a result, the government has direct and indirect influence in Ontario's electricity industry.
(6) Political Interference	Excellent Good Satisfactory Below Average Poor	After years of a relatively stable political and regulatory environment, the utility sector in Ontario could face growing challenges. As generation costs potentially rise above and ultimately test the political ceiling (10% increase of the total bill annually), it may be difficult for the utilities to pass costs onto the ratepayers.
(7) Retail Rate	Excellent Good Satisfactory Below Average Poor	The cost of power in Hydro Ottawa's service territory is set by the OEB. On average, electricity prices for Hydro Ottawa's residential customers are around 13.5 cents per kilowatt hour. This is comparable with other service territories in Ontario.
(8) Stranded Cost Recovery	Excellent Good Satisfactory Below Average Poor	Minimal stranded costs exist in the Ontario market. DBRS notes that the recovery of the costs is also subject to some regulatory lag. Although stranded costs have been fully recovered in the past years, assets could potentially be written down if the OEB does not approve the recovery of the costs.
(9) Rate Freeze	Excellent Good Satisfactory Below Average Poor	Distribution rates were frozen for a short time in the early 2000s, but this did not have a material impact on Hydro Ottawa's financial profile. Since distribution costs represent approximately 20% of a customer's overall electricity bill, an increase in rates would have a greater nominal impact on customers' bills. This could increase the risk of potential rate freezes.
(10) Market Structure (Deregulation)	Excellent Satisfactory Poor	Following the restructuring of Ontario Hydro in 1999, Ontario's electricity market became partially de- regulated, specifically for the generation segment. Distribution (including Hydro Ottawa) and transmission remains fully regulated under the OEB. DBRS notes that no single utility in Ontario is fully integrated.

Hydro Ottawa Holding Inc.

Balance Sheet	As	at December	31			As a	t December	r 31
(CA\$ millions)	2014	2013	2012			2014	2013	2012
Assets				Liabilities & I	Equity			
Cash & equivalents	0	0	0	Bank indebtedne	ess	16	9	77
Accounts receivable	72	71	75	Accounts payab	le	176	133	133
Inventories	0	0	0	Current portion	L.T.D.	1	0	1
Prepaid expenses & other	88	113	97	Other current lia	ıb.	1	20	23
Total Current Assets	161	184	172	Total Current I	Liab.	194	162	234
Net fixed assets	780	725	670	Long-term debt		403	400	251
Future income tax assets	11	20	24	Provisions		10	9	11
Goodwill & intangibles	87	66	52	Deferred income	e taxes	7	6	5
Investments & others	21	13	8	Other L.T. liab.		48	46	56
				Shareholders' e	quity	398	384	368
Total Assets	1,060	1,009	926	Total Liab. & S	Ε	1,060	1,009	926
				For the year	r ended December 31			
Balance Sheet & Liquidity & Capital Ratios		20	14	<u>2013</u>	2012	<u>2011</u>		<u>2010</u>
Current ratio		0	.83	1.13	0.73	1.25		1.45
Total debt in capital structure		51.3	3%	51.6%	47.3%	41.7%		42.3%
Total debt in capital structure ¹		51.4	1%	51.6%	47.3%	41.7%		42.4%
Cash flow/Total debt		17.8	3%	17.8%	21.0%	29.1%		28.6%
Cash flow/Total debt ¹		17.8	3%	17.8%	21.0%	29.1%		28.5%
(Cash flow-dividends)/Capex (times)		0	.54	0.48	0.55	0.72		0.90
Dividend payout ratio		53.8	3%	56.5%	52.5%	60.1%		58.9%
Coverage Ratios (times)								
EBIT gross interest coverage		3	.00	3.52	4.16	3.86		4.49
EBIT interest coverage ¹		3	.00	3.52	4.16	3.85		4.49
EBITDA gross interest coverage		5	.13	5.97	7.11	7.47		8.02
Fixed-charge coverage		3	.00	3.52	4.16	3.86		4.49
Profitability Ratios								
EBITDA margin		44.	1%	46.4%	46.3%	52.3%		56.3%
EBIT margin		25.8	3%	27.3%	27.1%	27.0%		31.5%
Profit margin		16.6	5%	15.6%	16.4%	16.2%		16.7%
Return on equity		9.9	2%	8.8%	8.8%	8.4%		8.9%
Return on capital		6.0	0%	5.8%	6.0%	6.2%		6.4%

1 Includes operating leases.

Rating History

	Current	2014	2013	2012	2011	2010
Senior Unsecured Debt	А	А	А	А	А	А
Issuer Rating	А	А	А	А	NR	NR

Previous Report

• Hydro Ottawa Holding Inc. Rating Report, May 12, 2014.

Notes:

All figures are in Canadian dollars unless otherwise noted.

For the definition of Issuer Rating, please refer to Rating Definitions under Rating Policy on www.dbrs.com.

Generally, Issuer Ratings apply to all senior unsecured obligations of an applicable issuer, except when an issuer has a significant or unique level of secured debt.

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Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:A-8-1(1-SEC #13)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #13
2	
3	Reference: [Ex. A/8, Attach. B, p. 8]
4	
5	Question #13:
6	
7	Please provide the most recent "business plan approved by Holdco" and the documents,
8	presentations or other materials used to obtain the approval of this Application by
9	Holdco.
10	
11	
12	
13	Response:
14	
15	Please refer to Attachment Att-SEC-Q13-A for a copy of the most recently approved
16	business plan. For other materials used to obtain the approval of this application, please
17	see Interrogatory Response to CCC Question #3.



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-1(2-SEC #14)ORG ORIGINAL Page 1 of 2

1	Response to School Energy Coalition Interrogatory Question #14
2	
3	<u>Reference:</u> [Ex. B/1/1, p. 2]
4	
5	Question #14:
6	
7	Please confirm that the Applicant is proposing an increase of Gross Assets from \$571.3
8	million at the beginning of 2012 to \$1,391.0 million (\$1,277 million plus \$114 million
9	IFRS adjustment in 2014) at the end of 2020, for an increase in Gross Assets of 143.5%
10	over nine years, or about 10.5% per year. Please confirm that the Applicant is proposing
11	an increase in the net book value of its assets from \$534.5 million at the beginning of
12	2012 to \$977.3 million at the end of 2020, for an increase in net book value of 82.9%
13	over nine years, or about 7% per year. Please provide all information in the possession
14	of the Applicant comparing these proposed increases in gross and net assets to other
15	Ontario LDCs over the same or any other period.
16	
17	
18	
19	Response:
20	
21	Hydro Ottawa confirms a proposed increase in the net book value of its assets from
22	\$534.5 million at the beginning of 2012 to \$977.3 million at the end of 2020, for an
23	increase in net book value of 82.9% over nine years, or an average of 7% per year.
24	
25	However, when reviewing the percentage increase for gross assets, one needs to
26	consider both the MIFRS and IFRS adjustments as the accumulated depreciation has
27	been offset against the gross asset base. Therefore the gross asset figures should be
28	adjusted transitional MIFRS and IFRS amounts as shown in Table 1 below.
29	
30	
31	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-1(2-SEC #14)ORG ORIGINAL Page 2 of 2

1

2

Table 1: Change in Gross Assets (2012-2020)

	Column A *	Column B **	Column C ***	Column D ****	Columns
					A+B+C+D
	Gross Assets	Contributions	MIFRS 1	IFRS 1	Total
		and	adjustment as of	adjustment as of	
		Grants	January 1, 2011	January 1 2014	
2011	\$592M	(\$21M)	\$476M	n/a	\$1,047M
Ending					
Balance					
2020	\$1,446M	(\$173M)	\$476M	\$113.5M	\$1,862.5M
Ending					
Balance					

3 *Column A represents the total gross assets as shown in Exhibit B-2-1 Updated June 29, 2015, Table 1 for

4 the 2011 Ending Balances and Table 9 on page 17 for the 2020 Ending Balances

5 ** Column B represents the total Contributions and Grants as shown in Exhibit B-2-1 Updated June 29,

6 2015, Table 1 for the 2011 Ending Balances and Table 9 on page 17 for the 2020 Ending Balances

7 *** Column C represents the adjustment to gross assets and accumulated depreciation as shown in Exhibit

8 J2-1-1, Table 1 of EB-2011-0054

9 **** Column D represents the cost adjustment as noted in Exhibit B-2-1 Updated June 29, 2015, Table 3,

10 footnote 4, \$114M less the \$502k adjustment

11

12 The revised figures indicate an increase of 78% over nine years, or about 6.5% per year.

13

14 Hydro Ottawa is not in the possession of any information comparing these proposed

15 increases to other LDCs.



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-2(2-SEC #15)ORG ORIGINAL Page 1 of 6

1	<u>Response to School Energy Coalition Interrogatory Question #15</u>
2	
3	Reference: [Ex. B/1/2]
4	
5	Question #15:
6	
7	With respect to the Distribution System Plan:
8	
9	a. P. 32. Please provide details of the status of, and results from, the
10	Operational Process Liaison Committee.
11	
12	b. P. 32. Please provide a copy of the "Lean review" referred to.
13	
14	c. P. 33-34. For each of the five new technologies listed under the heading
15	"Increased Use of New Technology", please provide a table showing all
16	actual and forecast costs and savings or other benefits associated with the
17	new technology, broken down by year until at least 2020. If there are
18	business cases or other cost/benefit analyses for any of those new
19	technologies, please provide those documents.
20	
21	d. P. 37. With respect to the "need for additional capacity in the Lisgar TL
22	area":
23	i. Please provide the most up to date estimate of all costs
24	associated with these projects, whether those costs are capital or
25	operating costs of Hydro Ottawa, or payments to be made to
26	Hydro One.
27	ii. Please provide complete details of all costs associated with
28	these projects that are already included in the revenue
29	requirements and rates proposed in this Application.
30	iii. Please confirm that the Applicant believes these costs will qualify
31	for Z factor treatment during the 2016-2020 period. Please



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-2(2-SEC #15)ORG ORIGINAL Page 2 of 6

1			provide the Applicant's best estimate of the Z factor amounts to
2			be claimed, by year, for or relating to these projects.
3			
4		e.	P. 95 and following. Please provide the numeric data, in spreadsheet
5			format (preferably the spreadsheet that was actually used to create the
6			graphs), behind Figures 2.2.14, 2.2.16, 2.2.18, 2.2.20, 2.2.22, 2.2.24, and
7			2.2.26. If the Applicant has any Iowa curves prepared for any of these asset
8			classes, please also provide those curves both in numeric and graphical
9			format.
10			
11		f.	P. 208. Please explain how the DSP responds to the majority of the
12			customers who answered that they are "not willing to pay for further
13			improvements".
14			
15			
16			
17	<u>Re</u>	sponse	<u>.</u>
18			
19	a.	The Op	erational Process Liaison Committee is a cross functional group consisting of
20		staff a	nd management from Distribution Asset Management and Distribution
21		Operati	ons. The goal is to identify efficiency opportunities in execution while
22		maintai	ning customer service levels. The group's focus for 2015 is on documenting
23		new p	rocesses and reviewing and updating the documentation for existing
24		process	ses. After processes are documented, they will review them in more detail
25		with a v	view to identifying issues and making recommendations for improvement.
26			
27	b.	Please	see attachments Att-SEC-Q15-B - Design Implementation Plan and Att-SEC-
28		Q15-C	- Design Process Review Presentation.
29			
30	C.	The ref	erenced technologies are SCADA controlled switches, fault current indicators
31		(FCIs),	cable rejuvenation, the Copperleaf C55 program for Asset Investment



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-2(2-SEC #15)ORG ORIGINAL Page 3 of 6

Planning, and the recommended acquisition of a Mobile Workforce Management
 Tool.

3 SCADA controlled switches:

SCADA controlled switches provide system operators with real-time access to system
status and control, reducing time required to identify service disruptions, locate system
faults, and operate the system to restore customers. Reliability is improved and O&M
savings are achieved by reducing crew and truck time previously required for switching
and power restoration.
The forecasted capital costs of installing SCADA controlled switches are shown in Table

10 SEC #15 - 1.

11

12 Table SEC #15 -1: Forecasted Capital Costs of SCADA Controlled Switches

	2015	2016	2017	2018	2019	2020
Capital Cost (\$'000)	446	677	325	386	343	360

13

14 **FCIs:**

15 Fault current indicators improve reliability and achieve O&M savings by reducing the

16 time crews must spend to locate a fault during an outage.

17 The forecasted capital costs of installing fault current indicators are shown in Table SEC

- 18 #15 2
- 19

20 Table SEC#15 - 2: Forecasted Capital Costs of Fault Current Indicators

	2015	2016	2017	2018	2019	2020
Capital Cost (\$'000)	68	69	69	69	69	69

21

22 Cable rejuvenation:

- 23 Cable rejuvenations economics are discussed in Attachment B-1(B) Section 6.7.3 of the
- 24 2014 Asset Management Plan. It is anticipated that cable rejuvenation achieves capital



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-2(2-SEC #15)ORG ORIGINAL Page 4 of 6

savings by being more cost effective than traditional cable replacement for backyard
direct buried cables. It allows us to effectively manage more kilometres of cable within
the same capital envelope, helping to close the gap between the needs identified and
available expenditure levels.
While cable rejuvenation has been found to be effective, it is not suitable for all cables. It
is a life extension strategy.
The forecasted capital costs are shown in Table SEC #15 - 3 below. Capital savings are

8 achieved by extending the life of cable assuming injection is one fifth the cost of 9 replacement. The time value of money is not considered, thus approximately \$2 million 10 worth of capital is saved by spending \$500,000 of cable injection

11

Table SEC #15 - 3: Forecasted Capital Cost Vs Projected Savings for Cable Rejuvenation

	2015	2016	2017	2018	2019	2020
Capital Cost (\$'000)	500	500	500	500	500	500

14

15 **Copperleaf C55:**

Capital efficiency gains and benefits from the Copperleaf C55 program are described in Exhibit D Tab 1 Schedule 4, section 3.1.9 Asset Investment Planning (AIP). An assessment of O&M savings is described in Interrogatory Response to OEB #15 part vii. Budgeted capital and O&M costs are shown in Table SEC #15 - 4 below. Capital costs in 2015 are for enhancements of health indices of assets, risk modelling and project prioritization. For O&M costs for 2017 – 2020, refer to Interrogatory Response to OEB #7 part vii.

23

24 Table SEC #15 - 4: Capital & O&M Costs for CopperLeaf C55 Program

	2015	2016
Capital Cost (\$'000)	253	0
O&M Cost (\$'000)	160	140



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-1-2(2-SEC #15)ORG ORIGINAL Page 5 of 6

1

2 Mobile Workforce Management Tool:

3 The Material Investment document for this new technology is located in Attachment B-

4 1(A) on page 378. Budgeted capital and O&M costs are shown in Table SEC #15 - 5

5 below. For O&M costs for 2017 – 2020, refer to Interrogatory Response to OEB #7 vii.

6 The O&M savings for this initiative are estimated to be less than \$80,000 for 2016.

7 8

Table SEC #15 - 5: Capital and O&M Costs for Mobile Workforce Management Tool

9

	2015	2016
Capital Cost (\$'000)	1,950	-
Operating Costs (\$'000)	-	271

10

- 11 d.
- i. Cost estimation regarding the upgrade of Lisgar TL substation is currently
 being undertaken by Hydro One Networks Inc. (HONI). Please see Exhibit B 1-2 as updated June 29, 2015, Page 243, lines 5-22.
- 15

16 ii. Hvdro Ottawa Limited has incurred \$100,000 of capital cost to date towards 17 the efforts of HONI with regards to Lisgar TL substation. This cost is under 18 General Plant Hydro One Payments. Please see Exhibit B-1-2, Table 3.4.9 -19 General Plant Expenditure Summary. This cost is required in order for HONI 20 to complete a cost estimate and feasibility study for the project. Once the 21 costs and feasibility are known, Hydro Ottawa Limited will evaluate and 22 prioritize this project as per Hydro Ottawa Limited's Asset Management 23 Process; please see Exhibit B-1-2 Section 2.1.2 Asset Management Process 24 Components. Budgeted cost estimates for future work are included as 25 General Plant Hydro One Payments. Please see Exhibit B-1-2, Table 3.4.11 26 - General Plant Forecasted Spend.

27


- 1 Hydro Ottawa has budgeted for expected costs related to the Lisgar TL iii. 2 substation project as noted above. A Z-Factor is not deemed necessary at 3 this time due to the budgeted amount taken into consideration. However, Hydro Ottawa Limited reserves the right to file a Z-Factor application to 4 5 recover costs resulting from events or initiatives having a material impact to Hydro Ottawa Limited's cost or revenue structure for unforeseen events. 6 7 8 e. Please see Attachment Att-SEC-Q15-A – Numerical Data Asset Age and Condition 9 for the numerical data used to create Exhibit B-1-2 Figures 2.2.14, 2.2.16, 2.2.18, 10 2.2.20, 2.2.22, 2.2.24, and 2.2.26. Please note Hydro Ottawa Limited identified an 11 error with Figure 2.2.22. Please see Interrogatory Response to OEB #17 part xvi. 12 Hydro Ottawa Limited uses Weibull analysis for probability of asset failure opposed to 13 14 lowa curves. These curves can be found in Attachment B-1(B) 2014 Asset Management 15 Plan. They have also been described in Interrogatory Response to OEB #17 part xvi. 16 17 f. As stated in Exhibit B-1-2 as updated June 29, 2015 page 208 line 23-28, "Based on 18 the survey results, HOL customers indicated that reliability be maintained or 19 improved, at minimal or no increased cost. As a result, HOL has created a capital 20 plan that paces investments in order to minimize rate impacts, while continuously 21 improving efficiencies and productivity with respect to distribution planning and 22 implementation. HOL is continuing to improve capital project prioritization, 23 specifically in the areas of data collection and risk management." 24
- 25

These numbers represent assets years that are known and estimated

Age		Convis	tion	
-BC	Critical	Poor	Fair	Good
0	0	0	0	17
1	0	0	0	70
2	0	0	0	134
3	0	0	0	118
4	0	0	0	55
5	0	0	0	69
6	0	0	1	38
/	0	0	4	2/9
0	0	1	20	408
10	0	1	11	390
11	0	1	12	362
12	0	2	27	707
13	0	2	24	546
14	0	2	19	400
15	0	3	24	443
16	0	2	18	310
17	0	3	22	354
18	0	2	16	237
19	0	4	22	315
20	0	5	28	374
21	0	8	42	537
22	0	4	23	285
23	0	7	34	408
24	0	11	53	609
25	0	8	37	417
26	0	18	79	860
27	0	9	37	390
28	0	13	54	550
29	0	12	47	467
30	0	18	68	657
31	0	15	55	516
32	0	9	32	298
33	0	18	62	556
34	0	9	31	207
35	0	21	41	536
30	0	21	66	530
37	1	32	90	690
39	1	47	130	954
40	1	36	94	665
41	1	28	71	483
42	1	33	80	528
43	1	28	65	412
44	1	29	64	388
45	2	38	80	466
46	1	27	54	299
47	2	32	62	331
48	1	17	32	160
49	6	94	165	796
50	3	40	67	310
51	7	83	131	578
52	9	107	162	682
53	8	88	126	504
54	17	157	215	820
55	10	87	112	408
56	10	80	98	341
5/	13	93	108	300
50	17	113	125	396
29	12	120	110	242
61	21	38	36	345
67	16	77	70	182
63	8	37	31	79
64	12	50	41	98
65	10	37	28	65
66	10	34	24	53
67	7	23	16	33
68	18	55	35	71
69	4	12	8	15
70	4	9	5	10
71	41	96	53	92
72	16	35	18	30
73	16	33	16	25
74	13	24	11	17
75	12	21	9	13
76	4	7	3	4
77	30	42	15	20
78	53	67	23	28
79	68	78	24	28
80	108	112	32	35
	107	99	26	26
81	101	83	19	18
81 82		20	4	4
81 82 83	28			- 1
81 82 83 84	28	11	2	
81 82 83 84 85	28 17 93	11 48	7	5
81 82 83 84 85 86	28 17 93 3	11 48 1	7	5
81 82 83 84 85 86 87 87	28 17 93 3 53	11 48 1 17	2 7 0 2	5
81 82 83 84 85 86 87 88 88	28 17 93 3 53 7 24	11 48 1 17 1	2 7 0 2 0	5 0 1
81 82 83 84 85 86 87 88 88 89 90	28 17 93 3 53 7 7 31	11 48 1 17 1 3 0	2 7 0 2 0 0	5 0 1 0 0

Δøe	PI	LC Cable	e (m) dition	
чве	Critical	Poor	Fair	Good
0	0	0	0	842
1	0	0	0	96
2	0	0	0	3890
3	0	0	0	1706
4	0	0	0	2963
5	0	0	0	4533
6	0	0	0	2498
7	0	0	0	2950
	0	0	0	2303
8	0	0	0	5/58
9	0	0	0	6460
10	0	0	0	2950
11	0	0	0	4152
12	0	0	0	19498
13	0	0	0	2071
14	0	0	0	2153
15	0	0	0	5576
16	0	0	0	978
17	0	0	0	4799
18	0	0	0	4272
10	0	0	0	1758
20	0	0	0	1012
20	0	0	0	1912
21	0	0	0	4813
22	0	0	0	9469
23	0	0	0	3610
24	0	0	0	3956
25	0	0	0	2196
26	0	0	0	3511
27	0	0	0	7315
28	0	0	0	10033
20	0	0	0	3127
30	0	0	0	8420
30	0	0	0	40420
31	0	0	0	10461
32	U	U	U	7985
33	0	0	0	2320
34	0	0	0	11210
35	0	0	0	6679
36	0	0	0	10748
37	0	0	0	8930
38	0	0	0	7535
39	0	0	0	6050
40	0	0	1327	0
41		0	10020	0
42	0	0	0350	0
42	0	0	3330	0
43	0	U	//4/	0
44	0	0	6911	0
45	0	0	1493	0
46	0	0	7517	0
47	0	0	8309	0
48	0	0	7778	0
49	0	0	3408	0
50	0	0	4042	0
51	0	0	1735	0
52	n	0	945	0
52	0	0	1759	0
54	0	0	5016	0
24	0	0	2082	
33	-	0	/263	-
56	0	0	3113	0
57	0	0	29/4	0
58	0	0	136	0
59	0	0	3238	0
60	0	407	0	0
61	0	5838	0	0
62	0	2121	0	0
63	0	795	0	0
64	0	6351	0	0
65	0	1520	0	0
00	-	1353	- U	-
00	0	2098	- 0	0
ь7	0	3224	0	0
68	0	0	0	0
69	0	433	0	0
70	0	211	0	0
71	0	0	0	0
72	0	1590	0	0
73	0	0	0	0
7/	0	07	0	-
74		23	-	-
/5	- 0	858	0	0
/6	0	1606	0	0
-		0	0	0
77	U			
77 78	0	33	0	0
77 78 79	0	33 2911	0	0
77 78 79 >80	0 0 23418	33 2911 0	0	0

puic cable

		XLPE 0	Cable (km)	
Age			Condi	tion	
	Critical	Poor	Fair	Good	Like New
0	0	0	0	0	28
1	0	0	0	0	34
2	0	0	0	0	107
3	0	0	0	0	119
4	0	0	0	0	74
5	0	0	11	27	3
6	0	0	8	19	2
7	0	0	17	42	4
8	0	0	17	42	5
9	0	1	54	135	14
10	0	0	18	45	5
11	0	0	27	67	7
12	0	0	24	59	6
13	0	1	42	105	11
14	0	0	21	54	6
15	0	0	14	34	4
16	1	4	13	16	6
17	0	3	8	10	4
18	0	2	7	8	3
19	1	9	28	33	12
20	1	7	21	26	10
21	2	14	43	52	20
22	1	7	22	26	10
23	1	5	15	19	7
24	1	8	26	31	12
25	1	7	22	27	10
26	4	19	46	46	15
27	3	18	44	44	14
28	3	15	36	35	12
29	2	13	30	30	10
30	2	9	21	20	7
31	5	26	63	63	21
32	1	5	13	13	4
33	2	8	20	20	7
34	1	6	15	15	5
35	,	12	32	32	10
36	11	32	56	52	20
37	10	27	47	44	17
38	10	13	23	22	
30	2	21	37	35	12
40	4	17	21	19	7
40	*	24	41	38	15
41	3	24	16	15	- 15
42	5	15	26	24	0
43	5	15	10	19	9
44	4	17	30	18	11
43	2	- 1/	16	10	
40	3	9	10	15	6
4/	3	6	10	12	2
48	2	6	10	9	4

ALCO A REAL	a va r dulli	Condi	tion	onnel
nge	Critical	Poor	Fair	Good
C	n	n 001	n all	1
1	0	0	0	72
2	0	0	0	280
2	0	0	0	257
4	0	0	0	275
5	0	0	0	204
6	0	0	0	209
7	0	0	0	208
	0	0	0	30/
0	0	0	0	15.4
10	0	0	0	244
11	0	0	0	344
12	0	0	0	198
12	0	0	0	537
14	0	0	0	374
15	0	0	0	240
16	0	0	0	151
17	0	0	0	131
18	0	0	0	68
19	0	0	0	318
20	0	0	0	255
21	0	0	0	494
22	0	0	0	229
23	0	0	0	298
24	0	0	0	317
25	0	0	0	282
26	0	0	0	660
27	0	0	0	577
28	0	0	0	447
29	0	0	0	441
30	0	0	295	0
31	0	0	420	0
32	0	0	163	0
33	0	0	184	0
34	0	0	202	0
35	0	0	324	0
36	0	0	808	0
37	0	0	604	0
38	0	0	271	0
39	0	0	327	0
40	0	0	177	0
41	0	0	188	0
42	0	0	151	0
43	0	0	167	0
44	0	0	188	0
45	0	0	285	0
46	0	0	190	0
47	0	0	134	0
48	0	0	65	0
49	0	0	557	
50	0	83	0	0
51	0	52	0	0
52	0	/1	0	0
23	0	40	0	0
54	0	38	0	0
55	0	33	0	0
55	0	35	0	0
5/	0	44	0	0
58	0	11	0	0
59	0	41	0	
>60	172	0	0	0

Age		Condi	tion	
	Critical	Poor	Fair	Good
0	0	0	0	18
1	0	0	0	111
2	0	0	0	133
3	0	0	0	143
4	0	0	0	111
5	0	0	0	110
	0	0	0	
0	0	0	0	114
	0	0	0	169
8	0	0	0	375
9	0	0	0	217
10	0	0	0	293
11	0	0	0	140
12	0	0	0	142
13	0	0	0	519
14	0	0	0	190
15	0	0	0	122
15	0	0	0	133
10	0	0	0	105
1/	U	U	U	113
18	0	0	0	122
19	0	0	0	134
20	0	0	0	106
21	0	0	0	131
22	0	0	0	231
23	0	0	0	91
24	0	0	0	171
25	0	n n	n	208
26	n	0	ñ	205
37	0	0	- C	417
2/	0	0	0	412
28	0	. 0	0	192
29	0	0	0	258
30	0	0	301	0
31	0	0	269	0
32	0	0	337	0
33	0	0	298	0
34	0	0	178	0
35	0	0	166	0
36	0	0	134	0
37	0	0	100	0
20	0	0	100	0
30	0	0	103	0
39	0	0	226	0
40	0	0	499	0
41	0	0	332	0
42	0	0	215	0
43	0	0	175	0
44	0	0	232	0
45	0	0	163	0
46	0	0	171	0
47	0	0	156	0
40		0	106	0
40	0	0	175	0
49	0	0	272	0
50	0	0	3/3	0
51	0	0	191	0
52	0	0	353	0
53	0	0	453	0
54	0	0	332	0
55	0	0	505	0
56	0	0	286	0
57	0	0	243	0
58	0	n n	344	0
59	n	0	350	n
	0	200	-	~
61	0	208	0	~
01	0	405		-
62	0	105	0	0
63	0	124	0	0
64	0	88	0	0
65	0	72	0	0
66	0	53	0	0
67	0	36	0	0
68	n	41	0	n
69	0	33	n	0
70	n	18	ñ	n
74	0	46	- C	~
/1	0	15	0	0
/2	0	/1	0	0
73	0	48	0	0
74	0	15	0	0
75	0	14	0	0
76	0	12	0	0
77	0	14	0	0
78	n	29	0	n
70	0	75	C C	0
15	0	,) 	0	~
80	0	3/	0	0
81	0	72	0	0
82	0	40	0	0
83	0	61	0	0
84	0	9	0	0
85	0	7	0	0
86	0	33	0	0
87	0	4	n	0
8.8	n	2	n	n
80	0	14	0	0
89	0	- 14	0	- 0
>00				. 0

	vault li	ansion	nation	
Age		Condi	tion	
	Critical	Poor	Fair	Good
1	0	0	0	56
2	0	0	0	112
3	0	0	0	4/
5	0	0	0	10
6	0	0	0	75
7	0	0	0	50
8	0	0	0	30
9	0	0	0	305
10	0	0	0	6
11	0	0	0	9
12	0	0	0	31
13	0	0	0	47
14	0	0	0	11
15	0	0	0	19
16	0	0	0	5
17	0	0	0	12
18	0	0	0	19
19	0	0	0	43
20	0	0	0	30 69
22	0	0	0	67
23	0	0	0	67
24	0	0	0	75
25	0	0	0	94
26	0	0	0	21
27	0	0	0	45
28	0	0	0	104
29	0	0	0	91
30	0	0	0	54
31	0	0	0	86
32	0	0	0	103
33	0	0	0	34
34	0	0	0	63
35	0	0	40	15
30	0	0	40	0
38	0	0	178	0
39	0	0	177	0
40	0	0	138	0
41	0	0	121	0
42	0	0	110	0
43	0	0	44	0
44	0	0	59	0
45	0	0	24	0
46	0	0	54	0
47	0	0	47	0
48	0	0	51	0
49	0	0	22	0
50	0	0	15	0
52	0	0	13	0
52	0	0	- 13	0
5/	0	0	0	0
55	0	n	4	n
56	0	14	0	0
57	0	30	0	0
58	0	17	0	0
59	0	15	0	0
60	0	3	0	0
61	0	8	0	0
62	0	21	0	0
63	0	12	0	0
64	0	5	0	0
65	0	9	0	0
66	0	6	0	0
60	~	-	~	~
69	0	2	0	0

	Underground Switchgear							
	Condition							
	Critical	Poor	Fair	Good				
0	0	0	0	32				
1	0	0	0	27				
2	0	0	0	19				
3	0	0	0	21				
4	0	0	0	16				
5	0	0	0	9				
6	0	0	0	10				
7	0	0	0	6				
8	0	0	0	4				
9	0	0	0	19				
1	0	0	0	5				
2	0	0	0	6				
3	0	0	0	11				
4	0	0	0	13				
5	0	0	0	5				
6	0	0	0	1				
7	0	0	0	8				
8	0	0	0	1				
9	0	0	0	10				
0	0	0	0	0				
1	0	0	0	14				
2	0	0	0	11				
3	0	0	0	16				
4	0	0	0	25				
5	0	0	14	0				
6	0	0	16	0				
7	0	0	8	0				
8	0	0	16	0				
9	0	0	4	0				
0	0	4	0	0				
1	0	3	0	0				
2	0	0	0	0				
3	0	0	0	0				
4	0	0	0	0				
5	0	0	0	0				
6	0	0	0	0				
7	0	0	0	0				
8	3	0	0	0				
-								

Priority	Recommendation	Actions	Target
High	Establish clear project measures of success	Establish and gain consensus on objective and subjective measures	Q2
		Monitor, track and report progress	
High	Realign Designers & CAD Techs	Develop short term plan plus long term rotation plan	Q2
		Engage supervisors to develop regional assignments	
		Document transition and change management plan	
		Engage assets and construction	
		Create and communicate final org chart	
		Assign CAD techs to geographic areas	
High	Establish Area Coordination Meetings	Engage key stakeholders	Q2
		Define agenda, frequency, location, and chair	
		Define content and deliverables for meeting	
		Identify and train facilitators (Intersol offers good program)	
		Establish timing and send invitations out for remainder of year	
High	Estimating Tool	Develop discipline specific tool in Excel	Q3/4
		Enagage IT/BAS to build a Z-file upload to import directly into JDE and populate	
		work orders more efficiently	
		Train staff and deploy	
High	Formalize Mentoring Program	Develop trilateral mentoring Assets-Design-Construction	Q3
		Define plan, identify candidates	
		Assign mentors	
High	Formailze Designer Training program	Review existing programs	Q4
		Define content/specs	
		Define internal and external resources to complete	
		Develop program and associated material	
		Establish training program schedule	
High	JD Edwards	Quantify the impact of the new version and communicate upwards	Q2
		Review and understand the process for issue identification & prioritization	
		Need to influence the content of Phase II enhancements	
		(ensure code code and other issues fed into feedback loop)	

Medium	Review Project Coach	Assemble a cross functional team	Q2
		Address process, approvals, tech signing authority	
		Revise document as required	
		Map out training program on revised document	
		Specifically address front end customer requests (expand Designers role)	
		Technical signing authority (expand numbers)	
Medium	Management Reporting	Define reporting requirements	Q2
	<u> </u>	Identify data and sources	
		Design and validate reports	
		Establish schedule and distribution list	

Lean Program

Design Process Review Recommendations Presentation

March 2011



Objectives

- Summary Issues/Opportunities
- Recommendations
- Next Steps



Issues/Opportunities

- Issues were collected during the course of the first workshop
- Combination of those within our direct control and out of our control
- Majority can be categorized as:
 - > People
 - > Process
 - > Technology
 - Policy



People Summary

- Communication issues across process
- Design aligned functionally while all others aligned geographically
- Structure of assets not well known
- No training plan for new designers
- Lack of formal mentoring program
- CAD process could be more efficient



Process Summary

- Take a fresh look at Project Coach simplify/streamline
- Asset planning cycle still lagging
- Material mgmt is a big issue
- Design process inconsistently applied
- Need to clarify ownership of projects at various stages
- No consistent method of receiving demand projects (manage front end)
- Too many approvals



Process Summary

- Contractor invoicing not timely and not always getting back to designer
- Need to define/communicate as-built process – who does the QA
- Need a better method (or tool) for generating estimates
- Need better management reporting



Technology Summary

JDE

- More difficult to generate an estimate
- > Errors in cost code assignments
- Lack of quality reporting
- Insufficient training

- GIS

- Perceived accuracy of GIS continues to cause concerns
- No common understanding of error correction process (and feedback loop)



Policy Summary

- Do we need designs approved that have no deviations from approved standards
- Can we designate Planning Engineers as technical signing authorities
- Sole source requirement for HONI (and others) is non-value add effort
- Can we increase the \$ threshold for general tender



RECOMMENDATIONS



Realign Designer and CAD Techs

- Formalize the geographic allocation of designers within each discipline
- Assign CAD resources geographically

Capital Planning, Design and Execution Process

A	Overhead	Underground	Residential	Commercial	C
S	East	East	East	East	A
S F	West	West	West	West	M
T	South	South	South	South	
S	Central	Central	Central	Central	



Establish Area Coordination Meetings

Attendees:

> Assets, Area Designers, CAM, FT, Supervisor Scheduling, Procurement, and System Ops

Agenda:

Structured, efficient, consistent

Frequency:

- Biweekly operational
- Quarterly review and mid term planning
- > Annually long term planning and resourcing



Review/Revise Project Coach

- Establish a team to review project coach start to finish
- Opportunity to:
 - Enhance some parts
 - > Eliminate or simplify others
 - Clarify roles, responsibilities across lifecycle
- Need to develop training module for revised document



Estimating Process/Tool

- Need a more efficient method of generating estimates
- Need a more efficient method of getting estimates populated in JDE work orders
- Tool can be within or outside of JDE
- Need to identify alternatives, select and justify a solution



Develop Management Reporting

- Define specific reports to monitor performance across the process
- Determine data required and source
- Develop and validate reporting
- Deploy to key stakeholders
- Automate generation or establish self serve option



Designer Training & Mentoring Program

- Work has begun on designer development program
- Continue to define the program specs
- Develop necessary material
- Establish schedule and deliver program
- Establish trilateral mentoring program
 - > Assets
 - Design
 - Construction



JD Edwards

- Need to quantify the impact of the new version (man hours and labour \$\$)
 - Consolidate results and report to COO/CIO for consideration
- Need to better understand the process for issue identification & prioritization
- Communicate the \$ impact of issues
- Need to influence the content of the Phase II enhancements



Other Recommendations

- Material Management Lean review
- Scheduling Lean review
- Review General Maintenance process
- Records Maintenance:
 - Review and communicate As-built process
 - > Address accuracy of GIS
- Document and review Site and Community Dev Plan process



Timeline

Q2 2011

- Realign Designers & CAD Techs
- > Establish Area Coordination Meetings
- Formalize Mentoring Program
- > Establish Project Measures
- > JD Edwards

• Q3 2011

- » Review Project Coach
- Management Reporting

• Q4 2011

- > Training Program
 - **Estimating Tool**



Next Steps

 Recommendations and plan endorsed by Bill & Lance

- Develop detailed implementation plan
- Establish project measures of success
- Establish Communication/change management plan
- Execute the plan







Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:B-3-1(2-SEC #16)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #16
2	
3	<u>Reference:</u> [Ex. B/3/1, p. 2]
4	
5	Question #16:
6	
7	Please provide the RFP, including Statement of Work, and list of bidders for the lead/lag
8	study. If a contract has been signed for this study, please provide the contract.
9	
10	
11	
12	Response:
13	
14	Hydro Ottawa Limited ("Hydro Ottawa") will be completing a lead lag study. No RFP
15	process has yet been initiated.
16	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-5(4-SEC #17)ORG ORIGINAL Page 1 of 4

1		Response to School Energy Coalition Interrogatory Question #17
2		
3	Refer	ence: [Ex. D/1, Attach. D]
4		
5	Quest	tion #17
6		
7	With	respect to Table 3-3 of the PSE Benchmarking Study, we have attached a table
8	and re	elated spreadsheet preparing calculations based on the consultant's table. With
9	respe	ct to these results:
10		
11	a)	Please confirm that the calculations in the attachment are correct.
12		
13	b)	Please confirm that both the Benchmark dollars and the Hydro Ottawa dollars in
14		the original table are in US\$, made equivalent using PPP. If this is not confirmed,
15		please explain how they are made equivalent. Please confirm that this results in
16		the benchmark and the actual/forecast dollars being calculated on a consistent
17		basis. Please restate the table with the US data in US dollars, and the Hydro
18		Ottawa data in Canadian dollars.
19		
20	c)	Please explain the relationship between the percentage column in the original
21		table (i.e. 50% for 2002) and the dollar figures in each of the other two original
22		columns. Please provide an example calculation to demonstrate this relationship.
23		
24	d)	Please explain the basis for the forecast of the US benchmark for 2016 through
25		2020, and explain why the average annual increase of the benchmark in those
26		five years is 3.79%, while the average annual increase of the benchmark from
27		2002 to 2015 is 2.60%. What assumptions were made with respect to future
28		growth in the benchmark costs that would result in this higher future increase?
29		
30	e)	Please explain the factors unique to Hydro Ottawa that justify Hydro Ottawa costs
31		increasing over this eighteen year period at a rate of 5.02% per year,



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-5(4-SEC #17)ORG ORIGINAL Page 2 of 4

1 compounded annually, when the US benchmark selected by Hydro Ottawa's 2 consultant as being comparable has only increased by 2.92% per year, 3 compounded annually, over the same period. 4 5 6 7 Response: (Supplied by PSE) 8 9 a. Confirmed. The calculations are correct when using the arithmetic method of 10 calculating growth rates. 11 b. Both the Benchmark dollars and the Hydro Ottawa dollars are presented in 12 Canadian dollars (C\$). They are already equivalent in the table. There is no "US 13 data" in the table, but rather a Hydro Ottawa benchmark that is presented in C\$, 14 and actual Hydro Ottawa total costs that are also presented in C\$. 15 c. The original percentage column is the logarithmic percent difference between 16 Hydro Ottawa's actual costs and their model-expected (benchmark) costs. The 17 column indicates whether Hydro Ottawa's actual costs are above or below the 18 benchmark costs, and by what percentage difference. Since all of Hydro 19 Ottawa's percent differences are negative (actual costs are below benchmark 20 costs), all the percentages are negative, and the column is labeled "Percent 21 Below..." 22 23 In the example of the question: The PSE econometric model produces a 24 benchmark cost value in 2002 for Hydro Ottawa of \$193 million (C\$). Hydro 25 Ottawa's actual costs are \$117 million (C\$). The 50% below benchmark costs 26 cited above is calculated using the following formula. $-50\% = Natural Log (\frac{117}{193})$ 27 28 All of the other percentages are calculated using the same formula, but for the 29 given year. The generic formula is:

30



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-5(4-SEC #17)ORG ORIGINAL Page 3 of 4

Efficiency Score = Natural Log (Actual Costs/Benchmark Costs)

d. The basis for the forecast of the benchmark for Hydro Ottawa for 2016 through
2020 is the econometric model and forecasted explanatory variables for those
years. The model and explanatory variables are all provided in Table 3-1 of the
PSE report. For example, the number of customers is projected to increase
during 2016 through 2020 and this increase, and the estimated cost impact of
that increase is reflected in the benchmark costs.

8 One of the explanatory variables in the model is the capital price. Distribution 9 utilities are capital intensive enterprises, so the price of capital they pay will have 10 a large influence on their costs (or predicted costs). One of the largest 11 components of the capital price is the cost of capital (i.e. interest rates).

12

7

The question states that the annual increase from 2002 to 2015 for the benchmark is 2.60% versus a 2016 to 2020 increase of 3.79%. The primary reason for this difference is the substantial decline in interest rates and the cost of capital from 2002 to 2015. The model inputs use the Board allowed cost of capital, which has annually declined by around 2% to 3% during this period. The model uses the assumption of constant interest rates during the future 2016 to 2020 time period.

20

The assumption was made that the unprecedented low interest rates will not continue to decline into the future, but rather will be constant over the 2016 to 2020 period. This assumption appears reasonable, if not conservative, as many economists are predicting interest rate increases in the next few years.

- 25
- 26 27

e. It is necessary to recall the starting point of the cited annual growth rates. Hydro
 Ottawa was found to be 50% below benchmark costs. This is an extremely low cost level that is perhaps not sustainable in the long-run. Superior cost



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-5(4-SEC #17)ORG ORIGINAL Page 4 of 4

performers tend to converge towards benchmark values. This expected
 convergence is exactly what has occurred. However, Hydro Ottawa remains a
 statistically superior cost performer, based on its proposed spending plan,
 through 2020.

6 "It is unrealistic to expect Hydro Ottawa to simultaneously renew its system, 7 improve reliability, and maintain such a strong cost efficiency assessment. Even 8 absent system renewal and improving reliability, it would be unrealistic to expect 9 a utility to maintain an efficiency score of -50%. As the utility grows and expands 10 to be able to continually "beat" the industry by 50% is not a realistic 11 expectation. It is unfair, in our opinion, to punish Hydro Ottawa for providing 12 customers with such strong cost performance in the past. Especially when 13 strong cost performance is projected to continue throughout the Custom IR 14 period."

15

5

16



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-2(4-SEC #18)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #18
2	
3	<u>Reference:</u> [Ex. D/1/2, p. 2]
4	
5	Question #18:
6	
7	Please provide the Budget Memo referred to.
8	
9	
10	
11	Response:
12	
13	A copy of the budget memo can be found in Exhibit D-1-2.
14	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-6(4-SEC #19)ORG ORIGINAL Page 1 of 2

1	Response to School Energy Coalition Interrogatory Question #19
2	
3	<u>Reference:</u> [Ex. D/1/6, p. 4]
4	
5	Question #19:
6	
7	For each of items 3, 4, 5, and 6, please provide a comprehensive list of all costs and
8	benefits for that initiative, by year, up to and including 2020.
9	
0	
1	
2	Response:
3	
4	The items noted in this question reference our already introduced services including
5	Monthly Billing, Electronic Billing, Payment Options and our MyHydroLink Web Account
6	Portal.
17	
8	Monthly Billing – Hydro Ottawa transitioned to monthly billing as part of our March 6 th ,
9	2014 implementation of our new CC&B billing system. The decision to move to monthly
20	billing was initially driven by customer interest in moving to monthly billing which was
21	then following by Ontario Energy Board direction for Local Distribution Companies to
22	transition to monthly billing. Customer benefits include smaller bills (albeit more
23	frequent) making for easier payments that align with other regular monthly bills. The
4	more frequent bills also more closely align with when the product was used allowing for
5	improved correlation to conservation initiatives.
6	
27	Recognizing that monthly billing would effectively double our annual bill production and
28	postage costs from \$1.6M (0.4M bill production and \$1.2M in postage costs) to \$3.2M
29	(\$0.8M bill production and \$2.4M in postage costs), Hydro Ottawa focused attention on
0	increasing E-Billing subscriptions. In 2015, in-year cost avoidance due to our E-Billing
61	program is estimated to be \$0.7M, thereby reducing our increased \$3.2M costs down to



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\$2.5M. With continued customer uptake of E-Billing, we will continue to drive our costs
 of bill delivery down.

3

4 Electronic Billing – Please see Interrogatory Response to School Energy Coalition
 5 Interrogatory Question #11 c.

6

7 **Payment Options** – Hydro Ottawa continues to encourage customers to shift to an 8 electronic payment form. Currently 91% of customers make payments in an electronic 9 format (including autopay, equal monthly payment plan, electronic bank transaction, 10 etc.). We offer credit card payment options as required by the Distribution System Code. 11 We now offer two credit card options (Paymentus and Plastig) on a convenience fee 12 model. Under this model, the customer pays a modest convenience fee to pay by card. 13 Hydro Ottawa does not earn any revenue on these transactions. Hydro Ottawa 14 continues to develop programs to convert customers from paying by cheque. We 15 currently process approximately 25,000 cheques per month at a cost of approximately 16 \$1.00 per cheque.

17

18 MyHydroLink Web Account Portal – Introduced in 2006, MyHydroLink (MHL) is the 19 gateway for customers to subscribe to E-Billing. MHL also fulfills the requirement to 20 provide customer usage data and information from their Smart Meters. Several 21 customer services such as alerts have been added to this popular service which 22 continues to see upward growth and use. A reduction in calls to our call centre has been 23 partially attributed to the customer popularity of MHL. MHL development and 24 maintenance costs are outlined below.

25

MHL \$K	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
Opex	49	53	71	96	98
Capex	112	101	71	41	40

26

27



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1	Response to School Energy Coalition Interrogatory Question #20
2	
3	<u>Reference:</u> [Ex. D/1/6, p. 12]
4	
5	Question #20:
6	
7	Please advise which of the school boards that are customers of Hydro Ottawa have
8	been designated as Large Key Accounts.
9	
10	
11	
12	Response:
13	
14	Section 15.2 of the Electricity Distribution Licence issued to Hydro Ottawa Limited by the
15	Ontario Energy Board prohibits disclosing information regarding a customer without the
16	written consent of the consumer except, among other matters, where such disclosure is
17	required to comply with regulatory requirements. Hydro Ottawa would be pleased to
18	respond to this question once consent of each school board in question has been
19	provided to Hydro Ottawa by the School Energy Coalition.
20	
21	
22	
23	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-7(4-SEC #21)ORG ORIGINAL Page 1 of 2

1	
2	Response to School Energy Coalition Interrogatory Question #21
3	
4	Reference:
5	
6	[Ex. D/1/7, p. 6]
7	
8	Question #21:
9	
10	Please advise, with respect to each of Figures 4 and 5, the number of employees
11	actually forecast in the Applicant's model to retire in each year. If there is an algorithm
12	related to the "60% within two years of eligibility" estimate, please provide the actual
13	algorithm together with a description of how it works and how it was derived.
14	
16	Response:
17	
18	The number of employees in Figure 4 of Exhibit D/1/7 who are actually forecast to retire
19	based on Hydro Ottawa's model is as follows:
20	
21	Forecasted Retirements, All Employees





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- 1 The number of employees in Figure 5 of Exhibit D/1/7 who are actually forecast to retire
- 2 based on Hydro Ottawa's model is as follows:
- 3
- 4



Forecasted Retirements, Trades and Technical Employees

- 5
- 6

7 For the purposes of the model, the algorithm used to forecast the number of retirements

8 is as follows, rounded to the nearest whole number: [(# Employees Eligible within

9 Current Year + # Employees Remaining from Prior Year) X .60]. Please note that for the

10 purposes of the initial calculation of forecasted retirements from those who are

11 considered "eligible now," there would be no prior year. This algorithm is derived from an

- 12 average retirement rate of 60% within two years of eligibility.
- 13
- 14



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-7(4-SEC #22)ORG ORIGINAL Page 1 of 2

1	Response to School Energy Coalition Interrogatory Question #22
2	
3	<u>Reference:</u> [Ex. D/1/7, p. 4]
4	
5	Question #22:
6	
7	Please provide a table showing the number of current employees at each age from 18 to
8	70 (i.e. not grouped within five year batches).
9	
10	
11	
12	Response:
13	

14 The number of current employees, as of June 30, 2015, at each age from 18 to 70 is as

15 follows:

Age	Number of Employees
18	0
19	0
20	4
21	7
22	4
23	9
24	12
25	16
26	14
27	14
28	12
29	24
30	12
31	10
32	22
33	7
34	18
35	9

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Age	Number of Employees
36	12
37	12
38	10
39	10
40	13
41	14
42	18
43	14
44	12
45	16
46	18
47	21
48	26
49	21
50	28
51	32
52	33
53	43
54	36
55	22
56	12
57	10
58	14
59	9
60	9
61	3
62	3
63	1
64	5
65	2
66	1
67	1
68	0
69	0
70	0

¹



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:D-1-8(4-SEC #23)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #23
2	
3	<u>Reference:</u> [Ex. D/1/8, Appendix 2-K]
4	
5	Question #23:
6	
7	Please explain why the total compensation cost per unionized employee, \$98,761 in
8	2014, goes up 5.5% to \$104,168 in 2015, and goes up a further 4.3% to \$108,680 in
9	2016.
10	
11	
12	
13	Response:
14	
15	As outlined in Exhibit D, Tab 1, Schedule 8, there are several factors which cause
16	increases to forecasted 2015 and 2016 total compensation. These factors include:
17	• wage increases, such as the negotiated wage increases as per the current
18	collective agreement which is in effect from April 1, 2013 to March 31, 2017;
19	 annual step progressions for unionized employees;
20	 increases to certain insured benefit premiums that are wage-dependent, such as
21	long term disability and life insurance premiums;
22	 increase in the accrued post-retirement life insurance obligation;
23	 increases in statutory benefit and pension contributions; and,
24	• expiration of the rate guarantee for certain insured benefits leading to expected
25	increases in premiums.
26	
27	



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Response to School Energy Coalition Interrogatory Question #24
<u>Reference:</u> [Ex. D/2/4, appendix 2-M]
Question #24:
Please insert 2012 Actuals into the table in place of Board-approved.
Response:
The 2012 Actuals have been inserted for Appendix 2-M Regulatory Costs, please refer
to Attachment, Att-SEC-Q24_Chapter_2_Appendicies_2-M_Regulatory_Costs, for this
update.

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Exhibit:	D
Tab:	2
Schedule:	4
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	Updated: July
Date:	31,2015

Appendix 2-M Regulatory Cost Schedule

Regulatory Cost Category	USoA Account	USoA Account Balance	Ongoing or One-time Cost? ²	Las Y	st Rebasing 'ear (2012 Board Approved)	20	12 Actuals	Most Current Actuals Year 2014	20)14 Actuals	2015 Y	Bridge ear	Annual % Change	Annual % Change	2	016 Test Year	Annual % Change	
(A)	(B)	(C)	(D)		(E)		(E1)	(F)		(F1)	(G)		(H) = [(G)-(F)]/(F)	(H) = [(G)-(F1)]/(F1)	(I)		(J) = [(I)-(G)]/(G)	
1 OEB Annual Assessment	5655		On-Going	\$	775,196	\$	831,097	\$ 880,729	\$	883,460	\$	398,344	2.00%	1.68%	\$	916,311	2.00%	
2 OEB Section 30 Costs (Applicant-originated)																		
3 OEB Section 30 Costs (OEB-initiated)																		
4 Expert Witness costs for regulatory matters																		
5 Legal costs for regulatory matters	5655		On-Going	\$	208,829	\$	7,955	\$ 55,955	\$	-	\$	157,547	181.56%		\$	160,711	2.01%	
6 Consultants' costs for regulatory matters	5630		On-Going	\$	20,000	\$	14,444	\$ 64,773	\$	121,056	\$	66,069	2.00%	-45.42%	\$	16,188	-75.50%	
7 Operating expenses associated with staff resources allocated to regulatory matters																		
8 Operating expenses associated with other resources allocated to regulatory matters ¹																		
9 Other regulatory agency fees or assessments	5655		On-Going	\$	127,044	\$	131,031	\$ 135,374	\$	136,457	\$	138,081	2.00%	1.19%	\$	140,843	2.00%	
10 Any other costs for regulatory matters (please define)	5655		On-Going	\$	5,208													
11 Intervenor costs	5620		On-Going	\$	161,880	\$	213,360	\$ 36,472	\$	26,277	\$	78,822	116.12%	199.96%	\$	131,722	67.11%	
12 Sub-total - Ongoing Costs ³		\$-		\$	1,298,157	\$	1,197,887	\$ 1,173,303	\$	1,167,250	\$ 1,3	338,863	14.11%	14.70%	\$	1,365,775	2.01%	
13 Sub-total - One-time Costs 4		\$-		\$	-	\$	-	\$-	\$	-	\$	-			\$	-		
14 Total		\$-		\$	1,298,157	\$	1,197,887	\$ 1,173,303	\$	1,167,250	\$ 1,:	338,863	14.11%	14.70%	\$	1,365,775	2.01%	

Please fill out the following table for all one-time costs related to this cost of service application to be amortized over the test year plus the IRM period.

		Historical Year(s)	2015 Bridge Year	2016 Test Year
4	Expert Witness costs			
5	Legal costs			
6	Consultants' costs			
7	Incremental operating expenses associated with			
	staff resources allocated to this application.			
8	Incremental operating expenses associated with			
	other resources allocated to this application. 1			
11	Intervenor costs			



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:I-1-2(9-SEC #25)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #25
2	
3	<u>Reference:</u> [Ex. I/1/2, p. 4-6]
4	
5	Question #25:
6	
7	Please confirm that the Applicant is proposing to add to rate base the current market
8	value of land for the new facilities, but to only credit the ratepayers with 50% of the value
9	of the land being used for the existing facilities that those new facilities are to replace.
10	Please explain the policy rationale for this proposal. Please confirm that, with respect to
11	the buildings being replaced, however, the Applicant is proposing that the ratepayers
12	bear 100% of the loss on sale.
13	
14	
15	
16	Response:
17	
18	The value of the land to be used for the new facilities was added to rate base in Hydro
19	Ottawa Limited ("Hydro Ottawa") 2012 Rate Application, please refer to EB-2011-0054.
20	For the land being used for Hydro Ottawa's existing facilities the proposal is to
21	credit/debit ratepayers with 50% of the after-tax net gain for the sale of this land. The
22	50% share of the after-tax net gain for the sale of the land recognized that land is an
23	undepreciated asset. With respect to the building being replaced Hydro Ottawa is
24	proposing to credit or debit 100% of the after-tax gain or loss on the sale of the buildings.
25	
26	



Hydro Ottawa Limited EB-2015-0004 Interrogatory Responses IR:I-1-2(9-SEC #26)ORG ORIGINAL Page 1 of 1

1	Response to School Energy Coalition Interrogatory Question #26
2	
3	<u>Reference:</u> [Ex. I/1/2, p. 7]
4	
5	Question #26:
6	
7	Please confirm that the proposed account relating to monthly billing is intended to
8	capture both the costs and benefits of monthly billing during the 2016-2020 period. If
9	some of the costs or benefits are already included in the proposed revenue requirements
10	for 2016-2020, please provide an itemized list of all of those costs and benefits so
11	included.
12	
13	
14	
15	Response:
16	
17	Please see Interrogatory Response to Energy Probe Question #53 part c.
18	