EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-18

Ref: Exhibit 2, Tab 1, Schedule 1 and Attachment 1, Appendix 2-BA

Interrogatory:

a) Please reconcile the net book value shown in Appendix2-BA with the rate base calculations inE2/T1/S1, pp.2-5 and the RRWF for each year of the custom IR years.

b) Kingston Hydro noted that its custom IR is driven by capital needs over the next 5 years, with a significant infrastructure renewal component (i.e. overhead infrastructure replacement). Please explain why Kingston Hydro has not shown any disposals on its continuity schedule during the custom IR term 2016-2020.

Response:

a) E2/T1/S1, pp.2-5 for 2011 through 2015 included Capital works in progress and should not have. The remainder of the differences in 2016 through 2020 were very minor and as a result of rounding differences. The following should replace pages 2 through 5 of E2/T1/S1:

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2011 - Board Approved			
Rate Base:			
Cost of power			64,216,293
Operating expenses			6,357,503
Total			70,573,796
Working capital allowance %			15%
Total working capital allowance		$	10,586,069
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 29,993,083		
Closing balance - regulated fixed assets (NBV)	$ 33,414,368		
Average regulated fixed assets	$ 31,703,726		31,703,726
Total rate base - 2011 - Board Approved		**$**	**42,289,795**

2011 Actual			
Rate Base:			
Cost of Power		$	62,084,765
Operating Expenses		$	6,519,438
Total		$	68,604,203
Working Capital Allowance %			15%
Total Working Capital Allowance		$	10,290,630
Fixed Assets			
Opening Balance	$ 28,404,783		
Closing Balance	$ 30,208,147		
Average	$ 29,306,465	$	29,306,465
Total Rate Base - 2011		$	39,597,095

2012			
Rate Base:			
Cost of Power		$	65,548,409
Operating Expenses		$	6,291,523
Total		$	71,839,932
Working Capital Allowance %			15%
Total Working Capital Allowance		$	10,775,990
Fixed Assets			
Opening Balance	$ 30,208,147		
Closing Balance	$ 31,200,776		
Average	$ 30,704,462	$	30,704,462
Total Rate Base - 2012		$	41,480,451

2013		
Rate Base:		
Cost of power		$ 72,678,286
Operating expenses		$ 7,006,565
Total		$ 79,684,851
Working capital allowance %		15%
Total working capital allowance		$ 11,952,728
Fixed Assets		
Opening balance - regulated fixed assets (NBV)	$ 31,200,776	
Closing balance - regulated fixed assets (NBV)	$ 37,955,044	
Average regulated fixed assets	$ 34,577,910	$ 34,577,910
Total rate base - 2013		**$ 46,530,638**

2014		
Rate Base:		
Cost of power		$ 74,734,540
Operating expenses		6,468,160
Total		$ 81,202,700
Working capital allowance %		15%
Total working capital allowance		$ 12,180,405
Fixed Assets		
Opening balance - regulated fixed assets (NBV)	$ 37,955,044	
Closing balance - regulated fixed assets (NBV)	$ 39,898,913	
Average regulated fixed assets	$ 38,926,979	$ 38,926,979
Total rate base - 2014		**$ 51,107,384**

2015 - Bridge Estimated		
Rate Base:		
Cost of power		$ 83,213,877
Operating expenses		6,858,652
Total		$ 90,072,529
Working capital allowance %		15%
Total working capital allowance		$ 13,510,879
Fixed Assets		
Opening balance - regulated fixed assets (NBV)	$ 39,898,913	
Closing balance - regulated fixed assets (NBV)	$ 41,750,743	
Average regulated fixed assets	$ 40,824,828	$ 40,824,828
Total rate base - 2015 Bridge Estimated		**$ 54,335,707**

2016 - Test Estimated			
Rate Base:			
Cost of power		$	83,328,903
Operating expenses			7,130,810
Total			$ 90,459,713
Working capital allowance %			13%
Total working capital allowance			$ 11,759,763
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 44,342,873		
Closing balance - regulated fixed assets (NBV)	$ 47,893,668		
Average regulated fixed assets	$ 46,118,271		$ 46,118,271
Total rate base - 2016 Test Estimated			**$ 57,878,033**

2017 - Test Estimated			
Rate Base:			
Cost of power		$	82,386,451
Operating expenses			7,253,351
Total			$ 89,639,802
Working capital allowance %			13%
Total working capital allowance			$ 11,653,174
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 47,893,668		
Closing balance - regulated fixed assets (NBV)	$ 48,826,319		
Average regulated fixed assets	$ 48,359,994		$ 48,359,994
Total rate base - 2017 Test Estimated			**$ 60,013,168**

2018 - Test Estimated			
Rate Base:			
Cost of power		$	80,979,625
Operating expenses			7,378,017
Total			$ 88,357,642
Working capital allowance %			13%
Total working capital allowance			$ 11,486,494
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 48,826,319		
Closing balance - regulated fixed assets (NBV)	$ 51,015,061		
Average regulated fixed assets	$ 49,920,690		$ 49,920,690
Total rate base - 2018 Test Estimated			**$ 61,407,184**

2019 - Test Estimated			
Rate Base:			
Cost of power		$	80,381,134
Operating expenses			7,504,848
Total			$ 87,885,982
Working capital allowance %			13%
Total working capital allowance			$ 11,425,178
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 51,015,061		
Closing balance - regulated fixed assets (NBV)	$ 52,970,534		
Average regulated fixed assets	$ 51,992,798		$ 51,992,798
Total rate base - 2019 Test Estimated			**$ 63,417,975**

2020 - Test Estimated			
Rate Base:			
Cost of power		$	79,324,426
Operating expenses			7,633,881
Total			$ 86,958,307
Working capital allowance %			13%
Total working capital allowance			$ 11,304,580
Fixed Assets			
Opening balance - regulated fixed assets (NBV)	$ 52,970,534		
Closing balance - regulated fixed assets (NBV)	$ 55,132,845		
Average regulated fixed assets	$ 54,051,690		$ 54,051,690
Total rate base - 2020 Test Estimated			$ 65,356,269

b) The disposals on the continuity schedules are $Nil due to the fact that the assets being replaced are fully depreciated and would have a net book value of $Nil and therefore no effect on Rate Base or depreciation.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-19

Ref: Exhibit 2, Tab 2, Schedule 1–DSP5.4.1 pp. 133-136, Table3-6

Filing Requirements for Electricity Transmission and Distribution Applications, Chapter 5: Consolidated Distribution System Plan, section 5.1.1

Interrogatory:

In Chapter 5 of the Filing Requirements, the OEB determined that a projector activity involving two or more 'drivers' associated with different categories should be placed in the category corresponding to the 'trigger' driver. OEB staff notes that Kingston Hydro allocated a percentage of all projects to the different drivers rather than attribute the total costs of a project to its 'trigger' driver.

a) Please restate all affected tables and appendices to show total costs of its projects under its 'trigger' driver for each of the 5 years of the Custom IR term.

Response:

a) The following tables are restated in the manner requested by Board Staff.

Exhibit 2, Tab 2, Schedule 3 Attachment 1–OEB Appendix 2-AB

File Number:	EB-2015-0083
Exhibit:	2
Tab:	2
Schedule:	3
Page:	1
Date:	13-Apr-15

Appendix 2-AB
Table 2 - Capital Expenditure Summary from Chapter 5 Consolidated Distribution System Plan Filing Requirements

First year of Forecast Period: *2015*

CATEGORY	Historical Period (previous plan[1] & actual)															Forecast Period (planned)					
	2010			2011			2012			2013			2014			2015	2016	2017	2018	2019	2020
	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var	Plan	Actual	Var						
	$ '000		%	*$ '000*		%	*$ '000*		%	*$ '000*		%	*$ '000*		%	*$ '000*					
System Access		1,271,327	--		173,183	--		743,923	--		743,556	--		573,960	--	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000
System Renewal		2,019,598	--		5,454,169	--		1,593,770	--		3,621,695	--		2,406,160	--	$2,972,000	$4,247,000	$2,211,000	$3,083,000	$3,353,000	$3,287,000
System Service		43,677	--		247,485	--		496,839	--		70,645	--		248,162	--	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000
General Plant		518,530	--		295,016	--		1,129,516	--		207,879	--		384,562	--	$ 173,000	$ 863,000	$ 322,000	$ 406,000	$ 427,000	$ 321,000
TOTAL EXPENDITURE	-	3,853,132	--	-	6,169,853	--	-	3,964,048	--	-	4,643,775	--	-	3,612,844	--	$3,600,000	$5,650,000	$3,049,000	$4,269,000	$4,200,000	$4,200,000
System O&M		$ 3,344,858	--		$3,415,756	--		$3,212,599	--		$ 3,888,080	--		$ 3,051,338	--	$3,204,043	$3,300,165	$3,389,269	$3,480,779	$3,574,760	$3,671,279

Notes to the Table:
1. Historical "previous plan" data is not required unless a plan has previously been filed
2. Indicate the number of months of 'actual' data included in the last year of the Historical Period (normally a 'bridge' year):

Explanatory Notes on Variances (complete only if applicable)
Notes on shifts in forecast vs. historical budgets by category
Notes on year over year Plan vs. Actual variances for Total Expenditures
Notes on Plan vs. Actual variance trends for individual expenditure categories

Exhibit 2, Tab 2, Schedule 3 Attachment 2–OEB Appendix 2-AA

File Numbe	EB-2015-0083
Exhibit:	2
Tab:	2
Schedule:	3
Page:	

Appendix 2-AA
Capital Projects Table

Projects	2010	2011	2012	2013	2014	2015 Bridge
Reporting Basis	**CGAAP**	**CGAAP**	**CGAAP**	**CGAAP**	**CGAAP**	**MIFRS**
System Access						
Princess St. Reconstruction - Phase 1	757,094					
Barrie St. Reconstruction	169,158					
Meters	278,100		128,620	82,571	267,672	300,000
Pole Replacement - Pine & Division St		96,390	199,816			
Johnson- Victoria to Division 44kV Extension			286,345			
New Transformer Vault TV82 on Queen st				79,275	242,188	
RNI Upgrades				85,305		
King-Centre St 44kV Line Extension			71,573	55,622		
Williamsville-Transferring OH Secondary Service to UG				354,584		
44kV Services for 333 University Ave.						
Russell St. Reconstruction - Division to Montreal						
Miscellaneous	66,975	76,793	57,569	86,199	64,100	105,000
Sub-Total	1,271,327	173,183	743,923	743,556	573,960	405,000
System Renewal						
Transformer Vault 12 (TV12) & Circuit 103 Upgrade	345,797					
Transformer Vault 10 (TV10) Upgrade	199,018					
Annual Deteriorated Pole Replacement - Spot Replacement	891,045	924,723	842,295	971,540	807,602	
Pole Replacement - Wellington St	153,768					
Pole Replacement - Brock, Alfred & Palace	259,273	103,480				
Pole Replacement - Fairway Hill Cres	92,205					
Pole Replacement - Weller Ave	94,606					
Transformer Purchases	-132,408	510,556	189,241	162,541	167,771	
Substation No.11 Circuit Breaker Upgrade		1,644,010				
Secondary Underground Network Upgrade - Alfred Street		645,370				
Substation No.8 Transformer Upgrade	26,597	256,684				
Transformer Vault TV41 Upgrades		96,116	105,630			
Substation No.3 Circuit Breaker Upgrade		1,064,406				
Transformer Vault TV7 Upgrades		16,199	157,761	68,602		
Substation No.1 Rebuild			162,336	50,214	3,666	400,000
Substation No.11 44kV Riser Upgrade		53,083	80,249			
44kV Cable Replacement - Concession St at Princess				48,552	170,054	
Pole Replacement - Kingscourt Ave				101,798		
Pole Replacement - Portsmouth-Miles to Johnson				110,272		
Pole Replacement - Willingdon-Johnson to Hill				93,953		
Princess St Reconstruction - Phase 2				2,014,223		

Projects	2010	2011	2012	2013	2014	2015 Bridge
Reporting Basis	**CGAAP**	**CGAAP**	**CGAAP**	**CGAAP**	**CGAAP**	**MIFRS**
Pole Replacement - Portsmouth-Phillips to Fairvw					129,405	
Pole Replacement - Bagot-Catarqui					105,434	
Pole Replacement - Union St Rebuild					293,265	
Pole Replacement - Rideau St Rebuild					117,620	
Substation No.10 Riser Poles					68,690	
Reconstruction of 5kV Cables- Princess, King to Bagot					77,895	
5kV Faulted Cable Replacement - King St-Clarence to Johnson					129,163	
5kV Faulted Cable Replacement -TV15 to TV16 on Johnson St					158,709	
Princess St Condition Assessment					74,207	
Transformer Vault TV#8 Upgrade						385,000
Transformer Vault TV#9 Upgrade						470,000
Substation No. 10 44kV Riser PILC Cable Replacement						135,000
Deteriorated Overhead Infrastructure Replacement Program						847,000
Reactive 5kV Cable Replacement						70,000
5kV Cable Replacement on Seaforth						165,000
5kV 306 Circuit Fault PILC Cable Replacement						70,000
Princess St Reconstruction-Phase 3						330,000
Miscellaneous	89,697	139,542	56,258	0	102,679	100,000
Sub-Total	2,019,598	5,454,169	1,593,770	3,621,695	2,406,160	2,972,000
System Service						
Hydro One Incremental Cost for Gardiner TS Expansion	-121,000					
Distribution System Modeling	82,100					
SCADA	82,328		249,578			
Substation No.12 Relay Upgrade		157,974				
Substation No.2 Relay Upgrade			126,218	13,420		
44kV Motor Operated Switch			72,712	2,822	10,050	
Substation No.6 Relay Upgrade					104,131	
Substation No.8 Relay Upgrade					115,988	
Miscellaneous	249	89,511	48,331	54,403	17,993	50,000
Sub-Total	43,677	247,485	496,839	70,645	248,162	50,000
General Plant						
Tools & Equipment	214,381				206,133	
Vehicle Modifications/Upgrades	177,652	168,314	906,159	89,265	157,007	69,000
Substation No.11 and No.3 - Close-out Documentation		18,949	71,192	26,539		
Substation No.11 and No.3 - Critical Spare Breakers			66,298			
Computer Hardware & Software						
Miscellaneous	126,497	107,753	85,867	92,075	21,422	104,000
Sub-Total	518,530	295,016	1,129,516	207,879	384,562	173,000
Total	**3,853,132**	**6,169,853**	**3,964,048**	**4,643,775**	**3,612,844**	**3,600,000**
Less Renewable Generation Facility Assets and Other Non Rate-Regulated Utility Assets *(input as negative)*						
Total	**3,853,132**	**6,169,853**	**3,964,048**	**4,643,775**	**3,612,844**	**3,600,000**

Notes:

1 Please provide a breakdown of the major components of each capital project undertaken in each year. Please ensure that all projects below the materiality threshold are included in the miscellaneous line. Add more projects as required.

2 The applicant should group projects appropriately and avoid presentations that result in classification of significant components of the capital budget in the miscellaneous category.

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Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP5.2 Page 9, Table1 - Annual Expenditures and Annual Percentage Expenditure by Category

Investment Category	Forecast (planned)						
	2015	2016	2017	2018	2019	2020	Average
System Access	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000	$ 455,500
System Renewal	$ 2,972,000	$ 4,247,000	$ 2,211,000	$ 3,083,000	$ 3,353,000	$ 3,287,000	$ 3,192,167
System Service	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000	$ 95,000
General Plant	$ 173,000	$ 863,000	$ 322,000	$ 406,000	$ 427,000	$ 321,000	$ 418,667
Total	$ 3,600,000	$ 5,650,000	$ 3,049,000	$ 4,269,000	$ 4,200,000	$ 4,200,000	$ 4,161,333

Investment Category	Forecast (planned)						
	2015	2016	2017	2018	2019	2020	Average
System Access	11.3%	9.2%	14.3%	13.6%	9.5%	9.3%	10.9%
System Renewal	82.6%	75.2%	72.5%	72.2%	79.8%	78.3%	76.7%
System Service	1.4%	0.4%	2.6%	4.7%	0.5%	4.8%	2.3%
General Plant	4.8%	15.3%	10.6%	9.5%	10.2%	7.6%	10.1%
Total	100%	100%	100%	100%	100%	100%	100%

Exhibit 2, Tab 2, Schedule 1 Attachment 1–DSP5.2.1Page 12, Table1 - 2015-2020 Total Budget Breakdown by Investment Category

Investment Category	Total	% Total of 2015-2020 Budget
System Access	$ 2,733,000	10.9%
System Renewal	$ 19,153,000	76.7%
System Service	$ 570,000	2.3%
General Plant	$ 2,512,000	10.1%
Total	$ 24,968,000	100%

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP5.4.1Page 131, Table2 - Capital Expenditures

Investment Category	Forecast (planned)						Annual Average	
	2015	2016	2017	2018	2019	2020	Amount	%
System Access	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000	$ 455,500	10.9%
System Renewal	$ 2,972,000	$ 4,247,000	$ 2,211,000	$ 3,083,000	$ 3,353,000	$ 3,287,000	$ 3,192,167	76.7%
System Service	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000	$ 95,000	2.3%
General Plant	$ 173,000	$ 863,000	$ 322,000	$ 406,000	$ 427,000	$ 321,000	$ 418,667	10.1%
Total	$ 3,600,000	$ 5,650,000	$ 3,049,000	$ 4,269,000	$ 4,200,000	$ 4,200,000	$ 4,161,333	100%

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP5.4.1Page 133, Table3 - Annual Investment for System Access

Project Description	2015	2016	2017	2018	2019	2020	Total	%
Meters	$ 300,000	$ 300,000	$ 376,000	$ 440,000	$ 340,000	$ 332,000	$ 2,088,000	76.4%
44kV Services for 333 University Ave.		$ 160,000					$ 160,000	5.9%
Russell St. Reconstruction - Division to Montreal				$ 80,000			$ 80,000	2.9%
Miscellaneous	$ 105,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 405,000	14.8%
Grand Total	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000	$ 2,733,000	100.0%

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP5.4.1Page 134, Table 4 - System Renewal

Project Description	2015	2016	2017	2018	2019	2020	Total	%
Deteriorated Overhead Infrastructure Replacement Program	$ 847,000	$ 1,177,000	$ 1,211,000	$ 1,379,000	$ 1,355,000	$ 1,378,000	$ 7,347,000	38.4%
Substation No.1 Rebuild	$ 400,000	$ 150,000	$ 300,000	$ 374,000	$ 438,000	$ 1,529,000	$ 3,191,000	16.7%
Princess St Reconstruction-Phase 3	$ 330,000	$ 2,820,000					$ 3,150,000	16.4%
Substation MS#4 Y2&Y3 Bus Switchgear Replacement					$ 1,100,000		$ 1,100,000	5.7%
Transformer Vault TV#38 Upgrade				$ 570,000			$ 570,000	3.0%
Transformer Vault TV#9 Upgrade	$ 470,000						$ 470,000	2.5%
Substation MS#4 T1 Transformer Replacement				$ 420,000			$ 420,000	2.2%
Transformer Vault TV#8 Upgrade	$ 385,000						$ 385,000	2.0%
Barrie St. Reconstruction - Union to King					$ 260,000		$ 260,000	1.4%
Division St Reconstruction - Union to Princess			$ 250,000				$ 250,000	1.3%
Transformer Vault TV#3 Upgrade						$ 230,000	$ 230,000	1.2%
Transformer Vault TV#29 Upgrade			$ 210,000				$ 210,000	1.1%
5kV Cable Replacement on Seaforth	$ 165,000						$ 165,000	0.9%
Substation No. 10 44kV Riser PILC Cable Replacement	$ 135,000						$ 135,000	0.7%
Johnson St. Reconstruction - S.J.A to MacDonnell				$ 100,000			$ 100,000	0.5%
44kV Riser PILC Cable Replacement					$ 100,000		$ 100,000	0.5%
5kV 108 Circuit Fault PILC Cable Replacement			$ 90,000				$ 90,000	0.5%
Substation MS#17 T1 Transformer Replacement				$ 90,000			$ 90,000	0.5%
Reactive 5kV Cable Replacement	$ 70,000						$ 70,000	0.4%
5kV 306 Circuit Fault PILC Cable Replacement	$ 70,000						$ 70,000	0.4%
Miscellaneous	$ 100,000	$ 100,000	$ 150,000	$ 150,000	$ 100,000	$ 150,000	$ 750,000	3.9%
Grand Total	$ 2,972,000	$ 4,247,000	$ 2,211,000	$ 3,083,000	$ 3,353,000	$ 3,287,000	$ 19,153,000	100.0%

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP5.4.1Page 135, Table5 - System Service

Project Description	2015	2016	2017	2018	2019	2020	Total	%
44kV Motor Operated Switch				$ 180,000		$ 180,000	$ 360,000	63.2%
Miscellaneous	$ 50,000	$ 20,000	$ 80,000	$ 20,000	$ 20,000	$ 20,000	$ 210,000	36.8%
Grand Total	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000	$ 570,000	100.0%

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP 5.4.4 Page 173, Table 1b – 2015 Bridge Year & 2016-2020 Forecast Period (from App 2-AB)

CATEGORY	Forecast Period (planned)					
	2015	2016	2017	2018	2019	2020
	$ '000					
System Access	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000
System Renewal	$ 2,972,000	$ 4,247,000	$ 2,211,000	$ 3,083,000	$ 3,353,000	$ 3,287,000
System Service	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000
General Plant	$ 173,000	$ 863,000	$ 322,000	$ 406,000	$ 427,000	$ 321,000
TOTAL EXPENDITURE	$ 3,600,000	$ 5,650,000	$ 3,049,000	$ 4,269,000	$ 4,200,000	$ 4,200,000
System O&M	$ 3,204,043	$ 3,300,165	$ 3,389,269	$ 3,480,779	$ 3,574,760	$ 3,671,279

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP 5.4.4 Page 174, Table 2

Refer to Exhibit2, Tab 2, Schedule 3 Attachment 2 – OEB Appendix 2-AA above.

Exhibit 2, Tab 2, Schedule 1 Attachment 1 – DSP 5.4.5 Page 175, Table 2 - Capital Expenditure Summary – Forecast Period

	Forecast (planned)						6 Forecast Year Average	
Investment Category	2015	2016	2017	2018	2019	2020	Expenditures	Investment Percentage
System Access	$ 405,000	$ 520,000	$ 436,000	$ 580,000	$ 400,000	$ 392,000	$ 455,500	10.9%
System Renewal	$ 2,972,000	$ 4,247,000	$ 2,211,000	$ 3,083,000	$ 3,353,000	$ 3,287,000	$ 3,192,167	76.7%
System Service	$ 50,000	$ 20,000	$ 80,000	$ 200,000	$ 20,000	$ 200,000	$ 95,000	2.3%
General Plant	$ 173,000	$ 863,000	$ 322,000	$ 406,000	$ 427,000	$ 321,000	$ 418,667	10.1%
Total Expenditure	$ 3,600,000	$ 5,650,000	$ 3,049,000	$ 4,269,000	$ 4,200,000	$ 4,200,000	$ 4,161,333	100%

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-20

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.1 p. 133-136 and 174, Tables 3, 4, 5 and 6 and Appendix 2-AA

Interrogatory:

Please update Appendix 2-AA to show the actual year-to-date capital expenditures for the 2015 calendar year and the actual 2014 spending over the same time frame.

Response:

File Numbe	EB-2015-0083
Exhibit:	2
Tab:	2
Schedule:	3
Page:	

Appendix 2-AA
Capital Projects Table

Projects	2010	2011	2012	2013	2014	2014 Actual By June 30, 2014	2015 Bridge	2015 Actual By June 30, 2015
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS
System Access								
Princess St. Reconstruction - Phase 1	757,094							
Barrie St. Reconstruction	169,158							
Meters	278,100		128,620	82,571	267,672	98,034	300,000	66,389
Pole Replacement - Pine & Division St		96,390	199,816					
Johnson- Victoria to Division 44kV Extension			286,345					
New Transformer Vault TV82 on Queen st				79,275	242,188	159,560		
RNI Upgrades				85,305				
King-Centre St 44kV Line Extension			71,573	55,622				
Williamsville-Transferring OH Secondary Service to UG				354,584				
44kV Services for 333 University Ave.								
Russell St. Reconstruction - Division to Montreal								
Miscellaneous	66,975	76,793	57,569	86,199	64,100	27,111	105,000	35,807
Sub-Total	1,271,327	173,183	743,923	743,556	573,960	284,705	405,000	102,196
System Renewal								
Transformer Vault 12 (TV12) & Circuit 103 Upgrade	345,797							
Transformer Vault 10 (TV10) Upgrade	199,018							
Annual Deteriorated Pole Replacement - Spot Replacement	891,045	924,723	842,295	971,540	807,602	283,037		
Pole Replacement - Wellington St	153,768							
Pole Replacement - Brock, Alfred & Palace	259,273	103,480						
Pole Replacement - Fairway Hill Cres	92,205							
Pole Replacement - Weller Ave	94,606							
Transformer Purchases	-132,408	510,556	189,241	162,541	167,771	59,828		
Substation No.11 Circuit Breaker Upgrade		1,644,010						
Secondary Underground Network Upgrade - Alfred Street		645,370						
Substation No.8 Transformer Upgrade	26,597	256,684						
Transformer Vault TV41 Upgrades		96,116	105,630					
Substation No.3 Circuit Breaker Upgrade		1,064,406						
Transformer Vault TV7 Upgrades		16,199	157,761	68,602				
Substation No.1 Rebuild			162,336	50,214	3,666	147	400,000	166,793
Substation No.11 44kV Riser Upgrade		53,083	80,249					
44kV Cable Replacement - Concession St at Princess				48,552	170,054	159,627		
Pole Replacement - Kingscourt Ave				101,798				
Pole Replacement - Portsmouth-Miles to Johnson				110,272				
Pole Replacement - Willingdon-Johnson to Hill				93,953				
Princess St Reconstruction - Phase 2				2,014,223				

Projects	2010	2011	2012	2013	2014	2014 Actual By June 30, 2014	2015 Bridge	2015 Actual By June 30, 2015
Reporting Basis	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	CGAAP	MIFRS	MIFRS
Pole Replacement - Portsmouth-Phillips to Fairvw					129,405	92,290		
Pole Replacement - Bagot-Catarqui					105,434	92,437		
Pole Replacement - Union St Rebuild					293,265	102,495		
Pole Replacement - Rideau St Rebuild					117,620	32,124		
Substation No.10 Riser Poles					68,690	0		
Reconstruction of 5kV Cables- Princess, King to Bagot					77,895	42,809		
5kV Faulted Cable Replacement - King St-Clarence to Johnson					129,163	114,313		
5kV Faulted Cable Replacement -TV15 to TV16 on Johnson St					158,709	0		
Princess St Condition Assessment					74,207	0		
Transformer Vault TV#8 Upgrade							385,000	24,420
Transformer Vault TV#9 Upgrade							470,000	26,039
Substation No. 10 44kV Riser PILC Cable Replacement							135,000	75,956
Deteriorated Overhead Infrastructure Replacement Program							847,000	342,108
Reactive 5kV Cable Replacement							70,000	34,077
5kV Cable Replacement on Seaforth							165,000	274
5kV 306 Circuit Fault PILC Cable Replacement							70,000	0
Princess St Reconstruction-Phase 3							330,000	68,869
Miscellaneous	89,697	139,542	56,258	0	102,679	8,787	100,000	62,819
Sub-Total	2,019,598	5,454,169	1,593,770	3,621,695	2,406,160	987,894	2,972,000	801,355
System Service								
Hydro One Incremental Cost for Gardiner TS Expansion	-121,000							
Distribution System Modeling	82,100							
SCADA	82,328		249,578					
Substation No.12 Relay Upgrade		157,974						
Substation No.2 Relay Upgrade			126,218	13,420		0		
44kV Motor Operated Switch			72,712	2,822	10,050	0		
Substation No.6 Relay Upgrade					104,131	99,291		
Substation No.8 Relay Upgrade					115,988	51,379		
Miscellaneous	249	89,511	48,331	54,403	17,993	8,823	50,000	33,624
Sub-Total	43,677	247,485	496,839	70,645	248,162	159,493	50,000	33,624
General Plant								
Tools & Equipment	214,381				206,133	13,901		
Vehicle Modifications/Upgrades	177,652	168,314	906,159	89,265	157,007	0	69,000	18,479
Substation No.11 and No.3 - Close-out Documentation		18,949	71,192	26,539				
Substation No.11 and No.3 - Critical Spare Breakers			66,298					
Computer Hardware & Software								
Miscellaneous	126,497	107,753	85,867	92,075	21,422		104,000	72,108
Sub-Total	518,530	295,016	1,129,516	207,879	384,562	13,901	173,000	90,587
Total	**518,530**	**6,169,853**	**3,964,048**	**4,643,775**	**3,612,844**	**1,445,993**	**3,600,000**	**1,027,762**
Less Renewable Generation Facility Assets and Other Non Rate-Regulated Utility Assets *(input as negative)*								
Total	**3,853,132**	**6,169,853**	**3,964,048**	**4,643,775**	**3,612,844**	**1,445,993**	**3,600,000**	**1,027,762**

Notes:

1 Please provide a breakdown of the major components of each capital project undertaken in each year. Please ensure that all projects below the materiality threshold are included in the miscellaneous line. Add more projects as required.

2 The applicant should group projects appropriately and avoid presentations that result in classification of significant components of the capital budget in the miscellaneous category.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-21

Ref: Exhibit 2, Tab 2, Schedule 1–DSP 5.4.4 p. 172-3, Tables 1a and 1b

Interrogatory:

In tables 1(a) and (b), Kingston Hydro provided the following capital expenditures.

Year	$	VarianceY/Y
2011BA	$ 5,433,500	
2011A	$ 6,169,853	13.55%
2012A	$ 3,964,048	-35.75%
2013A	$ 4,643,775	17.15%
2014A	$ 3,612,844	-22.20%
2015A	$ 3,600,000	-0.36%
2016E	$ 5,650,000	56.94%
2017E	$ 3,049,000	-46.04%
2018E	$ 4,269,000	40.01%
2019E	$ 4,200,000	-1.62%
2020E	$ 4,200,000	0.00%

a) Please explain the underspending of capital expenditures during the IRM period.

b) Please explain how Kingston Hydro is expecting to complete the proposed capital projects during the custom IR term with in its proposed OM&A budget.

Response:

a) The percentage variance between Year 2011A and 2012A is due to several factors. First, the 2011 budget was increased due to a refunded capital contribution that Kingston Hydro received from Hydro One for the Gardiner TS expansion project. Second, capital expenditures in 2011 were higher than average due to circuit breaker upgrades at Substation No. 3 and Substation No.11. and much of this work was contracted. Third, the capital budget for 2012 was reduced due to the approved IRM amount of $3,500,000. The 2012 budget had to be reduced to maintain acceptable Debt-to-Equity ratios. Further details regarding Kingston Hydro's IRM application (EB2011-0178) can be found in Exhibit 2, Tab 2, Schedule 8 of Kingston Hydro's 2016 Cost of Service Application (EB-2015-0083). Generally speaking, the historic annual average spending for 2010-2014 was approximately $4.6 million and the forecast annual average spending for 2015-2020 is approximately $4.2 million.

b) Kingston Hydro developed the 2016-2020 capital budgets with knowledge and consideration of its proposed OM&A budgets. Given the fact that the historical average of the capital expenditures noted in section 5.4.5 (page 175 of 184) of the DSP is $4.4 million and the annual average for the 2016-2020 test years is $4.3 million, Kingston Hydro believes that sufficient resources exist to complete the proposed capital projects.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-22

Ref: Exhibit 2, Tab 2, Schedule 1 – Distribution System Plan (DSP), p. 17 and 134
Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.2 pp. 78, 80, 87-89 Annual Deteriorated Overhead Infrastructure Replacement Program

Interrogatory:

On p. 134 of the DSP, Kingston Hydro shows an overview of its system renewal plan, which represents 68% of its proposed capital expenditures for 2016-2020. The annual deteriorating overhead infrastructure replacement program constitutes 43.6% of Kingston Hydro's system renewal budget for a total of $7.3M over 5 years and an annual average of $1.3M. Historically, Kingston Hydro spent $880,700 annually on this program.

On pages 87-89 and p. 78 Kingston Hydro shows that 57.5% of Cedar Poles, 75% of Pine Poles and 26% of concrete poles are in very good health. On p.80 Kingston Hydro shows that 70% of pole top transformers are in very good health.

a) Please provide detailed explanation and a breakdown of Kingston Hydro's proposed overhead infrastructure replacement program year-over-year.
b) Please quantify the expected annual savings due to pole life maximization for the 2015-2020 budget period.
c) Is Kingston Hydro maximizing the useful life of poles by running to failure, by active intervention/treatment to extend pole lives, or by a combination of these

approaches?

d) Provide the cost per unit and compare to historical costs.

e) Please describe and quantify where possible the benefits that Kingston Hydro's customers will realize from this investment. Please explain how the increase to this program reflects customer preferences identified through customer engagement.

f) Please describe the alternatives to capital investment that were assessed and rejected in favour of the proposed capital investment.

g) Please explain why a pole replacement program could not be managed under a Price Cap IR approach.

h) How does the Fibre-To-The-Home project impact the planning and pacing of the pole replacement program (DSP p.17)?

i) Does the selected approach represent a departure from past Kingston Hydro practice?

Response:

a) The Annual Deteriorated Overhead Infrastructure Replacement Program (we will reference as the "Overhead Program" in this response) is a mix of small projects (projects below the materiality threshold of $65,000) and large projects (projects above the materiality threshold of $65,000). The small projects typically focus on the most urgent pole replacement work involving the replacement of one or more poles in very poor condition within a city block. The large projects typically focus on multiple pole replacements spanning multiple city blocks involving poles in poor and/or very poor condition. On average the 2015-2020 program involves 7-8 large projects per year. The following table contains a prioritized list of projects that have been tentatively identified for the 2015-2020 planning period.

Condition assessment activity relating to overhead assets is an annual activity that

adds to our Asset Condition data. The table below provides Kingston Hydro's best estimate over the 2015-2020 period for overhead infrastructure replacement program. Kingston Hydro does however reserve the right to adjust this program should asset condition data collected during this 2015-2020 period reveal assets that have significantly deteriorated. In those cases assets after evaluation in accordance with Kingston Hydro's Asset Management Planning Process and in particular DSP Section 5.4.2 – Risk of Deferral and Project Value may be prioritized ahead of those listed.

Year	Project	Notes
2015	Bagot - Barrack, Ordinance	
2015	Connaught St - Third to Concession	
2015	MacDonnell- Third to Concession	
2015	First Ave - MacDonnell to Neilson	
2015	MacDonnell - Concession to Princess St.	
2015	Hickson - Montreal - harvey	
2015	St Remy PL	
2016	Francis St at Churchill	
2016	King St W - West of Pembroke to Sir John A Macdonald	
2016	Cataraqui St	
2016	Division - Colborne to Hamilton	
2016	Portsmouth South of Princess to Miles Ave	
2016	MacDonnell -Johnson to Princess	
2016	Westdale St - Park and Bath	
2016	Drayton St	
2017	Barriefield Village - Regent St.	Heritage site issues
2017	Barriefield Village - Drummond St.	Heritage site issues
2017	Johnson St- South side - Richfield to Portsmouth	Backyard reconstruction
2017	Russell St -Patrick and Montreal	Poles in gutter
2017	Patrick St- Russell to Railway	
2017	McMichael - McMahon to Stormont Ave.	Backyard reconstruction
2017	McMahon - Indian Rd to Sir JAM	Backyard reconstruction
2017	Durham St	
2018	Johnson St - North Side - Roden to Portsmouth	Backyard reconstruction
2018	124-209 Hawthorne	9 front yard poles + 12 backyard poles
2018	Gilmour - Bath Road to Phillips St.	
2018	Conacher at Sutherland	Backyard from 12 Conacher to 2 Conacher Dr
2018	Queen's - Lower University Ave	
2018	Queen's Stuart St	
2018	Alamein	Backyard reconstruction
2018	Victoria - Princess to Mack	
2018	Victoria - Johnson to Union	
2019	Dalton Ave MS#16-MS#17	
2019	Lundy's Lane 27-55	Backyard reconstruction
2019	Bath Rd - Grenville to Armstrong	
2019	HWY #2 - Niagara Park to Princess Mary	Merge lines on South Side
2019	Assoro Cres	Replace existing "dog houses". Convert UG to OH
2019	Johnson St - North side - Richfield to Portsmouth	Backyard reconstruction
2019	Portsmouth John Counter to Princess	
2019	Old Quarry-Champlain	Backyard reconstruction
2020	155 - 301 Phillips	
2020	Queenston Heights	Relocate Back Yard to Front Yard
2020	Railway St	
2020	Duff St	
2020	Sir John A MacDonald - Avenue Rd	Accessible backyard rebuild
2020	Regent St-Park to Princess	
2020	Albert- King St and Union St	
2020	King St E - Barrie to Earl	

b) The concept of maximizing the life of an asset (or end of life) ensures that you obtain the most value for the investment(s) made in the past. Conversely the early replacement of an asset would not adhere to accepted principles of asset management and at worst could be assumed to be a wasteful use of valuable resources. Maximizing the life of an asset also ensures that you have depreciated the asset fully and are therefore avoiding a financial loss. It is unclear as to what "savings due to pole life maximization" is achieved as the concept simply ensures that the investment being made is occurring at the appropriate time.

In order to quantify annual savings due to pole life maximization, Kingston Hydro would have to compare its "maximized life" program to a non-maximized life program. Kingston Hydro does not have a plan or budget for a non-maximized life program for the reasons set out in the preceding paragraph. If Board Staff could propose a methodology to respond to this interrogatory, Kingston Hydro would appreciate it.

c) Kingston Hydro would refer to the evidence filed in its DSP and in particular Section 5.3 – Asset Management Process that describes how Kingston Hydro's assets are analyzed (asset understanding) and the decision-making process undertaken. Kingston Hydro does not currently use active intervention/treatment to extend pole lives. However, Kingston Hydro continues its efforts to improve its condition assessment data such as using Polux pole tester in an effort to quantify the remaining strength of existing poles. Quantifying the remaining strength of a pole assists in prioritizing pole replacement

d) It is difficult to estimate the cost per pole unit since installation cost varies depending upon factors that include pole height, pole location (front vs. back yard), soil conditions, number of phases/circuits, equipment, cable risers, etc.

With that caveat, Kingston Hydro undertook a simple review of historic costs for 2011-2014 which involved summing all annual costs recorded in the OEB USofA accounts for overhead capital programs and dividing by the total number of poles installed. The average installation cost was $14,500 per pole. In Kingston Hydro's experience, this cost will fluctuate annually, depending upon the type of pole work undertaken due to the wide range of installation scenarios and small sample base.

Kingston Hydro expects to replace less than 100 poles per year over the 2015-2020 period which makes it difficult to establish meaningful unit costs due to the small sample base and potential year-to-year variations in the type of pole work undertaken.

e) Kingston Hydro customers identified via the Customer Engagement Process (5.4.1(f)) support for the following:

1. Capital improvements that improve reliability
2. Pacing the investment for rate stability
3. Having rates set for a five year period
4. The commitment to keep operating costs below the actual inflation rate
5. Maintain levels of customer service, including the one bill for all utilities
6. Enhanced in-person support and assistance with conservation initiatives
7. Annual meeting to discuss utility issues

Kingston Hydro has identified in the DSP that its focus is on system renewal activities. Overhead infrastructure renewal activities are one of the most visible asset renewal activities that our customers see. Although underground assets renewal is important, the overhead work is often the area where rate payers can

see their dollars at work in renewing the infrastructure. As a result this work provides a credible demonstration of the value of their rates in renewing and improving the assets that deliver electric power to their residence or business.

The effect of the investment in overhead assets can be dramatic to a neighbourhood – visually and aesthetically. The following photos show before and after pictures of the changes in streetscapes. The effort Kingston Hydro undertakes to address customer's issues such as pole placement, mitigation of impact on street trees etc is appreciated by our customers in specific projects.

In addition the removal of deteriorated poles from sidewalk panels and gutter locations along streets improves safety conditions for vehicles and pedestrians a further benefit to customers.

Pine Street Pole Line

Pole line in the gutter

Pole in sidewalk

Existing OH Wiring

Pine Street post construction

Customers are aware of the safety concerns that rotted poles present as demonstrated by the following communication received by Kingston Hydro.

The fact that Kingston Hydro's proposed investment in overhead infrastructure involves the replacement of poles such as the one noted above provides assurances to our customers that there is a benefit realized from the investment made to replace old rotted poles with new, safe and reliable ones.

In recognition of an increasing amount of severe weather conditions impacting Eastern Ontario there is increased awareness around the vulnerability of infrastructure and in particular Kingston Hydro's overhead assets. Capital improvements that improve reliability are one customer theme being addressed in Kingston Hydro's application and in the investments proposed for overhead assets. Building resiliency in our infrastructure by replacing poles that are degraded and past their useful life is one way to reduce vulnerability to severe weather. Kingston Hydro has also acknowledged operational considerations in addressing this resiliency through its active tree trimming programs, recognizing the need for coordinated approaches to asset management. It is expected that over time reliability indices associated with these assets and the activity undertaken to improve them will trend in a positive manner.

In recognition of the customer preference for pacing the investment for rate stability a consistent level of spending is being proposed through the 2016-2020 period. Table 2-AA of Section 5.4.4 of the DSP illustrates historical spending. This (Table 2-AA) reporting allocates the total Annual Deteriorated Overhead Infrastructure Replacement actual spends into two categories - Pole Replacement (line rebuilds) and Annual Deteriorated Pole Replacement – Spot Replacement. As a result in combining both categories to identify historical spending the average over five years (2010-2014 is $1,218,456; not the $880,700 identified. It is Kingston Hydro submission that a historical spend of $1.2 million annually on average over the last 5 years compares favorably with Kingston Hydro proposed spend of $1.3 million annually on average over the next 5 years and appropriately mitigates the impact on our customers.

f) One alternative evaluated as part of the proposed investment is the “do nothing approach”. Kingston Hydro acknowledges that given the inventory of overhead assets and their condition, there are in fact decisions made that adopt a deferral of work on those assets or a “do nothing” until post 2020 when those assets will be reviewed again. The proposed investments in overhead assets that form part of this application represent our best understanding of the priority of assets in need of replacement. Kingston Hydro notes however that those assets in need of replacement were rejected for the do nothing alternative as they represent unacceptable risk to the delivery of safe and reliable electrical service to our customers.

g) The deteriorated pole replacement program represents a replacement of assets that have exceeded their estimated useful lives. A significant amount of work is needed to be done over the next 5 years and these capital additions are recorded in accounts 1830 and 1835. Total additions for the

period in these accounts amount to approximately $6.1 million. Over the same period of time, depreciation expense is expected to be approximately $2.0 million. Given the fact that annual spending will be triple depreciation, rate base will increase by $4.0 million over the IRM period which will make it difficult for Kingston Hydro to earn a fair Return on Equity under the Price Cap IR approach.

h) Kingston Hydro in its planning for the 2015-2020 period recognized the impact that the Bell Fibre-to-the-Home program would have on its resources and our ability to perform “normal” capital activity. As such a deliberate reduction in 2015 to the Annual Deteriorated Overhead Pole Replacement Program ($847,000) was adopted. This recognized that staff typically involved in Overhead planning, design and construction would not have the capacity to undertake historical levels of activity ($1,200,000). Kingston Hydro continues to monitor the effects of the fibre to the home project on the allocation of resources. Kingston Hydro will be initiating contingency planning to ensure the proposed capital investments throughout 2016-2020 are undertaken as planned, yet still meet our requirements to address third party service requests.

i) Kingston Hydro’s approach to the management of its overhead assets is similar to our previous approach, yet the current approach that utilizes the DSP approach and more robust asset management practices represent an improvement in the validity and credibility of the investment program to our customers, shareholder and the OEB. Kingston Hydro believes the current submission represents an improvement to the process that will continue to evolve and improve.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Interrogatory 2-Staff-23

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.1. p. 134, Table 4
Exhibit 2, Tab 2, Schedule 1 5.4.4., p. 174 Table 2, Appendix 2-AA, p. 179
Exhibit 3, Tab 1, Schedule 1 – Appendix 2-IA Meter

Interrogatory:

On p. 133 of the DSP, Kingston Hydro is showing capital expenditures for meters, which represents 57.2% of Kingston Hydro's system access budget over the next 5 years:

Meters

2016	2017	2018	2019	2020	Total
$300,000	$376,000	440,000	$340,000	$332,000	$2,088,000

Kingston Hydro has historically spent an average of $176,160 on its meter assets over the 2010-2015 years. Over that period Kingston Hydro experienced a load growth of 1%. For the 2016-2020 period Kingston Hydro is forecasting a load decrease for the residential, GS>50 kW and Large Use rate classes.

a) Please explain the increases in meter expenditures given Kingston Hydro's load forecast.
b) Please detail the impact of converting multi-unit buildings from bulk meters to unit meters.

Response:

a) During the 2010-2015 years, Kingston Hydro finished the smart meter deployment. During this time period, there were meter expenditures that were allocated to the smart meter capital project, and subsequently recovered in a smart meter rate rider. Consequently, the budget for metering during these years was reduced from what should be considered a typical budget as there weren't the "normal" metering activities occurring. The proposed budgets are increased over the 2010-2015 period as meter seal sample testing is scheduled to begin, meters required for the DSC MIST change are budgeted, and continued conversion of bulk metered multi-unit residential buildings to unit metering is expected.

b) Converting multi-unit residential buildings from bulk meters to unit meters results in no net increase to the utility load. There is an increase in the number of meters required as each unit is provisioned with a residential meter.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Interrogatory 2-Staff-24

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.1 p. 133, Table 3
Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.5 p. 179

Interrogatory:

Road Reconstruction Projects

Please explain Kingston Hydro's process for prioritizing projects for road reconstruction requested by the City of Kingston within the framework of its multi- service model.

Response:

Kingston Hydro has within the DSP provided information on how it manages its assets (Section 5.3 and in particular the Capital Expenditure Decision Making Process) and how decision are made, and identified the proposed capital infrastructure program for 2016-2020. Within that framework, decisions on asset replacement are undertaken based on the need and priority of the asset in question. This process is applied to all assets in question regardless of whether they involve a road reconstruction process. Kingston Hydro does however acknowledge that we do at times receive customer requests (City of Kingston) to relocate our electrical assets within the road right of way. Those types of requests are managed like any other third party/customer request.

With respect to the process for prioritizing projects for road reconstruction requested by the City of Kingston within the framework of the Utilities Kingston multi-utility service model, the process does not change from that described in the DSP. Any decision

made by Kingston Hydro to invest in its assets is based on the criteria noted (condition of the asset, risk of failure, safety, etc.) in the DSP. While the opportunities for synergies and cost reductions in undertaking electrical asset replacement work (sometimes in conjunction with City work) is advantageous and is considered, fundamentally there must be a valid need to undertake the work. The capital projects identified in the DSP such as for Princess Street have electrical assets that in their own right have reached the end of their useful life and have been prioritized for replacement in conjunction with City of Kingston road reconstruction.

Kingston Hydro notes however that in the 2011-2013 periods, the City of Kingston identified road work on Earl St. from Division St. to Collingwood St., and Division Street from Quebec St. to Colborne St. Kingston Hydro reviewed its underground assets in the proposed construction zones and determined that the assets were in fair to good condition based on the asset age, condition and inspection records. Kingston Hydro also determined that there were no System Access or System Service issues driving any investments in this case. Therefore Kingston Hydro declined to make any capital investment in those assets on those streets as it was premature to do so.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-25

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.1 p. 134, Table 4
Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.5 p. 180

Interrogatory:

Substation No. 1 Rebuild

On p. 180 Kingston Hydro notes that capital expenditures on the Substation No.1 Rebuild will be paced over the first 5 years (2015-2019) and will focus on design and remediation work. In 2020 the east bus will be decommissioned and removed and the purchase of new transformers will occur in anticipation of installation in 2021.

a) Please describe the design and remediation work in more detail to justify average annual spending of $265,920.

b) Please explain why the OEB should approve a capital addition of $1,223,200 to rate base for the 2020 rate year for an asset that won't come into service until 2021 and therefore not be used or useful during the Custom IR plan term.

c) Please state if any of the cost for the remediation and design work will be allocated to the city of Kingston? If none of the cost have been allocated to the city, please explain why not.

d) Please explain if Kingston Hydro has considered green field investment to replace this substation and why this option was not chosen.

Response:

a) The average annual spending figure of $265,920 quoted in this IR question is based on total expenditures of $1,329,600 over the 2015-2019 period for Substation No. 1 as filed in Section 5.4.1 Table 4 of the DSP. Kingston Hydro wishes to clarify that this response is based on the revised Section 5.4.1 Table 4 submitted in response to IR 2-Staff-19 resulting in an average annual spending figure of $332,400 based on total expenditures of $1,662,000 over the 2015-2019 period for Substation No. 1. Please refer to the response to IR 2-Staff-19 for further details.

The design and construction upgrade work planned for 2015-2019 includes:

- Protection and SCADA upgrades
- Electrical preparatory work
- Architectural, structural and mechanical preparatory work
- Engineering studies and design work

The protection and SCADA upgrades represent approximately $440,000 of the costs for 2015-2019. These upgrades will enhance the protection and monitoring of the existing distribution equipment in the short term and future distribution equipment in the long term. The 44kV protection upgrades are a priority as they will help to mitigate potential risks and hazards during construction.

Electrical preparatory work represents approximately $490,000 of the total expenditures for 2015-2019 and includes upgrades to the station service, DC control wiring and 5kV cable racking. The station service and DC control wiring upgrades are a priority as they will eliminate identified hazards inside Substation

No. 1, namely the oil-filled transformers in the basement that have live 5kV terminations as well as old instrumentation and control wiring that is brittle and susceptible to failure.

Architectural, mechanical and structural preparatory work represents approximately $375,000 of the total expenditures for 2015-2019. This work includes repointing of the North and East exterior brick walls which is required to maintain the structural integrity of Substation No. 1.

Finally, the engineering studies and design work represent approximately $350,000 of the total expenditures for 2015-2019. This work will be paced and relates to electrical protection, high voltage layout, mechanical ventilation and structural designs.

b) The capital addition figure of $1,223,200 quoted in this IR question is based on 2020 expenditures for Substation No. 1 as filed in Section 5.4.1 Table 4 of the DSP. Kingston Hydro wishes to clarify that this response is based on the revised Section 5.4.1 Table 4 submitted in response to IR 2-Staff-19 which now indicates a capital addition of $1,529,000 in 2020 for Substation No. 1. Please refer to the response to IR 2-Staff-19 for further details.

Approximately $500,000 of the total expenditure of $1,529,000 proposed in 2020 is related to the purchase of two new power transformers. As per OEB accounting practices, power transformers are capitalized as soon as they are purchased. The budget for Substation No. 1 was prepared with consideration of this OEB accounting practice and recognition that this large capital expenditure needed to be coordinated with the annual expenditures over the 2015-2020 planning period.

The remainder of the expenditures proposed in 2020 for Substation No.1 are related to Structural, Architectural, and Mechanical upgrades. The benefits of these upgrades will be realized as soon as this work is completed and will therefore be capitalized in the 2020 budget period.

c) None of the design and construction work for Substation No. 1 will be allocated to the City of Kingston because this work represents upgrades to Kingston Hydro assets and the work has been initiated by Kingston Hydro.

d) There are several reasons why green field investment was not chosen. First, the magnitude of the investment to rebuild Substation No. 1 relative to the total annual capital budget is significant and rebuilding on the existing site is clearly the best way to pace investments. Second, the purchase of land for a new substation would have escalated the cost of the substation upgrade further. Third, the lands surrounding Substation No. 1 are considered to be brown fields therefore, constructing a new structure on adjacent lands would have increased environmental costs and risks associated with excavations for footings and duct structures. Finally, the added upfront cost to extend/replace the existing 44kV and 5kV underground cables would have further escalated the cost of the substation upgrade.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-26

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.1 p. 133-134, Table 3&4
Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.5 p. 182

Interrogatory:

Princess St. Reconstruction

a) Please confirm that the total cost for the Princess St. Reconstruction is $2,820,000 in the 2016 year.

b) What costs will be borne by the City of Kingston as part of their infrastructure renewal plans?

Response:

a) Yes

b) The $2,820,000 represents Kingston Hydro's budget to undertake the work and does not include the costs associated with customer requests to move plant. The City of Kingston has requested Kingston Hydro to lower specified ducts and to bury overhead secondary services within the project area at a total financial contribution by the City of Kingston of $170,000. Kingston Hydro does not have access to the City's costs, budget or expenditures associated with this project.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-27

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.5 p. 182

Interrogatory:

5kV Oil Switch Replacement

On p. 182, Kingston Hydro states that replacing oil switches with new gas switches will greatly improve system reliability, efficient operations and worker safety, and reduce O&M cost.

a) Please quantify the OM&A savings.

b) Please state if and how these OM&A savings have been reflected in Kingston Hydro's OM&A budget for the 2016 rate year.

c) If no, please explain why not.

Response:

a) Deteriorated mechanical contacts in this type of oil switch move slowly and are prone to arcing when operated under load. Current safe work practice requires Kingston Hydro staff to de-energize and ground this type of switch by opening feeder breakers at substations before operating the switch, resulting in complicated switching operation procedures and an extra O&M cost of $1,240 per event to perform these additional switching operations.

The additional work includes:

- Preparation of "order to operate". An operator prepares the switching order, and another operator reviews it.
- Execution of switching operations to isolate and de-energize the switch involve:
  - Two crews are required to open circuit breakers at substations to de-energize the entire feeder, isolate and ground the oil switch at the first riser poles for each ways of a typical 4 way oil switch.
  - Then crews close the circuit breakers at the substations to restore the feeder.
- Execution of switching operations to re-energize the switch involves:
  - Crews open circuit breakers at substations to de-energize the entire feeder, remove the groundings and close the switch at the first riser poles for each ways of the oil switch, and close circuit breakers at the substations to restore the feeder and the switch.

These operations are typically performed after hours to minimize the outage impacts on customers in downtown Kingston and the Princess Street Corridor as the majority of the oil switches feed these areas.

In the last five historic years (2010 to 2014), an average of seven planned outages per year occurred for operating oil switches. Kingston Hydro expects the frequency will decrease to approximate five events per year in the next five years as more oil switches are being replaced, resulting in an O&M saving of $6,200 per year.

Replacement of the oil switch with the new switchgear will reduce O&M costs, but the most important outcome of the project are to reduce customer interruption occurrences and duration and to meet customers' expectation of continuous

reliable electrical supply.

b) Yes. These O&M savings are taken into consideration in OEB account 5020.

c) N/A

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Interrogatory 2-Staff-28

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP5.4.5 p. 183

Interrogatory:

Customer Information System (CIS)

On p.183 Kingston Hydro states that the capital cost for the new CIS system is spread across all utilities and that it shares the Enterprise Resource Management System and Customer Relationship Management System.

a) Please state what percentage of the total cost has been allocated to Kingston Hydro for each of these systems and describe the allocation methodology used.
b) Please state if any OM&A savings can be achieved through these system upgrades.
c) If so, explain how these savings will impact Kingston Hydro's 2016 OM&A budget over the next 5 years.

Response:

a) The total estimated cost to convert to a new CIS system is $800,000 with an in service date of 2017. The capital cost is spread across all the utilities that are billed by Utilities Kingston. Approximately 40% is allocated to electricity billing based on the significantly more complex requirements of this utility.

The estimated total cost of the CRM system is approximately $1.62 million with an in service date of 2018. The utilities portion is approximately 25% or $406,000. Kingston Hydro's portion of this would be 34% or approximately $138,000. The municipally owned gas, water and sewer utilities would be paying the remaining 66%. Kingston Hydro would be paying more given the number of calls that relate to electric customers and questions related to billing complexities.

The estimated implementation cost of the ERM system is $4 million with an in service date of 2016 and an estimate of 25% of this cost to be funded by the five utilities. The amount required to be funded by Kingston Hydro is 23% based on the five way utility split with the 4 large utilities paying 23% each and the smaller fibre optic utility paying 8%.

b) During the implementation phase of each of the ERM and the CIS projects operating and process efficiencies are expected and will assist Kingston Hydro with meeting its productivity targets. The CRM is being implemented to enhance the customer service experience by allowing the Customer Service Reps to access more information and provide customers with quicker response times.

c) As noted in b) above, it is expected that during the IRM period, efficiencies will be achieved through process improvements.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-29

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.5 p. 184

Interrogatory:

Vehicle Replacement Policy

Please provide Kingston Hydro's vehicle replacement policy, and provide details and further justification for Kingston Hydro's proposed capital expenditures on its fleet over the next 5 years.

Response:

The Kingston Hydro vehicle capital replacement process is triggered using, as a base line, minimums for the vehicle age and vehicle usage (measured in kilometers or hours).

Industry standard guidelines use:

- 7-8 years or 140,000-160,000 kilometers for light-duty vehicles such as cars, minivans and light trucks (pickups)
- 10 years or 6,000 hours for heavy-duty vehicles such as large work vans, dump trucks, bucket trucks and radial boom derrick trucks

Kingston Hydro extends beyond those typical guidelines by using:

- 12 years or 200,000 kilometers for light-duty vehicles such as cars, minivans and light trucks (pickups)
- 15 years or 8,000 hours for heavy-duty vehicles such as large work vans, dump

trucks, bucket trucks and radial boom derrick trucks

This flagging of a vehicle then prompts the operational user groups, fleet mechanical group, and management to further evaluate whether the replacement should proceed or not with due consideration to a number of factors such as:

- mechanical condition
- cost of servicing
- parts availability
- usage
- repurposing
- cost effectiveness of remedial work to extend vehicle life
- safety
- residual (expected sale) value
- capital impact

In addition to the justifications noted in Attachment 2.2.1.1.1 Appendix 9, the Applicant submits the following.

<u>2016 Fleet Replacements and Additions</u>

- $375,000 Replacement of 1998 Double Bucket Line Truck
  This truck will have been extended 3 years beyond its normal planned replacement year, and with an expected 12,800 hours, more than 60% past its baseline trigger of 8,000 hours. Mechanics have indicated that the cost and frequency of servicing this vehicle necessitates it replacement.
- $14,000 Addition of Van for SCADA
  Required, as noted in submission, for a new SCADA technician being added. $14,000 is the portion attributed to electric.

2017 Fleet Replacements and Additions

- $44,000 Replacement of 2001 Ford Van
  This van will already have been extended 4 years beyond its normal planned replacement year. The planned replacement for this van will be a 4-wheel drive truck that would provide greater usage and versatility in inclement winter conditions.
- $14,000 Addition of Van for Metershop
  Required, as noted in submission, for new metering staff being added. $14,000 is the portion attributed to electric.

2018 Fleet Replacements and Additions

- $280,000 Replacement of 1997 Radial Boom Derrick Truck
  This truck will be 21 years old and will have been extended 6 years beyond its normal planned replacement year. It will have an expected 11,800 hours on it, almost 50% past its baseline trigger of 8,000 hours. Mechanics do not consider that it will be suitable for use beyond that year due to its condition (hydraulics, mechanical).
- $20,000 Addition of Van for Locators
  Required, as noted in submission, for a new Locator being added. $20,000 is the portion attributed to electric.

2019 Fleet Replacements and Additions

$390,000 Replacement of 2003 Bucket Line Truck

This truck has been extended beyond its trigger replacement date based on it having 10,800 hours already, however operational and mechanical staff have assessed that replacement can be postponed until 2019 based on its current good condition. At replacement, it is anticipated that it will have been operational 75% beyond its normal planned usage.

2020 Fleet Replacements and Additions

$284,000 Replacement of two 2001 Work Step Vans

These large work vans used for Substation staff will be 19 years old and will have been extended 4 years beyond their normal planned replacement based on age, and 6 years based on usage. They are expected to have 11,900 hours and 13,400 hours on them respectively, well past the baseline trigger of 8,000 hours. At that point, the mechanical condition of the units are not expected to be conducive to further extension.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-30

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (b) p. 15

Interrogatory:

Sources of Cost Savings - Substation Power Transformers

Kingston Hydro is showing $900,000 in cost savings, which are attributed to deferring the replacement of the six 3 MVA transformers at Substation No. 1 and reusing transformer T2 from Substation No. 4 at Substation No. 17 to pace investments.

a) Please show how the $900,000 in savings was calculated.

b) What portion of the $900,000 is related to deferring replacement of the Substation No. 1 transformers?

c) Are these annual savings or are they savings spread over the 5 year forecast period?

Response:

a) The pro-active replacement strategy for substation transformers outlined in the Kinectrics ACA report identified 7 transformers in poor condition (Flagged-For-Action) that should potentially be replaced immediately.

The savings were calculated using an estimated average installed cost of

$300,000 per power transformer times the three units that were deferred for the entire 2015-2020 planning period; one each at Substation MS8, MS5 and MS17. The estimated average installed costs were derived from Kingston Hydro's past experience with similar type work.

b) None.

c) These savings are spread over the 5 year forecast period.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Interrogatory 2-Staff-31

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (b) p. 15
Exhibit 2, Tab 2, Schedule 1, PDF pp. 797 – 799 Appendix 9 - Capital Project Write-ups

Interrogatory:

Sources of Cost Savings - Substation #1 Comparison of Upgrade Options

Kingston Hydro states that the J.L. Richards & Associates report identified cost savings of $1.65M for upgrade Option A2 relative to Option A due to reduced costs related to "constructability, scheduling, reliability, phasing, health and safety".

a) Please provide details of the specific cost savings attributable to each of these categories, and how the attribution was calculated.
b) Please explain why similar costs savings could not be achieved under development Option A.
c) Will Kingston Hydro engineering or electrical staff be underutilized if Option A2 is not pursued?

Response:

a) J.L. Richards estimated the soft costs as a lump sum in the Options Report and did not provide a breakdown. That information is therefore not available. This Opinion of Probable cost is intended to capture project execution challenges related to constructability, scheduling, reliability, phasing, health

and safety.

The following statements in the Options Report related to Soft Costs provide some insight into what is captured in the estimated soft costs in the J.L. Richards Options Report:

Excerpt from Section 16.11 Capital Costs:

In this section the Options are re-evaluated in the context of Kingston Hydro doing the electrical work, and with the possibility of reducing the station capacity by half for 6 months to 1 year. This has influence in two major areas. First, there will be no contractor mark-up on equipment. Second, the soft costs related to the contractors perceived risks are no longer applicable.

Excerpt from Section 17.0 RECOMMENDATIONS:

We support Kingston Hydro carrying out the electrical work. It greatly reduces soft costs, provides much more flexibility in terms of scheduling and will reduce the pressure on operational staff to take risks because a contractor is pushing a time table. This method of executing the contract will also greatly increase the possibility of phasing the budget within annual budgets by allowing equipment to be purchased in separate fiscal years from the their installation.

b) As stated previously, J.L. Richards did not provide a breakdown for soft costs. However there is mention about material mark-up and flexibility in terms of scheduling. Scheduling is likely a large portion of the soft costs and may be attributed to unplanned Mobilization and Demobilization of High Voltage contractors due to unpredictable project execution challenges. For example, the changing configuration/state of the distribution system, weather conditions and system loading are unpredictable and may trigger the need to reschedule an outage and

associated high voltage work on short notice. Contractors often find it challenging to reschedule work on short notice, especially when it involves mobilization and/or demobilization of out-of-town staff and resources. Conversely this is less of an issue for Kingston Hydro staff.

c) No. Kingston Hydro has reviewed all aspects of its plan to undertake the renewal of Substation 1. Option A2 is the preferred solution for the reasons noted in our DSP. Option A was identified to demonstrate that various alternatives were considered as part of Kingston Hydro's consideration of the best approach to be taken. Kingston Hydro continues to support and recommend Option A2.

In the event that the renewal of Substation 1 could not proceed as planned, Option A is not necessarily the next best option as it has been demonstrated to be a more costly solution and an inefficient solution that would impact our customer's preferences negatively. Kingston Hydro has carefully considered its work program, the priorities and the assignment of resources to undertake the proposed work. Option A would result in a re-evaluation of the program to assess the impact on resources, and priorities. Kingston Hydro would offer the observation that even if Option A was to proceed, Kingston Hydro would still need to allocate engineering and electrical staff to manage, coordinate and inspect construction activities within the substation.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-32

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (b) p. 15
Exhibit 2, Tab 2, Schedule 1, PDF pp. 797 – 799 Appendix 9 - Capital Project Write-ups Substation No. 1 Rebuild

Interrogatory:

Sources of Cost Savings - Substation #1 Comparison of Upgrade Options

With reference to Option A2, Kingston Hydro states that "Paced design creates cost uncertainty since total construction cost cannot be accurately estimated until final design is complete".

a) Please quantify the range of the project cost uncertainty associated with the proposed project implementation approach.

b) Please assess if the cost uncertainty is greater than the projected $1.65M cost savings of Option A2 relative to Option A.

Response:

a) Kingston Hydro continues to advance the necessary studies to upgrade the existing facility and is satisfied with the forecasted expenditures for the Substation No. 1 rebuild project contained within the DSP and this application. With that being said, Kingston Hydro does have concerns about cost uncertainty of structural work related to seismic upgrades. The J.L. Richards Opinion of Probable

Cost (OPC) found in the Substation MS-1 Station Upgrade Options report pegs these structural costs at $1,000,000 and recommends a seismic assessment. That amount is being carried in the overall project budget and may need to be adjusted post 2020 dependent upon final structural engineering assessment reports.

Section 4.1.8 of Part 4 of the Ontario Building Code (OBC) deals with earthquake loads and effects and describes the system requirements associated with post-disaster buildings. The intent of a post-disaster building is that it must remain operational after a disaster event such as an earthquake; in the case of a substation this is interpreted as protecting the internal electrical plant from a seismic event. Based on this information, Kingston Hydro retained the MMM Group in 2015 to perform a Seismic Screening Study. Two structural upgrade options were considered to retrofit the building so that it could be considered to be a “near post-disaster” building. The cost estimate for Option 1 is $1,600,000 and involves upgrades to preserve the existing building as a means to protect the internal electrical plant from a seismic event. The cost estimate for Option 2 is $950,000 and involves upgrades intended to perform in isolation to the building as a means to protect the internal electrical plant from a seismic event. The range of the cost uncertainty for structural work related to seismic upgrades is therefore:

-$50,000 (Option 2 – OPC) to +$600,000 (Option 1 – OPC).
These options remain draft and are not final.

b) Based on the best information available at this time, Kingston Hydro believes the cost uncertainty is less than the projected $1.65M cost savings of Option A2 relative to Option A. It is also noted that an additional cost savings of $50,000 (increase to $1.7 million) could be achieved if structural upgrade Option 2 is selected.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-33

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (e), p. 16

Interrogatory:

Please describe Kingston Hydro's transition from “a 'top down' planning process” to “a more formal asset lifecycle optimization process.” When did the transition begin, and when does Kingston Hydro plan to have fully transitioned?

a) Will the transition to formal asset lifecycle optimization approach impact the capital investment decisions in the 2016-2020 time period?

b) If no, then why not?

c) What is Kingston Hydro’s assessment of the risk of not yet having fully transitioned to a new process? What is the risk that a number of assets fail simultaneously or in quick succession relative to Kingston Hydro’s recent operating history?

Response:

Kingston Hydro’s transition in asset management has its origins in the adoption of Enterprise Geospatial Information Systems (GIS) in 2006-2008. Kingston Hydro’s DSP submission in Section 5.3.1.b) describes the process, the various components and the interrelationships that have been created and evaluated. The evolution of Asset Condition, System Performance and System Planning data have evolved to become

more robust asset information and system knowledge component that influence the bottom up process described in Section 5.3.1.a) Figure 1 of the DSP.

Kingston Hydro notes that there is an implied assumption in the question that Kingston Hydro will transition completely from a top down process. That has not been determined by Kingston Hydro at this time, nor has Kingston Hydro assumed that it is an "either or" scenario. Kingston Hydro sees merit in a planning approach that utilizes both a bottom up and top down approach.

a) The capital investment proposal for the 2016-2020 period reflects the influence of Kingston Hydro's work on asset management. The outcome as presented is therefore a reflection of all of the various inputs and influences as described in our application. Currently, Kingston Hydro does not foresee any impacts during the 2016-2020 period.

b) Kingston Hydro has committed significant resources to the development of the DSP submitted as part of this application. The assets identified for action have been subjected to the various processes and analysis as identified in the DSP and represent an appropriate investment program for Kingston Hydro. Kingston Hydro submits that the proposed capital investment represents those assets in need of action during the 2016-2020 period.

c) Kingston Hydro notes that the Capital and O&M Expenditure Decision Making Process (Section 5.3.1.b - DSP) and the Capital Expenditure Planning Process Overview (Section 5.4.2 –DSP) describe the considerations reviewed regarding risk of asset failure.

Kingston Hydro's historic "top down" approach to Asset Management has been

and continues to be an effective approach to risk assessment and decision making. Two key factors that contribute to the effectiveness of Kingston Hydro's historic top down approach are the size of the team involved with the decision making (typically no more than 9 people) and the cross-functional make-up of the team. This approach is very similar to the "Scrum" and "Agile" management methods, which advocate getting work done faster with great teams that are cross-functional, autonomous and small. The current decision making is further supported by the employment continuity of staff, some of which have more than 35 years of hands-on field knowledge of the distribution assets. Kingston Hydro acknowledges that the current decision making process is evolving through continuous improvement, but that this is an appropriate evolution and it is consistent with the current evolution taking place in the industry.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-34

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (f), p. 16

Interrogatory:

Section 5.2.1 (f) describes the future influences on Kingston Hydro's DSP.

a) What are the anticipated impacts of these influences?
b) What is the risk that the costs associated with the DSP will increase or decrease?
c) Please describe how Kingston Hydro calculates and quantifies the costs provided in response to the previous question.

Response:

a) Kingston Hydro would anticipate impacts of two types, those that might influence the current 2016-2020 program and those that will influence the post 2020 period. For example, Kingston Hydro anticipates that improvements to our asset condition registry (cable condition assessment methodology) will potentially affect the investment decisions and priorities on assets in the post 2020 period. During the 2016-2020 period Kingston Hydro has noted in the discussion regarding Downtown Intensification (DSP -5.2.1.f) that while we do not foresee impacts to System Access, this area is driven by private sector investment decisions that can be unpredictable. The location, size, density and land uses of these intensification

proposals could require infrastructure improvements/investments in order to provide service to a customer.

On a similar note, third party activity, particularly involving third party attachments to Kingston Hydro's overhead assets, continues to present uncertainties with respect to the impact on resources this will have on the 2016-2020 program. For 2015, Kingston Hydro acknowledged the impact the Bell 'fibre to the home' project would have by reducing the amount of work linked to overhead renewal activity. Kingston Hydro is aware of several other "proposed" fibre builds from others, but to date no confirmed applications to attach to our infrastructure have been received. Kingston Hydro has just recently been approached by another telecommunication company regarding a "fibre to the home" plan that "may" involve three years of activity in Kingston Hydro's distribution area. Third party investment decisions and their timing are difficult to predict, however, Kingston Hydro will be undertaking contingency planning to ensure we can meet our regulatory requirements for third parties as well as complete our scheduled capital infrastructure program, particularly in the area of overhead renewal.

With respect to Substation 1, Kingston Hydro has indicated that this rebuild is a long term project that will span 10 years. Kingston Hydro believes the sequencing of work and the pacing to mitigate sharp rate increases is the correct approach. The consequence is some risk associated with total cost estimates as detailed design work has not advanced enough. That aspect might impact the post 2020 period but cannot be quantified at this time. During the 2016-2020 period, Kingston Hydro will be advancing works to ensure the building is ready for major electrical upgrades (i.e., protection and structural). To meet current codes, safety issues and structural loading requirements (i.e., transformers), Kingston Hydro will be assessing the structural requirements. Although this work is not complete,

preliminary results relating to seismic matters indicate potential costs are in line with estimated costs. Structural assessments relating to floor loadings, as an example, have not been undertaken and remain a possible area of impact on the budget. Kingston Hydro is, however confident in the estimates for the 2016-202 period and was aware of these matters in establishing the program for Substation 1.

b) Within our multi-utility model we have had considerable experience with multi-year (3-4 years) approved capital budgets. This requires forecasting capital program work and cost estimates. Our experience suggests that there are risks of costs changing, particularly in the latter years of the program. Notwithstanding our understanding of market conditions that impact the competitive bidding processes (i.e., tendering) bid pricing on construction items can create surprises (both above or below the estimate established), particularly in the later years of a multi-year approved program. Similarly, pricing for equipment supplied by manufactures can be influenced by global economic changes. However, acknowledging these factors, and based on our experience, we believe the risks are manageable, that we intend to work within the proposed budgets established and continue to support the proposed investment program over 2016-2020.

c) As noted in the previous question, the influences on costs cannot be quantified as the variables are based on future events and influences. Kingston Hydro would not presume to have any greater knowledge of future costs than anyone else and therefore is not prepared to attempt to do so.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-35

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (b) p. 15

Interrogatory:

Sources of Cost Savings - Reduced Underground Asset Costs

Kingston Hydro states that costs were reduced through coordinating replacement of underground assets with City of Kingston road upgrades.

a) Please quantify the expected savings for each of the road upgrade projects and describe how the savings were calculated.

b) Does Kingston Hydro have input into the City of Kingston's planning and scheduling of road upgrade projects?

Response:

a) By coordinating the renewal of underground assets with the city road reconstruction works, Kingston Hydro is able to save on road excavation and restoration expenses that are borne by the city in a joint construction project.

Kingston Hydro has estimated the savings utilizing an average of the unit cost pricing received on Kingston Hydro contracts over the last two years.

- The excavation and restoration cost is calculated by multiplying the excavated area and the unit price ($/m^2).

- The quantities of asphalt excavation and restoration are calculated based on the width and the linear length of the road-cut required for installation of concrete encased duct banks or manholes.
- The quantities of concrete sidewalk excavation and restoration are calculated based on the linear length of the trench and width of the sidewalk as the City of Kingston requires a full sidewalk panel replacement for any construction in sidewalk. The width of the sidewalk varies from 2 to 2.5 m.
- For projects located in the downtown area, the unit price will be higher than average because the contractor incurs additional costs associated with customer communication, lane/road closures and traffic control, which are factored into the unit price.

Cost savings for all road reconstruction projects from 2015 to 2020 are summarized in the following table. There is no saving on excavation and restoration in the Russell St. Reconstruction project as Kingston Hydro will only be relocating poles in the gutter/sidewalk to the back of the sidewalk.

Expected Savings in Road Reconstruction Projects

Road Upgrade Project	Total Project Estimate	Total Saving	Saving, %
Princess St. Reconstruction 2016	$2,820,000	$289,000	10.2%
Johnson St. Reconstruction	$100,000	$12,400	12.4%
Russell St. Reconstruction	$80,000	$0	0.0%
Barrie St. Reconstruction	$260,000	$29,500	11.3%
Division St. Reconstruction	$250,000	$25,450	10.2%

b) Kingston Hydro participates (along with other utility providers) in the planning of the “4 Year Capital Budget” undertaken by the City of Kingston as it relates to road infrastructure. Kingston Hydro would also refer to the

response in Interrogatory 2.0-STAFF-24 for additional information on this issue.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-36

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (a) pp. 26 & 27

Interrogatory:

Engineering Costs

Kingston Hydro states that as a percentage of its total project costs, engineering costs amount to approximately 2% for pole replacement projects, and in the range of 5% to 8.5% for other project types. The RSMeans Electrical Cost Data indicates that industry standard engineering and construction management fees for projects up to $1M, range from 8.6% to 17.6% of total project costs.

a) Does Kingston Hydro's low level of engineering expenditure relative to industry standards materially improve average projected costs?

b) Does Kingston Hydro's low level of engineering expenditure relative to industry standards increase the risk of poor project execution or reduced project reliability and quality?

Response:

a) Yes. Any time that Kingston Hydro can gain efficiencies and effectiveness in undertaking capital programs, it will yield positive results in total costs and over time, average costs. Engineering is one component of a project and where Kingston Hydro can develop effective cost controls in engineering, it assists in producing an improved financial result as described in the DSP 5.4.3.a).

b) No. There is no history of that occurring. In fact, there is considerable pride amongst staff in the quality, professional and cost effective manner our projects are undertaken in. To-date our historical capital work continues to perform as designed and expected.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-37

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.1 (f) p. 17
Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.2 p. 19 Table 1

Interrogatory:

Coordination with Third Parties

Kingston Hydro has identified that third party projects, including Bell's Fibre-To-The-Home and Fibre-To-The-Node projects are expected to have an impact on staff resources for most of 2015, and will have an ongoing impact on Capital Expenditures for 2016-2020 related to System Access.

a) How are Kingston Hydro's costs for performing the cited make-ready work allocated to third parties?

b) Does the allocation methodology fully recover Kingston Hydro's incremental costs, including the impacts on staff resources?

Response:

a) In general, when a third party applies to attach to Kingston Hydro poles, the third party pays for all materials and resources required to complete the "Make Ready Work". Make ready work encompasses all necessary work required for the third party to safely attach its assets to Kingston Hydro poles; make ready work does not include bringing existing distribution assets up to current standards as

required by Ontario Regulation 22/04. However, due to the volume of Bell's fibre to the home program, Bell has agreed to pay more of the costs for both "Make Ready Work" and for bringing existing assets up to current standards.

b) Yes.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-38

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 Figure 2 p. 23

Interrogatory:

Annual ESA Audit Findings

Kingston Hydro's ESA audit performance as shown in Figure 2 improved materially over the period from 2006 to 2015.

a) Describe any capital projects or O&M changes Kingston Hydro undertook to deliver the improved performance.

b) Did implementing the required changes impact capital or operating budgets?

Response:

a) Generally speaking, the ESA audit performance improved materially through minor changes to internal processes, policies and procedures.

b) No.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-39

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (a), p. 24, 5.2.3 – Table 1 Kingston Hydro Performance Outcomes

Interrogatory:

In **5.2.3 – Table 1 Kingston Hydro Performance Outcomes**, Kingston Hydro lists "Risk Management" as one of the categories monitored.

a) Please describe how Kingston Hydro identifies, prioritizes, and mitigates risks.

b) Does Kingston Hydro maintain some form of risk registry or a database listing risks being monitored?

c) If yes,
   i) Please provide a recent sample of the document.
   ii) Please list which assets are not covered by the risk registry.

Response:

a) As described in Section 5.2.3 a) of the DSP Kingston Hydro utilizes reliability indices as one method for identifying risk. Kingston Hydro would also refer to Section 5.4.2 (a) of the DSP as further documentation about the factors considered in risk identification, prioritization. Furthermore the Asset Management Process described in Section 5.3.1 of the DSP and in particular the review of

Capital O&M Expenditure Decision Making and Work Execution reviews the notion of mitigation by considering both capital renewal and or operational activities to mitigate risk on assets of high priority.

b) Kingston Hydro has as part of its Strategic Plan, identified a need to undertake formal corporate Risk Management Activities. That process has begun and reference is made to the response provided in IR–1-SEC-10 for further information about that process. However a formal risk registry as it applies to asset management has not been completed. Kingston Hydro notes that the DSP does however identify a number of risk factors that are considered throughout the Asset management Process.

c) Not applicable.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-40

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (a) p. 25

Interrogatory:

Monitoring of Risk Management

Kingston Hydro adjusted its Tree Trimming program to produce a significant reduction in Total Customer Hour Interruptions (TCHI).

a) Quantify the annual changes in tree trimming program costs associated with the referenced TCHI improvements.

b) Will the tree trimming program adjustments be continued going forward into the forecast period to maintain the improved TCHI performance?

c) If yes to b), what are the associated incremental O&M costs during each year of the forecast period?

Response:

a) Since power interruptions from tree contact occur almost exclusively due to unpredictable weather events such as ice storms, high winds, or heavy snowfalls, it is difficult to quantify TCHI improvements associated with incremental changes to tree trimming costs. Upon review of the outage data, staff noticed an increase due to tree contacts in conjunction with less stringent tree trimming activity in 2012.

TCHI for that year was 32,215 and 6,073 the year prior. Changes were made to improve line-clearing, and results were positive with a TCHI of 3,813 for 2013, excluding the major December ice storm. Similarly, 2014 TCHI was 1,274 and 2015 is currently at 2,275. The Applicant is not able to specifically quantify the program costs with the TCHI improvements as year-to-year weather comparables are not tracked, however we do believe that there is strong causality between the level of tree-trimming and the TCHI.

b) The Applicant believes that the proposed budget amounts for tree trimming will provide the right balance to minimize the amount of customer interruptions from tree contacts.

c) N/A

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-41

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (a) p. 29

Interrogatory:

Aging Oil Switches

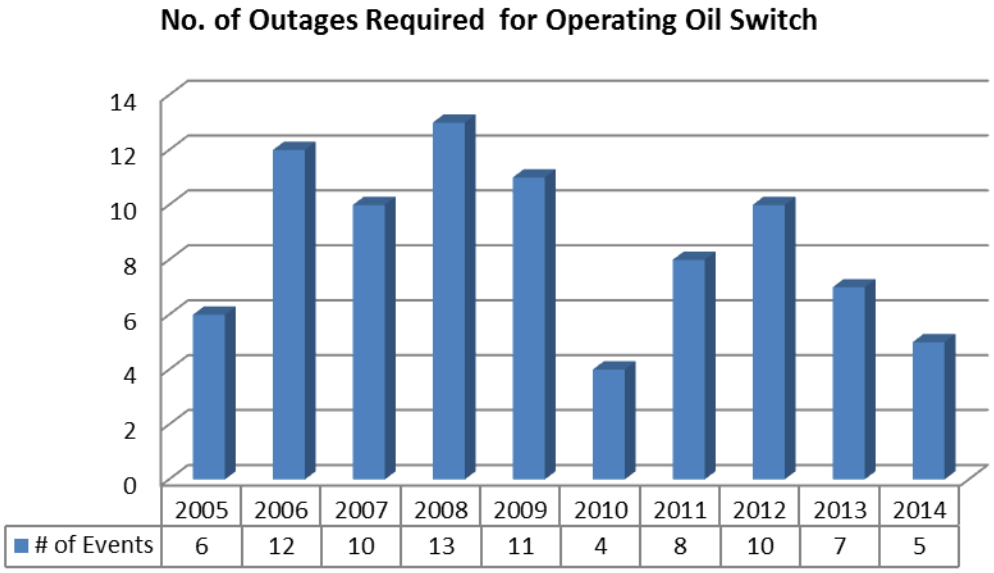
Kingston Hydro notes that Outage Code 1B was created to denote planned outages performed to accommodate work or switching involving aging oil switches which are unsafe to operate while energized due to slow-moving deteriorated mechanical contacts.

a) Is it anticipated that replacement of the aging oil switches will eliminate or significantly reduce Outage Code 1B outages?
b) What is the count of problematic/unsafe oil switches in the Kingston Hydro system at present?
c) How many problematic/unsafe oil switches will remain in the Kingston Hydro system after 2020 following the planned replacements under the DSP?

Response:

a) It is anticipated that the continued replacement of the aging oil switches will reduce Outage Code 1B outages. Kingston Hydro replaced five oil switches (21 switched ways) during the last rate application period (2010-2014) and plans to replace 4 switches (16 switched ways) in the next five years. The table below shows the trend of the planned outages required for operating oil switches

(Outage Code 1B) in the last ten years. There are currently 18 obsolete oil switch assemblies (72 switched ways) still in service in the Kingston Hydro distribution system. If all oil switches were replaced, then Outage Code 1B would be eliminated.



2005-2014 No. of Planned Outages Required for Operating Oil Switch

b) There are currently 18 obsolete oil switch assemblies (72 switched ways) in service in the Kingston Hydro distribution system.

c) Fourteen obsolete oil switch assemblies (56 switched ways) will remain in the Kingston Hydro distribution system after 2020 in accordance with the DSP.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-42

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (b), p. 40, 5.2.3 – Table 4 Top Three Defective Equipment Causes

Interrogatory:

Please explain why Kingston Hydro only listed years 2011 and 2014 **in 5.2.3 – Table 4 Top Three Defective Equipment Causes**.

Response:

In Section 5.2.3. Figure 12 of the DSP, on the same page, indicates *Defective Equipment* was one of the major causes of interruptions in the last five historical years (2010 to 2014) and *Defective Equipment* had a large contribution to SAIDI in 2011 and in 2014. Given the data, the *Defective Equipment* outage code data in 2011 and 2014 were analyzed in more detail given that those years saw significant variances. This was done to determine the causes and to identify which types of equipment caused more forced outages.

If all *Defective Equipment* outage code data from 2010 to 2014 were analyzed, the top defective equipment types in the last five historic years are shown in the table below. Distribution transformer fused switch is the no. 2 cause of interruptions among all defective equipment types. However, the impact of this outage caused by distribution transformer fused switch is minor as typically 10 to 20 customers are affected by the outage and the switch is easily repaired. As a result the investment

priority for this asset is low.

Year	No. of Outages			
	Overhead Conductor (OH wires, transformer lead)	Distribution Tx Fused Switch	Distribution Transformer & Auxiliaries	5kV 500MCM PILC Cable
2010	2	3	2	2
2011	6	3	5	3
2012	3	1	0	2
2013	7	7	0	1
2014	5	1	6	4
Total	23	15	13	12

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-43

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.2.3 (c), p. 43

Interrogatory:

Regarding "Continuous Improvement Using Corporate Strategy":

a) Please explain how Kingston Hydro links information that resides in the asset registry, the Asset Condition Assessment, and the observational database and/or the historical reliability data.

b) Are there instances where there is inconsistency between one set of data and another?

Response:

a) Dependent on the asset in question the process may vary slightly but in general the following process is utilized to link information together to produce information that enables further evaluation later in the Asset Management Process described in Section 5.3.1 of the DSP.

Data collected in Asset Registry is queried in order to extract relevant information and may be shown in tabular form or geospatially. That information might be related to the asset id, location of the assets being examined, the age, relevant condition and inspection data, other related equipment or circuits adjacent or

located on the asset. As with most electronic data, this data can be very discrete i.e. show only assets with "x" condition rating or it can be at a gross level i.e. assets with condition ratings "x, y and z."

The data being refined in this early step is generally of interest because service quality, performance, reliability or outage indices are indicative of an "issue" or "concern" that warrants further investigation and analysis. In addition the observational (priority) data base is also used to identify areas of concern that warrant further investigation and analysis, especially new observational data since the last Health Index analysis. The data collected will assist in the determination of the causal effect creating the issue.

The other component utilized is the asset condition assessment work performed by Kinetrics. Based on the asset in question a review of the Health Index and effective age of the asset (derived from Health Index) is compared with the actual age and typical useful life (TUL) data for the asset with a view to determining whether the asset behaved as expected, whether it is over or under its TUL, and whether that information suggest more analysis is required. Kingston Hydro also considers the suggested "flag for action numbers" for the asset in question against the number of assets being considered in the analysis.

The process employed by Kingston Hydro is iterative depending on what the information and data reveals during the review. It is not unusual to cycle back through the process in order to ensure we completely understand the assets in question and what actions may be required to resolve the matter.

b) In the earlier years (2006-2008) of asset management, there were instances of inconsistency between data sets largely due to multiple data sets being

maintained. Over the years Kingston Hydro has driven one centralized data storage system available to all staff, principally held within the Enterprise Geospatial Information System. Kingston Hydro utilizes several checks and balances to ensure the consistency and accuracy of the data, before being stored in its GIS system. This process has evolved to a point where all staff has a high degree of confidence in the data and relies on it for information. Kingston Hydro has also started to use tablets with a cellular data link for field inspections. Field staff now has real-time access to the asset registry and can flag any inconsistencies found with asset data while they are performing their inspections in the field.

As noted in the Kinectrics Asset Condition Assessment report, some inconsistencies or missing data was encountered while performing the Health Index analysis. A sample or subset of useful asset data was therefore used for Health Index analysis and then extrapolated to the total asset population.

As a result where inconsistency in data is revealed actions are taken to correct the inconsistency.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-44

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.1 (b), p. 55

Interrogatory:

The following are intended to assess Kingston Hydro's intentions regarding the performance of its Asset Condition Assessments in the future:

a) Please provide a list of Kingston Hydro's electric assets for which Kinectrics did not perform a Health Index calculation.
b) How often will the ACA be performed?
c) Will future ACAs be performed by Kingston Hydro personnel or external third parties?
d) Does Kingston Hydro intend that its ACA adhere to international standards or processes?
e) If yes, please provide details and relevant documentation.

Response:

a) The following is a list of Kingston Hydro's electric assets for which Kinectrics did not perform a Health Index calculation:

Asset Class	**Asset Subclass**
Underground Civil Structures	Duct banks
Underground Equipment	Primary Cables
Underground Civil Structures	Maintenance Holes
Underground Civil Structures	Pad Foundations
Underground Civil Structures	Hand Holes
Substation Structures	Station 5kV Building
Substation Equipment	Station Arresters
Underground Civil Structures	U/G Vaults - Main Structure
Substation Equipment	Station Ground Grid
Substation Equipment	Current & Potential Transformers
Substation Equipment	Station Breakers - 44kV Standalone
Substation Structures	Station 44kV Building
Substation Equipment	Primary Cables
Substation Structures	Indoor/Outdoor Steel Structure
Substation Equipment	Station Switch - 44kV ganged 3ph
Substation Equipment	Station Breakers - 5kV Reclosers
Substation Structures	Roof
Underground Civil Structures	U/G Vaults - Removable Components
Substation Structures	Fence
Substation Equipment	Station Switch - 5kV ganged 3ph

b) Kingston Hydro expects to perform the ACA every 4-5 years. Kingston Hydro also recognizes that the ACA is a continuous improvement process and expects to add duct banks, primary cables and maintenance holes (first three items in the list from the response to 2-Staff-44 a) to its next round of Health Index calculations and to add updated information yearly.

c) That has yet to be determined.

d) First and foremost, the ACA will adhere to standards or processes consistent with other Electrical Distributors in Ontario and any regulatory requirements. Adopting standards or processes from other jurisdictions is dependent upon future

resources and a determination if there is value added above and beyond current methodologies.

e) Not Applicable.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-45

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.1(b) pp. 61-64

Interrogatory:

Kingston Hydro describes its asset management process as the collection of informational inputs, including asset age and asset degradation assessments, and Kingston Hydro's proprietary asset registry. The informational inputs are then analyzed, and based upon that analysis; Kingston Hydro compiles a list of potential asset repair or replacement projects. From this list of projects, Kingston Hydro prioritizes the projects, and schedules the work according to perceived available resources.

a) Is the prioritization process described in **5.3.1 (b): Capital Expenditure Decision Making Process** exclusively or primarily a qualitative exercise?
b) Does Kingston Hydro use quantitative cost-benefit analysis in the selection and prioritization of the capital investment projects?
c) **5.3.1 (b): Results Measurement Process** states that Kingston Hydro, as part of the continuous improvement of the asset management cycle, assesses the effectiveness of the capital investment program. How does Kingston Hydro measure the results of the individual capital projects? Please provide examples.

Response:

a) No, the prioritization is not exclusively or primarily a qualitative exercise. For example, risk is evaluated by relative order of magnitude based on voltage class

(e.g. 44kV, 5kV, less than 1000V) and cost estimates are reviewed and discussed but the decision process is not currently documented or measured in a formal manner. Kingston Hydro believes the current prioritization methodology is effective and will evolve through a continuous improvement which is consistent with industry trends.

b) Yes, but the quantitative cost-benefit analysis is often approximated based on expert judgment of competent staff and not formally documented.

c) Whenever possible, Kingston Hydro measures the results of similar previous capital projects. For example, in financial performance, current vault replacement costs are compared with historic costs for similar projects. This has resulted in reduced reconstruction costs for new underground vaults through the use of precast rather than cast-in-place structures as described in Section 5.2.1(b), page 15 of the DSP. It has also caused Kingston Hydro to re-tender civil contracts resulting in reduced reconstruction costs as described in Section 5.2.3(a), page 25 of the DSP.

Kingston Hydro also reviews various performance measures such as reliability indices as a measure of performance. The DSP for example notes changes to the tree trimming activities and although weather conditions are variable we are seeing some positive results in our reliability indices relating to that issue. Kingston Hydro's capital work associated with the replacement of old, obsolete oil switches is and will trend favorably in reducing the number of planned outages caused by this equipment.

EXHIBIT 2 – RATE BASE

Response to Ontario Board Staff Interrogatory 2-Staff-46

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.2 (c) pp. 72 - 90

Interrogatory:

Summary of Asset Age and Condition

DSP section 5.3.2 provides Typical Useful Life (TUL) values for different asset categories and then provides actual asset age distributions and condition assessments for the Kingston Hydro portfolio.

Should the TUL values be adjusted upward for specific asset categories, considering that significant numbers of Kingston Hydro's pole, switch, transformer and underground cable assets have achieved service lives far beyond the expected TUL values?

Response:

No. Kingston Hydro submits that TUL values should not be adjusted at this time. TUL values are consistent with the industry values identified by Kinectrics in the report entitled Asset Depreciation Study for the Ontario Energy Board dated July 2010 and are representative of industry wide experiences. TUL should not in principle be based on one LDC's experience. Kingston Hydro acknowledges that the TUL values may not be representative of industry norms for assets such as Oil Switches, PILC cables and Cedar poles with Creosote impregnated butts. This however has more to do with "legacy" issues than with any activities that prolonged the typical life of the asset.

Kingston Hydro also acknowledges that asset management and cost of service methodologies have evolved considerably over the past decade. The goal of this evolutionary change is to ensure effective and efficient investment decision making that meets customer needs but it has also meant that annual capital spending related to system renewal of these legacy assets will be significantly higher than the depreciation expenses, until these legacy assets are replaced.

Another factor to be considered is that legacy assets with service lives that exceed the expected TUL are not necessarily unsafe but they do affect operational activities and performance. For example, Kingston Hydro has maximized the useful life of legacy oil switches through planned outages to operate switches safely. The deferral of legacy cedar poles with adequate structural strength has occurred but results in framing configurations that are incompatible with current standards.

Kingston Hydro does not support a change to the TUL unless industry wide research and data supports such a change.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-47

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.1 (c), pp. 92-95

Interrogatory:

Kingston Hydro has listed three groups of assets that "Require Detailed Condition Assessment": Maintenance Holes, Primary Cable, and Substation Facilities.

a) For maintenance holes, Kingston Hydro states: "Costs for this inspection would be part of Kingston Hydro's existing operating expenses created through on-going efficiencies."
   i) Please explain the Kingston Hydro ongoing efficiencies that are going to be created.
   ii) Are those efficiencies accounted for in the current spending plans?

b) For primary cable, Kingston Hydro states: "test are required … providing further evidence … obsolete cable to be replaced."
   i) Please explain the purpose of the testing of the cables, since it appears that Kingston Hydro intends to replace the cables regardless of the results of the tests.

Response:

a) Regarding ongoing efficiencies associated with maintenance hole inspections:
   i) Kingston Hydro intends to use a Maintenance Hole Scanner which will eliminate the need for staff to make a confined space entry thus reducing the

field staff time.

ii) Yes.

b) Regarding primary cable testing:

i) Kingston Hydro intends to test cables in an effort to prioritize and pace investments in cable replacement.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-48

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.3.3 p. 113
Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.4 pp. 179 – 183

Interrogatory:

Asset Lifecycle Optimization
Justification and Investment Drivers – Historic Trend and Forecast Evolution

Kingston Hydro's pole, switchgear, transformer and underground cable assets can be generally grouped into two vintage categories: very old assets near, at or beyond planned end of life, and very new assets which have a substantial expected remaining useful life. For example, 41% of the pole assets exceed the typical planned useful life of 45 years and 19% are in Poor or Very Poor condition.

In its discussion of investment drivers, Kingston Hydro states that it has to maintain the same investment level over the forecast period, so that the overhead infrastructure can be sustainable.

a) Considering the "dumbbell shaped" vintage curves for much of Kingston Hydro's fleet of poles, switches, transformers and underground cables, and the fact that a significant proportion of the asset portfolio has already reached, or will reach or exceed planned service life over the next 5 years, is the planned investment level adequate to maintain system performance and customer service?
b) Has Kingston Hydro quantitatively evaluated the system performance and customer service risk that would be associated with accelerating equipment failure

rates due to the asset vintage distribution?

c) Would an increased rate of asset failure over the next 5 years materially impact future operation and/or capital maintenance costs?

Response:

a) For clarification purposes, Kingston Hydro does not currently have vintage curves for underground cables and has established a “reactive cable replacement program” in the absences of cable condition information. Continuous improvements to the asset registry, condition assessment and performance monitoring factors may result in different investment levels in the future. Currently, Kingston Hydro believes the planned investment level is adequate to maintain system performance and customer service based on the available data and condition information, historic reliability performance indicators and the intimate knowledge of field staff as balanced against resources and customer preferences.

b) Kingston Hydro has not formally evaluated system performance and customer service risk associated with accelerating equipment failure rates but staff have considered the relative magnitude of risk associated with different distribution voltages (e.g. 44kV, 5kV, Less Than 1000V) and prioritized work accordingly. Many assets such as poles and switches have surpassed their typical useful life and Kingston Hydro has prioritized work using relative magnitude of risk for quite some time. We believe the current prioritization approach is effective. Kingston Hydro expects that continuous improvements to the investment decision making process will provide additional confirmation that Kingston Hydro’s investment decision making is not only effective but also efficient.

Kingston Hydro would also make the observation that the implications noted in questions a) and b) are not new observations/conditions and in fact are indicative of conditions that have existed for some time. Kingston Hydro through this application is not suggesting that a rapid or significantly different investment strategy is required. Kingston Hydro continues to approach its asset management strategy with a long term perspective that will evolve and improve and with time will sustain our asset base and continue to satisfy customer preferences.

c) This is difficult to answer without considering all investment decision factors. But, Kingston Hydro has in the past adjusted capital programs where the unexpected failure of an asset has resulted in no other alternative but to invest now. Typically that has occurred within the total allocated budget with minimal impacts. Kingston Hydro would only foresee such a situation arising if there was a catastrophic failure of multiple assets; then there would be a materiality impact on operations and/or the capital investment program. At this time, however, there does not appear to be any evidence that such an increase in the rate of asset failure is occurring.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-49

Ref: Exhibit 2, Tab 2, Schedule 1 – DSP 5.4.4 p. 113

Interrogatory:

Capital vs. Operating Costs

This table shows that System O&M costs are projected to increase in each year of the Forecast Period of 2015 to 2020 by an average of over $93,000 (approximately 2.7%) per annum, resulting in a cumulative O&M cost increase of $467,236 annually, or approximately 15% over the forecast period. Historical System O&M costs fell from $3,344,858 in 2010 to $3,051,338 in 2014, representing a reduction of $293,520 or approximately 8.8% over the historical period.

a) Please explain what is causing the historical trend in O&M cost reductions to reverse into significant O&M cost increases.

b) Given the forecast increase in average expenditures for System Renewal and System Service projects, and considering the planned General Plant expenditures on upgraded CIS, GIS and Financial systems, should the expectation not be that O&M costs will decrease over the forecast period?

Response:

a) The amounts provided in the referenced table (5.4.4. Table 1b) for System O&M costs is incorrect. As noted on the page, the data is from Appendix 2-AB, and

that appendix does have the correct amounts. The table below provides the correct information:

	2015	2016	2017	2018	2019	2020
System O&M	$ 3,204,043	$ 3,300,165	$ 3,389,269	$ 3,480,779	$ 3,574,760	$ 3,671,279

This correction yields System O&M costs projecting to increase in each year of the Forecast Period of 2015 to 2020 by an average of $69,493 (2.0%) per annum, resulting in a cumulative O&M cost increase of $347,463 annually, or approximately 10% over the forecast period.

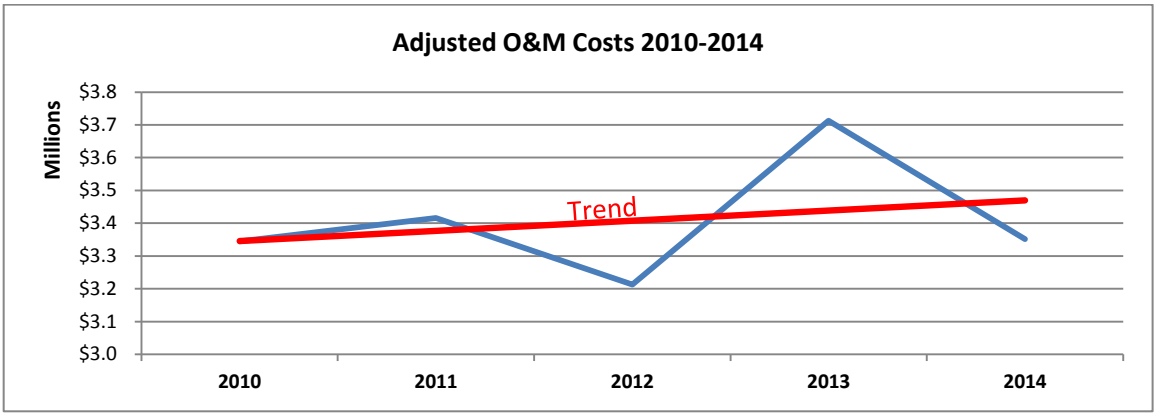
The Applicant would argue that the proposed projected O&M expenses do not reflect a reversal of a historical cost reduction trend that is bringing forth significant O&M cost increases. The table below reports our O&M costs for the historic years.

	2010	2011	2012	2013	2014
System O&M	$ 3,344,856	$ 3,415,756	$ 3,212,599	$ 3,888,080	$ 3,051,338

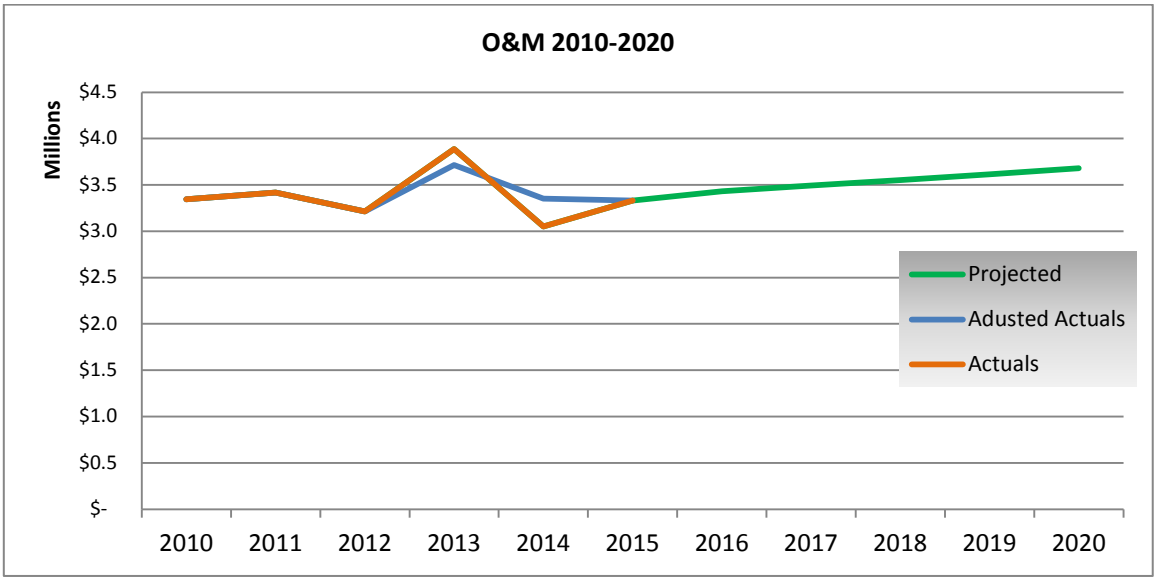
As Exhibit 4 Tab 2 Schedule 1 provides, 2014 O&M costs were unusually low due to the Bell Fibre to the Home project amongst some others as noted in Appendix 2-JB of that Exhibit. Adjusting for that 2014 Bell work as well as the major ice storm in 2013 – events largely beyond the control of the utility – yields the following adjusted O&M costs:

	2010	2011	2012	2013	2014
System O&M	$ 3,344,856	$ 3,415,756	$ 3,212,599	$ 3,713,080	$ 3,351,338

The Applicant would argue that this represents a more fair representation. As the graph below illustrates, the trend actually indicates cost increases, not cost reductions.



The graph below puts all of this in context with the proposed O&M costs.



The average O&M costs for the 2010-2014 period is $3,382,526.

The average O&M costs for the 2010-2014 period as adjusted is $3,407,526.

The projected 2020 O&M expense of $3,679,007 is a $271,481 increase over the 2010-2014 adjusted average O&M costs – a modest 8.0% increase over that 6-year term.

b) The Applicant does not have a 2015-2020 forecast increase in average expenditures above the 2010-2014 historic average for the capital works noted. As evidenced in Attachment 2.2.1.1 Distribution System Plan 5.4.5, p175, the average forecast expenditure for System Renewal, System Service, and for General Plant was decreasing. Revised numbers in response to Board Staff interrogatory 2-Staff-19 yields a reallocation between the categories but does not change the net effect that overall the average capital expenditures are decreasing:

Capital Investment	2010-2014 Average	2015-2020 Average	Variance
System Renewal	$3,019,078	$3,192,167	$173,089
System Service	$221,362	$95,000	($126,362)
General Plant	$507,101	$418,667	($88,434)
Total	$3,747,541	$3,705,834	(41,707)

With a projected 2015-2020 period 8.0% increase over the 2010-2014 adjusted actuals, representing 1.6% per annum, Kingston Hydro would suggests that this does represent a decrease in O&M costs when placed in context with an inflationary rate of 2% per year.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-50

Ref: Exhibit 2, Tab 2, Schedule 1, Appendix 4

Interrogatory:

Utilities Kingston 2012 Asset Condition Assessment

Kinectrics Inc. issued the Utilities Kingston Asset Condition Assessment report in December 2013.

a) Please confirm that the Asset Condition Assessment by Kinectrics was prepared based entirely upon information provided by Utilities Kingston, and did not involve any field evaluation of assets by Kinectrics.

b) Please confirm that the Asset Condition information used in the report was collected up to and including 2012.

c) Did Kinectrics identify any deficiencies in the quality or quantity of the asset condition data or records made available by Utilities Kingston for preparation of the report?

d) If yes to c), please identify any steps Kingston Hydro has taken to improve the asset condition information that will be made available for subsequent Asset Condition Assessments.

Response:

a) Confirmed.

b) Some of the Asset Condition information was collected up to 2011 (e.g. oil analysis) and other Asset Condition information was collected up to 2012 (e.g. transformer loading).

c) No, Kinectrics did not identify any deficiencies in the Asset Condition Assessment (ACA) report relating to the quality of the asset condition data or records for the assets analyzed. Kinetrics did identify differences between the population size and the sample size used to establish the health indices and Flag-For-Action plans for each asset class analyzed.

d) Kingston Hydro recognizes that Asset Management is a continuous improvement process. In 2014, Kingston Hydro staff reviewed, prioritized and recommended a focus on reviewing the asset registry and asset condition data for Wood Poles, Duct Banks, Primary Cables, Maintenance Holes and Substation Transformers. In 2014, GIS staff recommended the adoption of the ArcFM Multispeak Electric Data Model which serves as the asset registry for many of Kingston Hydro's assets such as wood poles, duct banks and primary cables. Currently progress on these items has already occurred, but none are complete.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-51

Ref: Exhibit 2, Tab 2, Schedule 1, PDF p. 797 Appendix 9 - Capital Project Write-ups Substation No. 1 Rebuild

Interrogatory:

Substation #1 Comparison of Upgrade Options

Table 1 on PDF page 797 compares various parameters related to the different development options. This table rates Option A2 as "Difficult to Manageable" for Constructability and Health & Safety, and as "High Risk" for Reliability.

a) Has Kingston Hydro quantified or evaluated the project cost risks attributable to pursuing an upgrade option with such Constructability, Health & Safety and Reliability risks?

b) Has Kingston Hydro created a planning phase risk register for the Substation #1 project?

Response:

a) Yes, staff have considered the project cost risks associated with Constructability, Health & Safety and Reliability and determined that these risks can be mitigated. For example, the greatest risks are associated with performing work in close proximity to energized bus work and equipment. Staff have reviewed feeder loading and developed a plan for offloading Substation No. 1 which will greatly

reduce these risks.

b) No, we have not formally created a planning phase risk register however, by undertaking the design and high voltage construction work in-house our team of competent staff will carefully plan the required work sequences, consider the risks and take measure to mitigate them accordingly through good communications, extensive experience and good work practices.

EXHIBIT 2 – RATE BASE

Response to Ontario Energy Board Staff Interrogatory 2-Staff-52

Ref: Exhibit 2, Tab 2, Schedule 1, PDF pp. 788 & 789 Appendix 9 - Capital Project Write-ups Substation No. 1 Rebuild

Interrogatory:

Overview of the Condition of Major Substation Components

Table 1 on pdf page 788 categorizes the condition of the six power transformers in Substation #1 as "Critical – at end of life". The detailed description table on page 789 states: "…oil analysis suggests these transformers have reached end-of-life".

a) Has Kingston Hydro quantitatively evaluated the probability and cost consequences of one or more of these transformers failing prior to their planned replacement?

b) Would catastrophic failure of any of the 6 power transformers in Substation No. 1 potentially cause an extended loss of service to significant portions of downtown Kingston?

c) How frequently is the transformer oil analyzed?

d) Confirm that none of these transformers has real-time alarms to enable preventive de-energization of an individual transformer in the event of sudden acceleration in the rate of off-gassing.

Response:

a) Yes. Please refer to Table I-15 Prioritized Flag-For-Action List of Substation Transformers on page 59 of the Utilities Kingston 2012 Asset Condition Assessment prepared by Kinectrics and filed as Appendix 4 of the DSP (EX 2 ATT 2 SCH 1 ATT 1). Table I-15 includes references to the 6 transformers in Substation 1. Kinectrics developed a condition-based flag-for-action plan that identifies the action year for proactive replacement when the risk (probability of failure times criticality) is greater than or equal to a pre-set minimum risk value.

b) No, failure of 1 of 6 power transformers would not cause an extended loss of service to significant portions of downtown assuming the remaining 5 of 6 power transformers can be returned to service immediately after the failure of one transformer.

c) The transformer oil is analyzed annually. The transformer oil may be resampled more frequently if the oil analysis identifies changes in the oil condition.

d) All 6 transformers are protected by sudden pressure relays which trip the 44kV breakers at Substation No. 1 and are also remotely monitored by SCADA.

EXHIBIT 2 – RATE BASE

Response to The Consumers Council of Canada Interrogatory 2-CCC-20

(Ex.2/T2/S1/Att. 1)

Interrogatory:

Re: Third party Infrastructure Development Requirements:

Please prepare a Table showing the breakdown of actual costs between Kingston Hydro contributions and total project costs for each third party project from 2010 – 2014 and the forecast breakdown between Kingston Hydro and the third party for each project in the proposed capital expenditures from 2015 - 2020.

Response:

Year	Project	Total Project Cost	Kingston Hydro Cost	Third Party Cost
2010	Princess St. Reconstruction - Phase 1	$1,141,036	$841,036	$300,000
2010	Barrie St. Reconstruction	$169,158	$169,158	$0
2011-2012	Pine St & Division St Pole Replacement	$296,206	$296,206	$0
2012	Johnson- Victoria to Division 44kV Extension	$286,345	$286,345	$0
2012-2013	King-Centre St 44kV Line Extension	$127,195	$117,319	$9,876
2013	Williamsville-Transferring OH Secondary Services to UG	$354,584	$0	$354,584
2013	Princess St Reconstruction - Phase 2	$2,014,223	$1,816,412	$197,811
2013-2014	New Transformer Vault TV82 on Queen st	$321,463	$321,463	$0
2015-2016	Princess St Reconstruction-Phase 3	$3,320,000	$3,150,000	$160,000 to $180,000
2016	44kV Services for 333 University Ave.	$160,000	Below the Materiality Threshold	$100,000 to $125,000

Notes:

1. Barrie St. Reconstruction project and Pine & Division St Pole Replacement project were incorrectly coded to System Access and should have been coded to System Renewal.

2. Johnson – Victoria to Division 44kV Extension project and New Transformer Vault TV82 on Queen St. project were triggered by new customer connection proposals. However, the expansions are also of benefit to other existing customers and new customers. The capital contribution calculation conducted by Kingston Hydro indicated the revenues generated from the new customer will cover the cost of the connections and therefore no required customer capital contributions were imposed.

3. For the 2017-2020 period Kingston Hydro has not identified any customers or development scenarios that would trigger third party contributions.

EXHIBIT 2 – RATE BASE

Response to The Consumers Council of Canada Interrogatory 2-CCC-21

(Ex.2/T2/S1/Att. 1, p. 181)

Interrogatory:

With the large amounts of 44kV and 5kV PILC cables in service, which are known to have high asset failure issues, why has Kingston Hydro not undertaken more of this work to either replace or refurbish the asset to date?

Response:

Kingston Hydro prioritizes and paces investments in asset renewal to achieve the optimum investment level needed to sustain all assets in Kingston Hydro distribution system, reliably delivery electricity to our customers and ensure a predictable and smooth investment. In the past, the investment priorities were mainly given to station breakers, deteriorated poles and transformer vault structures and equipment due to their criticality and required sustainable replacement levels. As a result, available resources and priority setting meant the primary strategy for underground cables was reactive replacement.

However, Kingston Hydro is proposing to increase the investment level in legacy PILC cable replacement during the 2015-2020 forecast period for the following reasons:

- Increasing 44kV PILC cable failure rate
- Increasing replacement backlog of failed 5kV PILC cables

- Need to bring duct structures up to current standards to enable installation of new cross-link cable
- Shifting of investment priorities from station breakers to PILC cable replacement

Kingston Hydro plans to replace 5,700 meters of PILC cables and install additional ducts to facilitate future PILC cable replacement in various projects over this rate application term.

EXHIBIT 2 – RATE BASE

Response to The Consumers Council of Canada Interrogatory 2-CCC-22

(Ex.2/T2/S3)

Interrogatory:

Please list the proposed individual projects and the associated costs within each of the four capital expenditure categories that are greater in cost than the materiality threshold, as shown on Appendix 2#AB for 2015 – 2020.

Response:

Appendix 2-AB is the actual and forecast capital expenditure summary by four investment categories over the historical and forecast periods. Appendix 2-AA is the proper table to list the individual projects and associated costs. Therefore, the proposed individual projects and the associated costs within each of the four capital expenditure categories that are greater in cost than the materiality threshold were provided on Appendix 2-AA.

Appendix 2-AA
Capital Projects Table

Projects	2015 Bridge	2016	2017	2018	2019	2020
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
System Access						
Meters	300,000	300,000	376,000	440,000	340,000	332,000
44kV Services for 333 University Ave.		160,000				
Russell St. Reconstruction - Division to Montreal				80,000		
Miscellaneous	105,000	60,000	60,000	60,000	60,000	60,000
Sub-Total	405,000	520,000	436,000	580,000	400,000	392,000
System Renewal						
Substation No.1 Rebuild	400,000	150,000	300,000	374,000	438,000	1,529,000
Transformer Vault TV#8 Upgrade	385,000					
Transformer Vault TV#9 Upgrade	470,000					
Substation No. 10 44kV Riser PILC Cable Replacement	135,000					
Deteriorated Overhead Infrastructure Replacement Program	847,000	1,177,000	1,211,000	1,379,000	1,355,000	1,378,000
Reactive 5kV Cable Replacement	70,000					
5kV Cable Replacement on Seaforth	165,000					
5kV 306 Circuit Fault PILC Cable Replacement	70,000					
Princess St Reconstruction-Phase 3	330,000	2,820,000				
Transformer Vault TV#29 Upgrade			210,000			
5kV 108 Circuit Fault PILC Cable Replacement			90,000			
Division St Reconstruction - Union to Princess			250,000			
Substation MS#4 T1 Transformer Replacement				420,000		
Substation MS#17 T1 Transformer Replacement				90,000		
Transformer Vault TV#38 Upgrade				570,000		
Johnson St. Reconstruction - S.J.A to MacDonnell				100,000		
Substation MS#4 Y2&Y3 Bus Switchgear Replacement					1,100,000	
44kV Riser PILC Cable Replacement					100,000	
Barrie St. Reconstruction - Union to King					260,000	
Transformer Vault TV#3 Upgrade						230,000
Miscellaneous	100,000	100,000	150,000	150,000	100,000	150,000
Sub-Total	2,972,000	4,247,000	2,211,000	3,083,000	3,353,000	3,287,000
System Service						
44kV Motor Operated Switch				180,000		180,000
Miscellaneous	50,000	20,000	80,000	20,000	20,000	20,000
Sub-Total	50,000	20,000	80,000	200,000	20,000	200,000
General Plant						
Vehicle Modifications/Upgrades	69,000	389,000		300,000	390,000	284,000
Computer Hardware & Software		393,000	234,000	76,000		
Miscellaneous	104,000	81,000	88,000	30,000	37,000	37,000
Sub-Total	173,000	863,000	322,000	406,000	427,000	321,000
Total	**3,600,000**	**5,650,000**	**3,049,000**	**4,269,000**	**4,200,000**	**4,200,000**
Less Renewable Generation Facility Assets and Other Non Rate-Regulated Utility Assets *(input as negative)*						
Total	**3,600,000**	**5,650,000**	**3,049,000**	**4,269,000**	**4,200,000**	**4,200,000**

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-6

Ref: Exhibit 2, Tab 1, Schedule 1, Attachment 1

Interrogatory:

a) Please explain why there are no contributions and grants shown for 2015 through 2020. If the contributions and grants have been included in the individual line items that add up to the total, please provide revised continuity schedules for 2015 through 2020 that reflect the gross additions by line item, offset by the contribution and grants shown in a separate line.

b) Please explain why the depreciation expense shown on both schedules for 2013 have different figures for the Total PP&E line and the Total line, whereas in all other years they are identical.

c) Please confirm that Kingston Hydro does not have any fully allocated depreciation expense. If this cannot be confirmed, please provide a table that shows for 2011 through 2020 the total fully allocated depreciation and the amount that is capitalized and the amount that is expensed and included in OM&A.

Response:

a) Contributions and grants are dependent on customer driven work. The capital program is based on the DSP. There are no budgeted contributions and grants because if Kingston Hydro receives contributions and grants, then the capital

program is increased by the same amount, which results in the same net book value of capital assets.

b) The difference for 2013 reflects the Smart Meter Decision of $818,462 under the column “Smart Meter Additions”.

c) Kingston Hydro does not have any fully allocated depreciation.

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-7

Ref: Exhibit 2, Tab 1, Schedule 1, Attachment 1

Interrogatory:

a) Please provide an updated continuity schedule for 2015 based on the latest year to date capital expenditures in 2015 along with the most current forecast for the remainder of the year.

b) If necessary, please provide updated continuity schedules for 2016 through 2020 that reflect the changes in 2015 plus any additional changes based on the most current forecast available.

Response:

a) Attached is Appendix 2-BA updated for YTD actuals and forecast expenditures to the end of 2015.

b) N/A

Response to Energy Probe Interrogatory
2-Energy Probe-7

Attachment 1

Appendix 2-BA
Fixed Asset Continuity Schedule

MIFRS
2015

			Cost					Accumulated Depreciation				
CCA Class	**OEB**	**Description**	**Opening Balance**	**Additions to June 30, 2015**	**Additions July - December, 2015**	**Disposals**	**Closing Balance**	**Opening Balance**	**Additions**	**Disposals**	**Closing Balance**	**Net Book Value**
	1610	Misc. Intangible Plant	$ 242,440				$ 242,440	-$ 39,776	- 6,061		-$ 45,837	$ 196,603
12	1611	Computer Software (Formally known as Account 1925)	$ 345,639	$ -	$ 23,000		$ 368,639	-$ 324,118	- 14,195		-$ 338,313	$ 30,326
CEC	1612	Land Rights (Formally known as Account 1906)	$ -				$ -	$ -			$ -	$ -
N/A	1805	Land	$ 197,343				$ 197,343	$ -			$ -	$ 197,343
47	1808	Buildings	$ 725,696	$ 30,828	$ 50,172		$ 806,696	-$ 235,369	- 15,075		-$ 250,444	$ 556,252
13	1810	Leasehold Improvements	$ -				$ -	$ -			$ -	$ -
47	1815	Transformer Station Equipment >50 kV	$ -				$ -	$ -			$ -	$ -
47	1820	Distribution Station Equipment <50 kV	$ 9,492,611	$ 170,170	$ 84,444		$ 9,747,225	-$ 2,692,449	- 210,046		-$ 2,902,495	$ 6,844,730
47	1825	Storage Battery Equipment	$ -				$ -	$ -			$ -	$ -
47	1830	Poles, Towers & Fixtures	$ 14,758,203	$ 326,087	$ 75,241		$ 15,159,531	-$ 5,782,601	- 255,696		-$ 6,038,297	$ 9,121,234
47	1835	Overhead Conductors & Devices	$ 4,527,444	$ 68,181	$ 386,057		$ 4,981,682	-$ 990,573	- 80,346		-$ 1,070,919	$ 3,910,763
47	1840	Underground Conduit	$ 10,524,032	$ 77,896	$ 567,149		$ 11,169,077	-$ 3,287,710	- 150,896		-$ 3,438,606	$ 7,730,471
47	1845	Underground Conductors & Devices	$ 6,978,767	$ 148,840	$ 753,815		$ 7,881,422	-$ 2,111,225	- 123,839		-$ 2,235,064	$ 5,646,358
47	1850	Line Transformers	$ 4,676,568	$ 90,003	$ 79,347		$ 4,845,918	-$ 2,300,711	- 81,101		-$ 2,381,812	$ 2,464,106
47	1855	Services (Overhead & Underground)	$ 1,741,481	$ 27,806	$ 40,664		$ 1,809,951	-$ 875,229	- 17,504		-$ 892,733	$ 917,217
47	1860	Meters	$ 5,822,567	$ 64,607	$ 235,393		$ 6,122,567	-$ 1,655,959	- 358,819		-$ 2,014,778	$ 4,107,788
47	1860	Meters (Smart Meters)	$ -				$ -	$ -			$ -	$ -
N/A	1905	Land	$ -				$ -	$ -			$ -	$ -
47	1908	Buildings & Fixtures	$ -				$ -	$ -			$ -	$ -
13	1910	Leasehold Improvements	$ 335,574				$ 335,574	-$ 234,693	- 8,114		-$ 242,807	$ 92,767
8	1915	Office Furniture & Equipment (10 years)	$ 27,285		$ 1,000		$ 28,285	-$ 8,533	- 2,779		-$ 11,312	$ 16,973
8	1915	Office Furniture & Equipment (5 years)	$ -				$ -	$ -			$ -	$ -
10	1920	Computer Equipment - Hardware	$ -				$ -	$ -			$ -	$ -
45	1920	Computer Equip.-Hardware(Post Mar. 22/04)	$ 405,077				$ 405,077	-$ 282,635	- 41,461		-$ 324,096	$ 80,981
45.1	1920	Computer Equip.-Hardware(Post Mar. 19/07)	$ -				$ -	$ -			$ -	$ -
10	1930	Transportation Equipment	$ 2,951,072	$ 18,479	$ 50,521		$ 3,020,072	-$ 1,676,728	- 198,247		-$ 1,874,975	$ 1,145,097
8	1935	Stores Equipment	$ 61,101				$ 61,101	-$ 35,435	- 6,110		-$ 41,545	$ 19,556
8	1940	Tools, Shop & Garage Equipment	$ 1,082,327	$ 1,648	$ 28,352		$ 1,112,327	-$ 805,669	- 51,052		-$ 856,721	$ 255,606
8	1945	Measurement & Testing Equipment	$ 63,381				$ 63,381	-$ 33,227	- 6,338		-$ 39,565	$ 23,816
8	1950	Power Operated Equipment	$ -				$ -	$ -			$ -	$ -
8	1955	Communications Equipment	$ 157,913	$ 1,782	$ 48,218		$ 207,913	-$ 92,651	- 22,926		-$ 115,577	$ 92,336
8	1955	Communication Equipment (Smart Meters)	$ -				$ -	$ -			$ -	$ -
8	1960	Miscellaneous Equipment	$ -				$ -	$ -			$ -	$ -
47	1970	Load Management Controls Customer Premises	$ -				$ -	$ -			$ -	$ -
47	1975	Load Management Controls Utility Premises	$ -				$ -	$ -			$ -	$ -
47	1980	System Supervisor Equipment	$ 2,722,393	$ 1,435	$ 48,565		$ 2,772,393	-$ 1,983,857	- 61,901		-$ 2,045,758	$ 726,635
47	1985	Miscellaneous Fixed Assets	$ -				$ -	$ -			$ -	$ -
47	1990	Other Tangible Property	$ -				$ -	$ -			$ -	$ -
		Sub-Total Before Contributions	**$ 67,838,914**	**$ 1,027,762**	**$ 2,471,938**	**$ -**	**$ 71,338,614**	**-$ 25,449,149**	**-$ 1,712,506**	**$ -**	**-$ 27,161,655**	**$ 44,176,959**
47	1995	Contributions & Grants	-$ 2,848,475				-$ 2,848,475	$ 357,655	64,604		$ 422,259	-$ 2,426,216
47	2440	Deferred Revenue[5]	$ -				$ -	$ -			$ -	$ -
			$ -				$ -	$ -			$ -	$ -
		Sub-Total	**$ 64,990,439**	**$ 1,027,762**	**$ 2,471,938**	**$ -**	**$ 68,490,139**	**-$ 25,091,494**	**- 1,647,902**	**$ -**	**-$ 26,739,396**	**$ 41,750,743**
		Less Socialized Renewable Energy Generation Investments (input as negative)					$ -				$ -	$ -
		Less Other Non Rate-Regulated Utility Assets (input as negative)					$ -				$ -	$ -
		Total PP&E	**$ 64,990,439**			**$ -**	**$ 68,490,139**	**-$ 25,091,494**	**- 1,647,902**	**$ -**	**-$ 26,739,396**	**$ 41,750,743**
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable[6]										
		Total							**- 1,647,902**			

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-8

Ref: Exhibit 2, Tab 1, Schedule 4

Interrogatory:

Given the Board letter of June 3, 2015 setting the default WCA percentage to 7.5%, is Kingston Hydro going to continue with the option of choosing the default value, or does Kingston Hydro plan on filing a lead-lag study? If the latter, when does Kingston Hydro expect to file the study?

Response:

Please see response to 1-Staff-5.

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-9

Ref: Exhibit 2, Tab 2, Schedule 3, Attachment 1

Interrogatory:

Please provide a version of Appendix 2-AB that shows for each of 2010 through 2014 the budgeted capital expenditure amount for each year and the actual amount (already shown) as well as variance column in the same level of detail as shown in the table.

Response:

During the 2010-2014 period, budgets were not developed on the basis of the investment categories established by the Board on March 28, 2013. Actuals were reported in Appendix 2-AB after analysis.

As part of the development of the DSP, the investment categories are being used for the 2015-2020 budgets.

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-10

Ref: Exhibit 2, Tab 2, Schedule 3, Attachment 2

Interrogatory:

Please provide an updated Appendix 2-AA (for 2015 only) that reflects actual expenditures to date in 2015 along with the most recent forecast for the remainder of the year. Please also include a column that shows for each project the projected in-service date for each discrete project.

Response:

Appendix 2-AA
Capital Projects Table

Projects	2015 Bridge	2015 Actual By June 30, 2015	2015 Year-End Forecast	Projected In-service Date
Reporting Basis	**MIFRS**	**MIFRS**	**MIFRS**	**MIFRS**
System Access				
Meters	300,000	66,389	225,000	12/31/2015
Miscellaneous	105,000	35,807	60,000	12/31/2015
Sub-Total	405,000	102,196	285,000	
System Renewal				
Substation No.1 Rebuild	400,000	166,793	400,000	Multi-year project
Transformer Vault TV#8 Upgrade	385,000	24,420	385,000	11/15/2015
Transformer Vault TV#9 Upgrade	470,000	26,039	470,000	10/31/2015
Substation No. 10 44kV Riser PILC Cable Replacement	135,000	75,956	75,956	2/9/2015
Deteriorated Overhead Infrastructure Replacement Program	847,000	342,108	958,000	12/31/2015
Reactive 5kV Cable Replacement	70,000	34,077	70,000	10/31/2015
5kV Cable Replacement on Seaforth	165,000	274	165,000	11/15/2015
5kV 306 Circuit Fault PILC Cable Replacement	70,000	0	70,000	10/31/2015
Princess St Reconstruction-Phase 3	330,000	68,869	330,000	12/31/2015
Miscellaneous	100,000	62,819	150,000	12/31/2015
Sub-Total	2,972,000	801,355	3,073,956	
System Service				
Miscellaneous	50,000	33,624	50,000	12/31/2015
Sub-Total	50,000	33,624	50,000	
General Plant				
Vehicle Modifications/Upgrades	69,000	18,479	69,000	12/31/2015
Miscellaneous	104,000	72,108	104,000	12/31/2015
Sub-Total	173,000	90,587	173,000	
Total	**3,600,000**	**1,027,762**	**3,581,956**	
Less Renewable Generation Facility Assets and Other Non Rate-Regulated Utility Assets *(input as negative)*				
Total	**3,600,000**	**1,027,762**	**3,581,956**	

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-11

Ref: Exhibit 2, Tab 2, Schedule 8

Interrogatory:

Please confirm that each of the projects shown in Table 1 was complete and placed into service by the end of 2014. If this cannot be confirmed, please indicate when the project was completed and placed into service and the total cost associated with the project at the time of completion.

Response:

All ICM projects were completed and placed into service by the end of 2014.

EXHIBIT 2 – RATE BASE

Response to Energy Probe Interrogatory 2-Energy Probe-12

Ref: Exhibit 2, Tab 2, Schedule 3, Attachment 2

Interrogatory:

Please provide a table in the same format at Appendix 2-AA that shows the capital projects forecast for 2016 through 2020 broken down by project within each of the system access, system renewal, system service and general plant categories.

Response:

Appendix 2-AA
Capital Projects Table

Projects	2016	2017	2018	2019	2020
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
System Access					
Meters	300,000	376,000	440,000	340,000	332,000
44kV Services for 333 University Ave.	160,000				
Russell St. Reconstruction - Division to Montreal			80,000		
Miscellaneous	60,000	60,000	60,000	60,000	60,000
Sub-Total	520,000	436,000	580,000	400,000	392,000
System Renewal					
Substation No.1 Rebuild	150,000	300,000	374,000	438,000	1,529,000
Deteriorated Overhead Infrastructure Replacement Program	1,177,000	1,211,000	1,379,000	1,355,000	1,378,000
Princess St Reconstruction-Phase 3	2,820,000				
Transformer Vault TV#29 Upgrade		210,000			
5kV 108 Circuit Fault PILC Cable Replacement		90,000			
Division St Reconstruction - Union to Princess		250,000			
Substation MS#4 T1 Transformer Replacement			420,000		
Substation MS#17 T1 Transformer Replacement			90,000		
Transformer Vault TV#38 Upgrade			570,000		
Johnson St. Reconstruction - S.J.A to MacDonnell			100,000		
Substation MS#4 Y2&Y3 Bus Switchgear Replacement				1,100,000	
44kV Riser PILC Cable Replacement				100,000	
Barrie St. Reconstruction - Union to King				260,000	
Transformer Vault TV#3 Upgrade					230,000
Miscellaneous	100,000	150,000	150,000	100,000	150,000
Sub-Total	4,247,000	2,211,000	3,083,000	3,353,000	3,287,000
System Service					
44kV Motor Operated Switch			180,000		180,000
Miscellaneous	20,000	80,000	20,000	20,000	20,000
Sub-Total	20,000	80,000	200,000	20,000	200,000
General Plant					
Vehicle Modifications/Upgrades	389,000		300,000	390,000	284,000
Computer Hardware & Software	393,000	234,000	76,000		
Miscellaneous	81,000	88,000	30,000	37,000	37,000
Sub-Total	863,000	322,000	406,000	427,000	321,000
Total	**5,650,000**	**3,049,000**	**4,269,000**	**4,200,000**	**4,200,000**
Less Renewable Generation Facility Assets and Other Non Rate-Regulated Utility Assets *(input as negative)*					
Total	**5,650,000**	**3,049,000**	**4,269,000**	**4,200,000**	**4,200,000**

EXHIBIT 2 – RATE BASE

Response to Sustainable Infrastructure Alliance of Ontario Interrogatory 2-SIA-4

Ref: Exhibit 2, Tab: 2, Schedule 2, DSP Section 5.2.3

Interrogatory:

Kingston Hydro describes a number of monitoring methods that it uses to gauge the effectiveness of its performance and planning objectives. Please summarize what specifically Kingston Hydro plans to track and report to the OEB on an annual basis (or at the end of the term) as part of its reporting commitment for this CIR application. In responding, please specifically address the proposed format and level of detail for capital spending reporting needed to satisfy the OEB's RRFE requirement to "monitor capital spending against the approved plan by requiring distributors to report annually on actual amounts spent"[1]

[1] RRFE Report, page 20.

Response:

The DSP in Section 5.2.3 identifies a number of monitoring activities that are intended to satisfy regulatory reporting requirements. Kingston Hydro will report in the format required within the timelines stipulated on all regulatory reporting matters.

Annually, as part of the RRR reporting requirements, Kingston Hydro reports its financial results with the OEB. Included in this reporting are annual capital expenditures, operating expenses, revenues and Return on Equity. Additionally, as part of its MD&A

reporting on the annual scorecard results, Kingston Hydro explains the results of its operational effectiveness measures as it relates to system reliability, DSP implementation progress and cost control.

EXHIBIT 2 – RATE BASE

Response to Sustainable Infrastructure Alliance of Ontario Interrogatory 2-SIA-5

[Ref: Exhibit 2, Tab 2, Schedule 2, DSP Section 5.4.2]

Interrogatory:

In this section, Kingston Hydro describes the process it undertakes to develop its capital program budget, noting among other things that "A balance of 'Bottom up' project identification and 'Top Down' project prioritization/selection is commonly used when developing a capital expenditure plan."

To what extent did the "top down" approach reduce the proposed capital budget? That is, in the absence of any top down restrictions, what levels of incremental spending did Kingston Hydro consider to undertake over the term of this application?

Response:

Kingston Hydro appreciates the intent of the question, but must acknowledge that "top down" approaches are not the only factor that acts to "reduce proposed capital spending". Kingston Hydro has acknowledged in the DSP the significance of its customer engagement process and the influence it has had in order to address those expressed preferences including smoothing and pacing. Furthermore, available resources, both human and equipment, act to constrain the ability to complete work and hence budgets; and lastly debt to equity ratios and borrowing limits further influence proposed budgets.

With the forgoing in mind, Kingston Hydro during the Asset Management Process did consider other work not identified in the 2016-2020 program which resulted in reducing the overall budget between $750,000- $900,000 per year on average during this period.

EXHIBIT 2 – RATE BASE

Response to Sustainable Infrastructure Alliance of Ontario Interrogatory 2-SIA-6

Ref: Exhibit 2, Tab 2, Schedule 2, DSP Section 5.4.2

Interrogatory:

Kingston Hydro provided an example of its capital expenditure planning process: "a team comprised of Field Staff, Engineering Staff, an Operator, a Supervisor, a Manager and a Director reviews the list of potential capital expenditure projects then informally discuss and compare projects using the objectives, criteria and assumptions outlined in 5.4.2a. Projects are then prioritized and annual capital expenditures are optimized."

Please provide the list of capital projects that were considered through this process but ultimately not included as part of this rate application. Please list the general reasons why these projects were deemed to be of a lower priority than those ultimately included.

Response:

The following projects were considered and either deferred or reduced in scope:

- MS 5 T1 Transformer replacement — deferred
- MS 8 T2 Transformer replacement — deferred
- 5Kv Feeder 1400 extension — deferred
- Voltage Conversion – Dalton Avenue – Phase 1 — deferred
- Substation 1 — reduced
- Deteriorated Overhead Infrastructure Replacement — reduced

- 44kv motor operated switch reduced

As described in the DSP, Asset Management Process, Kingston Hydro evaluated these projects with the above noted results. These projects were ultimately deferred or reduced in scope for the following reasons:

- Limited risk due to actions/plans to mitigate such as spares, load shift, alternate feeds etc.
- Limited risk/impact to customers by deferral.
- Ranked lower in the priority setting exercise as compared to projects selected.
- Consideration of available resources when measured against the “total” work plan i.e. can the scope of work being considered be completed?
- Projects were not integral / linked to other projects and did not affect sequencing.

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-6

Reference: E2/T1/S4

Interrogatory:

a) Please recalculate the 2016-2020 Rate Base working capital allowance using the Board's default value of 7.5% of controllable costs.

b) If Kingston Hydro does not intend to use this value please indicate when it expects to file its own lead/lag study.

Response:

a) Kingston Hydro has recalculated the WCA rate to 7.5%.

b) Please see response to 1-Staff-5.

Response to Vulnerable Energy Consumers Coalition

Interrogatory 2-VECC-6

Attachment 1

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2015 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Interrogatory Responses	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	$73,979,610	$ -	$73,979,610	$ -	$73,979,610
2	Accumulated Depreciation (average)	(3)	($27,861,376)	$ -	($27,861,376)	$ -	($27,861,376)
3	Net Fixed Assets (average)	(3)	$46,118,234	$ -	$46,118,234	$ -	$46,118,234
4	Allowance for Working Capital	(1)	$11,759,763	($4,975,284)	$6,784,479	$ -	$6,784,479
5	**Total Rate Base**		$57,877,997	($4,975,284)	$52,902,713	$ -	$52,902,713

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$7,130,810	$ -	$7,130,810	$ -	$7,130,810
7	Cost of Power		$83,328,903	$ -	$83,328,903	$ -	$83,328,903
8	Working Capital Base		$90,459,713	$ -	$90,459,713	$ -	$90,459,713
9	Working Capital Rate %	(2)	13.00%	-5.50%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$11,759,763	($4,975,284)	$6,784,479	$ -	$6,784,479

Notes

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(3) Average of opening and closing balances for the year.

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2015 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Interrogatory Responses	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	$78,117,585	$ -	$78,117,585	$ -	$78,117,585
2	Accumulated Depreciation (average)	(3)	($29,757,628)	$ -	($29,757,628)	$ -	($29,757,628)
3	Net Fixed Assets (average)	(3)	$48,359,957	$ -	$48,359,957	$ -	$48,359,957
4	Allowance for Working Capital	(1)	$11,653,174	($4,930,189)	$6,722,985	$ -	$6,722,985
5	**Total Rate Base**		$60,013,131	($4,930,189)	$55,082,942	$ -	$55,082,942

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$7,253,351	$ -	$7,253,351	$ -	$7,253,351
7	Cost of Power		$82,386,451	$ -	$82,386,451	$ -	$82,386,451
8	Working Capital Base		$89,639,802	$ -	$89,639,802	$ -	$89,639,802
9	Working Capital Rate %	(2)	13.00%	-5.50%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$11,653,174	($4,930,189)	$6,722,985	$ -	$6,722,985

Notes

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(3) Average of opening and closing balances for the year.

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2015 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Interrogatory Responses	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	$81,712,470	$ -	$81,712,470	$ -	$81,712,470
2	Accumulated Depreciation (average)	(3)	($31,791,818)	$ -	($31,791,818)	$ -	($31,791,818)
3	Net Fixed Assets (average)	(3)	$49,920,652	$ -	$49,920,652	$ -	$49,920,652
4	Allowance for Working Capital	(1)	$11,486,494	($4,859,670)	$6,626,823	$ -	$6,626,823
5	**Total Rate Base**		$61,407,146	($4,859,670)	$56,547,475	$ -	$56,547,475

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$7,378,017	$ -	$7,378,017	$ -	$7,378,017
7	Cost of Power		$80,979,625	$ -	$80,979,625	$ -	$80,979,625
8	Working Capital Base		$88,357,642	$ -	$88,357,642	$ -	$88,357,642
9	Working Capital Rate %	(2)	13.00%	-5.50%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$11,486,494	($4,859,670)	$6,626,823	$ -	$6,626,823

Notes

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(3) Average of opening and closing balances for the year.

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2015 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Interrogatory Responses	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	$85,931,970	$ -	$85,931,970	$ -	$85,931,970
2	Accumulated Depreciation (average)	(3)	($33,939,211)	$ -	($33,939,211)	$ -	($33,939,211)
3	Net Fixed Assets (average)	(3)	$51,992,759	$ -	$51,992,759	$ -	$51,992,759
4	Allowance for Working Capital	(1)	$11,425,178	($4,833,729)	$6,591,449	$ -	$6,591,449
5	**Total Rate Base**		$63,417,937	($4,833,729)	$58,584,208	$ -	$58,584,208

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$7,504,848	$ -	$7,504,848	$ -	$7,504,848
7	Cost of Power		$80,381,134	$ -	$80,381,134	$ -	$80,381,134
8	Working Capital Base		$87,885,982	$ -	$87,885,982	$ -	$87,885,982
9	Working Capital Rate %	(2)	13.00%	-5.50%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$11,425,178	($4,833,729)	$6,591,449	$ -	$6,591,449

Notes

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(3) Average of opening and closing balances for the year.

Ontario Energy Board

Revenue Requirement Workform (RRWF) for 2015 Filers

Rate Base and Working Capital

Rate Base

Line No.	Particulars		Initial Application	Adjustments	Interrogatory Responses	Adjustments	Per Board Decision
1	Gross Fixed Assets (average)	(3)	$90,207,745	$ -	$90,207,745	$ -	$90,207,745
2	Accumulated Depreciation (average)	(3)	($36,156,094)	$ -	($36,156,094)	$ -	($36,156,094)
3	Net Fixed Assets (average)	(3)	$54,051,651	$ -	$54,051,651	$ -	$54,051,651
4	Allowance for Working Capital	(1)	$11,304,580	($4,782,707)	$6,521,873	$ -	$6,521,873
5	**Total Rate Base**		$65,356,231	($4,782,707)	$60,573,524	$ -	$60,573,524

(1) Allowance for Working Capital - Derivation

6	Controllable Expenses		$7,633,881	$ -	$7,633,881	$ -	$7,633,881
7	Cost of Power		$79,324,426	$ -	$79,324,426	$ -	$79,324,426
8	Working Capital Base		$86,958,307	$ -	$86,958,307	$ -	$86,958,307
9	Working Capital Rate %	(2)	13.00%	-5.50%	7.50%	0.00%	7.50%
10	Working Capital Allowance		$11,304,580	($4,782,707)	$6,521,873	$ -	$6,521,873

Notes

(2) Some Applicants may have a unique rate as a result of a lead-lag study. The default rate for 2014 cost of service applications is 13%.

(3) Average of opening and closing balances for the year.

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-7

Reference: E2/T1/S1/DSP/pg.13

Interrogatory:

a) Please show 5.2.1 Table 2 (Breakdown by key investment) by the same categories for years 2010 through 2020.

b) Please show the Engineering cost percentage expected for each of these categories (see pg.26)

c) For each of the categories please provide the measurement metric(s) and targeted outcome(s) that Kingston will use to assess these work programs over the term of the rate plan.

Response:

a) Kingston Hydro would refer to the response provided in IR 2-Staff-19 for relevant information pertaining to the 2010-2014 period as well as 2015-2020.

b) As noted in the DSP, Section 5.2.3 (a) Table 2, 90% of the engineering cost examples were below the materiality threshold. Kingston Hydro, in the DSP section 5.2.3 (a) page 27, line 17 to 19 identifies that the expected forecasted engineering costs will range from 5-8% of project costs.

Kingston Hydro also refers to the OEB's procedural order and in particular:

"Parties should use the materiality thresholds documented in Chapter 2 of the Filing Requirements as a guide"

To complete the request as stated would require a significant level of effort to extract this data for each of the categories defined for each of the requested years.

c) Kingston Hydro would refer to the response provided in IR 1-Staff-12 for relevant information pertaining to this question.

Annually, as part of the RRR reporting requirements, Kingston Hydro reports its financial results with the OEB. Included in this reporting are annual capital expenditures, operating expenses, revenues and Return on Equity. Additionally, as part of its MD&A reporting on the annual scorecard results, Kingston Hydro explains the results of its operational effectiveness measures as it relates to system reliability, DSP implementation progress and cost control

In addition, Kingston Hydro is planning on measuring the success of its capital investment program over the planning period by answering the following questions. This would apply to not only the categories identified in Section 5.2.1 Table 2 noted above but for all capital investment areas identified in the DSP.

- Over the planning period, did Kingston Hydro replace the number of assets it indicated in the DSP? In other words, if we proposed to undertake to replace 6 pad mount switchgear, was that in fact completed as planned?
- Over the planning period, did Kingston Hydro place the asset into service as planned and within the estimated budget?

- Over the planning period, did Kingston Hydro vary from the planned program and if so explain the variation and its outcomes.

Kingston Hydro would also refer to the OEB Scorecard and in particular Operational Effectiveness – System Reliability. Not all of the categories noted in Section 5.2.1 Table 2 of the DSP relate specifically to system reliability, however Kingston Hydro would expect on balance, over the five year average to observe improvements in reliability trends as reported in the OEB Scorecard as a result of our proposed capital investment plan as identified in the DSP.

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-8

Reference: E2/T1/S1/DSP/pg.37, 44-45

Interrogatory:

a) Please provide a table showing for each year from 2010 to 2014 outages by all cause codes tracked by Kingston Hydro (if more than those shown at pages 36-41).

b) Please also show by cause codes for each year's contribution to SAIFI.

Response:

a) Refer to 5.2.3. Figure 12 on E2/T1/S1/DSP/page 40 for the table.

b)

2010-2014 SAIFI Breakdown by All Cause Codes Excluding Major Events

Cause of Interruption	2010	2011	2012	2013	2014
Unknown/Other	0.04	0.04	0.02	0.15	0.04
Scheduled Outage	0.17	0.20	0.13	0.10	0.11
Loss of Supply	0.11	0.45	0.02	0.13	0.00
Tree Contacts	0.09	0.30	0.17	0.07	0.08
Lightning	0.00	0.00	0.00	0.02	0.00
Defective Equipment	0.13	0.54	0.05	0.49	0.19
Adverse Weather	0.13	0.15	0.10	0.21	0.00
Adverse Environment	0.00	0.00	0.00	0.00	0.00
Human Element	0.00	0.05	0.06	0.00	0.00
Foreign Interference	0.21	0.03	0.09	0.24	0.09

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-9

Reference: E2/T1/S1/DSP/pg.41-47

Interrogatory:

a) Does Kingston anticipate any change to its planned outage metrics during the course of the rate plans' capital program?

b) Please provide the anticipated contribution (percentage) of planned outages contribution to SAIFI and SAIDI during the period 2015 through 2020.

Response:

a) Kingston Hydro anticipates there are no significant changes to its planned outage metrics during the custom IR term.

The planned outage (scheduled outage) is the customer interruptions due to the disconnection at a selected time for the purpose of construction or preventive maintenance, including power outages required for asset replacement, regular preventive maintenance, new utilities equipment connections, new customer connections and other construction purposes. In the forecast period, Kingston Hydro plans to maintain the similar maintenance practice and investment levels as in the last five historical years. Therefore, the planned outage metrics (no. of planned outages) are expected to remain in a similar pattern during the 2015-2020 period. However, customers may experience less TCHI (Total Customer Hour

Interruptions) caused by planned outages as more obsolete vault oil switches are being replaced. The oil switch is unsafe to operate under load due to deteriorated mechanical contacts. Current safe work practice requires Kingston Hydro staff to de-energize this type of switch by opening feeder breakers at substations before operating it, resulting in extended outages,

b) During the 2010-2014 historical years, the planned outages contributed 15% to SAIDI and 14% to SAIFI in Kingston Hydro's distribution system. So Kingston Hydro anticipates the planned outages will provide a similar contribution to SAIDI and SAIFI during the period of 2015 to 2020 for the reasons stated in the question a).

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-10

Reference: E2/T1/S1/DSP/pg.179

Interrogatory:

Please provide a table for each year for the first full year following the implementation of smart meters (2013?) to 2020 which shows by rate class: (a) total number of meters installed; (b) new service meters installed; (c) total meter costs.

Response:

Kingston does not have sufficiently detailed records to be able to report the requested data for 2013. Kingston does not have total meter costs for the Large User rate class separated from interval metered customers, and as such cannot provide specific financial data for specifically the GS>50, or Large User Rate Class.

Note that 2015 total meters installed is an actual value up to August 31, 2015.

Note that the total meters installed from 2016 to 2020 are the same values used in the Cost Allocation.

	2013			2014			2015		
	Total Meters Installed	New Service Meters	Total Meter Costs	Total Meters Installed (As at Dec 23 2014)	New Service Meters	Total Meter Costs (Actual)	Total Meters Installed (As at August 31 2015)	New Service Meters	Total Meter Costs (Budget)
Residential	N/A	140	$ 110,170.00	24144	346	$ 89,397.00	24260	500	$ 84,516.00
GS<50		0	$ 71,373.00	3004		$ 131,214.00	3009	0	$ 100,196.00
GS>50		0	$ 47,392.00	326		N/A	323	0	N/A
Large User		0	N/A	5		N/A	5	0	N/A

2016			2017			2018		
Total Meters Installed (Forecast from CA)	New Service Meters	Total Meter Costs	Total Meters Installed (Forecast from CA)	New Service Meters	Total Meter Costs	Total Meters Installed (Forecast from CA)	New Service Meters	Total Meter Costs
24157	500	$ 93,631.00	24311	1000	$ 95,336.89	24466	1000	$ 98,586.35
2950	0	$ 107,857.00	2901	0	$ 110,209.75	2853	0	$ 117,066.54
337	0	N/A	343	0	N/A	350	0	N/A
5	0	N/A	5	0	N/A	5	0	N/A

2019			2020		
Total Meters Installed (Forecast from CA)	New Service Meters	Total Meter Costs	Total Meters Installed (Forecast from CA)	New Service Meters	Total Meter Costs
24622	1000	$ 102,085.75	24779	1000	$ 104,772.89
2805	0	$ 123,135.14	2758	0	$ 127,414.05
357	0	N/A	364	0	N/A
5	0	N/A	5	0	N/A

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-11

Reference: E2/T1/S1/pg. 174 /Appendix 2-AB

Interrogatory:

a) Please provide a table in the form of Appendix 2-B which shows the actual spending in each category and the associated capital contributions for that category in each of the years 2010 through 2020.

Response:

Please see response to 2-CCC-20.

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-12

Reference: E2/T1/S1/pg. 183 / Appendix 9 (PDF pgs. 920-)

Interrogatory:

a) For each of the following IT investments : a) CIS system; (b) ERP, (c) Customer Relationship Management System - please provide the total cost of the system, the amount allocated to Kingston Hydro and the methodology used for allocating the costs to Kingston Hydro. Please also provide the forecast in-service year.

Response:

Please refer to 2-Staff-28.

EXHIBIT 2 – RATE BASE

Response to Vulnerable Energy Consumers Coalition Interrogatory 2-VECC-13

Reference: E2/T1/S1/pg. 183 / Appendix 9

Interrogatory:

For each year 2015 through 2020 please provide the number of new vehicles to be purchased and the cost of the vehicles. If some or all of the vehicles are purchased in common by and for Utilities Kingston then please show the allocation of costs to Kingston Hydro and the methodology used for allocating those costs.

Response:

The table below indicates the vehicles being purchased. The cost allocation for the units that are used by Utilities Kingston to serve the electric, gas, water, and wastewater customers is based on the number of customers for each of those utilities.

2015				
Type	**Vehicle**	**KHydro Allocation**	**Cost to Kingston Hydro**	**Allocation Methodology**
Addition	Locator Van	23%	$11,500	Based on # of customers for each utility
Addition	Service Van	23%	$11,500	Based on # of customers for each utility
Addition	Service Van	23%	$11,500	Based on # of customers for each utility
2016				
Replacement	Lines Bucket Truck	100%	$375,000	
Addition	SCADA Van	23%	$14,000	Based on # of customers for each utility
2017				
Replacement	Lines Van	100%	$44,000	
Addition	Metering Van	23%	$14,000	Based on # of customers for each utility
2018				
Replacement	RBD	100%	$280,000	
Addition	Locators Van	23%	$20,000	Based on # of customers for each utility

2019				
Replacement	Lines Bucket Truck	100%	$390,000	
2020				
Replacement	Substation Step Van	100%	$142,000	
Replacement	Substation Step Van	100%	$142,000	

20