Kingston Hydro

Custom IR Application for Rates

effective January 1, 2016

EB-2015-0083

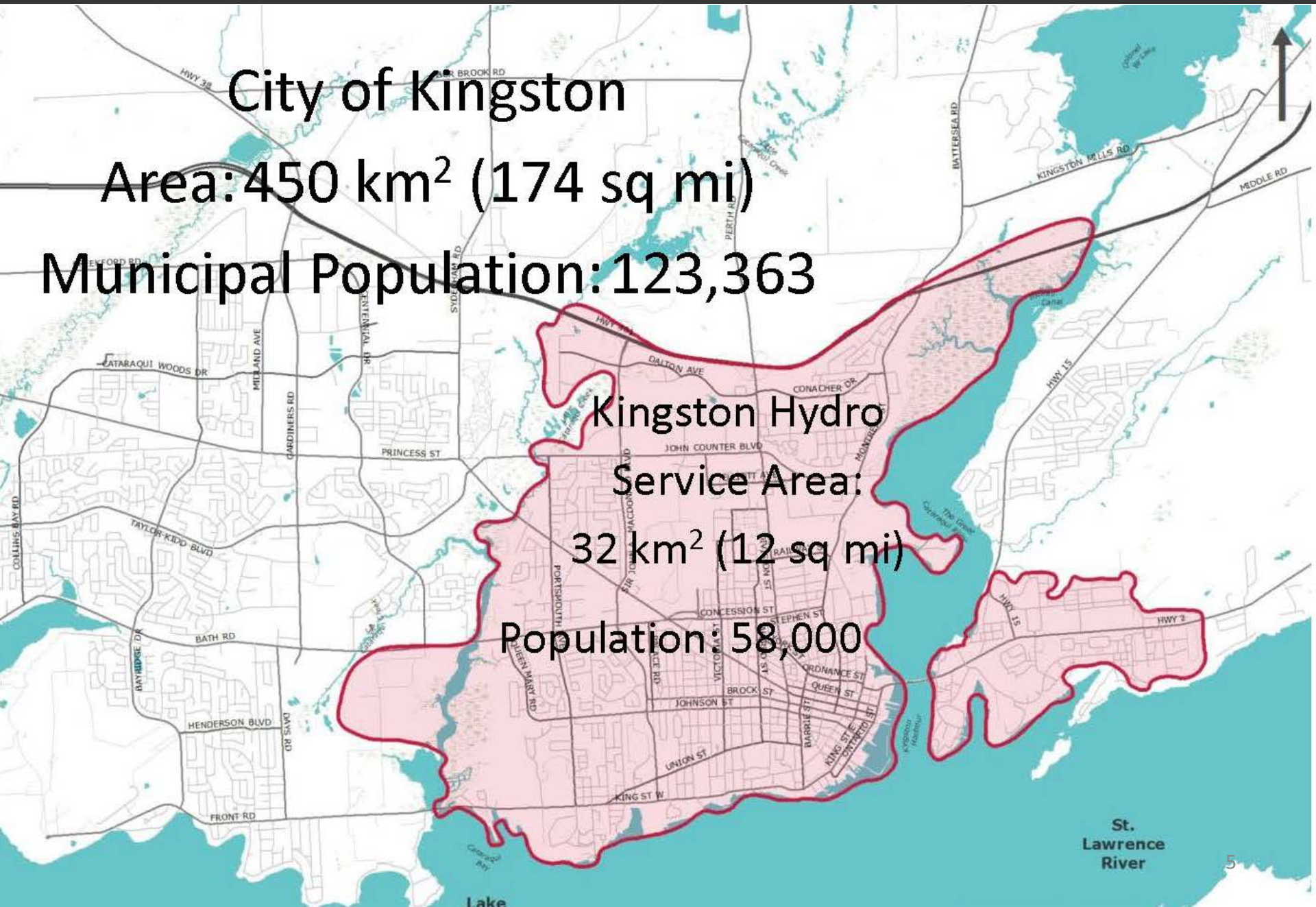
Public Presentation to Ontario Energy Board Panel
August 17,2015

Agenda

- Brief History and Overview
- Customer Engagement
- Distribution System Plan
- Operating Expenses
- Revenue Deficiency
- Cost Allocation
- Rate Impacts
- Deferral & Variance Accounts

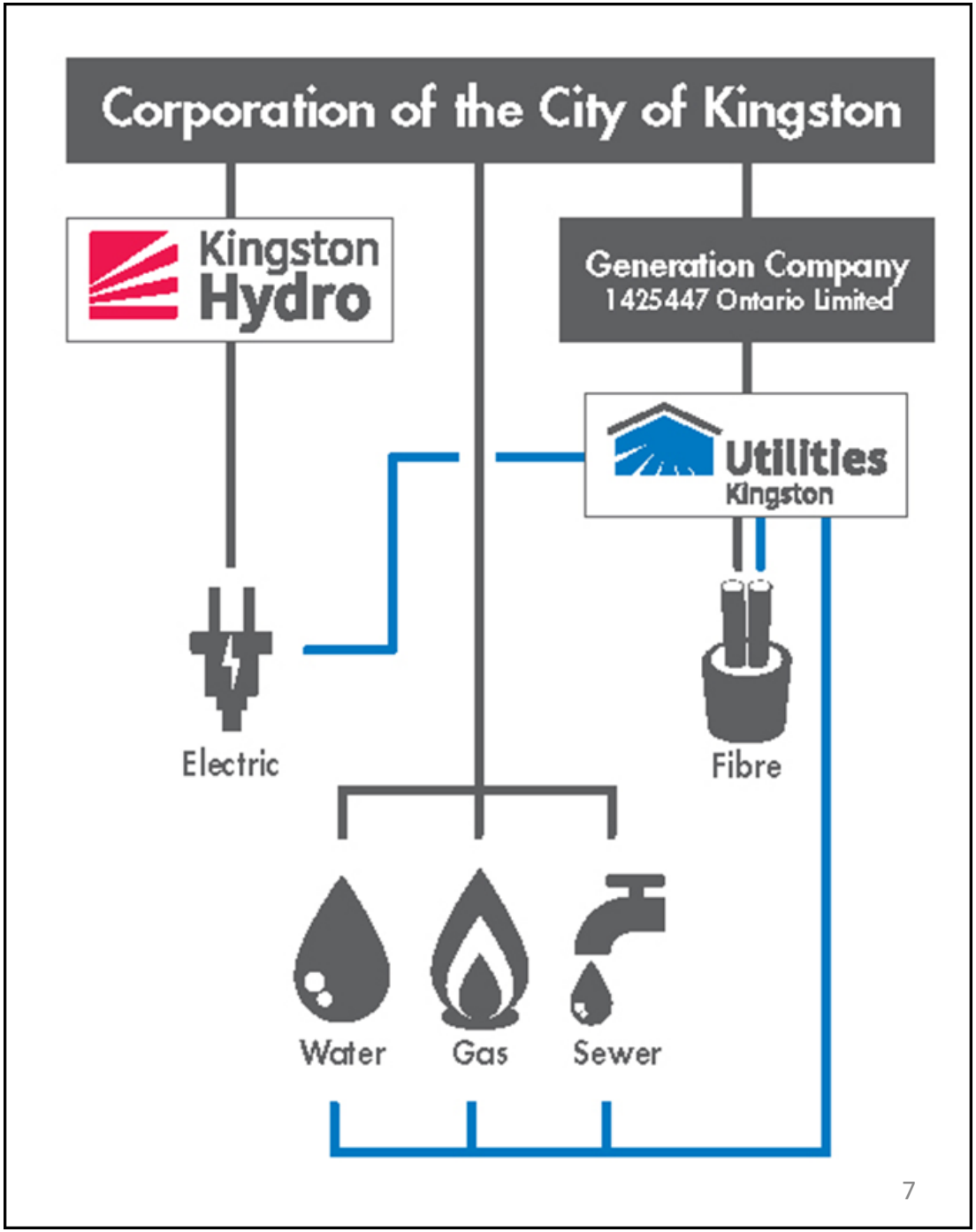
Brief History and Overview

OUR SERVICE AREA



OUR SYSTEM

OUR CORPORATE STRUCTURE



WHY A 5 YEAR CUSTOM IR?

FOCUS IS ON CAPITAL IMPROVEMENTS

ADVANTAGES OF OUR MODEL

Renewed Regulatory Framework

- Customer Focus
- Operational Efficiencies
- Public Policy
- Financial Performance

OUR PLANNING PROCESS

OUR CUSTOMERS

Customer Engagement

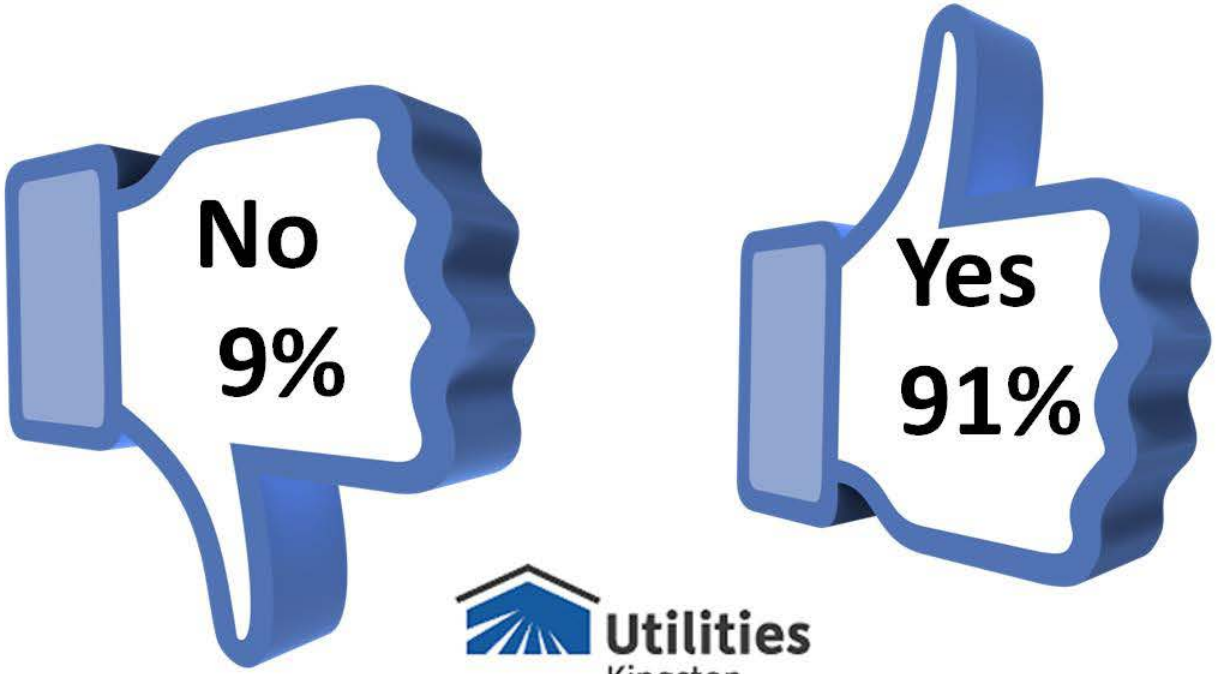
2014 Customer Satisfaction Survey

Hydro Results Snapshot:

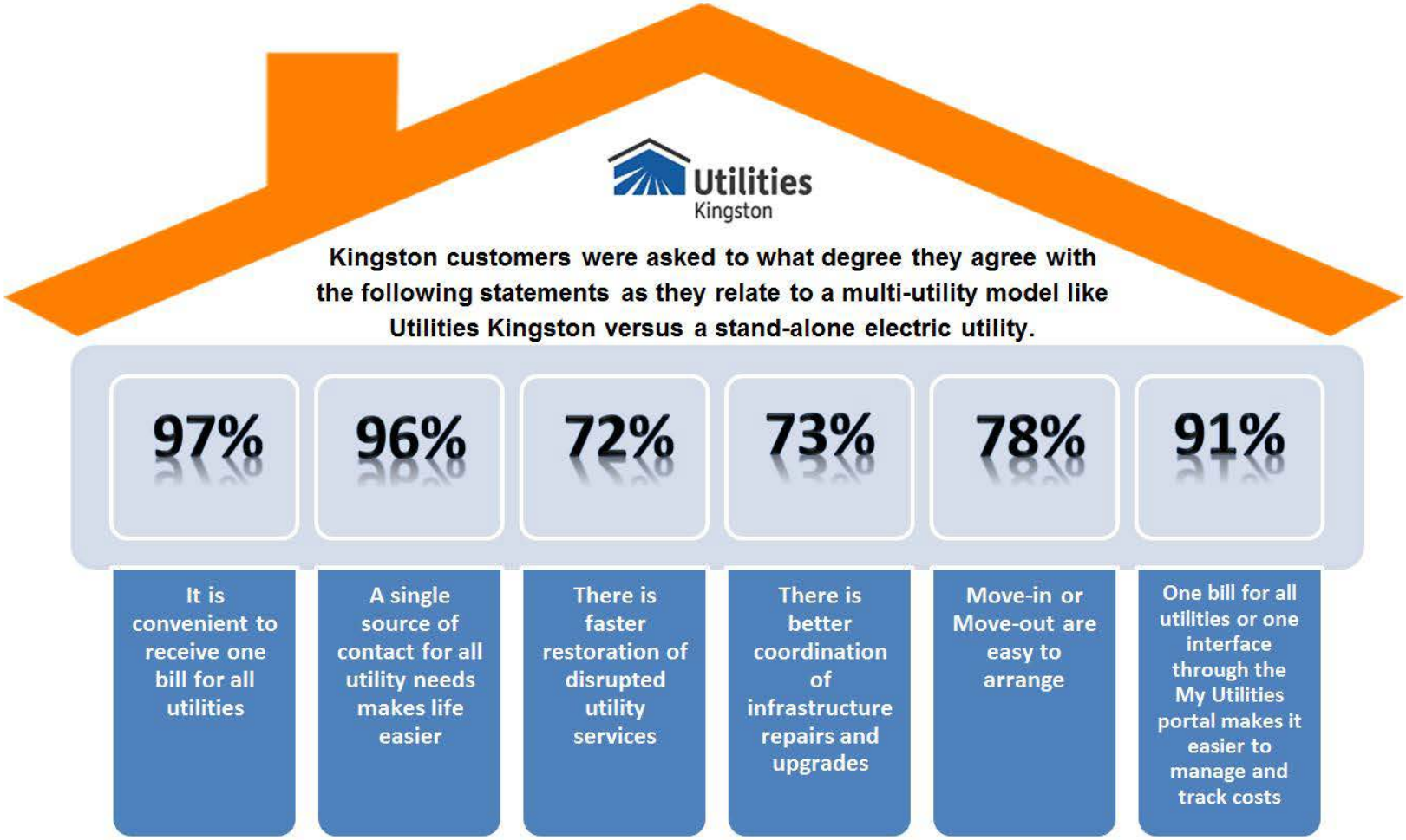
Ontario Benchmark	Utilities Kingston	
77%	83%	Credibility and Trust rating
83%	91%	Customer Satisfaction
25%	16%	Billing problems
61%	81%	Problems Solved
79%	85%	CEPr: Customer Experience Performance rating
86%	93%	Provides reliable electricity
83%	88%	Quickly restores power
87%	88%	Electricity safety is a top priority
62%	75%	Operates a cost effective electricity system
80%	85%	Overall the utility provides excellent quality services
77%	80%	Leader in promoting energy conservation
63%	73%	Provides good value
76%	81%	CCEI: Customer Centric Engagement Index
17%	25%	Loyalty: Secure customers
B+	A	Report Card

Multiple Utilities:

"… were you aware Utilities Kingston delivered multiple utilities under one roof?…"



Multi-Utility Model:



2014 Customer Satisfaction Survey – Priority Investments

Top 2 boxes “Very” and “Somewhat likely”	Ontario LDCs	Utilities Kingston
Maintaining and upgrading equipment	83%	84%
Reducing the time needed to restore power	79%	79%
Investing more in the electricity grid to reduce the number of outages	75%	74%
Educating customers about energy conservation	75%	74%

Customer Consultation

Queen's University

Kingston General Hospital

Canadian Forces Base Kingston

Customer Consultation

Meetings with:

- Chamber of Commerce
- Hotels
- Multi-residential
- School Boards
- Municipality

Customer Consultation

Meetings with:

- Community Health Centre
- Seniors Association

Leveraging Social Media

22,498
- the number of times users saw the tweets on Twitter.

433
- the number of times a user interacted with a tweet;
- this included 77 clicks on URLs, 219 clicks on embedded media and 73 detail expands.

Our Customers' Input

A high level summary of the feedback identified support for:

- Capital improvements that improve reliability
- Pacing the investment for rate stability
- The commitment to keep operating costs as low as possible
- Maintain levels of customer service, including the one bill for all utilities
- Enhanced in-person support and assistance with conservation initiatives
- Annual meetings to discuss utility issues

Distribution System Plan

Distribution System Plan

Value of Investments

Fit – Objectives & Plan

Customer Outcomes

Planning & Pacing

Value of Investments

Value is subjective, but customers have told us these are important…

- Pacing/smooth investments
- Reliability
- Keep operating costs low

Our application does these

What else are we doing?

Value of Investments

- Long Term Planning – Distribution System Plan (DSP)
- Prudent & appropriate investments given the environment
- Focused on infrastructure renewal and reliability
- Improving efficiencies
  e.g. oil switch replacements = fewer planned outages
- Improving restoration times
  e.g. 44kv motorized switches
- Improving resilience in overhead assets
  e.g. pole replacement

Value of Investments

- Safety

Value of Investments

- Improving communications with our customers
  – i.e. meetings to discuss utility issues

Summary

The value presented in this application is in the demonstration that the assets managed by Kingston Hydro are being reasonably & appropriately managed to ensure reliable hydro service while keeping rate impacts manageable i.e. smooth, reasonable

Fit – Objectives & DSP

Objective AMP - Assets

- Ensure the continuous improvement of Kingston Hydro's asset management system from asset condition data to critical processes of system planning and decision making
- Continuous improvement of services delivered, productivity and ultimately in cost performance

Fit – Objectives & DSP

Objective AMP – Assets

- Achieve over the long term, the optimum investment level needed to sustain the assets (distribution and general plant) over their life cycle in an effective and efficient manner
- Seek new and innovative solutions to operate, manage and renew Kingston Hydro's assets

Fit – Objectives & DSP

DSP Identifies for example:

- Transitioning from a “top-down” only approach to top-down and bottom-up approach (5.2.1.e)
- Asset Lifecycle Optimization (5.3.3.a)
- Capital expenditures on station transformers, wood poles, and pole mounted transformers = pacing and smoothing of investment levels over the long term
- Cost savings – multi-utility model (5.4.2.d)

Fit – Objectives & DSP

Objectives – AMP – Customer

- Deliver safe and reliable electricity to our customers
- Continue to satisfy customer expectations by delivering value for the rates charged
- Continue to engage in dialogue with our customers to ensure meaningful and appropriate distribution system improvements and operational effectiveness

Fit – Objectives & DSP

DSP Identifies for Example (5.4.5)

- The Proposed Average Annual Capital expenditures (2015-2020) are less than the previous 5 year average
- Maintain an a smooth expenditure pattern
- Maintain appropriate asset management activities

Fit – Objectives & DSP

Section 5.4.5 of the Distribution System Plan						
Historical Expenditures						
2010	2011	2012	2013	2014		2010-2014 Average
$ 3,853,132	$ 6,169,853	$ 3,964,084	$ 4,643,775	$ 3,612,844		$ 4,448,738
Forecasted Expenditures						
2015	2016	2017	2018	2019	2020	2015-2020 Average
$ 3,600,000	$ 5,650,000	$ 3,049,000	$ 4,269,000	$ 4,200,000	$ 4,200,000	$ 4,161,333

Fit – Objectives & DSP

Objectives – AMP – Financial

- Management of the assets to minimize their total life cycle costs
- Optimize operational and capital investments through innovation and best practices for replacement, refurbishment and maintenance
- Ensure the predictability of Kingston Hydro's proposed expenditures and enable the appropriate application of financial and human resources through the use of asset management, master planning and long term capital planning

Fit – Objectives & DSP

The DSP identifies for example:

- Sources of cost savings i.e. coordinated infrastructure renewal with other hydro work and other utility or road work (5.2.1.b & 5.3.1.b)
- Monitoring financial, infrastructure investment and community sustainability i.e. engineering costs for substation work (5.2.3.a)

Fit – Objectives & DSP

Objectives Capital Expenditure Plan

- Ensure the predictability of Kingston Hydro's proposed expenditures and enable the appropriate application of financial and human resources through the use of asset management, master planning and long term capital planning
- Meet Kingston Hydro's obligations with respect to customer, third party, generation and/or regional planning projects by ensuring that its capital plans include the appropriate enabling investments

Fit – Objectives & DSP

- Establish planned capital expenditures that represent an appropriate balance between sustaining the assets that underpin the distribution system in a responsible manner as identified in Kingston Hydro's Asset Management Plan and the resulting impact on distribution rates

Fit – Objectives & DSP

The DSP identifies for example:

- Third party Coordination (5.2.2.a)
- Regional Planning – Hydro One (5.2.2b)
- Prioritizing REG & capability to connect REG & DG (5.4.2 .e & 5.4.3)
- It is Kingston Hydro's opinion that the DSP submitted in this application represents appropriate level of investment in our assets necessary to sustain them while mindful of impact on distribution rates

Customer Outcomes – DSP

Derived from the Asset Management Process (5.3.1.b) and the Customer Engagement Process (5.4.1.f) the following represent outcomes or synergies from these processes

Investments in:

- Deteriorated Pole Replacement Program
- Substation No.1 Rebuild
- Princess St Reconstruction - Downtown
- Vault Reconstruction – Oil Switch Replacements
- 44kV & 5kV Cable Replacement

Deteriorated Pole Replacement

Pine Street Preconstruction

Deteriorated Pole Replacement

Pine Street
Post Reconstruction

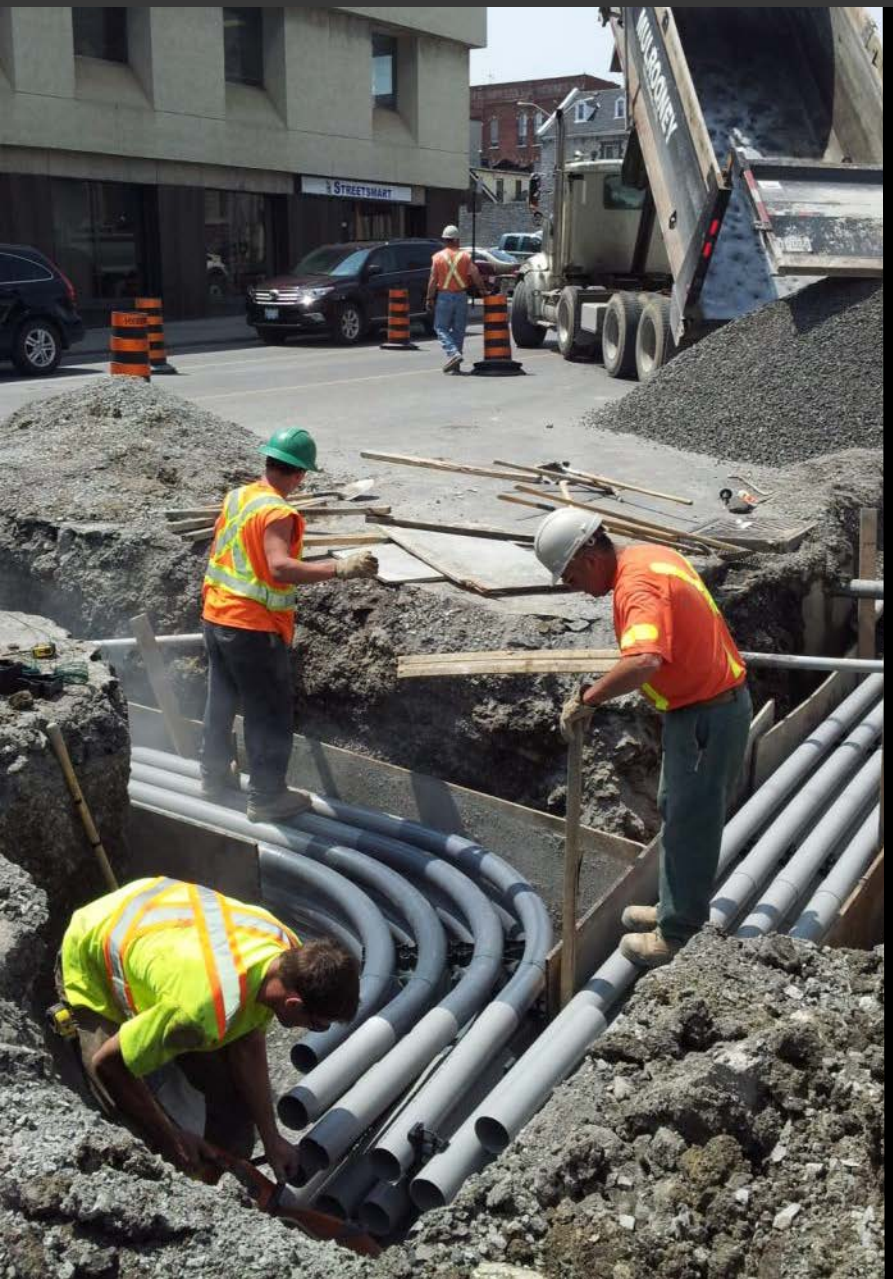
Aging Infrastructure: MS 1

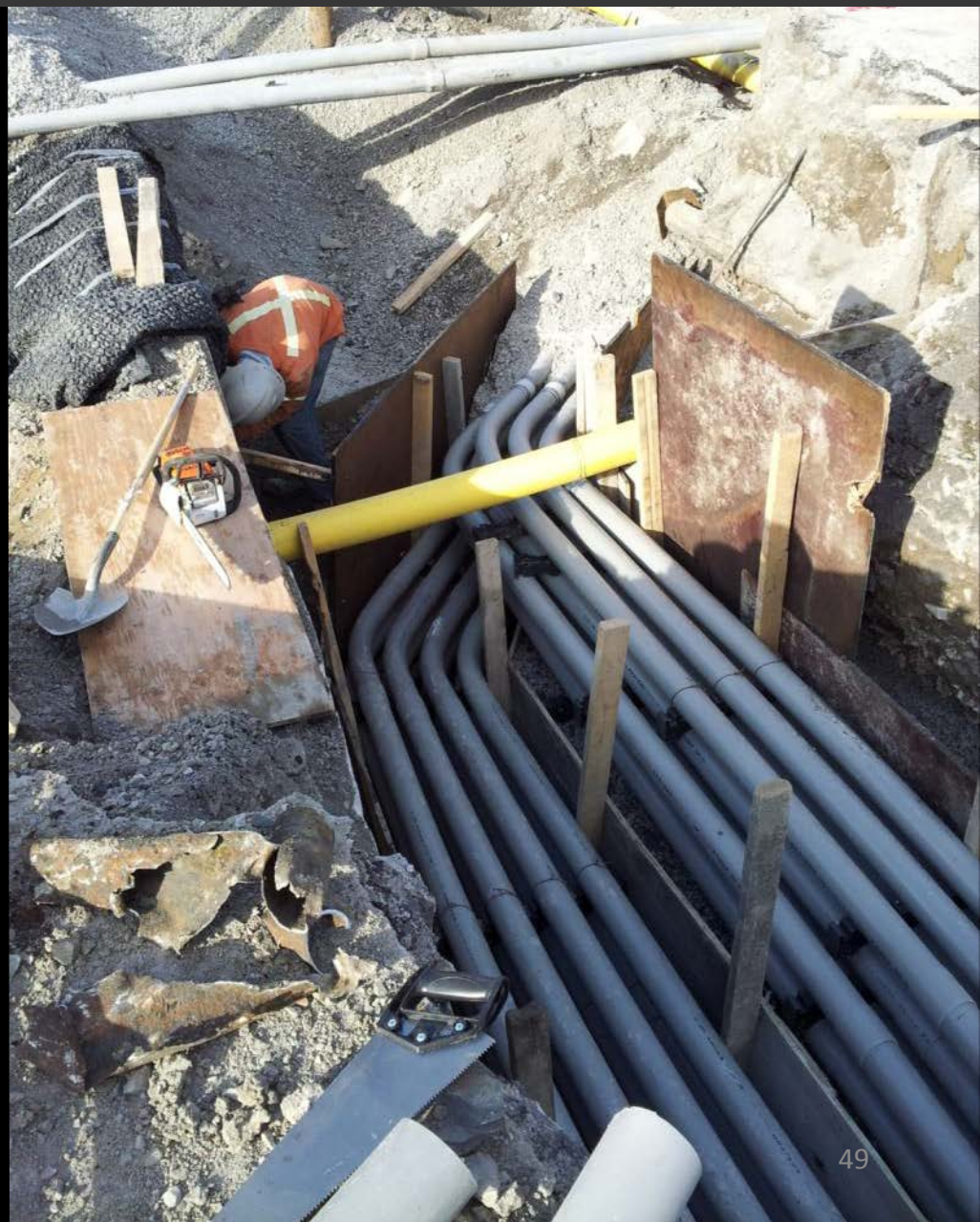
Aging Infrastructure: MS 1

Reconstruction: Princess St

Reconstruction: Princess St

Reconstruction: Princess St





Typical Vault Work

Exposed and Corroded Wall

End-of-Life Submersible Transformer

Transformer Vault (TV6) Preconstruction

End-of-Life Oil Insulated Switchgear

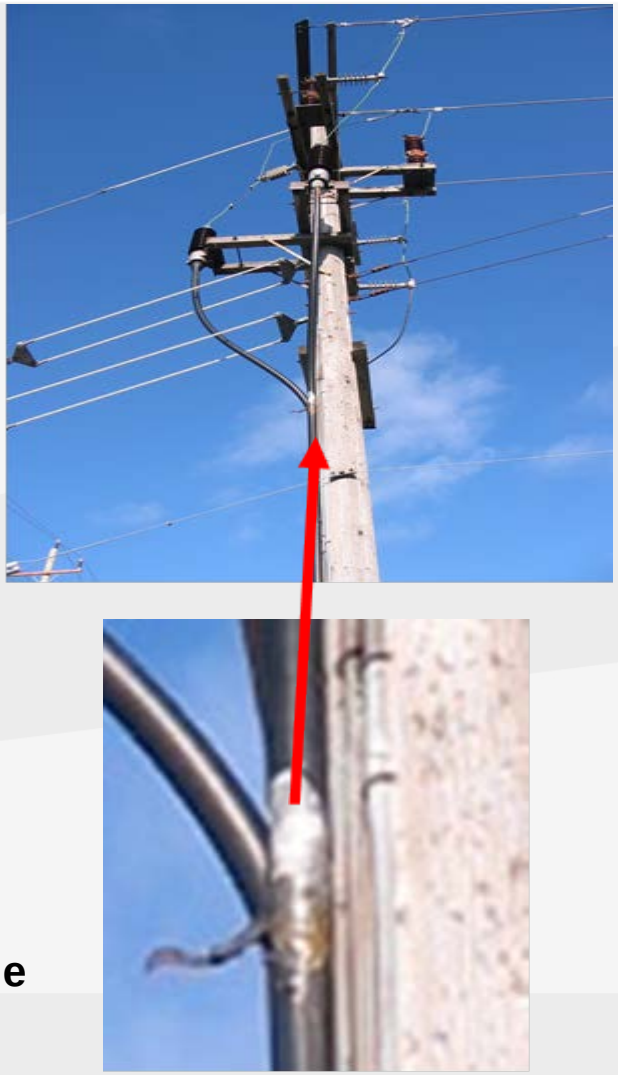
Typical Vault Work

New Pre-cast Concrete Vault

New Submersible Transformer, Gas Switchgear and Secondary Breaker Panel

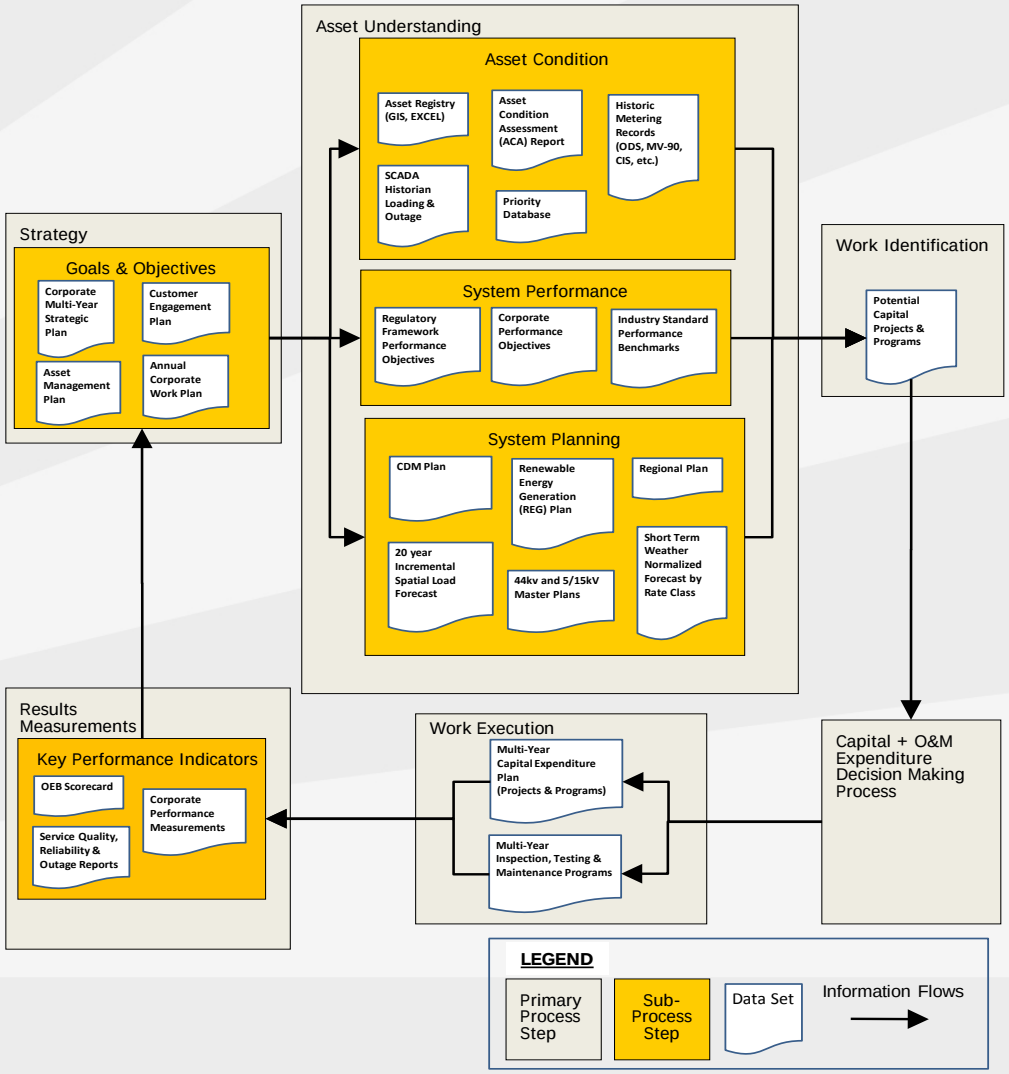
Transformer Vault (TV6) Post Reconstruction

44kV Cable Riser



Faulty 44kV PILC Cable removed from Riser Pole at a Substation – pitting of the lead sheath

Planning, Pacing & Decision Making



Planning, Pacing & Decision Making

Work Identification

Scoping exercise to assess the following issues:

- Sequencing or order of projects
- Linkages of a project(s) to other potential projects for cost efficiencies
- Determination of the scope of work involved
- High level expenditure estimates
- Consistency check with the ACA work recommendations on the number of units expected to be replaced in the next 20 years

Planning, Pacing & Decision Making

Capital + O & M Expenditure Decision Making

- Projects are prioritized over a 5 year period
- Capital budget threshold identified
- Projects & Objectives consistent reliable service
- Additional issues considered and evaluated safety – worker and public, risk of asset failure, customer impact, regulatory requirements

Planning, Pacing & Decision Making

- Project deferral - inspections or maintenance
- Qualitative and objective criteria to its decision making. “Risk of Deferral” and “Project Value” are qualitatively assessed by experienced line, station and engineering staff providing important insight into prioritization of capital projects

Summary

DSP

Reasonable and practical approach to managing assets

Responsive to customer inputs

Represent a level of investment required to ensure reliable services while keeping rate impacts manageable

Operating Expenses

OMA

Year	OMA	Amount	Percent Difference
2011	Board Approved	$ 6,357,504	
2012	Actual	$ 6,282,743	-1.2%
2013	Actual	$ 7,015,345	10.4%
2014	Actual	$ 6,468,160	-8.5%
2015	Budget	$ 6,858,652	5.7%
2016	Budget	$ 7,130,810	3.8%
2011	**Board Approved**	**$ 6,357,504**	
2016	**Budget**	**$ 7,130,810**	**10.8%**
	KHC Annualized - 2011-2016		**2.2%**
	Industry - 2012-2014		**5.1%**

OMA - Benchmarking

	Last Rebasing Year - 2011-Actual	2012 Actuals	2013 Actuals	2014 Actuals	2015 Bridge Year	2016 Test Year
Reporting Basis						
Number of Customers	26,961	26,906	27,154	27,380	27,484	27,589
Total Recoverable OM&A	$ 6,160,391	$ 6,282,743	$ 7,015,345	$ 6,468,160	$ 6,858,652	$ 7,130,810
OM&A cost per customer	$ 228.49	$ 233.51	$ 258.35	$ 236.24	$ 249.55	$ 258.47
Rank - Lowest	28	21	25	14	14	14
Total Reported	75	73	73	72	72	72
Industry Average	$ 292	$ 309	$ 325	$ 339	$ 354	$ 369
Industry Annual % increase		5.8%	5.2%	4.3%	4.3%	4.3%
					NOTE 1	**NOTE 1**
Kingston as a % of industry	78%	76%	79%	70%	71%	70%
NOTE 1						
Assumes industry continues to increase at 4.3% in 2015 and 2016						

OMA - Other

Other Items	Impact
LEAP Funding	$ 17,000
Regulatory One Time Costs	$ 352,000
IFRS effect on OMA	$ -
Staffing levels	Neutral
Depreciation	IFRS
PILS	Per 2011

Revenue Deficiency

Revenue Requirement 2016

Revenue Requirement - 2016		
Particulars		**Application**
OM&A Expenses		$ 6,992,675
Amortization/Depreciation		$ 1,889,986
Property Taxes		$ 138,135
Income Taxes (Grossed up)		$ 227,171
Return		$ -
Deemed Interest Expense		$ 1,460,689
Return on Deemed Equity		$ 2,153,061
Service Revenue Requirement (before Revenues)		$ 12,861,718
Revenue Offsets		$ (576,998)
Base Revenue Requirement		$ 12,284,720

Revenue Requirement – 2016 to 2020

Year	Revenue Requirement	Deficiency per year	Percent Increase
2016	$ 12,861,717	$ 444,116	3.6%
2017	$ 13,315,580	$ 453,863	3.5%
2018	$ 13,743,759	$ 428,179	3.2%
2019	$ 14,190,880	$ 447,121	3.3%
2020	$ 14,546,907	$ 356,027	2.5%

Annual IRM Adjustments

Annual IRM Adjustments
Operating Expense adjusted by approved depreciation expense
Annual Price Cap adjustment for OM&A
Changes in pass through charges
Working Capital allowance changes affecting rate base changes in OMA changes in pass thru charges
Change in tax rates
Change in cost of capital parameters
DVA disposition

Cost Allocation

Cost Allocation

C) Rebalancing Revenue-to-Cost (R/C) Ratios
2016

Class	Previously Approved Ratios Most Recent Year: 2011	Status Quo Ratios (7C + 7E) / (7A)	Proposed Ratios (7D + 7E) / (7A)	Policy Range
	%	%	%	%
Residential	93.28	97.08	97.66	85 - 115
GS < 50 kW	120.00	123.18	120.00	80 - 120
GS 50 to 4,999 kW	107.00	97.24	97.74	80 - 120
Large Use	93.00	97.92	98.42	85 - 115
Street Lighting	104.00	50.02	54.00	70 - 120
Unmetered Scattered Load (USL)	120.00	185.67	120.00	80 - 120
Standby Approved on an Interim Basis	0.00			
0				

** Policy change

Classes outside of target range: GS < 50 kW, Street Lighting, Unmetered Scattered Load

Cost Allocation

D) Proposed Revenue-to-Cost Ratios
2016 - 2020

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.66	97.81	98.36	99.37	100.40	85 - 115
GS < 50 kW	120.00	118.63	116.90	115.30	114.37	80 - 120
GS 50 to 4,999 kW	97.74	97.82	97.48	96.42	95.12	80 - 120
Large User	98.42	100.00	98.78	94.30	89.68	85 - 115
Street Lighting	54.00	58.00	62.00	66.00	70.00	70 - 120
Unmetered Scattered Load (USL)	120.00	118.45	117.32	116.30	115.97	80 - 120
Standby Approved on an Interim Basis						0
						0
0						

- Phase in of Street Lighting to bottom of target range by 2020
- 2016 GS < 50 kW and USL were outside, moved them to top of range
- Adjusted other class ratios only as required to reconcile with the overall approved revenue requirement

Rate Impacts

Rate Design – Fixed/Variable Proportion

	Approved Split		2016		2017		2018		2019		2020	
Customer Class	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable
Residential	54.06%	45.94%	66.24%	33.76%	78.28%	21.72%	89.58%	10.42%	100.00%		100.00%	
General Service < 50 kW	50.21%	49.79%	50.21%	49.79%	50.21%	49.79%	50.21%	49.79%	50.21%	49.79%	50.21%	49.79%
General Service 50 to 4,999 kW	48.07%	51.93%	48.30%	51.70%	48.30%	51.70%	48.30%	51.70%	48.30%	51.70%	48.30%	51.70%
Large Use	43.13%	56.87%	43.13%	56.87%	43.13%	56.87%	43.13%	56.87%	43.13%	56.87%	43.13%	56.87%
Unmetered Scattered Load	41.56%	58.44%	41.56%	58.44%	41.56%	58.44%	41.56%	58.44%	41.56%	58.44%	41.56%	58.44%
Street Lighting	54.53%	45.47%	54.53%	45.47%	54.53%	45.47%	54.53%	45.47%	54.53%	45.47%	54.53%	45.47%
Standby Approved on an Interim Basis												

- Proposed to maintain 2011 Board approved fixed/variable split for each of the customer classes except Residential.
- Residential proposed a move to a fully fixed rate by 2019.

Residential – Fixed/Variable Proportion

- Equal increases in the residential fixed charge over 2016-2019
- At the same time, the usage charge will be reduced in order to keep Kingston Hydro revenue-neutral

Rate Impacts

Residential

800 kWh	2015	2016	2017	2018	2019	2020
Distribution only	$27.43*	$28.48	$27.74	$27.83	$27.74	$28.35
		$1.05	($0.74)	$0.09	($0.09)	$0.61
		3.84%**	-2.60%	0.32%	-0.32%	2.20%
Total Bill	$127.73	$123.71	$122.05	$122.14	$122.05	$122.66
		($4.02)	($1.66)	$0.09	($0.09)	$0.61
		-3.15%	-1.34%	0.07%	-0.07%	0.50%

* Effective May 1

**Smart meter charge of $2.63 dropping off January 2016

Rate Impacts

General Service < 50 kW

2,000 kWh	2015	2016	2017	2018	2019	2020
Distribution only	$50.50*	$53.97	$53.25	$54.62	$56.01	$57.31
		$3.47	($0.72)	$1.37	$1.39	$1.30
		6.88%**	-1.33%	2.57%	2.54%	2.32%
Total Bill	$297.00	$300.61	$300.73	$302.10	$303.49	$304.79
		$3.62	$0.12	$1.37	$1.39	$1.30
		1.22%	0.04%	0.46%	0.46%	0.43%

* Effective May 1

**Smart meter charge of $3.65 dropping off January 2016

Rate Impacts

General Service > 50 kW

60 kW 40,000 kWh	2015	2016	2017	2018	2019	2020
Distribution only	$399.87*	$446.90	$454.58	$467.70	$479.78	$488.09
		$47.02	$7.69	$13.11	$12.08	$8.31
		11.76%	1.72%	2.88%	2.58%	1.73%
Total Bill	$5,140.45	$5,208.06	$5,235.45	$5,248.56	$5,260.64	$5,268.95
		$67.61	$27.38	$13.11	$12.08	$8.31
		1.32%	0.53%	0.25%	0.23%	0.16%

* Effective May 1

Rate Impacts

Large Use

8,000 kW 5,000,000 kWh	2015	2016	2017	2018	2019	2020
Distribution only	$13,556.00	$15,045.73	$15,118.09	$15,601.22	$16,061.04	$16,409.26
		$1,489.73	$72.36	$483.13	$459.82	$348.22
		10.99%	0.48%	3.2%	2.95%	2.17%
Total Bill	$608,313.65	$610,853.45	$614,963.53	$615,446.66	$615,906.48	$616,254.70
		$2,539.80	$4,110.09	$483.13	$459.82	$348.22
		0.42%	0.67%	0.08%	0.07%	0.06%

Rate Impacts

Unmetered Scattered Load

750 kWh	2015	2016	2017	2018	2019	2020
Distribution only	$22.05	$15.46	$15.78	$16.19	$16.57	$16.96
		($6.59)	$0.32	$0.41	$0.38	$0.38
		-29.89%	2.08%	2.57%	2.38%	2.32%
Total Bill	$115.35	$109.85	$109.56	$109.97	$110.35	$110.74
		($5.50)	($0.29)	$0.41	$0.38	$0.39
		-4.77%	-0.27%	0.37%	0.35%	0.35%

Rate Impacts

Street Lighting

375 kW, 150,000 kWh, 5,000 Lights	2015	2016	2017	2018	2019	2020
Distribution only	$6,842.70	$13,274.85	$9,143.51	$10,160.35	$11,155.03	$12,106.91
		$6,432.15	($4,131.34)	$1,016.84	$994.68	$951.89
		94.00%	-31.12%	11.12%	9.79%	8.53%
Total Bill	$24,843.71	$36,842.34	$26,868.76	$27,885.60	$28,880.27	$29,832.16
		$11,998.63	(9,973.58)	$1,016.84	$994.67	$951.89
		48.30%	-27.07%	3.78%	3.57%	3.30%

Deferral & Variance Accounts

Deferral and Variance Accounts

- Group 1 and Group 2 accounts disposed of over 1 year except:
  - Residual Smart Meters and IFRS CGAAP changes as these amounts result from changes to capital assets and will request to be disposed of over the Custom IR period.

Summary

Kingston Hydro is and will remain a low cost - low rate utility

We have listened to our customers

We continue to promote distributed generation and conservation initiatives

We use sound planning practices to ensure the investments maintain or improve reliability

Thank-you for your time