

RURAL OR REMOTE RATE PROTECTION (RRRP)

August 2016

CONFIDENTIAL

Overview: Rural or Remote Rate Protection (RRRP)

- The Rural or Remote Rate Protection (RRRP) framework was put in place in 2001.
 - The RRRP program was a continuation of the Rural Rate Assistance (RRA) program, that was introduced by the Government in the early 1980s through Ontario Hydro.
- The program was put in place to help offset the higher costs to distribute electricity to Ontario residents who live in rural or remote locations.
 - The cost of distributing power to lower-density rural and remote areas is much higher than for urban and higher density areas.
- Today, RRRP is a \$175M program collected via a 0.13 cents/kWh charge to all Ontario consumers, included under the "Regulatory" invoice line item.
 - There are roughly 337,000 customers that receive the RRRP subsidy. The majority of these are Hydro One Networks residential (class R2) customers. Customers of Algoma Power and Hydro One Remotes also receive RRRP.
 - \$127M of RRRP funding is dedicated to Hydro One R2 class (low density) customers (~\$125.5M) and three James Bay First Nations (~\$1.5M). This has been capped by regulation at \$127M since 2002.
- RRRP is an example of a program that shifts part of the burden of electricity sector costs from one class or subset of consumers to another. Other examples include Ontario Electricity Support Program (from low-income consumers to all others) and the Industrial Conservation Initiative (from large industrials with peak demand above 3MW or 5MW depending on industry to all others).
 - The Ministry has asked the OEB to prepare options on how to provide rate assistance to First Nation communities. These options will likely include a similar program.

Cost Shifts in Ontario's Electricity System

- The tables on the right show the estimated cost shifts in the province's electricity system that result from three government programs: ICI, RRRP and OESP.
- ICI expansion is currently under consideration and, if pursued, would place additional pressures on residential and commercial rates.
- While the OEB is still developing options, it is likely that any implemented First Nations rate assistance program will also shift costs onto non-First Nations customers.

Cost Shift Impacts - Residential Bill

Typical 750 kWh/month Toronto Hydro consumer

<i>\$/month</i>	2011	2012	2013	2014	2015	2016
ICI	2.65	3.25	3.01	3.53	4.75	4.77
RRRP	0.90	0.82	0.84	0.92	0.93	0.94
OESP	-	-	-	-	-	0.84
Total	3.55	4.07	3.85	4.46	5.68	6.55

Cost Shift Impacts - Commercial Bill

Typical non-RPP Class B consumer

<i>\$/MWh</i>	2011	2012	2013	2014	2015	2016
ICI	3.54	4.33	4.02	4.71	6.33	6.35
RRRP	1.20	1.10	1.12	1.23	1.24	1.25
OESP	-	-	-	-	-	1.13
Total	4.74	5.43	5.14	5.94	7.57	8.73

Cost Shift Impacts - Industrial Bill

Typical Class A consumer

<i>\$/MWh</i>	2011	2012	2013	2014	2015	2016
ICI	-22.17	-26.36	-23.50	-25.91	-33.79	-33.92
RRRP	1.20	1.10	1.12	1.23	1.24	1.25
OESP	-	-	-	-	-	1.13
Total	-20.97	-25.26	-22.38	-24.68	-32.56	-31.55

Note

Negative value indicates a benefit; positive value denotes an incremental charge

Primary Program Consideration: Funding Cap

- The original intent of Rural Rate Assistance and the early version of RRRP was to keep the average bill of a 'typical' rural residential customer similar to the average bill of municipal customers.
- However, since the total amount of subsidy available to Hydro One R2 customers has been capped, over time the average total bill paid by R2 customers has increased relative to municipal electric customers' average total bills.
 - Hydro One R2 customers currently have one of the highest average total bill in the Province, inclusive of the \$31.50 per month RRRP subsidy.
 - Hydro One R1 customers, who do not receive RRRP have the second highest average total bill in the Province.
- There are a number of variations of removing the cap that can be chosen depending on the balance between providing rate relief for rural customers and limiting the impact on other consumer bills.
 - The proposed options in this deck remove the subsidy cap and increase the subsidy to a level that either equalizes the R2 bill of the 'typical' consumer with another class of customer, or indexes to inflation.
 - The deck also proposes options for a new subsidy for R1 customers, at various level that also equalize to other classes of consumers.
 - These options are directed at Hydro One customers (excluding Remotes) only (the overwhelming majority of RRRP recipients) and would not change subsidy levels for Algoma Power or Hydro One Remotes customers.

Designing a Revised RRRP

- Designing options to revise RRRP involves three separate decision points:
 - **Eligibility:** Is the intention to simply increase the subsidy currently provided to R2 customers, or should the program be broadened to consider other classes of consumers (potentially R1) that may warrant assistance?
 - **Subsidy Level:** Increasing the subsidy will lead to comparisons to the total bills of LDC customers that do not receive RRRP. Options should seek to balance the need to provide meaningful rate relief with equity considerations that may result from subsidizing rural bills below the level of some urban ratepayers.
 - **Future Adjustments:** The impact of a one-timed subsidy increase will eventually dilute just as the current program's impact has diluted since 2001. There are different options for adjusting the subsidy amount in future years depending on the desire for the subsidy to keep pace with cost increases.
- Decisions made on these variables will ultimately determine the program costs, and the RRRP impacts to all ratepayers and be weighed against the final cost to consumers.
- Depending on the level of complexity of the designed option, a mixture of regulation and potentially legislative instrument will need to be developed. The OEB and IESO may also receive increased implementation responsibility.
- This deck provides an overview of the current RRRP and proposes options that balances these variables to differing degrees.

RRRP Eligibility

Overview: Rural and Remote

- The cost of distributing power to lower-density rural and remote areas is much higher than for urban areas.
- Hydro One Networks serves customers throughout Ontario in rural, semi-rural and urban and suburban areas. Due to the wide geographical areas served, Hydro One has density based rates:

Urban High Density

- service area contains 3,000 or more customers
- at least 60 customers for every kilometer of power line used to supply energy to the zone (called UR rate).
- UR customers do not receive RRRP.

Medium Density

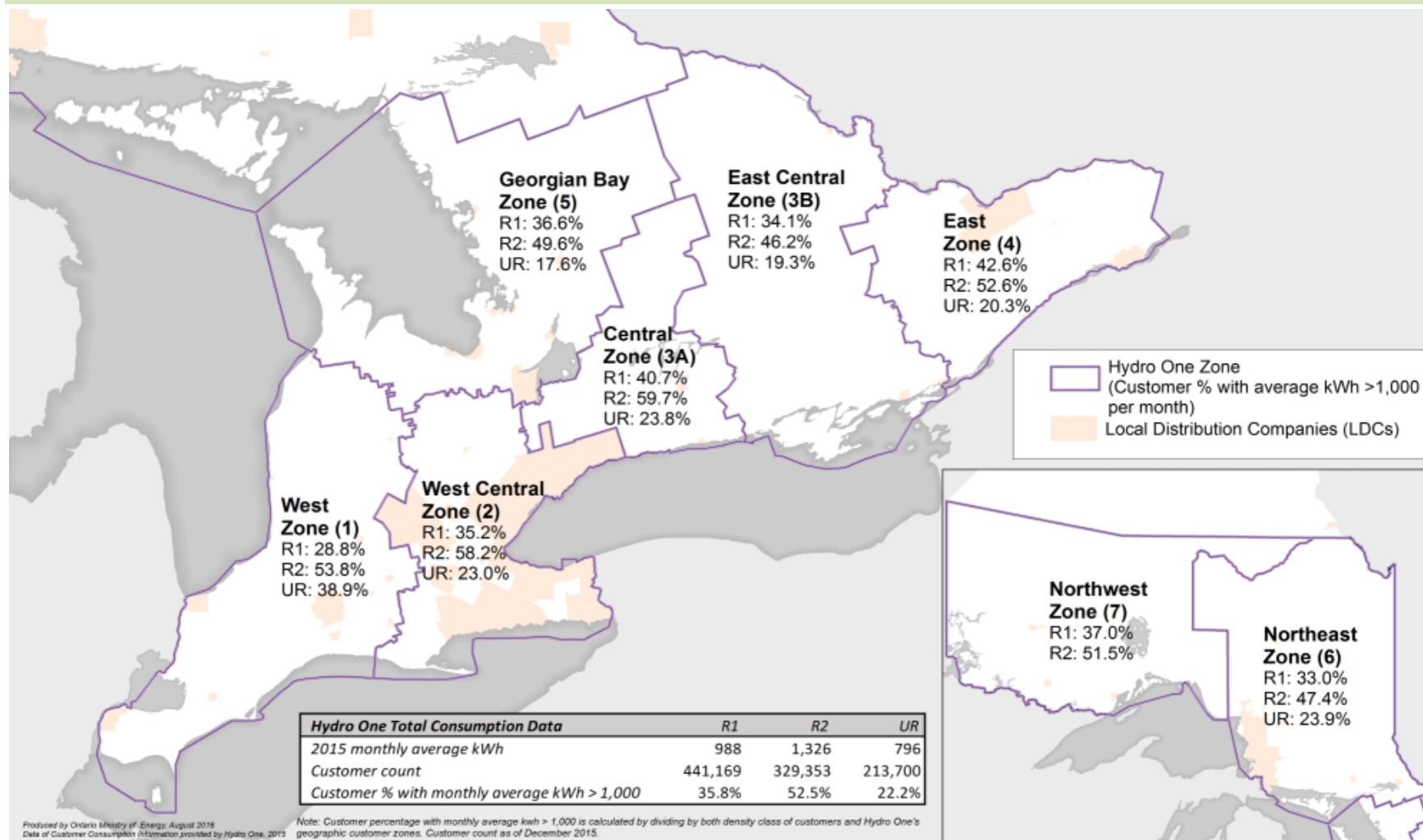
- service area contains 100 or more customers
- at least 15 customers for every kilometer of power line used to supply energy to the zone (called R1 rate).
- R1 customers do not receive RRRP.

Low Density

- the remaining area not covered by Urban or Medium Density areas (called R2 rate).
- R2 customers do receive RRRP.

- Remote areas refer to areas that are off-grid and are served by Hydro One Remote Communities Inc. These are exclusively in Northern Ontario.

Hydro One Residential Customer



Produced by Ontario Ministry of Energy, August 2016
Data of Customer Consumption information provided by Hydro One, 2015

RRRP Eligibility

- RRRP is available to Hydro One R2 customers (~329,000 customers).
 - R2 customers must be resident full-time (at least 8 months of the year) and are dwellings occupied as residences (including located on a farm).
 - Hydro One business and commercial class customers are not eligible for RRRP.
- RRRP is available to Algoma Power (~11,600 customers).
- RRRP is available for “Non Standard A” residential, general service, and seasonal customers of Hydro One Remote Communities (~3,500 customers).
 - Standard A (non-subsidized) rates are paid by federal and provincial government customers.
- James Bay First Nation LDCs serving about 750 customers also receive a fixed amount of RRRP funding (about \$1.5M annually).
- Eligibility for RRRP is set out in section 79 of the OEB Act, O. Reg 442/01 and O. Reg 445/07.

RRRP Collection and Disbursement

RRRP Administrative Roles

 Ministry of Energy	• The Province sets out the parameters of the program through legislation (s.79, OEB Act) and regulations (O. Reg 442/01, O. Reg. 445/07). • These set out, among other things: • Eligible customers • Amounts available to Hydro One Networks and James Bay First Nations.
	• The OEB determines annually the charge levied on all electricity consumption. Factors affecting the setting of the charge are detailed on slide 9.
	• Hydro One Networks determines the monthly RRRP subsidy available to each of its customers based on amount of RRRP made available to it through Regulation, the number of R2 customers, and accounting for any surplus or deficit in its variance account.
	• The IESO collects the charge from distributors across the Province and re-distributes to those distributors whose customers are eligible to receive the subsidy.

Determination of RRRP Requirement

- Each year, the OEB estimates the amount of rate protection that will be required in total and then calculates a volumetric regulatory charge that is applied to all customers in Ontario.
- To collect this \$175M from all electricity consumers, the OEB has determined a charge of 0.13 cents/kWh (~ \$1 monthly for a typical residential customer) is required.

Hydro One Networks and James Bay Communities (\$127M):

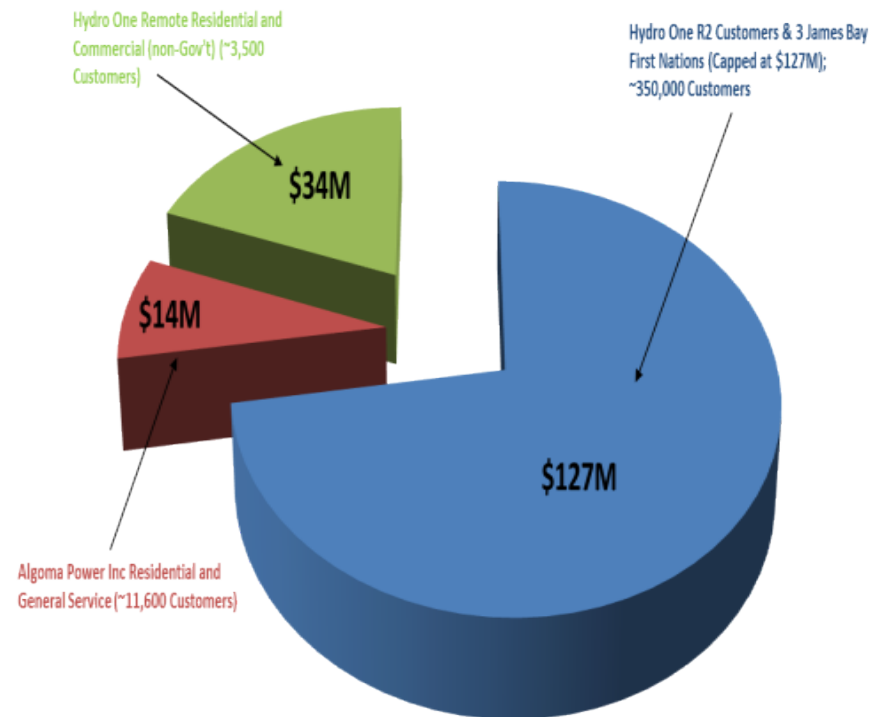
- The amount collected via RRRP to subsidize eligible consumers in these communities is capped at **\$127M** annually by Regulation (Hydro One, \$125.5M and James Bay, \$1.5M).

Algoma Power (~\$14M):

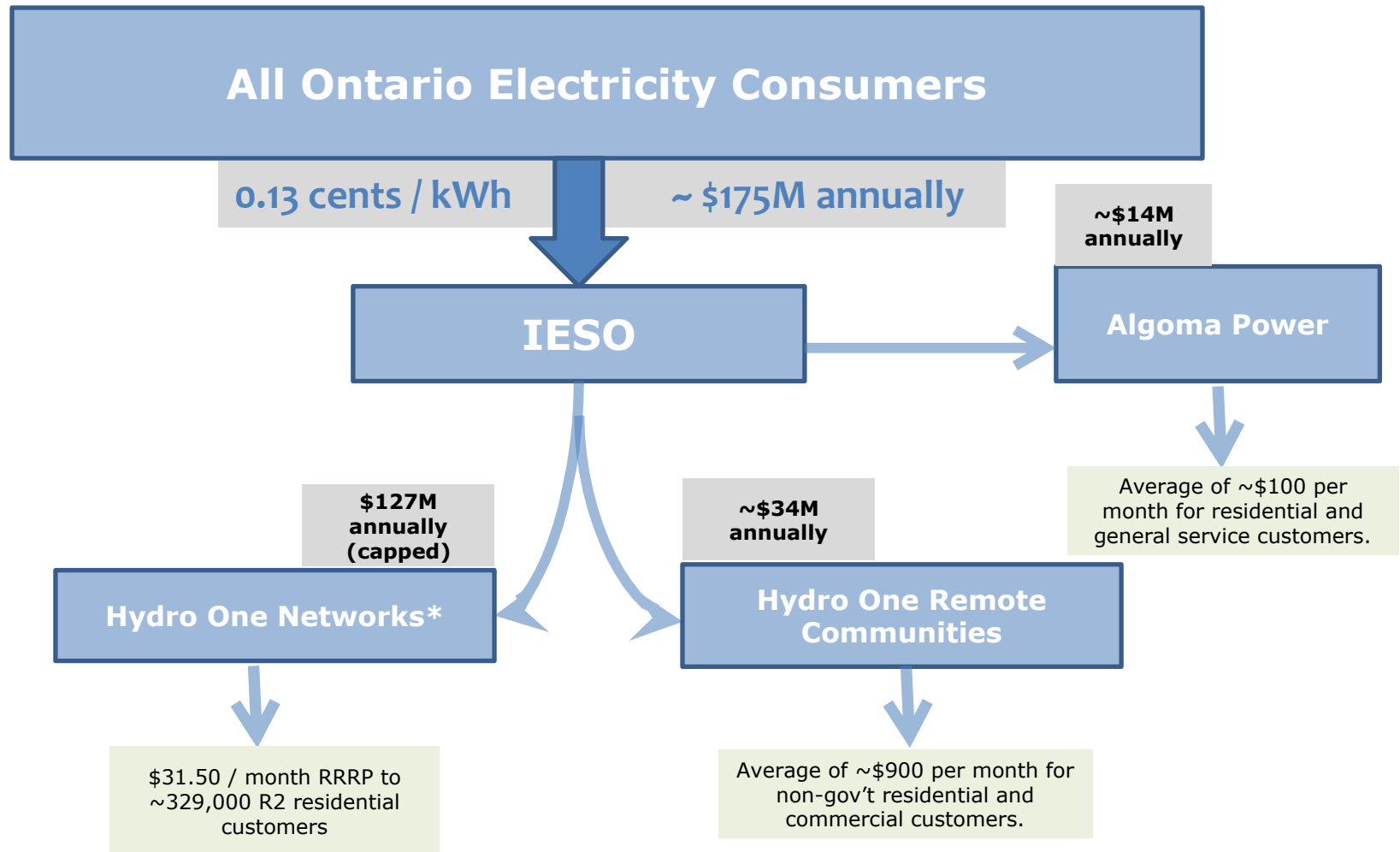
- RRRP permits Algoma to limit its increase in distribution rates charged to its residential and general service consumers by the annual average provincial distribution rate increase.
- RRRP compensates Algoma for any deficiency between what it collects from its consumers and its cost of service. The OEB currently determines this requirement at ~**\$14M**.

Hydro One Remotes (~\$34M):

- RRRP permits RemoteCo to limit its increase in rates charged to its non-government consumers by the annual average provincial distribution rate increase.
- RRRP compensates Remotes for any deficiency between what it collects from its consumers and its cost of service. The OEB currently determines this requirement at ~**\$34M**.



RRRP Subsidy: Collection and Disbursement



*Includes ~\$1.5M to James Bay First Nations

RRRP Customer Subsidy

- The following table illustrates the current level of support RRRP subsidy provides to customers.
- The RRRP subsidy for Hydro One R2 customers is a fixed amount of \$31.50. Hydro One R1 customers do not receive RRRP.
- While 750 kWh is the provincial average monthly consumption, rural and remote communities typically have higher average consumption (e.g. 1,000 kWh or more). For remote customers, the average subsidy approaches \$900 per month.
- The table illustrates amounts for consumption of 1,000 kWh per month.

Monthly Total Bill* for a 1,000 kWh per Month Customer		
<u>Rate Class</u>	<u>Total Bill with RRRP</u>	<u>Total Bill without RRRP</u>
Hydro One R2	\$229.04	\$260.54
Hydro One R1	n/a – does not receive RRRP	\$200.51
Remote Community	\$109.99	\$956.93 [†]

*before HST

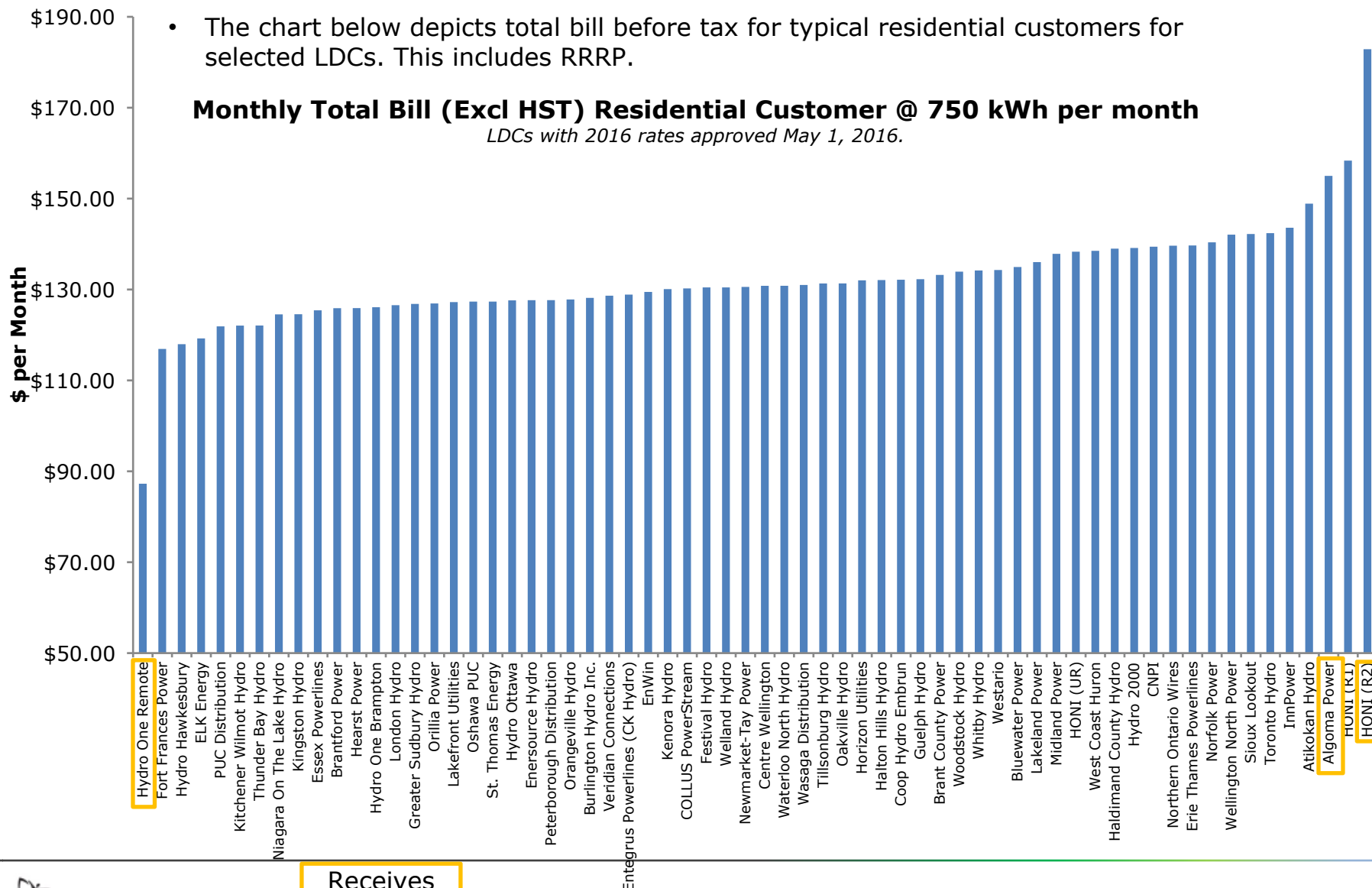
† Air Access

Customer Bill Comparison

- The chart below depicts total bill before tax for typical residential customers for selected LDCs. This includes RRRP.

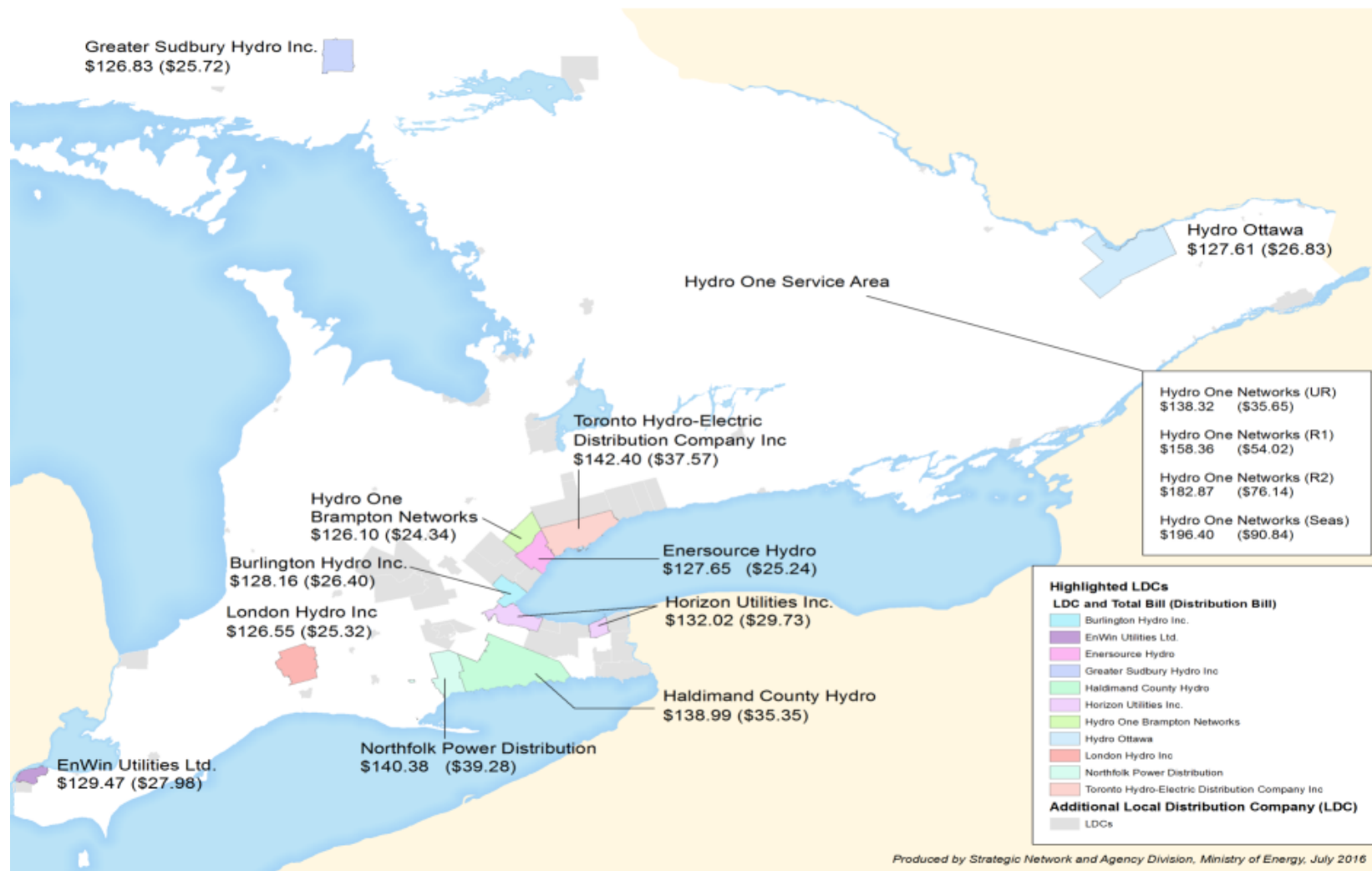
Monthly Total Bill (Excl HST) Residential Customer @ 750 kWh per month

LDCs with 2016 rates approved May 1, 2016.



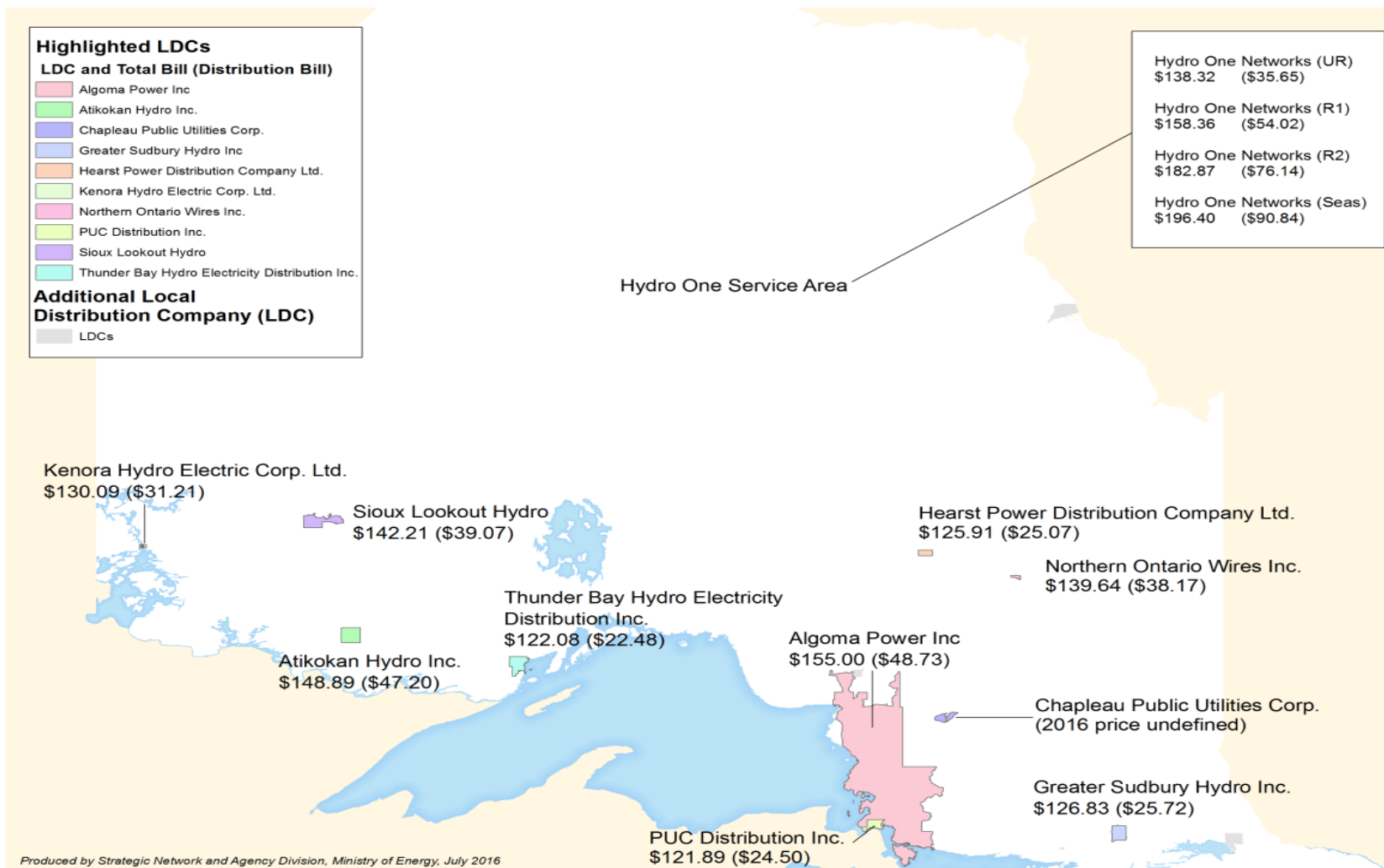
Selected Rate Comparison

Total Bill and Distribution Rate



Produced by Strategic Network and Agency Division, Ministry of Energy, July 2016

Selected Rate Comparison Total Bill and Distribution Rate



Program Considerations

Possible Options For Redesign – R2

Increase existing \$31.50 subsidy to R2 customers (~329,000 customers).

1. R2 Customers to Provincial Average¹

- Increase subsidy to equalize R2 bills with the averaged provincial bill, based on a monthly usage of 1000 kWh². This would result in a monthly subsidy increase of \$51.25.

2. R2 Customers to other grid connected customers receiving RRRP.

- Increase subsidy to equalize R2 bills with the average total bill of other grid connected customers receiving RRRP, based on a monthly usage of 1000 kWh.

3. R2 Customers to R1

- Increase subsidy to equalize R2 bills with the average total bill of R1 rate class, based on a monthly usage of 1000 kWh.

4. R2 Customer Subsidy Increased by Inflation (Retroactive to 2001)

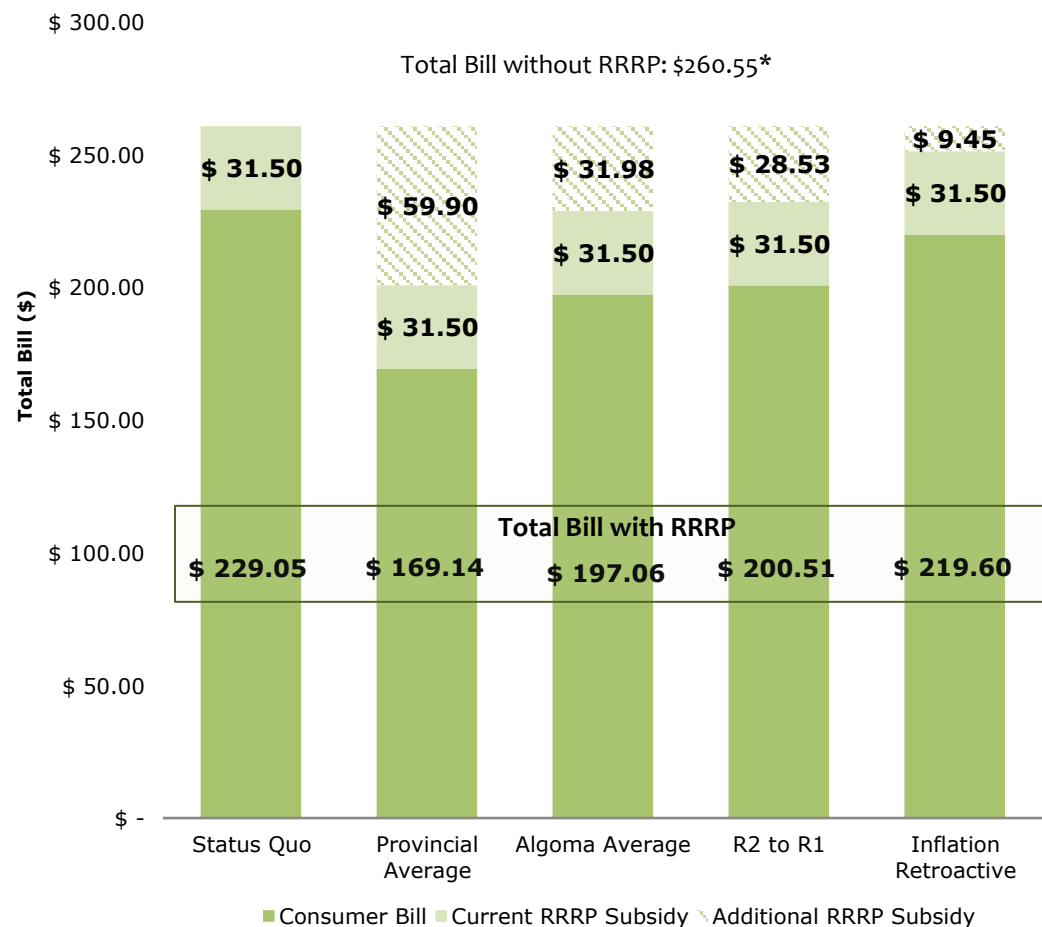
- Remove cap on subsidy and increase subsidy level by indexing to accumulated inflation and dating back to 2001.

Notes:

¹Average Bill of Ontario municipal LDCs and non-municipal Algoma Power, CNPI, and Hydro One Urban. Excludes Hydro One Remote, Hydro One R1 and Cornwall Electric.

²1000 kWhs is the median consumption rate for R2 customers

Ratio of RRRP to Consumer Bill: Hydro One R2 Customers @ 1000kWh/month



Summary of Options – Incremental costs R2

Option	Incremental Monthly Subsidy levels	Total Bill (1,000wh)	Incremental R2 Program Cost	Incremental Total Program Ratepayer Impact
Status Quo	\$31.50	\$229.05	\$125.5M	~\$1/month
1. R2 to Provincial Average	+\$59.90 (\$91.40)	\$169.14	+\$231M (~\$356.5M)	+\$1.24/month (\$2.24/month)
2. R2 to other grid connected customers receiving RRRP	+\$31.98 (\$63.48)	\$197.06	+\$124M (~\$249.5M)	+\$0.64/month (\$1.64/month)
3. R2 to R1	+\$28.53 (\$60.03)	\$200.51	+\$110M (~\$235.5M)	+\$0.57/month (\$1.57/month)
4.(a) Inflation index retroactive	+\$9.45 (\$40.95)	\$219.60	+\$37.5M (~\$163M)	+\$0.17/month (\$1.17/month)
4.(b) Inflation index going forward	+\$0.60 (\$32.10)	\$228.45	+\$2.5M (~\$127M)	+ <\$0.01/month (~\$1/month)

- Note 1: The subsidy provided would be a monthly lump sum, and would equalize bills for a 1000 kWh customer. Consumption over 1000 kWh would result in total bills higher than the average (eg: Under Option #1, R2 subsidy would be fixed at \$91.40 regardless of consumption level – same as it is fixed at \$31.50 today.)
- Note 2: Bill amounts exclude HST. Amounts are based on 2016 rates. If spending is uncapped beyond 2016, program costs would increase based on chosen adjustment mechanism (see slide 25)
- Note 3: Status Quo Ratepayer Impact includes recovery of additional \$49.5M (\$175M total) in costs to deliver RRRP to Algoma Power, Hydro One Remote, and the James Bay First Nation communities. Approximately ~\$0.70 of the ~\$1/month RRRP charge covers R2 subsidy costs. Rate payer impact based on 750kWh average consumption

Possible Options For Redesign – R1

Expand RRRP subsidy to include R1 customers
(There are ~440,000 R1 customers.)

1. R1 Customers to Lower Quartile (\$40)

- Provide a monthly \$40 subsidy to R1 customers.

2. R1 Customers to Provincial Average

- Provide a monthly subsidy to equalize R1 bills with the averaged provincial bill, based on a monthly usage of 1000 kWh².

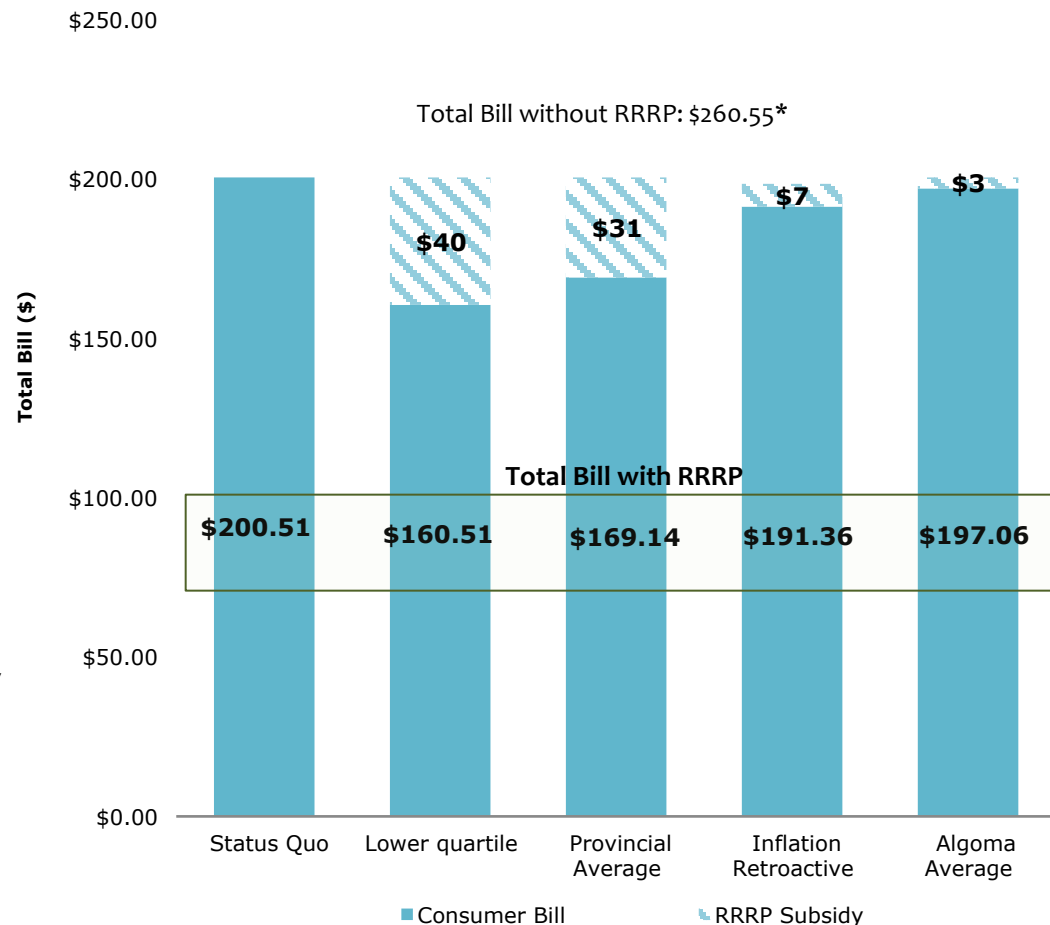
3. R1 to match rate relief for R2 Inflation increase

- Provide R1 customers with a monthly subsidy equal to the R2 inflation increase which indexes accumulated inflation dating back to 2001. This would result in a monthly subsidy of ~\$7.14.

4. R1 to Other grid connected RRRP customers

- Provide subsidy that would equalize R1 bills with the average total bill of other grid connected customers receiving RRRP, based on a monthly usage of 750 kWh.

Ratio of RRRP to Consumer Bill: Hydro One R1 Customers @ 1000kWh/month



Notes

¹Average Bill of Ontario municipal LDCs and non-municipal Algoma Power, CNPI, and Hydro One Urban. Excludes Hydro One Remote, Hydro One R1 and Cornwall Electric.

² 1000 kWhs is the average consumption rate for R1 customers

Summary of Options – Incremental Costs R1

Option	Monthly Subsidy levels	Total Bill (1000Kwh)	Incremental R1 Program Cost	Incremental Total Program Ratepayer Impact
Status Quo	\$0.00	\$200.50	\$0	~\$1/month
1. R1 to lowest cost LDC (\$40 subsidy)	\$40.00	\$160.50	+\$211M	+\$1.13/month (\$2.13/month)
2. R1 to Provincial Average	\$31.37	\$169.13	+\$165M	+\$0.87/month (\$1.87/month)
3. R1 to match rate relief for R2 Inflation increase	\$7.14	\$191.36	+\$37.5M	+\$0.17/month (\$1.17/month)
4. R1 to other grid connected customers receiving RRRP	\$3.45	\$197.05	+\$18.2M	+\$0.06/month (~\$1/month)

- Note 1: The subsidy provided would be a monthly lump sum, and would equalize bills for a 1000 kWh customer. Consumption over 1000kWh would result in total bills higher than the average (eg: Under Option #1, R1 subsidy would be fixed at \$40.00 regardless of consumption level – same as it is fixed at \$31.50 today for R2 customers.)
- Note 2: Bill amounts exclude HST. Amounts are based on 2016 rates. If spending is uncapped beyond 2016, program costs would increase based on chosen adjustment mechanism (see slide 25).
- Note 3: Status Quo Ratepayer impacts represents costs associated with recovery of current \$175M program. This charge does not currently support an R1 customer subsidy. Rate payer impact based on 750kWh average consumption

Impacts of Combining Options

- All R1 and R2 options can work independently of one another or in combination.
- This could include adjusting R2 subsidy on a yearly basis or creating a new cap for R1 customers or other permutations.
- Some examples below:

Combined Option	Monthly Subsidy levels		R2 & R1 Program Cost	Incremental Total Program Ratepayer Impact
	R2 Subsidy	R1 Subsidy		
Status Quo	\$31.50	\$0	\$125.5M	~\$1/month
(Highest Cost Option) R2 Customers to Provincial Average + R1 Customers to Lowest LDC	+\$59.90 (\$91.40)	\$40	+\$443 (\$568.5M)	+\$2.42/month (\$3.42/month)
(Mid-Cost Option) R2 Customers to R1 Rates + R1 Customer matched inflation increase	+\$28.53	+\$7.14	+\$148M (\$273.5M)	+\$0.79/month (\$1.79/month)
(Lowest Cost Option) R2 Customers Receive Increase Equivalent to Retroactive Inflation Boost + and R1 to other grid connected customers receiving RRRP	+\$9.45 (\$40.95)	\$3.45	+\$55.5M (\$181M)	+\$0.28/month (\$1.28/month)

- Parity in rates between Hydro Ones rate classes (R1, R2 and Urban) should be considered carefully, as it may raise questions of fairness.
- Bill impacts for larger customers, such as businesses and industrials would be substantially higher than bill impacts for low volume residential customers.
- Note ratepayer impact increases would be in addition to any costs collected through RRRP to fund transmission investment in northern Ontario, as recently enabled by Regulation (see Appendix). As well, selecting ICI scenario three would add an additional \$0.33/month increase.

Impacts of Combining Options – Small Business, Commercial, Industrial

- The table below provides examples of bill impacts for various small business, commercial and industrial electricity users. Model assuming a volumetric funding model, which would apply a volumetric charge to all users.
 - A volumetric charge of \$0.0013 per kWh is currently applied to all consumers to fund RRRP. That charge would increase depending on the total program costs

Consumer example	Monthly RRRP Bill Impact			
	Status Quo	Combined Highest Cost Option	Combined Mid-Cost Option	Combined Lowest Cost Option
Small Restaurant Small commercial – 5,000 kWh / month	\$6.50	+~\$16.50 (\$23)	+~\$5.50 (\$12)	+~\$2.00 (\$8.50)
Greenhouse Large farm – 50,000 kWh / month	\$65	+~\$163 (\$228)	+~\$54 (\$119)	+~\$20 (\$85)
Large grocery store Medium-large commercial – 300,000 kWh / month	\$388	+~\$979 (\$1,367)	+~\$327 (\$715)	+~\$123 (\$511)
Chemicals company Medium industrial – 6,000,000 kWh / month	\$7,760	+~\$19,577 (\$27,331)	+~\$6532 (\$14,292)	+~\$2463 (\$10,223)
Large Mine Large industrial – 60,000,000 kWh / month	\$77,598	+~\$195,716 (\$273,314)	+~\$65,323 (\$142,921)	+~\$24,635 (\$102,233)

Future Program Adjustments

- After a preferred option is implemented, the program can be re-capped to maintain cost certainty. Implementation can include a mandated program review on a set time-period. Ex: five years.
- As electricity costs continue to rise, the impact of any of the proposed reform options will dilute over time if the subsidy level is not subject to regular adjustments.
- Most of the proposed options can be adjusted (annually or on regularly defined intervals) by:
 - **Annual Re-Basing:** Continuously recalculating the RRRP requirement to maintain the total bill for a customer consuming 1000 kWhs per month at the intended relative level. Ex: If R2 is brought down to provincial average, recalculate average bill each year and set RRRP subsidy level to align R2 bill with new average.
 - **Limited Bill Increase:** Limit program funding increases for R1 and/or R2 customers to the average Ontario distribution bill increase. (i.e. allowing the total program envelope available to Hydro One to increase at the same rate as average distribution rates increase.)
 - **Inflation Increase:** Increase subsidy by rate of inflation, which is not likely to cover the rate of cost increases.
- Such adjustment mechanisms would need to be set out in Regulation and would likely fall to the Ontario Energy Board to implement, as it sets the RRRP amount currently.
- Analysis is required to identify any implementation risks associated with such adjustments.

Mid-Cost Option Adjustment Projections

- Explanation of adjustment options using the “mid-cost option” (slide 23) as example.

	Description	Considerations
Five Year Funding Cap	Program costs are maintained at \$273.5M/year for five years.	- Cost certainty - Subsidy impact is diluted year-over-year - Can be reviewed in regular intervals.
Inflation Adjustment	Available program funding is increased by inflation annually. Assuming 2.0%/year in inflation, year five costs are projected at \$296M.	- Protects slightly against subsidy dilution but unlikely to cover all cost increases. - RRRP charge will rise accordingly.
Annual Re-Basing	Program costs are adjusted annually to ensure R2 customers pay the equivalent of an unsubsidized R1 bill in each year. R1 subsidy would be adjusted by inflation annually. Costs cannot be projected as they depend on OEB-determined annual R1 rates.	- Should R1 bills rise at a faster rate than R2 bills, R2 will see its subsidy level decrease. - As a result, program costs could decrease, though this is unlikely as it would require a large H1 capital investment affecting only R1 customers.
Limited Bill Increase	Program costs are adjusted annually to ensure R2 and R1 RRRP subsidy increases by the provincial average distribution rate increase. Costs cannot be projected as they depend on OEB-determined annual rates for all LDCs.	If Hydro One's distribution costs increase at a greater rate than the provincial average, the RRRP subsidy will be diluted. However, program costs increases are limited to average distribution rate increase.

Next Steps

- Seek direction on preferred path forward.
- Reach out to other impacted stakeholders such as Hydro One, the OEB, and the IESO for input into options.
- Identify implementation considerations in moving forward with preferred option, targeting a late fall Cabinet submission.

APPENDIX

R2 Customer Options

Increase Subsidy for R2 customers to align with Provincial Average

- Currently R2 customers receive a subsidy of \$31.50/month through RRRP. The median consumption level for R2 customers is ~1000 kWh/month, which results in average bill of ~\$229 per month.
- The average provincial bill based on 1000 kWh/month consumption is ~ \$169 per month.
- Under this option, R2 customers would be given an increase of ~\$60 to the monthly RRRP subsidy to bring them in line with the provincial average.

	RRRP subsidy	Average R2 Bill (@ 1000 kWhs)
Status Quo	\$31.50	\$229.04
R2 to Provincial Avg.	+ \$59.90	
Total Benefit	= \$91.40/mth	
		\$169.14

	R2 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$125.5 Million	~\$1/month
R2 to Provincial Avg.	+ \$231 Million	+ \$1.24/month
Total Cost	= ~356.5 Million	= \$2.24/month

Considerations:

- Subsidizing R2 to provincial average would lead R2 bills being lower than many LDCs, including Toronto Hydro. It would also put R2 rates below H1's UR and R1 rates.
- R2 rates would also be lower than Algoma Power rates, whose service territory is more remote and less dense than much of Hydro One's service territory. Could lead to fairness considerations.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Increase Subsidy for R2 Customers to align with other grid connected customers receiving RRRP

- Currently R2 customers receive a subsidy of \$31.50/month through RRRP. The median consumption level for R2 customers is ~1000 kWh/month, which results in an average bill of ~\$229 per month.
- Consumers of Algoma Power also receive RRRP, but their average monthly bill using 1000 kWhs is ~\$197
 - Algoma Power's rates are the next highest in the Province following Hydro One R1
- R2 customers would be given an increase of ~\$32 to the monthly RRRP subsidy to bring them in line with other grid connected recipients of RRRP (Algoma Power).

	RRRP subsidy	Average R2 Bill (@ 1000 kWhs)
Status Quo	\$31.50	\$229.04
R2 to Algoma Avg.	+ \$31.98	
Total Benefit	= \$63.48/mth	
		\$197.06

	R2 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$125.5 Million	~\$1/month
R2 to Algoma Avg.	+ \$123.5 Million	+ \$0.64/month
Total Cost	= ~\$249 Million	= \$1.64/month

Considerations:

- Algoma Power customers also receive RRRP but have lower total bills than either of Hydro One's R1 or R2 classes. This option puts all current grid connected RRRP subsidy customers on equal footing.
 - No grid connected customer receiving RRRP will have a rate lower than a municipal electric utility customer, as Algoma Power's rates are the next highest in the Province following Hydro One R1.
- The Algoma Power total bill works out to approximately 18% higher than the average Ontario total bill, excluding Hydro One R1 and seasonal.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Increase subsidy to R2 customers to align with R1 customer bills

- Currently R2 customers receive a subsidy of \$31.50/month through RRRP, with an average bill (based on 1000 kWh) of \$229.
- R1 customers do not receive RRRP and their average monthly bill, based on 1000 kWh, is ~\$200. R1 customers pay close to the highest rates in the province, excluding R2
- To bring their bills closer in line with R1 customers, R2 customers would be given an increase of ~\$28.50 to the monthly RRRP subsidy. This is based on equalizing R1 and R2 bills based on a consumption rate of 1000 kWhs.

	RRRP subsidy	Average R2 Bill (@ 1000 kWhs)
Status Quo	\$31.50	\$229.04
R2 to R1	+ \$28.53	
Total Benefit	= \$60.03mth	
		\$200.51

	R2 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$125.5 Million	~\$1/month
R2 to Algoma Avg.	+ \$110 Million	+ \$0.57/month
Total Cost	= ~\$235.5 Million	= \$1.57/month

Considerations:

- Provides some relief to R2 customers.
- Bills for R1 customers are still considerably higher than most of the rest of the Province.
- This approach equalizes H1's density-based rate structure. Questions may arise as to why medium density R1 customers pay the same rate as low density R2 customers.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Increase subsidy to apply inflationary costs accumulated since 2001

- The total available RRRP funding for R2 consumers has not changed since 2001. Incorporating inflation rates since 2001 into 2017 subsidy levels would result in a large rate relief increase from 2016 to 2017, with subsidy levels rising by inflation beyond 2017.
- This would not bring the RRRP subsidy back to its share of the 2001 total bill as electricity costs have risen by more than inflation.
- Ontario's all-items Consumer Price Index has increased by 30% since 2001. A 30% increase in available funding would put total program costs at ~\$213M.
- Monthly subsidy level would rise from \$31.50 to \$40.95 for R2 customers, leading to average total bill reduction for a 750 kWh/month customer from \$182.87 to \$173.42, a subsidy increase of \$9.45/month.

	RRRP subsidy	Average R2 Bill (@ 1000 kWhs)		R2 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$31.50	\$229.04	Status Quo	\$125.5 Million	~\$1/month
Inflation index accumulated since 2001	+ \$9.45		Inflation index accumulated since 2001	+ \$37.5 Million	+ \$0.17/month
Total Benefit	= \$40.95mth		Total Cost	= ~\$163 Million	= \$1.17/month

Considerations:

- Limited on-going rate relief – annual inflation increases are not expected to keep pace with increases to total bill.
- Alternative options would be to apply inflation index going forward – which would result in an additional +\$0.60 in RRRP subsidy (\$32.10) and would increase the program costs by 2.5M. The resulting bill impact would be <\$0.01/month (~\$1/month)
- Minimizes ratepayer impact.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

R1 Customer Options

Provide Subsidy for R1 Customers to align with lower quartile LDCs

- Currently R1 customers do not receive a RRRP subsidy. The average consumption level for R1 customers is ~1000 kWh/month, which results in average bill of ~\$200 per month.
- Under this option R1 customers would be given a subsidy of ~\$40 which would bring their bills in line with the bills of the lower quartile of LDCs – based on an average consumption of 1000 kWhs.

	RRRP subsidy	Average R1 Bill (@ 1000 kWhs)
Status Quo	\$0	\$200.51
R1 to lower quartile	+ \$40.00	
Total Benefit	= \$40.00/mth	
		\$160.51

	R1 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$0	~\$1/month
R1 to lower quartile	+ \$ 211Million	+ \$1.13 /month
Total Cost (includes existing RRRP program for H1)	= ~336.5Million	= \$2.13/month

Considerations:

- This option would mean R1 bills would be lower than almost all municipal service territories that operate at lower cost. It would also lead to R1 being lower than Hydro One's urban rate.
- This could lead to fairness considerations, as customers who pay higher distribution charges will be subsidizing customers to well below the provincial average cost.
- Questions may arise as to why medium density R1 customers pay lower rates than higher density UR customers, who are less costly to serve.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Provide Subsidy for R1 customers to align with Provincial Average

- Currently R1 customers do not receive a RRRP subsidy. The average consumption level for R1 customers is ~1000 kWh/month, which results in average bill of ~\$200 per month.
- The average provincial bill based on 1000 kWh/month consumption is ~ \$169 per month.
- Under this option, R1 customers would be given an increase of ~\$31 to the monthly RRRP subsidy to bring them in line with the provincial average.

	RRRP subsidy	Average R1 Bill (@ 1000 kWhs)
Status Quo	\$0	\$200.51
R2 to Provincial Avg.	+ \$31.37	
Total Benefit	= \$31.37/mth	
		\$169.14

	R1 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$0	~\$1/month
R1 to Provincial Avg.	+ \$ 166Million	+ \$0.87 /month
Total Cost <i>(includes existing RRRP program for H1)</i>	= ~291.5Million	= \$1.87/month

Considerations:

- Subsidizing R1 to provincial average would lead R1 bills being lower than many LDCs, including Toronto Hydro. It would also put R1 rates below H1's UR.
- R2 rates would also be lower than Algoma Power rates, whose service territory is more remote and less dense than R1 service territory. Could lead to fairness considerations.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Provide R1 customers with subsidy that matches retroactive inflationary increase for R2 customers

- Currently R1 customers do not receive a RRRP subsidy. The average consumption level for R1 customers is ~1000 kWh/month, which results in average bill of ~\$200 per month.
- Under this option R1 customers would be given \$37.5 million to match amount of increased rate relief for R2 customers under the retroactive inflation option. This means that R1 customers would be provided a monthly subsidy of ~\$7.
- R1 customers' rates would be slightly lower than consumers of Algoma Power, who also receive RRRP, with an average monthly bill of ~\$197
- Algoma Power's rates are the next highest in the Province following Hydro One R1.

	RRRP subsidy	Average R1 Bill (@ 1000 kWhs)
Status Quo	\$0	\$200.51
Inflation index accumulated since 2001	+ \$7.14	
Total Benefit	= \$7.14/mth	
		\$193.37

	R1 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$0	~\$1/month
Inflation index accumulated since 2001	+ \$37.5 Million	+ \$0.17/month
Total Cost <i>(includes existing RRRP program for H1)</i>	= ~\$163 Million	= \$1.17/month

Considerations:

- Sets a new baseline of RRRP support for R1 customers going forward - \$37.5 million in additional RRRP program funding.
- Provides some level of support for R1 customers (\$7 per month) and avoids rate parity for Hydro One rate classes.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

Provide subsidy for R1 customers to align with other grid connected customers receiving RRRP

- Currently R1 customers do not receive a RRRP subsidy. The average consumption level for R1 customers is ~1000 kWh/month, which results in average bill of ~\$200 per month.
- Consumers of Algoma Power receive RRRP and their average monthly bill is ~\$197. Algoma Power's rates are the next highest in the Province following Hydro One R1
- R1 customers would be given a subsidy of ~\$3 to the monthly RRRP subsidy to bring them in line with the Algoma Power.

	RRRP subsidy	Average R1 Bill (@ 1000 kWhs)
Status Quo	\$0	\$200.51
Inflation index accumulated since 2001	+ \$3.45	
Total Benefit	= \$3.45/mth	
		\$197.06

	R1 RRRP Program Costs	Ratepayer Impact ¹
Status Quo	\$0	~\$1/month
Inflation index accumulated since 2001	+ \$18 Million	+ \$0.06/month
Total Cost (includes existing RRRP program for H1)	= ~\$143.5 Million	= \$1.06/month

Considerations:

- Algoma Power customers also receive RRRP but have lower total bills than either of Hydro One's R1 or R2 classes. This option puts all current grid connected RRRP subsidy customers on equal footing.
 - No grid connected customer receiving RRRP will have a rate lower than a municipal electric utility customer, as Algoma Power's rates are the next highest in the Province following Hydro One R1.
- The Algoma Power total bill works out to approximately 18% higher than the average Ontario total bill, excluding Hydro One R1 and seasonal.

¹ Ratepayer impact is calculated based on total RRRP program costs, based on average usage of 750 kWhs

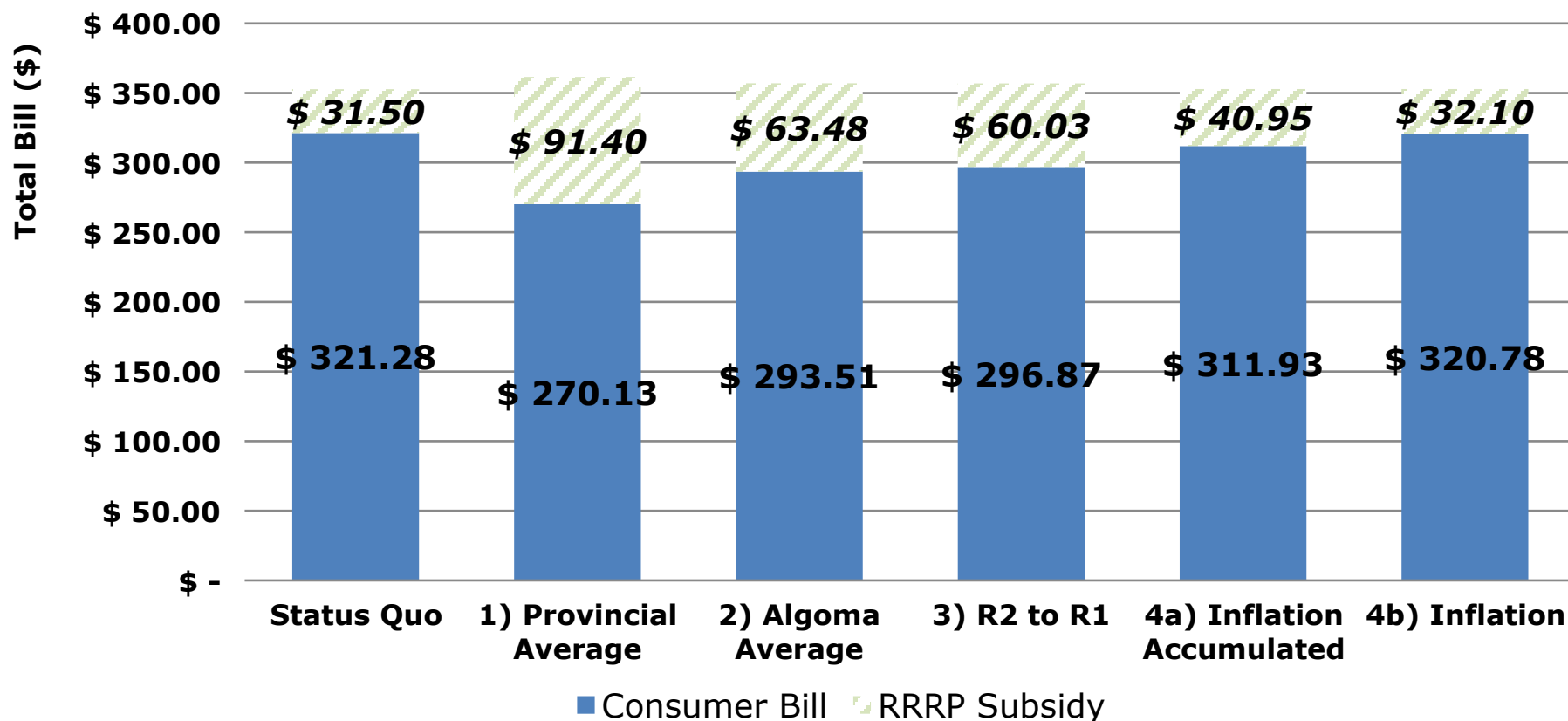
Supplementary Information

Summary Current RRRP Program

Design Elements	Current RRRP
Eligibility and Benefits	• Around 329,000 Hydro One low-density (R2), year-round residential customers • Residential customer discount is \$31.50/month or about \$380 annually. • Around 3,500 RemoteCo customers. • Remote customers receive about \$8,600 per year. • 750 customers in 3 grid-connected First Nation communities on the James Bay coast. • Around 11,600 customers served by Algoma Power in Algoma District.
Program Contributions	• Collected from all distribution (residential, commercial, industrial and sub-transmission) and embedded generation customers (except MicroFIT) as a charge on consumption. • Represents about 0.13 cents / kWh or 1% of average total bill. • Average residential customer, using 1000 kWh/month, would contribute \$16 per year. • \$175.5M expected to be collected in 2016
Billing and Visibility	• Invisible on bill. • Collected as an element of IESO uplift for Wholesale Market Service Charge which is a component of the Regulatory Charges line on the electricity bill . • IESO flows RRRP monies collected to pay distributors (Hydro One Networks, Algoma power, RemoteCo and James Bay communities) amounts they are entitled to.
Funding Levels	• Funding capped at \$127 million for Hydro One rural customers (this amount includes about \$1.5 million which is paid to the three James Bay communities). In addition, the OEB, at its discretion, sets additional amounts to address funding shortfalls for Algoma Power (\$14M) and RemoteCo(\$34M). • The current \$31.50 per month subsidy for R2 customers represents 29% of the distribution bill and 15% of the total bill of a 'typical' customer consuming 750 kWh/month, before taxes.

RRRP-to-Bill Ratio (1,500kWh) for R2

Ratio of RRRP to Consumer Bill: Hydro One R2 Customers @ 1,500kWh/month¹



¹. Hydro One R2 customers use on average 1326 kWhs per month, but customers in colder zones use on average 1500 kWhs per month.

Remote Communities Map



RRRP Amendment: Connecting Remote Communities

- Regulatory amendments to the RRRP regulation are included as part of a July 19, 2016 package of policy supports for connecting remote communities to the transmission system.
- If passed, the amendments would redefine “remote area” to allow for RRRP to cover costs related to transmission connection of communities served by RemoteCo.
- As a distribution customer being connected to the transmission system, RemoteCo could pass through costs associated with transmission connection to the transmitter (e.g. Wataynikaneyap Power).
- Transmission connection of up to 21 remote communities would result cost savings over the long term due to reduced use of diesel generation.
- These RRRP amendments are a first step to enable cost recovery for a portion of the remote connection project. Ontario’s objective is to facilitate the connection of all 21 connectable communities, including the nine served by Independent Power Authorities (IPAs).
- A significant portion of the lines needed to connect communities served by RemoteCo and by IPAs would be shared infrastructure.

Remote Connection Cost Impacts to RRRP

- The IESO estimates the cost of connecting 21 remote communities, including enabling infrastructure such as the line to Pickle Lake would cost ~\$1.3B
- Current annual costs to serve these communities with diesel generation is estimated at ~\$79M
- In general, transmission connection could result in a short term increase in the RRRP charge followed by a net reduction in RRRP over the life of the project as a result of reduced cost of service in remote communities.
- However, there are a number of factors which require resolution before accurate RRRP forecasting can be completed:
 - The amount and nature of Federal contribution to the project. Currently Ontario estimates the Federal government is responsible for over half of the costs associated with electricity service in remote communities.
 - The nature of any capital cost payment flowed through from RRRP. It is not anticipated that a lump sum single payment approach would be applied to RRRP. The nature of amortization approved by the OEB would impact annual RRRP amounts needed.
 - The scope of the project and success in connecting IPA communities
 - The approved rates of return on equity and debt financing for the transmitter.
- Projections of bill impacts from other RRRP reform proposals are conditional on any decision to move forward (and how) with transmission project cost recovery through RRRP.