

Addressing the Costs of Extreme Low Density

*A note submitted on behalf of the Ontario Federation of Agriculture to the hearing
Hydro One Distribution Rates 2015-2019 EB-2013-0416*

Introduction Ontario has relied on Rural Rate Assistance (RRA) to address the extra costs of low density areas for over thirty years. This approach relies on a ‘sales tax’ of 0.12 cents a kWh at present on each kWh bought by every Ontario rate payer and using these funds to offset the monthly service charges of low density customers.

In round numbers, 1,000 kWh per month in a low density area costs \$185, consisting of \$33.85 monthly charge including a smart meter levy, and \$50.00 for delivery plus \$100 for power (assuming 600 kWh at 8.6 cents and 400 kWh at 10.1 cents and 9% line losses) or \$2,200 a year, plus taxes. The first 11,000 kWh each year is eligible for RRA. This example customer enjoys the reduced monthly service charge of \$33.00, 11 months out of the 12 and their actual cost is closer to \$2,228 as one month will not qualify for RRA when they exceed 11,000 kWh for the year.

Without RRA, the monthly low density residential service charge would be \$61 a month and the annual cost \$2,526. RRA provides a 14.6% reduction in costs compared to what costs would otherwise be for 1,000 kWh a month customers.

A residential customer in Ottawa has costs of approximately \$10.35 a month as a service charge including the smart meter charge and delivery charges of \$33.50 a month plus power use of \$94 including lines losses of about \$2.00 a month. The total is \$137.85 a month or \$1654 a year.

Low density provision in Hydro One is about 25% more costly with RRA and would be 34% more costly without RRA, compared to regular suburban service in Ottawa. This comparison is neither praise for Ottawa, nor a critique of Hydro One. It illustrates that low density rural customers incur higher costs, through no fault of their own.

A medium density residential customer in Hydro One pays about \$47 a month for delivery, \$24.80 for service including a smart meter and about \$95 for power including line losses. This is \$168.80 a month or \$2,000 a year. They pay 17.3% more than an Ottawa customer.

1 If, Ottawa Hydro has about average costs for Ontario, this is close to the target threshold
2 originally set for RRA that rural Ontario customers pay about 15% more than the Ontario
3 average. OFA believes residential service rates for medium density customers in Hydro
4 One are acceptable compared to those for Ottawa and similar cities given the difference
5 in densities and related costs. But the extra costs in low density areas do not arise from
6 causes customers can avoid or control. The costs are higher per customer because there
7 are so few customers spread over a large area.

8 *OFA does not dispute that low density areas have higher costs and require greater*
9 *revenue to serve. The question is, "Where, should the extra revenue come from?".*

10 OFA believes the higher costs are incurred primarily by the extreme low density parts,
11 that is, areas with fewer than about 4 customers per km., of the low density service area
12 and that the extra revenue needed should come from RRA.

13 The present rate structure has the same charge for a customer in the 1 customer per
14 three km. parts as for those customers in 12 to 15 customers per km parts. If causality
15 applied within classes in the way that is applied between classes, the appropriate service
16 charge for those in the 'higher' density parts of the low density area would be greater
17 than the \$24 a month those in the medium density parts pay, but likely not much greater.
18 Those in the under 4 customers per km would likely have to pay well in excess of the \$61
19 a month that service charges would be in the absence of RRA. Without being able to offer
20 precision, the higher density customers in the low density zone likely incur costs of about
21 \$25 to \$30 a month; that is somewhat higher than their medium density neighbours. But,
22 those in the extreme low density parts incur costs of \$60 to \$80 a month or more.

23 Customers in the higher density part of the low density zone pay about \$5.00 a month or
24 \$60 a year more in service charges, in order to subsidize the costs of their lower density
25 neighbours. Something of this kind happens in all customer classes. For example in
26 Ottawa with monthly residential charges of \$9.50 it is likely that customers in high density
27 areas pay a \$1.00 a month to cross subsidize their neighbours in lower density suburbs.
28 Something of this kind is always the case, because there are in every class or zone
29 customers who are higher or lower density than is average for the zone.

30 In Hydro One's low density zone, the majority of this additional per customer cost is
31 covered by RRA. However, to reduce the cross subsidy paid by customers in the higher
32 density parts of the low density area and to bring rates so they are more or less in line
33 with a target charge of 115% of the provincial average; the RRA levy should be increased.

What Should The RRA Levy Be to Cover the Extra Costs of Extreme Low Density?

The present rate of RRA payments is 0.12 cents per kWh. Each one hundredth of a cent yields approximately \$1.08 million dollars assuming a gross yield of \$130 million which depends on consumption of 156 tWh. With load of 165 tWh, each one hundredth of a cent of RRA levy produces \$1.25 million and a gross of \$135 million.

To reduce the monthly service charge for low density customers to the level that applies to medium density customers it is necessary to reduce the monthly service charge by \$9.00. OFA allows that perfect equality is difficult and there may be aspects of causality in the low density customers' control that warrant a small difference in service charge.

As there are 335,388 low density customers, the extra Rural Rate revenue needed to equalize low density and medium density monthly service charges is \$36,222,000. (\$9.00 times 335,388 customers times 12 months.) This is substantive. Over the life of this rate-setting, it involves \$180 million charged to one rate class, (R2), that should be shared across Ontario.

Again, assuming aggregate load of 160 tWh, to have similar monthly service charges in low density areas as apply in medium density areas the RRA tariff would have to be increased by approximately 0.025 cents per kWh from 0.12 cents per kWh to 0.145 cents per kWh. OFA believes the RRA levy should be approximately 0.145 cents a kWh.

The HONI proposed alternative to raising the RRA levy to this level, is to require only low density customers to pay the extra costs of serving the low density zone. RRA exists to cover these costs. Accordingly OFA asks that the RRA be used to cover such costs, as it has been in the recent past. (May 2013 – see Appendix)

Using the table in the appendix, OFA estimates the customer impacts to be increases of:

22.5 cents a month for residential customers,
12.5 cents a month for seasonal customers and
55 cents a month for general service customers.

The present alternative to this is continued payment by low density customers of an extra \$9.00 a month. OFA submits that this is an inequitable burden that is unrelated to causes that customers could be reasonably expected to avoid. These costs are caused by low density and RRA is meant to address these costs.

Accordingly, the \$36,222,000 extra costs of serving R2 customers should be covered by increasing the RRA levy to 0.145 cents a kWh (+/-). This approach was used in May 2013. OFA believes it should be used now and whenever R2 rates significantly exceed R1 rates.

1 **Appendix One Material From Hydro One’s web site:**
2 <http://www.hydroone.com/RegulatoryAffairs/RatesPrices/Pages/RuralRateProtection.aspx>

3 This material explains a change to the Rural Rate Assistance levy effective May 2013.

4
5 **Regulatory Charges: Changes to Rural Rate Protection Charge and Wholesale Market**
6 **Service Rate**

7 **What is the Rural Rate Protection Charge?**

8 Rural Rate Protection Charge is a fund established by the provincial government to keep rates in
9 rural and remote parts of Ontario at similar level to rates paid by the rest of the province. All
10 customers who are charged for commodity are billed the Rural Rate Protection Charge under the
11 *Regulatory Charges* line on the bill.

12 The OEB has announced that this charge will be increased to 0.12 cents per kWh from 0.11 cents
13 per kWh, effective May 1, 2013. This will result in a slight increase on the bill. An average
14 residential customer who uses 800 kWh a month will see an increase of 9 cents a month.

15 **Who benefits from the Rural or Remote Rate Protection?**

16 Customers who benefit from the Rural or Remote Rate Protection are year-round residential low
17 density customers. These customers have their distribution service charge reduced by a credit of
18 \$28.50 per month.

19 **What is the Wholesale Market Service Rate?**

20 The Wholesale Market Service Rate is paid by most customers to the Independent Electricity
21 System Operator (IESO). It recovers the cost of services required to operate the electricity system
22 and run the wholesale market. The rate has decreased to 0.44 cents per kWh from 0.52 cents per
23 kWh. This rate was implemented upon Market Opening in May 2002 and has not been changed
24 since that time. This rate is billed by all electricity distributors. An average residential customer
25 who uses 800 kWh a month will see a decrease of 69 cents a month.

26 *Note: all customers who are charged for commodity are billed this charge.*

1 **How will the changes in Rural Rate Protection Charge and the Wholesale Market Service**
 2 **Rate affect my bill?**

3 *(note – the information in this table on Rural Rate Protection is used in OFA’s note to estimate per*
 4 *customer cost impacts of a 0.145 cent a kWh increase in RRA levy)*

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Service Type	Electricity used monthly	Increase in Rural Rate Protection Charge (RRRP)	Decrease in Wholesale Market Service Rate (WMS)	Decrease in Regulatory Charges due to the changes in RRRP & WMS
		\$	\$	\$
Residential – Urban High Density	800 kWh	\$0.09	(\$0.69)	(\$0.60)
Residential – Medium Density	800 kWh	\$0.09	(\$0.69)	(\$0.60)
Residential – Low Density	800 kWh	\$0.09	(\$0.70)	(\$0.61)
Residential – Seasonal	500 kWh	\$0.05	(\$0.44)	(\$0.39)
Urban General Service – Energy (less than 50 kW)	2,000 kWh	\$0.22	(\$1.72)	(\$1.50)
General Service – Energy (less than 50 kW)	2,000 kWh	\$0.22	(\$1.75)	(\$1.53)

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7 Source: From Hydro One’s web site URL:
 8 <http://www.hydroone.com/RegulatoryAffairs/RatesPrices/Pages/RuralRateProtection.aspx>