Niagara-on-the-Lake Hydro Inc.

November 3, 2014

Premier's Advisory Council on Government Assets
Government of Ontario
Toronto, ON

Dear Sirs:

On behalf of Niagara-on-the-Lake Hydro ("NOTL Hydro") I am pleased to provide our written comments to the Premier's Advisory Council on Government Assets ("Council") following the speech by Mr. Clark on October 17, 2014 ("Speech") and the release of its interim report *Retain and Gain: Making Ontario's Assets Work Better for Taxpayers and Consumers* ("Interim Report").

NOTL Hydro is a small utility with 8,600 customers but we are committed to providing the highest level of service to these customers. We are the smallest utility in the Niagara Region. Yet, we have the lowest delivery charge rates of all the electric utilities in the Niagara Region, as evidenced by the Ontario Energy Board rate calculator for 800 kw residential customers, and we have one of the best debt:equity ratios in the Province of Ontario. We also have a strong operational performance as evidenced by our low net system loss percentage and the smart grid investments we have made. Despite this, we are able to earn a fair return on equity and deliver a healthy return to our shareholder by way of annual payments. We therefore believe we know something about operating an efficient electricity distribution business in Ontario or local distribution company ("LDC").

A. Executive Summary

Our comments are focused on the recommendations and analysis provided in the Speech and Interim Report on the Distribution business of Hydro One. We are in general agreement with your recommendations and analysis with respect to Ontario Power Generation and the transmission business of Hydro One. Our thoughts on these businesses can be provided under a separate cover if requested. We are not in full agreement with your recommendations concerning the distribution business of Hydro One as we believe the Council has an incorrect understanding of the benefits of the local distribution companies.

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It is our belief that multiple LDCs are the most efficient means of distributing electricity to consumers. In section B we provide our arguments for this case. As we are responding to the Speech and Interim Report most of our arguments serve as a rebuttal of statements made regarding the electricity distribution sector in Ontario. However, they also serve to demonstrate our argument. In brief, we find that there is no statistical evidence that consolidation leads to efficiencies in the electricity distribution sector. Instead, the evidence supports the view that LDCs that represent the underlying economic territory are the most efficient. The Council started to recognize this efficiency analysis in their comparison of the underlying costs of Hydro One Networks distribution and Hydro One Brampton (effectively an LDC).

LDCs are the closest businesses to the customer in the electricity sector. Distribution assets and operations must be local so it is only in administration that economies of scale can be realized. The diseconomies that come from a large organization, such as higher salaries, increased layers of management and disconnectedness from the customer offset these efficiencies. The statistical analysis shows that there are no economies of scale from size. Instead, the cost of LDC operations reflect the underlying customer density of the LDC operation.

Hydro One has some of the highest distribution rates in the Province of Ontario. These rates are also increasing faster than those of smaller LDCs when Hydro One's size and the number of acquisitions it has made should be providing the company with economies of scale and smaller rate increases. As the goal of the Council is to maximize the value of Hydro One from the perspective of both taxpayers and ratepayers, we recommend that the Council analyze the option of breaking up Hydro One's distribution business to determine the value this could create from lower rates and increased shareholder value through the efficiencies that could be created.

B. A Different Viewpoint

1. Fragmented LDCs

The Speech characterized the electricity distribution sector as *"unnecessarily cluttered and fragmented"* and *"in urgent need of renewal"* with a "*hodge-podge*" of "*too many*" LDCs. The Interim Report was less derogatory in its comments but still stated that there were *"too many entities*". No evidence is provided to support this view other than referencing the 2012 report of the Ontario Distribution Sector Review Panel; a report that has come under considerable criticism which will be discussed below.

Anyone looking at the Province of Ontario Distribution Sector map in the Interim Report, as provided by Hydro One, might conclude that the system is fragmented as Hydro One serves >90% of the Province on a geographic basis with small pockets of LDC coverage scattered through-out the Province. The reality is that the electricity distribution system is designed to serve customers, not geography. The LDCs serve 75% of the Provinces population (80% if Hydro One Brampton, which is essentially run as an LDC though owned by Hydro One, is included). It is the population of Ontario which is fragmented geographically and the location of the LDCs mirrors that.

Of the top 50 municipalities in Ontario, ranked by population, only 9 are served wholly by Hydro One Networks and the largest of these, Kawartha Lakes, is the 34th largest municipality. Two of these nine municipal service territories were only purchased by Hydro One, at a very high price, within the past year. The 41 municipalities, including Brampton, served by LDCs represent 76% of the Province's population. These 41 municipalities are served by 33 different LDCs. There are no tax or regulatory impediments to the consolidation of LDCs by municipalities. The fact that the consolidation has been so limited over the past 10 years is evidence that the economic arguments for consolidation have not been persuasive for those that actually have to justify this decision.

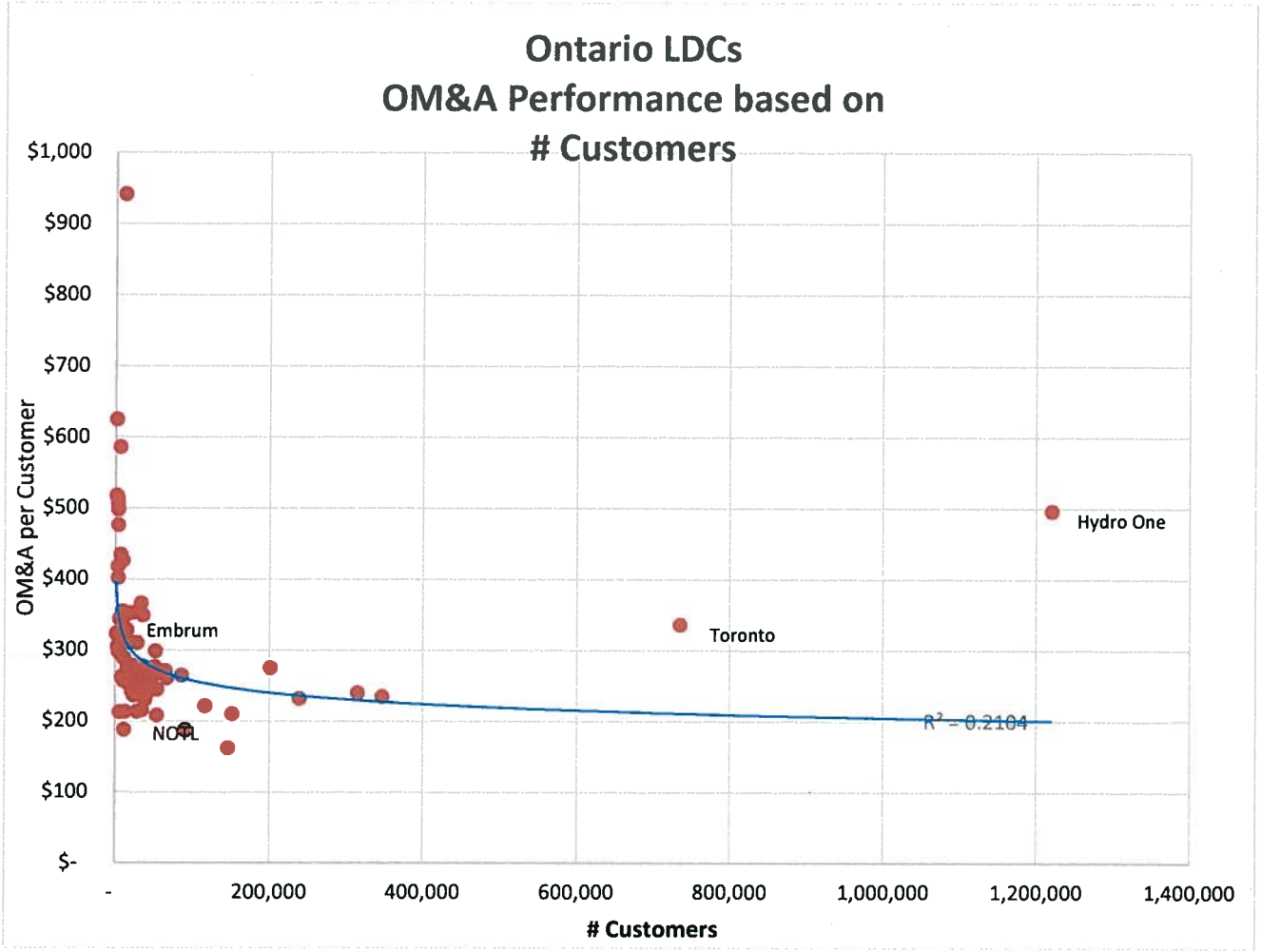
It is often noted that at one time there were over 300 LDCs prior to the rationalization in the 1990's and thereafter. While some of these LDCs were created at the time the municipality electrified, many were created by purchasing the local assets from Hydro One's predecessor the Hydro Electric Power Commission. The LDCs created with these purchases were local Commissions so were not allowed to generate a return for their shareholder. Instead, the LDCs were created as the local municipalities knew they could operate the LDC more efficiently and thus lower costs for their ratepayers. It was the efficiency of local control that created the distribution sector in Ontario.

It was only after *The Electricity Act, 1998* that municipalities could sell their LDC or generate a return. Many municipalities took this opportunity to sell their LDC, knowing that this ability could be removed in any future provincial legislation. The consolidation in Ontario that did take place was therefore not necessarily one of economic logic as of political risk assessment.

2. LDC Consolidation to Lower Costs

A key argument of proponents of consolidation is that consolidation would ensure that "*significant efficiencies and savings are available that could benefit ratepayers*" as stated in the Speech and that "*consolidation is good energy policy and will also lead to a more efficient, adaptive, and lower-cost system in the future*".

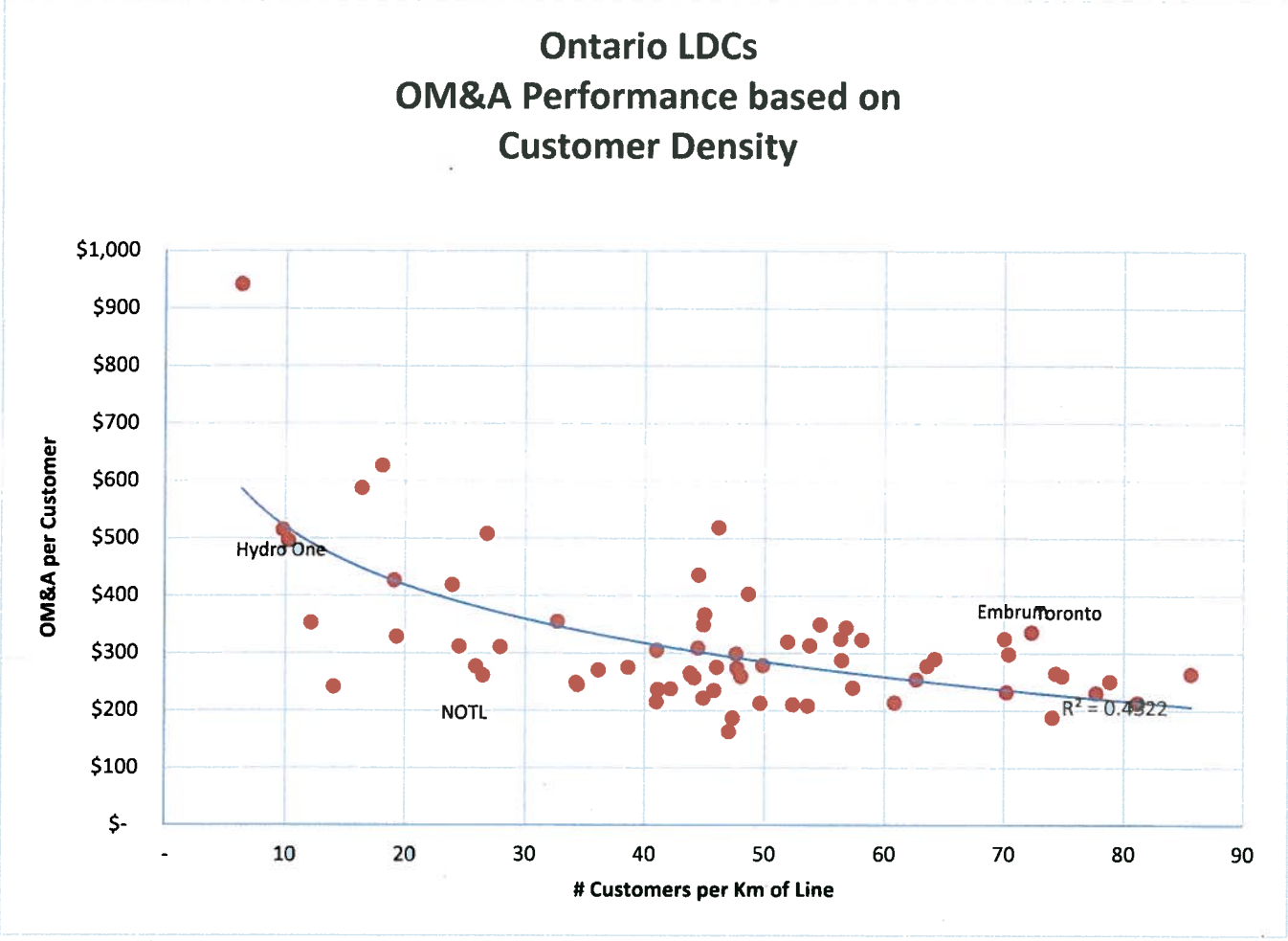
It is clear that there is usually an immediate savings from consolidation as the reduction in costs, usually administrative, can be readily identified. What is unclear is whether these savings are sustainable or whether they evaporate over time with cost creep. Proponents of consolidation argue that the savings would be sustainable due to the economies of scale from creating larger utilities. The chart below, recreated using 2013 data, was included in the report *Renewing Ontario's Electricity Distribution Sector: Putting the Consumer First* by the *Ontario Distribution Sector Review Panel* ("Panel Report").



Source: Ontario Energy Board 2013 Yearbook of Electricity Distributors

There are two changes in this chart from the one provided in the Panel Report. First, Toronto and Hydro One are shown on this chart while they were not included in the Panel Report chart despite being the two largest LDCs. This may be because they do not fit the curve of bigger being more efficient. In the case of Hydro One this can be explained as they serve so many rural customers; in the case of Toronto Hydro the reason for the higher costs is less obvious. The second change is the inclusion of the R^2 or the coefficient of determination which measures how strong the fit is between the line and its data points. The R^2 of .2104 is weak. This is supported by the correlation between number of customers and cost per customer which is +2.8%. This correlation indicates that not only is there little relationship between size and cost per customer but that what statistical relationship there is indicates that OM&A costs rise with the number of customers.

In reviewing the data for the above chart it appears that some of the larger LDCs also have high customer density. This is typically measured as number of customer per km of line. Higher customer density is not surprising for larger LDCs as they serve the larger urban areas. The chart below examines the relationship between cost per customer and customer density.



Source: Ontario Energy Board 2013 Yearbook of Electricity Distributors

As can be seen, there is a much stronger relationship between cost per customer and customer density than there is between cost per customer and size. The R^2 in the customer density chart is 0.4322 is twice as strong as that based on the size of the LDC. The correlation between number of customers and customer density is also considerably stronger at -49.3% which confirms that the greater the customer density the lower cost per customer. It is also interesting to note that Embrum, the smallest LDC and Toronto Hydro, the largest after Hydro One, have similar customer densities and similar costs per customer. Size clearly does not lead to lower costs in this case.

There are other factors that could be analyzed (weather, terrain, customer profile, etc.) to determine if they are also a meaningful determinant of cost per customer either independently or as part of a multiple factor regression analysis. However, it is doubtful that they would have as strong a correlation as customer density and, more importantly, it is clear from this analysis that LDC size is not the significant determinant many make it out to be.

Customer density across the province as a whole is fixed; unless you actually move where people live and businesses are located. To the extent that the costs of operating an LDC are determined by density, as appears to be strongly the case, consolidation will only alter the efficiency of the LDCs being consolidated and not the system as a whole. Low density LDCs merging with high density LDCs will appear more efficient (Hydro One) while high density LDCs that merge with lower density LDCs

(Toronto Hydro?) will appear less efficient. Any immediate savings through consolidation are likely not sustainable as the resulting LDC reverts over time to its natural costs structure given the distribution of its customer base.

3. Lack of Capital

The Speech described LDCs as entities that "*lack capital to modernize*". It stated that "*way more capital is needed*". These comments were reiterated in the Interim Report which stated that LDCs "*lack the capability and capital to modernize*" and that the distribution system "*needs more capital*". Again, no evidence is provided for these statements.

The reality is that there is no shortage of capital available to LDCs. Lenders of all sorts, such as the large Chartered Banks, are constantly courting the LDCs for opportunities to lend and provide services. The low risk profile of LDCs is very attractive to these lenders. LDCs, however, have to ration how much capital they invest. As the only way to earn a return on invested capital is through higher rates, LDCs, encouraged by their regulator, must limit their capital investments and ensure they are directed appropriately. System renewal and system enhancements are typically the focus of the LDC capital investments.

4. Adaptability

The Speech described LDCs as entities that "*cannot adapt to the changing environment*" and argued that consolidation would "*improve adaptability of the system and create companies which can grow and create jobs*". The Interim Report argued that consolidation would create "*companies capable of innovating and adjusting to a very different future energy world*" and that consolidation would "*improve adaptability of the system and create companies that can innovate, grow and create jobs*".

The statement that LDCs cannot adapt is, frankly, insulting. While from the outside LDCs may appear to be the same set of wires, transformers and poles, on the inside the use of new safety standards, automated and remote switches, communications technologies, digital mapping, smart meter data and other technological and social innovations have transformed how LDCs are operated. The best proof of this adaptation can be found in line losses which have dropped 5.7% over the past 6 years (2008-2014) through these adaptations. This has saved 234 GWh which is enough energy to serve the Town of Midland for a full year.

There is no argument that the industry as a whole has not seen the seismic changes that other industries such as telecommunications, computing or broadcasting have endured. The electricity industry may also see similar disruptive changes in the future. However, as has been seen in these industries, size is no guarantor as to the ability to adapt.

The idea that LDCs can grow and create jobs also displays a fundamental lack of understanding of the distribution sector. LDCs are tightly regulated as to the business lines in which they can participate, are subject to annual performance improvements requirements and must engage in conservation and demand management activities that are designed to reduce the demand for their product. Together, these

restrictions limit their growth to the underlying growth in electricity consumption and limit potential job growth even further.

Instead, innovation, growth and jobs are to be found in the unregulated businesses which are kept separate from the LDCs. Using earnings generated by the LDCs, municipalities have invested in businesses such as generation, fiber broadband and energy services. While larger LDCs can generate bigger cash flows for these investments, the extent to which a municipality uses these funds for investments is not conditional upon or related to size. Some small and medium sized LDCs have unregulated affiliates which are much bigger proportionately than some of the large LDCs (i.e. Erie Thames Powerlines and Toronto Hydro).

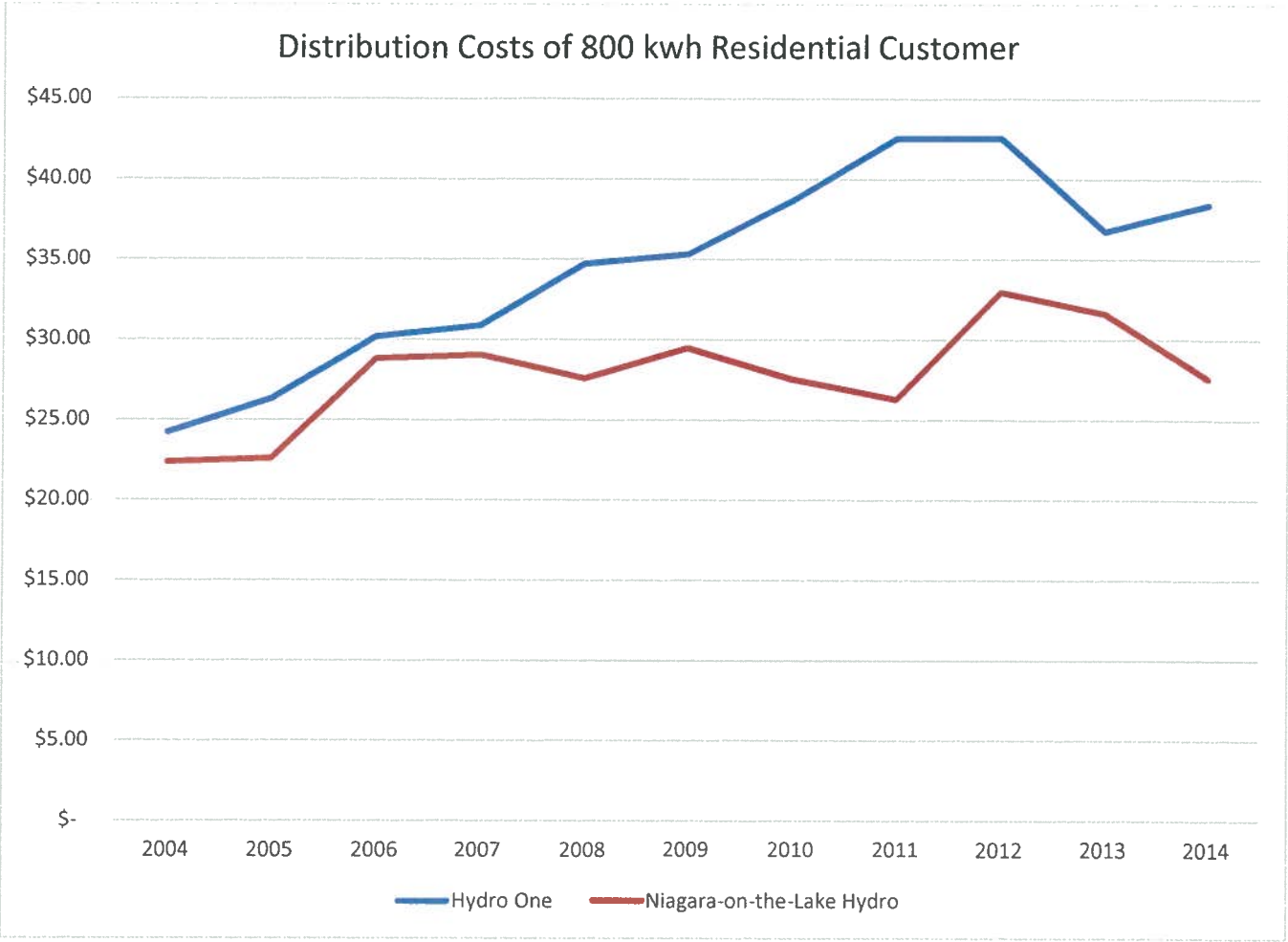
5. Inefficient LDCs

One of the assumptions prevalent through-out the Speech and Interim Report is that LDCs are inefficient. The Speech stated that "*some of them are highly inefficient*" while the Interim Report reduced this to "*some of them inefficient*".

One definition of inefficiency means that more resources are required to achieve the same result. For example, if the cost to bill customers is lower in a larger LDC due to economies of scale that is an inefficiency of the smaller LDC. Even if the smaller LDC is acting in the most efficient manner it is still being inefficient from an industry perspective. There is no doubt that many examples of inefficiencies of this sort can be found. However, as can be seen in the analysis above, the lack of any meaningful correlation between size and cost of service means that these anecdotal examples are not statistically significant. Whether this is because the actual savings are too small, whether the smaller LDCs have made offsetting arrangements such as co-operative purchasing or whether the larger LDCs have offsetting inefficiencies such as too many management layers is unknown.

One cost which some smaller LDCs have and which some larger LDCs do not is a higher level of service due to their local presence. This is not an inefficiency in this context but rather a different definition of what service they should be providing. An example is personal countertop service which many smaller LDCs still provide but which many larger LDCs do not.

Another definition of inefficiency would be an LDC in which resources are clearly underutilized. This type of inefficiency is more commonly found in larger rather than smaller organizations. If larger LDCs are more efficient one would expect that larger LDCs would have lower rate increases over time as these efficiencies translate into lower customer rates.



Sources:

Hydro One: Ontario Energy Board approved distribution rates and rate riders – residential customers (UR and UR2)

Niagara-on-the Lake Hydro – Ontario Energy Board approved distribution rates and rate riders – residential customers

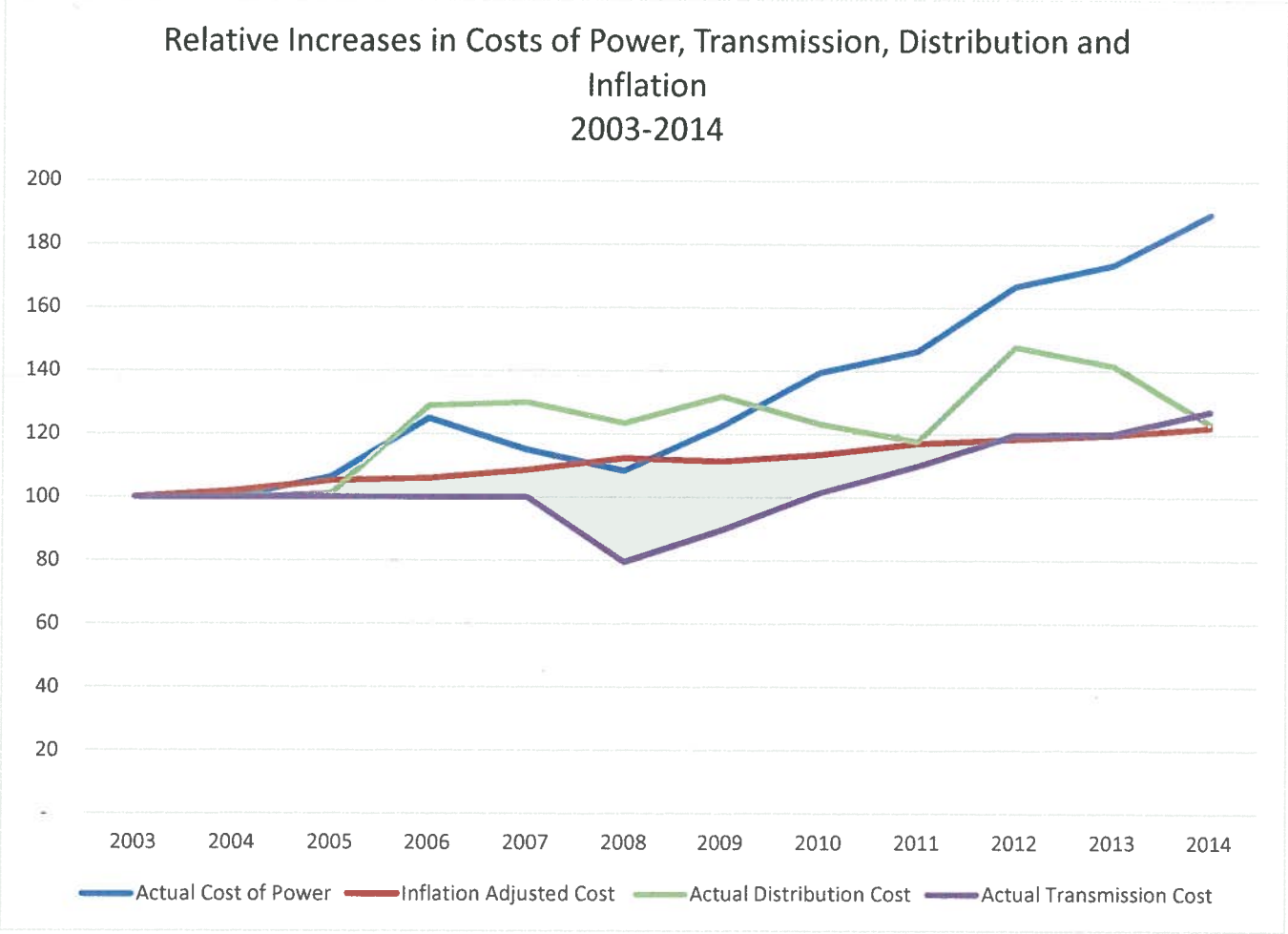
Hydro One, as the largest LDC and as the LDC that has consolidated the most LDCs, should therefore have realized the most efficiency gains. Yet, as the chart above shows, their distribution rates have increased relative to those of Niagara-on-the-Lake Hydro which is 0.6% of the size and has had no mergers or acquisitions. As we are comparing rates over time, the fact that Hydro One serves a much more dispersed customer base should have no bearing on this analysis.

A final definition of inefficiency is if the overall cost structure of the industry is too high due to unionization, lack of competition, lack of governance due to public sector ownership and empire building management. If this were the case we would expect to see costs rising significantly over time. This has not necessarily been the case.

As the chart below illustrates, distribution and transmission rates have risen at the rate of inflation over the period from 2003 – 2014. 2003 was the first year in which rates were broken down into their

components. There is no industry metric for distribution rates so the Niagara-on-the-Lake Hydro distribution rates were used as a proxy. Results may differ for other LDCs.

As can be seen it is the cost of generation which has been inefficient and which is up by 89% in this time period while transmission and distribution costs have gone up by 27% and 23% respectively. The Council may wish to review Government policies as relates to generation as part of its review of Ontario Power Generation.



Sources:
Actual Cost of Power: Ontario Energy Board Regulated Price Plan electricity commodity rates – residential customers
Inflation Adjusted Cost: Bank of Canada http://www.bankofcanada.ca/rates/related/inflation-calculator/
Actual Distribution Cost: Niagara-on-the-Lake Hydro Inc. Monthly distribution cost for 800 kwh residential customer
Actual Transmission Cost: Uniform Transmission Rates as approved by the Ontario Energy Board

6. Ontario Distribution Sector Panel Report

We do not know who you met in arriving at your conclusions with regards to the electricity distribution sector though it appears heavy reliance seems to have been placed on the Ontario Distribution Sector Review Panel report of 2012 ("Panel Report") and on Hydro One. In describing the electricity system

the Speech stated *"the Ontario Distribution Sector Review Panel aptly described the problem in its report in 2012"* while the Interim Report stated *"we agree with the core conclusions of the 2012 Ontario Distribution Sector Review Panel. Indeed, we believe that the conclusions are generally supported by virtually everyone in the industry, although not everyone agrees on how best to implement them."*

While there are those in the industry who support the Panel Report, typically the larger LDCs such as Powerstream, there are also many who have not. These include:

- CD Howe Institute
  http://www.cdhowe.org/pdf/Commentary_376.pdf

- Association of Municipalities Ontario (AMO)
  http://www.amo.on.ca/AMO-Content/Policy-Updates/2012/Ontario-Distribution-Sector-Review-Panel-Releases.aspx

- Cornerstone Hydro Electric Concepts Association
  http://checenergy.ca/wp-content/uploads/Letter-to-Ministry-of-Energy-Comments-on-Opportunities-in-the-Electrical-Sector_08042013.pdf

- PUC Services
  http://www.ssmpuc.com/UploadedFiles/files/Sector%20Review%20Panel%20PUC%20Presentation%20Mar4-2013.pdf

- Oshawa Power
  http://www.oshawa.ca/agendas/city_council/2013/2013_03_20_130/report_cm_13_28_opuc.pdf

- 38 LDCs including Niagara-on-the-Lake Hydro
  http://www.notlhydro.com/userfiles/file/ConsensusAccord.pdf

These are some that have made their views public.

The report provided a number of arguments as to why the current structure of the electricity distribution sector needs to be changed. These arguments, and our counterarguments are as follows:

How Others Do It

The Panel Report provided ten examples of jurisdictions that have a more concentrated electricity distribution sector than Ontario including Alberta, a couple of US states and five Australian states. It would be equally possible to choose ten jurisdictions where the sector has less concentration. As an example, there are over 2,000 municipal LDCs in the United States and these have been increasing at an average rate of two per year for the past 30 years as municipalities raise the required funds and purchase their distribution businesses from the large integrated utilities in order to lower costs (source: APPA American Public Power Association).

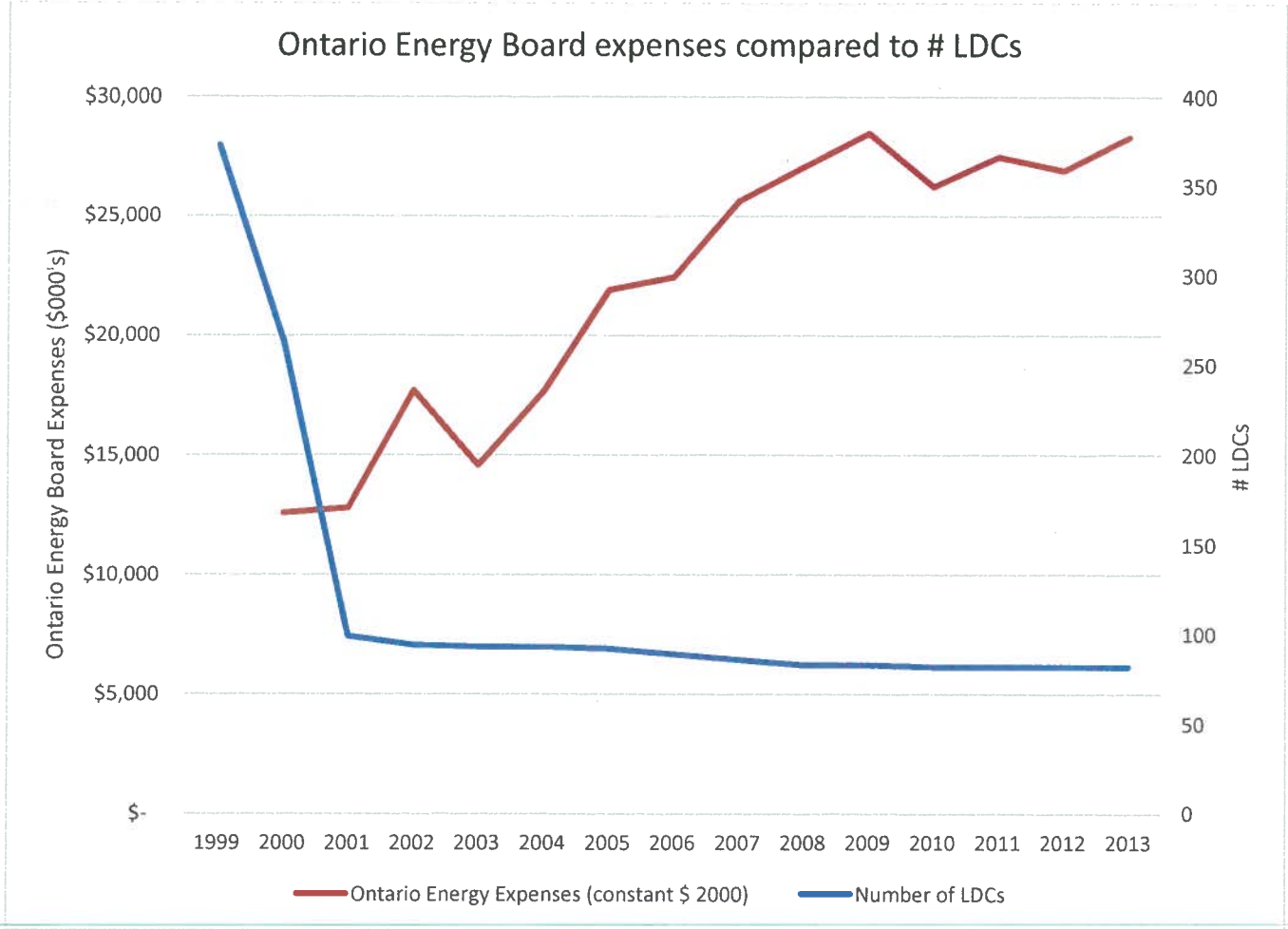
The Cost to the Consumer

The Panel Report argued that the smaller LDCs have higher Operations, Maintenance & Administration ("OM&A) costs and have lower capital expenditures. In section B2 above we discussed the issues with their analysis of OM&A costs by LDC size. With regards to capital expenditures, many smaller LDCs

enter into joint arrangements to share the capital expenditures needed for many of the required investments (billing systems, SCADA, smart meter settlement systems, transformer stations) whereas the larger LDCs tend to undertake these on their own. Capital expenditures are also a reflection of either growth or the need for major improvements and these both tend to be concentrated in large urban areas.

Regulatory Efficiency

The Panel Report argued that reducing the number of LDCs would reduce the regulatory cost to the system. As has been noted in many of the responses to the Panel Report, the following chart shows how Ontario Energy Board ("OEB") costs are rising despite the decline in the number of LDCs. There are clearly other forces affecting OEB costs other than the number of LDCs.



Unnecessary Duplication

The Panel Report noted that many of the Hydro One operations centres are located near the operations centre of an LDC and that consolidation would eliminate this duplication. It is likely that this happens as Hydro One locates their operation near a large urban area in order to attract employees even though their service area is the large surrounding rural area. The operations centres therefore serve different service territories even though located in proximity. The financial impact of this duplication is fairly small.

Workforce
The Panel Report noted the aging of the sector workforce and the opportunity consolidation could provide for some rationalization. The Panel Report relied on a 2008 study for this argument. Many of the LDCs have responded in the intervening years and have renewed their workforce. In addition, the skilled trades that were analyzed in the study are those that are usually required whether the LDCs are consolidated or not. The financial impact of any savings is small or, more likely, non-existent.

C. Recommendation

The Premiers Advisory Council on Government Assets was tasked with recommending ways to maximize the value of Hydro One to the people of Ontario. The Council has recognized that value is realized both through the fiscal impact (deficit and income tax impact) and rate payer impact and that any proposals cannot have a negative impact on the rate payer.

The Council, in their analysis of the efficiency of Hydro One Networks as compared to Hydro One Brampton, has taken their first steps in understanding the efficiencies of smaller LDCs focused on service territories that match the underlying economic region. Besides lower wages, other efficiencies include less centralized overhead, greater cost sharing with other regional LDCs, more flexible workforce arrangements and stronger identification with the customer.

The Council has recommended keeping Hydro One Networks whole - not break it up. The alternative does not appear to have been analyzed.

We recommend Council seriously study breaking up the Hydro One distributions business. This recommendation is based on the following:

- There are urban areas where Hydro One provides service in a manner similar to local LDCs but at a higher cost. Many of these are LDCs which Hydro One purchased in the early 2000's and in which Hydro One raised the rates after their five year rate guarantee had expired. Local LDCs can be created in these territories with potentially some private sector involvement in the ownership to create a return for taxpayers.
- There are other areas where Hydro One provides service which are contiguous to the service territories of LDCs and are within the economic sphere of the LDC territory. These areas can be merged or sold to the LDC which would thus create lower rates for these ratepayers and provide a return to the taxpayer.
- The remaining service territory can be broken into smaller pieces, each reflecting a rational economic approach in terms of the local identity of the region and the operational structure of Hydro One. Private sector involvement in the ownership of these new regional LDCs could create a return to the taxpayer and any efficiencies would be passed on to the ratepayer.

It will seem counterintuitive that these actions would create efficiencies. However, electricity distribution is, by its nature, a local business. The assets must be close to the customers. The economies of scale in electricity are in the transmission and generation businesses. With

distribution, the efficiencies from decentralizing the operations, as the Council saw in comparing Hydro One Networks and Hydro One Brampton, more than offset the administrative economies of scale.

The Interim Report expressed concern with "cherry picking" and the impact of such mergers or sales on the value of the distribution business as a whole and on the rates of remaining customers. As these are not one-off transactions but rather the wholesale break-up of the distribution utility there should be no impact on value from the individual actions. The study itself will determine whether the full exercise will add value or not. If rates of certain customers are negatively impacted then that is an indication that some customers were internally subsidizing others within Hydro One.

Niagara-on-the-Lake Hydro encourages the Premier's Advisory Council to give serious consideration to the option of breaking up the distribution assets of Hydro One and examine the value, in terms of both lower rates and increased shareholder value, that can be created through the efficiencies that would be realized.

Yours truly,

Timothy B. Curtis
President

Niagara-on-the-Lake Hydro Inc.

Meeting with MPP Cindy Forster
January 26, 2015

Niagara-on-the-Lake Hydro

- Smallest Niagara region hydro company serving 8,600 customers in NOTL
- 100% owned by Town of NOTL
- Lowest Delivery Charge in Niagara Region

Two arguments:

1. Medium sized local distribution companies (LDCs) are the most efficient for providing customers with quality, cost effective service. Consolidation is not the answer.
2. Province should look into breaking Hydro One up into multiple (20-50) smaller local distribution companies which will drive down costs and rates over time.

Not consolidation argument

- NDP stated position is that all consolidations will be voluntary
- Statistical analysis shows that there is zero correlation between company size and cost efficiency
- Normal expectation is that there should be economies of scale. These are not being seen because:
    - Operations are local so no economies of scale (linemen, trucks, technicians, etc.)
    - Administrative economies of scale (billing, finance, executive, etc.) offset by other costs (higher salaries, more layers of management, less flexibility)
- There is a statistical correlation between customer density and cost efficiency; this drives most of the variation in cost efficiency between LDCs
- LDCs of 50,000 – 100,000 customers (almost all not consolidated) had lower rates and lower rate increases (over 10 years) than LDCs of over 100,000 which were almost all consolidations
- Excluding Hydro One, most LDCs, on average, have had 10 year rate increases close to inflation of 16%. Exceptions are LDCs < 5,000 customers and privately owned LDCs

Break-up Hydro One

- Government Assets Council recommending splitting Hydro One between distribution and transmission
- Splitting distribution business the next logical step
- Customers of LDCs purchased by Hydro One have had the highest rate increase (almost double)
- On-going Hydro One customers have had a rate increase of 44%
- Smaller ex-Hydro One LDCs would be better able to manage costs and keep rates lower

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Niagara-on-the-Lake Hydro Inc.

March 3, 2015

Mr. Alan Hibben
Premier's Advisory Council on Government Assets
Government of Ontario
Toronto, ON

Re: Ideas for Hydro One Electricity Distribution Assets

Dear Sir:

On behalf of Niagara-on-the-Lake Hydro ("NOTL Hydro") I am pleased to provide our written ideas relating to the electricity distribution assets of Hydro One.

We believe the objectives of the government of protecting ratepayers while meeting its infrastructure objectives is best served by breaking up Hydro One into multiple distributors rather than encouraging further consolidation. As an investment banker you will know that sometimes more value is achieved by breaking up a business rather than by further consolidation. Multiple distributors also provide more opportunity for diluting the Province's ownership of this business in a manner that realizes value while protecting both taxpayers and ratepayers.

We realize that this approach goes against the recommendations in the draft report from the Council and goes against what appears to be received wisdom. However, we are recommending this approach based on the results of our statistical analysis of what has and has not worked in this industry. Our arguments are based on facts; not conventional thinking.

Most of our arguments are contained in our initial report to the Council dated November 3, 2014 which I have attached. I would like now to discuss some research that has been done since that submission.

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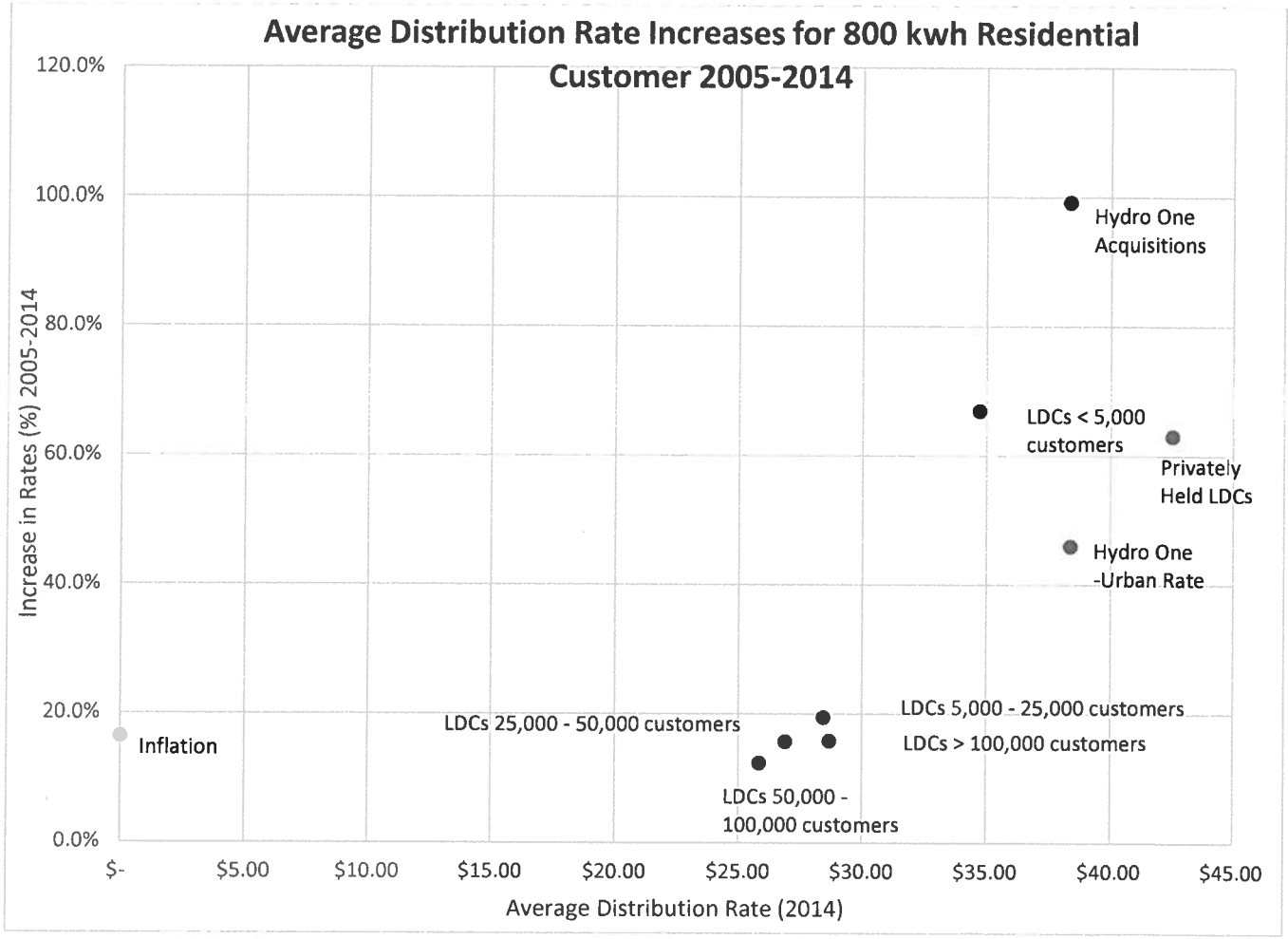
Distribution Rates over Time



We analyzed the changes in customer rates over time for all electricity distribution companies ("LDCs)" in Ontario. We then aggregated the results for LDCs with similar sizes or characteristics. It is important to note that as we are dealing with changes in rates over time, not the actual rates. Factors such as customer density, number of seasonal customers and number of large customers will affect the actual rates but should not affect the change in rates over the past ten years.

If consolidation was beneficial for ratepayers, as the benefits of the synergies trickle into rates, then it would be expected that the rate increases for utilities with extensive consolidation efforts would be lower than those that did not consolidate. Those that promote consolidation argue that this will be the benefit to the ratepayers from consolidation. This is not what the analysis shows:

Instead, the analysis showed the following:

- Most LDCs had rate increases at or around the total inflation over the period of 17%.
- The LDC grouping of 50,000-100,000 customers had the lowest average rate increase and is also the grouping with some of the least consolidation activity.

- Hydro One, which undertook by far the most acquisitions, would be expected to show the biggest benefit from the synergies. However, Hydro One had a rate increase of over 40%.
- FortisOntario, which also made a number of acquisitions, had an average rate increase of over 60%.
- The group of customers that benefited the least from the consolidation were the customers of utilities acquired by Hydro One; their rates almost doubled.

It is quite likely that Hydro One Distribution has become too big and unwieldy. The synergies from the acquisitions are being more than offset by other cost drivers such as salaries, pension costs and administrative burden.

Breaking up Hydro One Distribution into multiple distributors will allow for the tighter management of these costs as evidenced by the local distribution companies with customer counts over 5,000.

Achieving this will be less difficult than it sounds as operationally Hydro One has already split itself into over 50 separate operations centres. How many separate distribution companies these operations centres would create would need to be the subject of analysis. Creating the administrative functions for these smaller distribution companies would also not be difficult as the existing LDCs provide plenty of templates and best practices. There would be a difficult transition period but this is always the case whether you have consolidation or break-ups.

Breaking up Hydro One in this fashion should create the proper environment for strong ongoing cost management to ensure future cost increases are in line with inflation and industry averages. However, for this to happen, a strong governance structure is critical for each new LDC. Strong LDC Boards with the combination of local interests and industry skills will be required to ensure the interests of local customers are protected (rates and service) and an adequate return for the shareholder is earned.

As regulated companies the aggregate returns of the smaller Hydro One LDCs should be equivalent to that of Hydro One Distribution. The option of whether to seek third party investments will also be the same though now with additional options. As the manager of an LDC I can assure you that there is no shortage of players wishing to invest in the LDC sector.

I hope you will give this idea some attention and I would welcome the opportunity to discuss it with you further at any time. This discussion could include flushing out further thoughts on how this could be done.

Yours truly,

Timothy B. Curtis
President

Niagara-on-the-Lake Hydro Inc.

Meeting with MPP John Yakabuski
April 13, 2015

Niagara-on-the-Lake Hydro

- **Smallest Niagara region hydro company serving 8,600 customers in NOTL**
- **100% owned by Town of NOTL**
- **Lowest Delivery Charge in Niagara Region**

Issue:
Ontario electricity rates are too high and continue to rise.

Facts:

- Most distribution rates and transmission rates rising at rate of inflation
- Hydro One distribution rates too high and rising too fast
- Generation costs rising the most

Suggestions:

Distribution and transmission

- Break up Hydro One between transmission and distribution
- Break up Hydro One distribution into smaller LDCs
- Cancel MDM/R (save $55 million that is duplicated by LDCs)
- Cancel OESP
- Cancel on-bill financing

Generation

- Break up OPG between water and nuclear
- Stop all FIT and MicroFIT contracts possible
- Improve connections and agreements with Quebec

Other:

- Require rate impact assessments on all future initiatives
- Move all stranded debt to provincial debt
- Downsize Ministry of Energy staffing
- OPG and Hydro One pensions to 50/50 cost sharing
- Stop all Ministerial Directives

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LDC Landscape

LDC Consolidation Myths

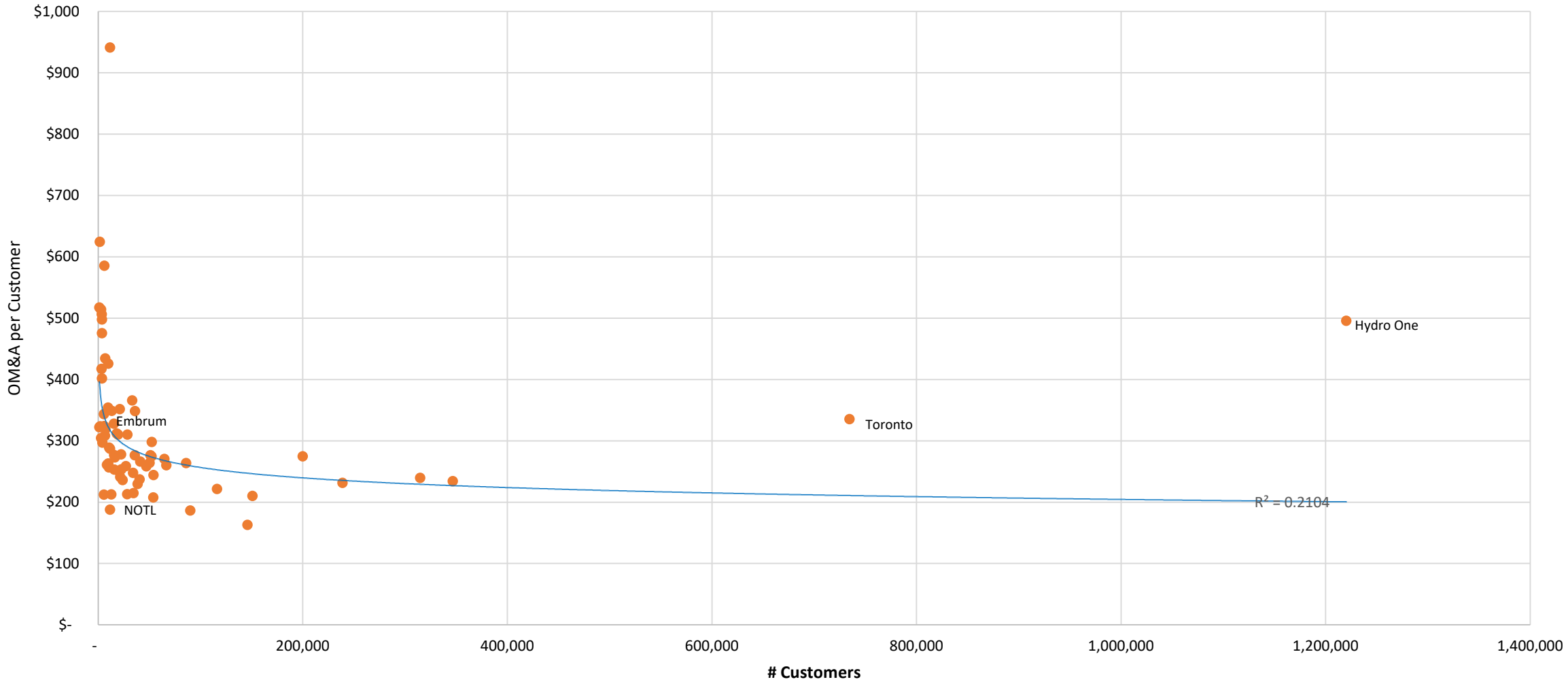
Niagara-on-the-Lake Hydro

April 14, 2015

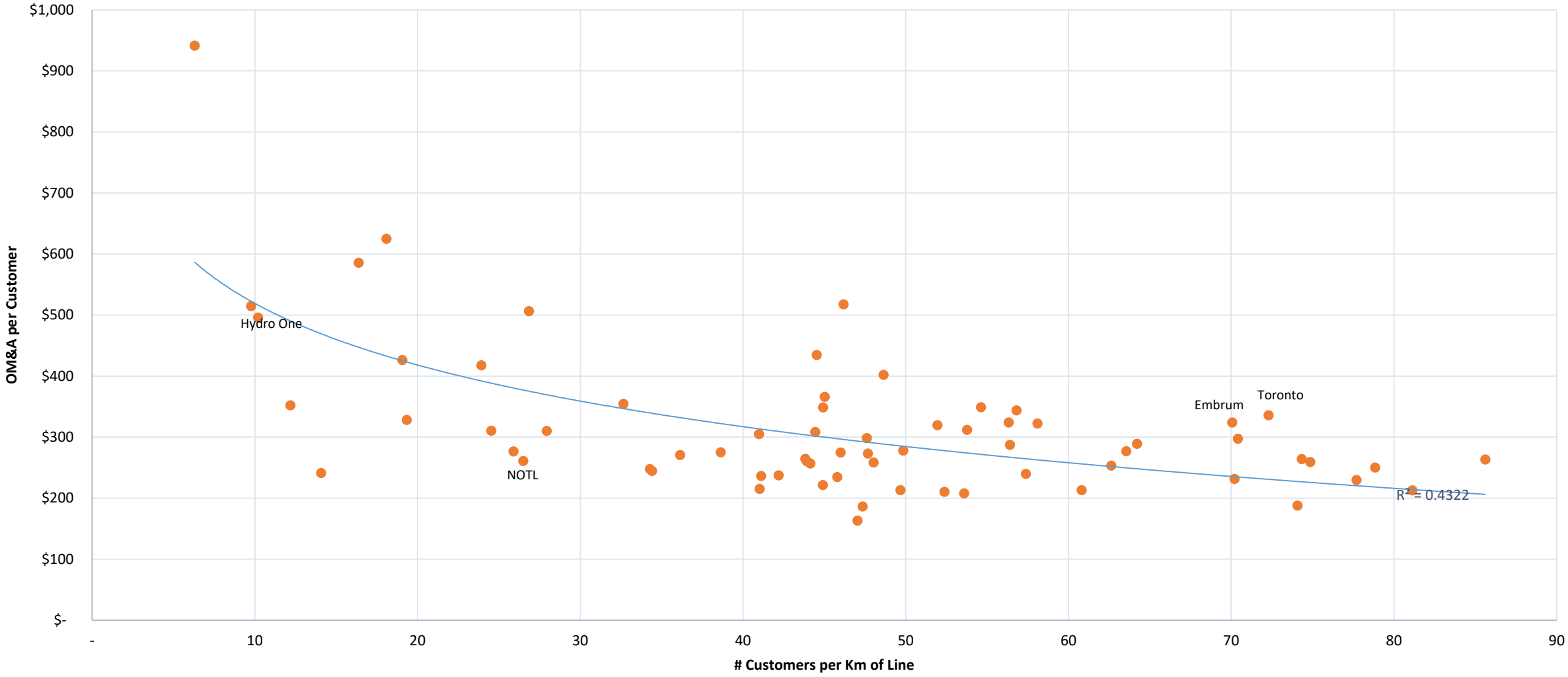
Consolidation Myths

1. Costs per customer become lower as the LDC gets bigger
2. Consolidation lowers costs and, therefore, rates
3. Smaller utilities are struggling
4. Distribution sector is “cluttered and fragmented” with too many LDCs
5. Consolidation is about lowering rates

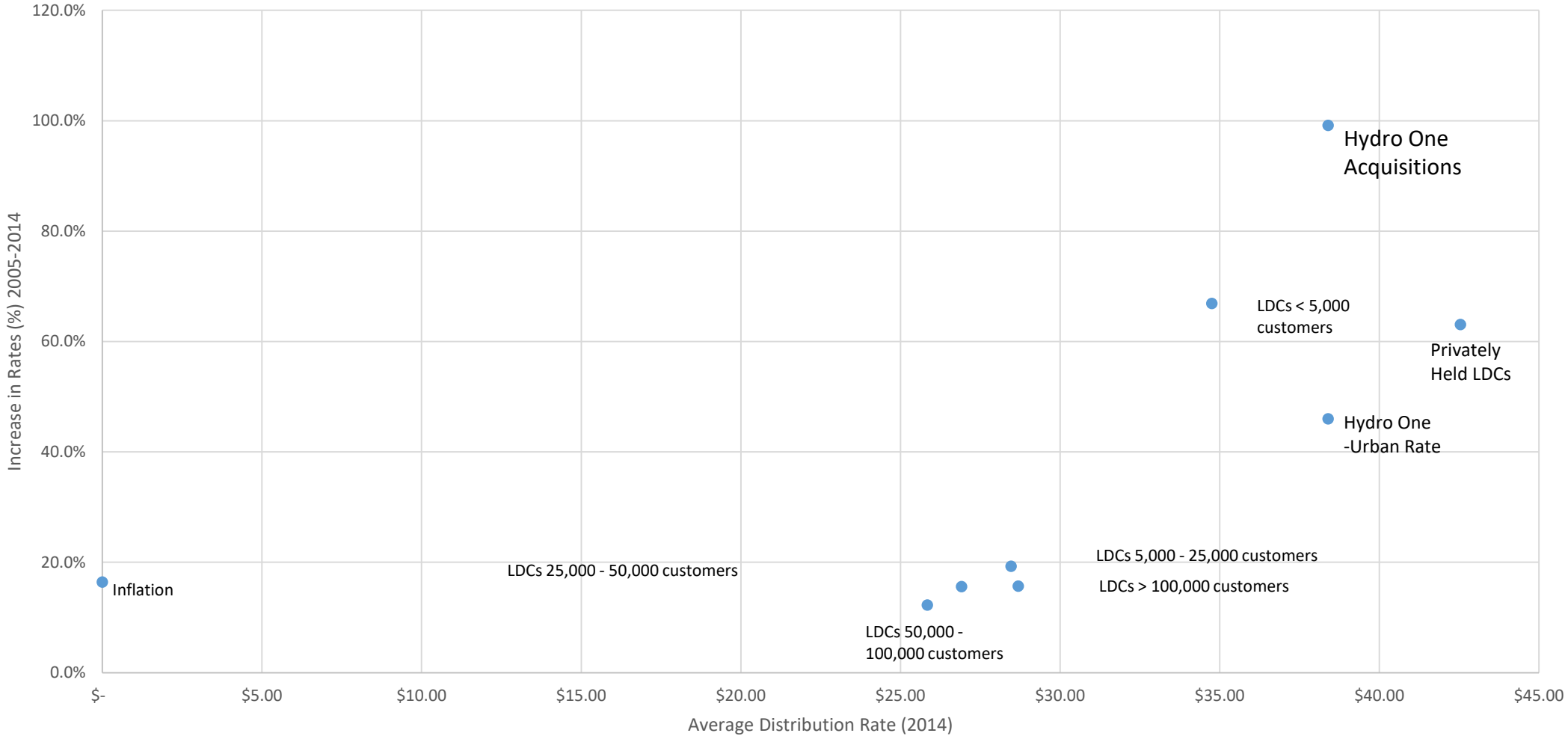
OM&A Performance *based on # Customers*



OM&A Performance *based on Customer Density*



Distribution Rate Increases 2005-2014



Average Distribution Rate Increases for 800 kwh Residential Customer 2005-2014

Speech to NDP Hydro One Town Hall
Hilton Garden Inn
June 16, 2015 7:00 pm

Niagara-on-the-Lake Hydro does not endorse any political party.

I am here today as the Board and Management of Niagara-on-the-Lake Hydro does not believe that selling Hydro One at this time and in this way is in the best interests of the electricity consumer in Ontario.

Niagara-on-the-Lake Hydro strives to do what is best for our customers. Despite being the smallest electricity utility in the Niagara region, we have the lowest Delivery Charge.

There are two reasons we do not believe selling Hydro One is in the best interest of the Ontario electricity consumer.

First, when the Ed Clark Council delivered their interim report in November 2014, they recommended splitting Hydro One into two companies; the distribution business and the transmission business. At this time the focus of the Council was on how to improve the performance of the company. We agreed with this recommendation and thought it a good first step. Distribution is a local business so we believe the next step should then be to break the distribution business into multiple smaller utilities. We know from experience that, in the distribution business, being closer to the customer means better service and lower cost. You get rid of all the excess overhead. Our analysis has clearly shown that there are major issues with the way the Hydro One distribution business is run with rates rising for too fast. Residents of Thorold, who have one of the highest rates in Niagara, will know all about that.

The transmission business, on the other hand, is province-wide in scale and well run so should remain one business.

It was only subsequent to their interim report, when the Council was directed by the Provincial Government to find more ways to raise cash, that the recommendation changed to keeping Hydro One whole and selling it. To investors it is worth more as one big company. With outside investors, the break-up of Hydro One, which is needed to reduce rates, will never happen.

Second, there are big problems in the Ontario electricity industry. The cost of the electricity commodity has doubled over the past 10 years and total rates have risen by 50%. This is hurting Ontario businesses, small and large, and is making it difficult for households. The focus of the Government in the energy sector must be on lowering the cost of electricity. This is not the place to go into the details of what is needed, but selling Hydro One is not part of the solution. The selling of Hydro One is a distraction, diverting focus from the real problem of the rising electricity costs. Taking money out of the electricity sector to fund infrastructure will also not help. We understand that the Government of Ontario has significant fiscal and infrastructure challenges that it must address, but it also has significant issues in the electricity sector that must be addressed. Making the electricity issues worse to assist with infrastructure is not the solution.

At Niagara-on-the-Lake Hydro we do what we can to assist our local electricity consumers but we are only a small part of a big industry. We need the same attention to the consumer at Hydro One and we do not believe selling it is the best way to achieve that. Thank you

LDC of the Future

Consumer Led Generation

Niagara-on-the-Lake Hydro

June 3, 2015

Niagara-on-the-Lake Hydro

- Lowest Delivery Charge in the Niagara Region
- 8,600 customers, 133 sq. km
- Own transmission stations feeding Town
- NR Canada 2014 Energy Star Utility of the Year – Regional
- Zero Quest Platinum Safety Award 2012

NOTL Solar Generation

Niagara-on-the-Lake Hydro

- > 130 solar installations in NOTL (FIT, MicroFIT, Net Meter)
- High level of interest in additional solar
- < 1,000 kWh per Micro Fit installation
- 1:65 solar to customer ratio
- 1.2% of load

Consumer Led Generation

Niagara-on-the-Lake Hydro

Propositions – New Generation

1. Technological changes and improvements will continue to reduce the cost of micro generation
2. Micro generation includes solar (primarily), small wind, battery, small gas generators, etc.
3. Micro generation will be driven by consumer choice; not centralized planning

Consumer Led Generation

Niagara-on-the-Lake Hydro

Propositions – Impact on the LDC

1. Micro generation will be a competitor to the grid but not a replacement (integrated approach)
2. Micro generation will define the limit of the LDC monopoly
3. Micro generation presents a safety concern

Consumer Led Generation

Propositions – LDC of the Future

1. Future LDC must be aligned with current strengths and weaknesses

2. LDC will complement electricity provision with independent, neutral advisory services

Niagara On-The-Lake HYDRO

Niagara-on-the-Lake Hydro Inc.

June 11, 2015

Ministry of Energy
Office of the Minister
4th Floor, Hearst Block
900 Bay Street
Toronto, ON M7A 2E1

Re: OntarioEnergyReport.ca

Dear Sirs:

Thank you for your letter of May 28, 2015 on the above subject and I commend the Ministry for their efforts in this regard. This is an excellent idea and one that I encourage you to continue to expand.

As the President of one of Ontario's Local Distribution Companies I am often asked by my customers to explain various aspects of the electricity industry in Ontario; particularly in relation to the rising costs. While we provide the lowest Delivery Charge in the Niagara region, despite being the smallest LDC, the rising costs of the commodity create economic challenges for our customers; especially our small business customers. This new site provides much of the information needed to answer their questions.

There are some enhancements I can suggest which I believe would further improve the website:

Cost of electricity by Source
Your website provides the source of the electricity and the cost of electricity to the customer but it does not provide the cost of each source. This transparent data would be invaluable for our customers to understand how the changing mix of supply is affecting their cost and it is important to prepare for the eventual reduction in nuclear power. The Ontario Energy Board provides a high level breakdown of this information as part of their bi-annual report on RPP pricing so it is available.

Historical Data
Your website does an excellent job aggregating information from various sources. However, to obtain historical information one must still visit the historical sites. While it is unrealistic to expect that you

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can replicate the current reports for past dates, it would be useful for consumers if historical summaries of some of the more commonly used data was provided.

Conservation Cost by kWh
The Minister has been a big supporter of the conservation efforts of the industry and I believe conservation has been one of the few success stories in the industry. The CDM information on your website, though robust, does not provide the consumer with a simple gauge of the true success of the project. Consumers understand the cost of the electricity on their bill. I recommend a cost per kWh saved be calculated and tracked. This would be an easy statistic for the Minister to extoll the success of this program.

Solar Generation in Distribution Service Territories
The charts showing the generation by source in the Province note that they do not include solar generation that is distribution connected. Consumers do not distinguish between grid connected and distribution connected generation. I recommend all the generation be integrated in one report so that the full impact of new renewable generation can be seen.

I hope these suggestions are of assistance.

Yours truly,

Timothy B. Curtis
President

Speaking Notes for Meeting with Minister of Energy

Introductions

Energy Conservation

- Minister a big proponent of energy conservation
- NOTL Hydro ranked 15 out of 76 utilities for the 2011-2014 CDM effort in energy conservation
- Currently rolling out the Cultivator Fund, a project funded by the IESO Conservation Fund, designed to bring CDM programs to the farming, greenhouse and winery industries
- We believe in energy conservation

Issue: Perception that CDM is just a waste of money as non-industry users do not understand relationship between cost and energy saved.

Recommendation: Provide a calculation of "Megawatts" in cents per kwh to show how cost effective the program is and include this in your Ontario Energy Report

LDC Consolidation

- NOTL Hydro is a progressive utility that is focused on serving its customers
    - Lowest Delivery Charge in the Niagara Region despite being the smallest utility
    - One of the lowest line loss rates due to continued investment in our system
    - 5% of customers visit our offices every month; our definition of service includes this personal touch
    - Helped over 130 customers install solar generation under MicroFIT contracts; 1:65 customers
    - One of the best debt:equity ratios in industry
- NOTL Hydro is proof that a smaller utility can do just fine and do not need to merge
- The government has stated that it will not force any mergers that are not voluntary
- However, the Minister has also made it clear that the government would prefer more mergers and fewer utilities
- This position is based on the myth of savings from consolidation that are passed on to the rate payers. The reality is otherwise.
    - No statistical evidence that merged utilities have lower rates or have generated more savings than non-merged utilities
    - Distribution is a local business as can be seen in structure of larger utilities (i.e. Hydro One has over 50 operations centres or one for every 24,000 customers)
    - Administrative savings are achieved by smaller utilities by working together (i.e. UCS)
    - Larger utilities have diseconomies of scale such as more levels of management, higher salaries, more union stasis and more in-house activities that could be outsourced.
- Smaller LDC's provide a higher level of service
    - Offices at which customers can pay bills or get other assistance
    - Greater attention to needs of customers
    - Participate in government initiatives such as Smart Grid projects or OEB working groups

- Better at implementing new initiatives such as smart meters than larger utilities like Hydro One

Issue: Smaller LDCs distracted by pressure created by Minister's statements, Advisory Council on Government Assets, Distribution Sector Panel and other market participants with their own agenda. This creates uncertainty and deprives Government of potential allies as the industry adapts to new reality.

Recommendation: Minister recognize benefit of smaller LDCs and publicly state his support. He would then find he has new allies in efforts to move industry forward.

Cost of Power

- Customers are suffering from the rising cost of power
- We are getting calls from businesses who cannot pass on the increasing cost of power to their customers because they are in an internationally competitive market
- The cost of the electricity commodity has doubled in the past ten years
- We estimate the excess cost of the wind and solar power under FIT and MicroFIT contracts will be $1.5 billion in 2015
- We estimate a further $1.5 billion will be lost on exporting surplus power at a price lower than what the IESO has paid for it
- Everything possible must be done to reduce the cost to the ratepayer

Recommendation 1:

a) Cancel the FIT and MicroFIT program and do not sign any more FIT or MicroFIT contracts. Promote net metering contracts instead.
b) Seek to expand inter-ties to alleviate concerns about power supply when a nuclear reactor must go offline.
c) Award all future energy contracts by auction as you are currently doing for the larger projects.

These joint steps are needed to minimize the impact of future cost increases for all the signed FIT and MicroFIT contracts that have not yet come online.

Note: NOTL Hydro has customers and affiliates that are planning on applying for FIT contracts but the above steps are of greater importance.

Recommendation 2: Cancel the MDM/R managed by the IESO. This will save consumers $9.48 a year each or almost $50 million in aggregate. MDM/R duplicates functions already managed by the LDCs so is redundant.

Small LDCs are not opposed to consolidation. Many small LDCs were created as a result of consolidations such as Rideau St. Lawrence, Lakeland and Lakefront. Also, should are shareholders ever want to monetize their LDC shares we would want the opportunity to get the best possible price for the shares. Small LDCs do object to much of the dialogue around consolidation. Let me give three quick examples.

First, consolidation is often portrayed as about reducing rates. This is disingenuous. Very few consolidations have been about rates; especially after the first wave at the time of market opening. Mergers and acquisitions are about a seller who wishes to either monetize their shares or realize a better dividend cash flow and buyers who wish to enhance shareholder value. While rates are important they are almost always secondary to the above two considerations. Small LDCs recognize this as the true reality.

Second, there is no evidence that consolidation has led to lower rates. An analysis of residential rate changes over the last ten years shows no statistical difference in the change in rates for utilities of 5,000 customers and above. With a few key exceptions they are all, on average, around the rate of inflation. Some consolidated utilities, like Powerstream, had a very good rate history while others consolidators did not. Some standalone utilities had a rate history as good as Powerstream while others did not. On average, no real difference. Small LDCs therefore object to the arguments that consolidation will lower rates; history says otherwise.

Finally, much of the analysis on cost per customer seems to confuse cause and effect. There is no statistical correlation between size and cost per customer. There is a statistical correlation between customer density and cost per customer. Small LDCs object to simplistic analysis that show larger urban utilities with high density operations with lower cost per customers than the smaller, more rural, LDCs as being an argument for consolidation.

Niagara On-The-Lake HYDRO

November 27, 2015

Rosemary Leclair
Chair and Chief Executive Officer
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Leclair:

The Ontario Energy Board recently publicized a speech you gave to APPrO. After reading it I also read some other recent speeches which were on the website including the Opening Remarks you gave to the Standing Committee on Finance and Economic Affairs on May 20, 2015. In these published remarks I was extremely disappointed to read the following:

"Let me illustrate the OEB's effectiveness in the context of Hydro One rates. Looking at an average residential customer's total bill since 2008, Hydro One's distribution rates have increased an average of 1.4% while its transmission rates have increased an average of 0.2%. Inflation during this time ran about 2%."

This is not a valid comparison. To validly compare the price increase of any product to inflation you must look at the increase in the price of that product alone (distribution rates); not as a part of a larger bundle of products (total bill). If we assume that distribution rates are about one-third of the total bill then the average increase in Hydro One distribution rates is 4.2% compared to inflation of 2%. If we assume that transmission rates are about one tenth of the total bill then the average increase in transmission rates is 2%. These are more consistent with our analysis of Hydro One rate increases.

With its solid record of transparency and analysis the OEB has been one of the few brighter lights in the current sorry state of the Ontario electricity industry. Smaller LDCs like Niagara-on-the-Lake Hydro rely on the OEB for its impartial analysis and unbiased undertakings.

On a more personal level, I hope you have recovered from what I hear was a nasty cold and that we are able to reschedule your visit to Niagara-on-the-Lake.

Yours truly,

Timothy B. Curtis
President

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Niagara On-The-Lake HYDRO

NOTL Hydro Board challenges Minister of Energy to debate

Niagara-on-the-Lake Hydro provides 11 Recommendations on Reducing the Cost of Electricity

December 9, 2015 Niagara-on-the-Lake, ON – The Board of Niagara-on-the-Lake Hydro would like to invite and challenge the Minister of Energy to a public debate on the historical, present and future plans on how to get the cost of electricity down and more manageable for the average consumer. Discussions and input from all interested parties are welcome.

The recently released Report of the Ontario Auditor General (AG report) has highlighted significant mismanagement of the electricity industry in Ontario that has substantially increased the cost of electricity to our customers. To reduce the current and future cost of electricity, it is clear that immediate and drastic actions are required.

As a local electricity distribution company, Niagara-on-the-Lake Hydro deals directly with the electricity consumer and sees the challenges the high prices are causing. Niagara-on-the-Lake Hydro therefore recommends the following immediate actions to assist our customers.

1. Immediately cancel the FIT and MicroFIT programs and immediately cease signing any new contracts. We cannot afford any more above market costs to be built into future pricing.
2. Calculate and transfer the present value of the excess pricing in the existing FIT and MicroFIT contracts to the Ontario Electricity Financial Corporation (OEFC) in a manner similar to that done with Ontario Hydro and the Non-Utility Generation contracts at the time of the market opening. This would remove these costs from the current pricing.
3. Re-instate the Debt Retirement Charge for residential customers. It was never right just to eliminate this for residential and not business customers. This charge will be needed to pay down the above excess pricing cost (Recommendation #2) for years and decades to come. Annual transparent reporting from the OEFC will be required to show how this new debt is being paid down.
4. Stop all provincial Conservation and Demand Management (CDM) programs. This will save $300 million per year per the AG report. CDM Is not needed in a surplus environment and consumers will undertake their own CDM activities based on market prices.
5. Review the pricing of exports. While we have no experience in this area other experts have suggested that better prices could be obtained on the excess generation we are forced to export through more pro-active management of this activity.

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6. Eliminate the Meter Data Management and Repository (MDM/R). This is a redundant service whose cost is part of the Wholesale Market Service Rate on the customer bill. Local distribution companies get the needed information elsewhere.
7. Eliminate the Ontario Electricity Support Program (OESP). This is a tax designed to fund a social program; support to low income customers. Providing refundable income tax credits would be more progressive and more efficient.
8. Separate the transmission and distribution businesses of Hydro One as proposed in the initial report by Ed Clark. The transmission business would remain publicly traded with private investors and the Government of Ontario could sell additional ownership for infrastructure funding.
9. Break-up the Hydro One distribution business into multiple smaller local distribution companies with local governance. Parts of this business could also be sold to local distribution companies. It is clear from the AG report that management of the Hydro One distribution business needs to be brought closer to its customers. We believe significant cost savings and improved customer service can be achieved by this action.
10. Tender the sale of Hydro One Brampton. We have no objection to the proposed LDC merger but as a taxpayer we wonder if the Government of Ontario is getting the best price for this asset.
11. Restore OEB oversight over all aspects of the electricity industry. A truly independent regulator is needed to protect Ontario electricity consumers. Bill 135 should be amended to provide this.

The cost of electricity for the Ontario consumer has risen by around 50% over the last ten years. Electricity costs are largely made up of generation, transmission and distribution costs. Transmission and distribution costs (for most distribution companies though Hydro One is a notable exception) have largely gone up at around the rate of inflation which has been around 18% (over 10 years). The cost of generation has risen by over 110% during this time. More details as to why the generation costs have risen so high can be found in the Auditor General's report.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

Niagara-on-the-Lake Hydro distributes power to over 8,800 customers in the Town of Niagara-on-the-Lake. We are committed to operating as a sustainable high-performance, customer-driven business and to providing the highest standard in safety, service and reliability. NOTL Hydro was the 2014 ENERGY STAR® Utility of the Year (Regional Category) in Canada. The Town of Niagara-on-the-Lake is the 100% shareholder of the corporation.

FOR MORE INFORMATION PLEASE CONTACT:

Tim Curtis
President
Niagara-on-the-Lake Hydro Inc.
905-537-4512
Office Phone – 905-468-4235

Fact Sheet:

Increase in Cost of Electricity

Niagara-on-the-Lake Residential Customer (800 kwh) – Monthly Cost						
	January 1, 2006	**¢/kwh**	**January 1, 2016**	**$/kwh**	**$ Change**	**% Change**
Electricity	$40.40	5.05	$86.13	10.77	$45.73	113%
Delivery Charge	$34.37		$37.26		$2.89	8%
Regulatory Charges	$5.54		$5.23		-$.31	-6%
Debt Retirement Charge	$5.60		-		-$5.6	-100%
Total before HST	**$85.91**	**10.74**	**$128.62**	**16.08**	**$42.71**	**50%**

Comparable Canadian City Electricity Costs

Total electricity cost before taxes (1,000 kwh) – April 1, 2015	
Montreal, QC	$ 71.91
Winnipeg, MB	$ 81.09
Vancouver, BC	$ 102.90
Edmonton, AB	$ 115.47
St. John's. NL	$ 115.53
Calgary, AB	$ 116.55
Moncton, NB	$ 122.98
Niagara-on-the-Lake, ON	**$ 135.18**
Toronto, ON	**$ 143.07**
Regina, SK	$ 143.72
Ottawa, ON	**$ 148.62**
Charlottetown, PE	$ 156.17
Halifax, NS	$ 160.30

Source: Hydro Quebec "Comparison of electricity prices 2015"

Niagara On-The-Lake HYDRO

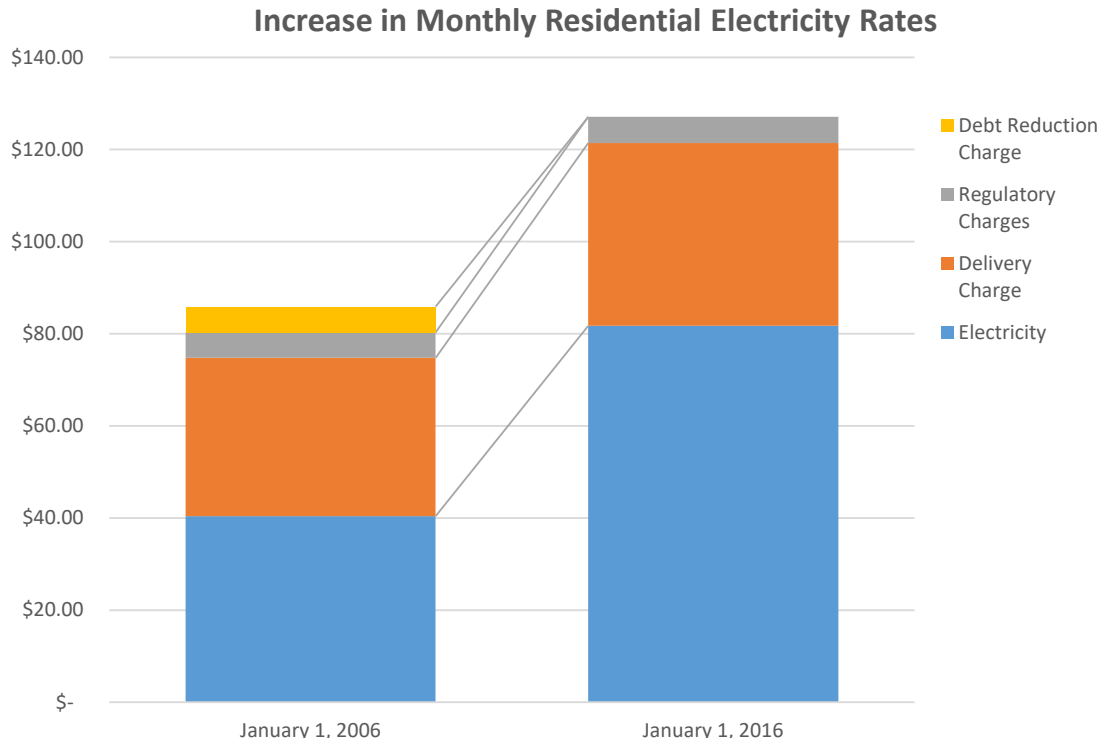
September 13, 2016

Kathleen Wynne, Premier
Legislative Building
Queen's Park
Toronto, Ontario M7A 1A1

Dear Premier Wynne:

The Board of Niagara-on-the-Lake Hydro is pleased to hear that you have finally declared the high cost of electricity an "urgent issue" for the Minister of Energy. The NOTL Hydro Board would like to help address this issue.

As you have stated, the rising cost of electricity is affecting all Ontarians so it is important that any government actions provide relief for all consumers, both business and residential. However, it is critical that the underlying cost issues be addressed. As the saying goes "when you are in a hole the best thing is to stop digging".



There are concrete actions that can be taken both immediately and in the medium term to reduce the cost of electricity or slow down the increase. NOTL Hydro has the lowest delivery charge in the Niagara

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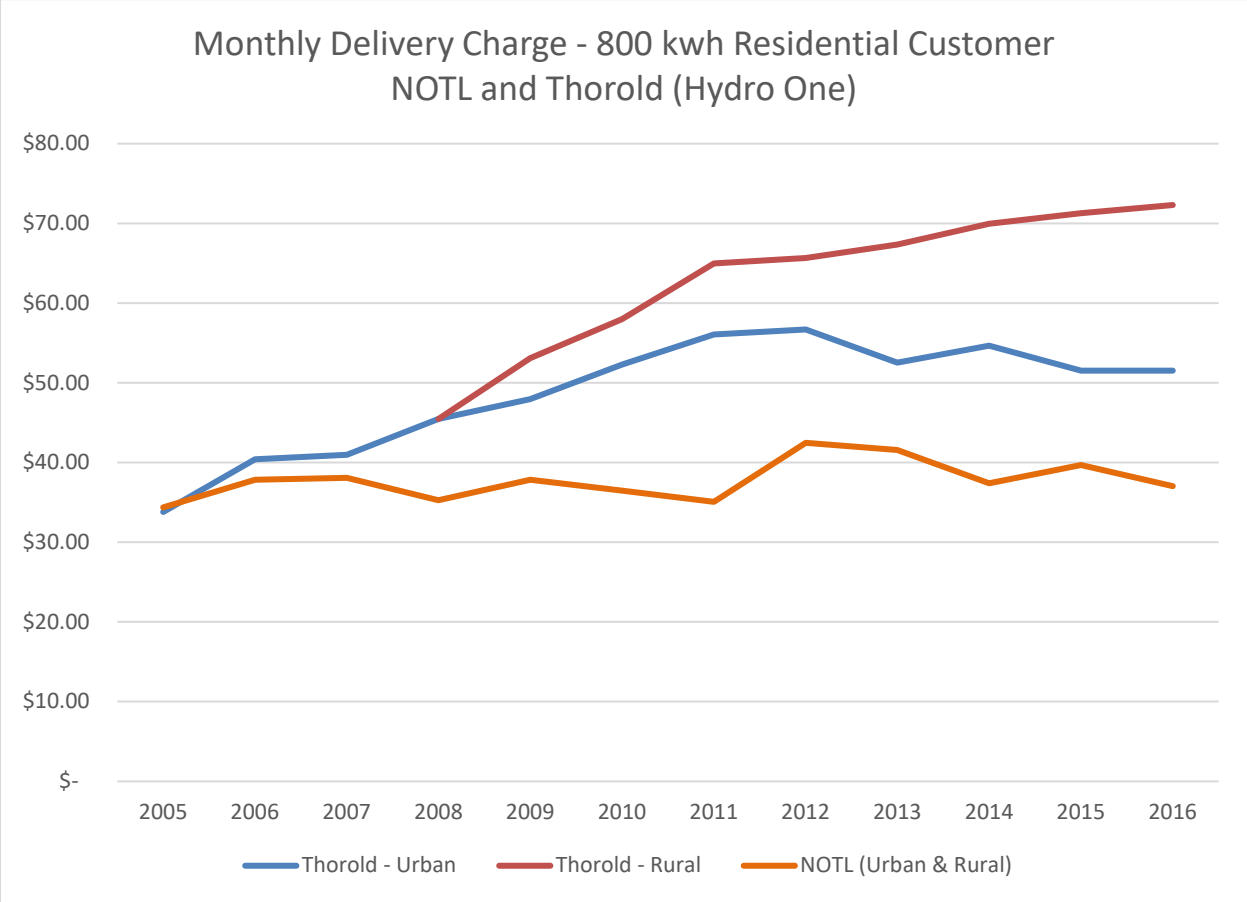
region not because of anything special we have done but because of a fifteen year focus on managing the business to keep costs low for our customers. This focus can be replicated at the Provincial level. The chart above shows that the driver of the increase in costs is generally not at the LDC nor transmission level (both in line with inflation) but at the generation level.

Immediate actions include:

1. Announce that you will stop immediately signing any FIT and MicroFit contracts and move as soon as possible to net metering. This will prevent encumbering the system with more expensive contracts. As you are moving to net metering you are not repudiating your climate action plan but accelerating the move to its next phase. As a sign of our commitment, if you announce this by the end of September 2016 we will cancel our FIT contract.
2. Eliminate the MDM/R branch of the IESO and their activities. This branch collects the smart meter data and all their activities are redundant as are duplicated by the local distribution companies who need the information for billing. If you announce you are eliminating this cost you can also announce you will be removing the $0.79 monthly charge on every customer's bill. While not a large amount this would be a symbolic gesture of the new direction.
3. Recognize that the earlier FIT and MicroFIT contracts were overpriced and transfer the excess cost to the OEFC. While this will increase the debt of the Province it will also reduce the cost of electricity which is needed to sustain jobs and keep Ontario competitive.
4. Meet with industrial business representatives such as in the steel industry to develop plans that mitigate the impact time of use pricing is having on the drivers of our economy. This needs to be done in a manner that does not just transfer the cost to residential customers.

Some medium-term actions include:

1. Break-up Hydro One between its transmission and distribution businesses. This was recommended in the first report from Ed Clark. The transmission business of Hydro One has a good cost performance record; the distribution business does not and is the focus of much of your bad press.



2. Sell to adjacent LDC's the assets of Hydro One in areas that are over-charging compared to their LDC neighbours. As an example, in Niagara Region these are Thorold and the Fonthill area. As well, stop the purchase of LDC's by Hydro One. These purchases are being made at a substantial premium and despite a promise to us by the last Minister of Energy that these were stopped (after the Norfolk purchase). As can be seen in the chart above, Thorold consumers have not benefited from the Hydro One ownership.
3. In other rural areas move the management of Hydro One distribution assets closer to the customers they serve. An “ivory tower” in Toronto with many high paid staff is not the best organization to manage a local business. The synergies can still be achieved through collaborative outsourcing as have been undertaken by most municipal LDCs.
4. Phase out the Conservation programs. These cost over $300 million a year. While the programs have been a success their objectives are no longer as relevant. Instead, it is more important that we reduce costs.

Niagara On-The-Lake HYDRO

5. Establish an independent review to determine if the refurbishment of the Darlington Nuclear plan is truly required. The rumour in the industry is that this was not recommended by the IESO. Announcing an independent review will allow you to demonstrate you are concerned about the rising costs.
6. Rather than build new and expensive generation seek to establish long term supply contracts with Quebec and New York State suppliers that have lower costs structures and surplus supply. We recognize that Ontario is currently in a surplus supply situation but this alternative should be considered on an equal basis to the refurbishment of the nuclear plants.
7. Assess the real cost of solar and wind projects including the back-up natural gas facilities to support them and assess whether there is not a better approach to this initiative.

The Niagara-on-the-Lake Board would welcome the opportunity to work with you on implementing any of these action items. We only have one objective, to lower the costs for our customers.

Sincerely on behalf of the Board of Niagara-on-the-Lake Hydro Inc.,

Tim Curtis
President

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Future Impact of Distributed Generation and Today's Policy Decisions

Niagara-on-the-Lake Hydro

October 13, 2016

Agenda

Niagara-on-the-Lake Hydro

1. Description of the new Grid with Distributed Generation and Electric Vehicles
2. New Technologies
3. Arising Issues
4. Policy Lessons

Niagara-on-the-Lake Hydro

- Over 100 years of distributing electricity in Niagara-on-the-Lake
- NOTL Hydro is one of the smaller LDC's in Ontario
  - 9,000 Customers
  - 133km^2 operating territory
  - Over 400km underground and overhead distribution lines
- Summer peak is 50MW
- 16 full time employees
- Winner of National Research Canada Regional Utility of the Year award 2015
- Lowest Delivery Charge in the Niagara Region

New Technologies

1. Solar
2. Wind
3. Storage
4. Micro-turbines
5. Smart meters
6. Conservation
7. Electric Vehicles
8. Greenhouse gas emissions

Issues Arising from Distributed Generation

Niagara-on-the-Lake Hydro

1. Transmission and distribution line constraints
2. Cost pressures
3. Pricing decisions
4. Meeting demand and supply
5. Potential impact of Electric Vehicles

Line Constraints – Dx

- Distribution lines use an inter-connected feeder system to serve customers
- Lines are adjusted over time based on changes in load and need for voltage control

Line Constraints – Tx

- Same issues as Dx but on a bigger scale

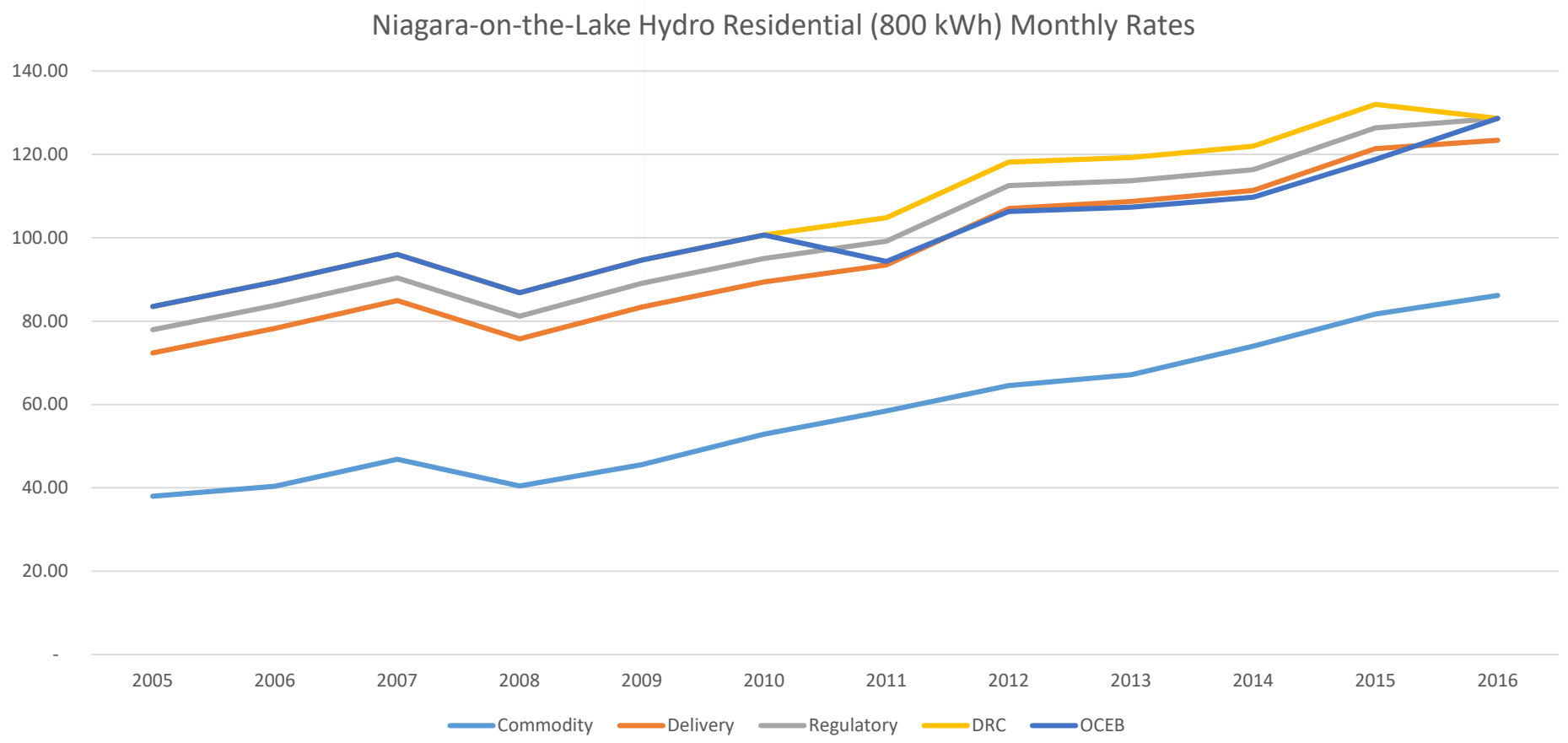
Line Constraints – Issues

Niagara-on-the-Lake Hydro

1. Distributed generation reduces demand from grid; particularly on transmission lines. Recent Hydro One rate increase affected by falling demand.
2. Generation installation can change much faster than demand creating oversupply and undersupply situations. For instance, Niagara has too much generation.
3. Intermittent generation on distribution lines creates voltage issues that are less easily corrected.

Rising Electricity Costs

Niagara-on-the-Lake Hydro



Cost of Electricity - 2014

Niagara-on-the-Lake Hydro

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,900	94.9	65%	$62.2
Hydro	1,835	37.9	26%	$48.4
Gas/Oil	2,287	14.9	10%	$153.5
Wind	935	7.8	5%	$119.9
Solar	884	1.8	1%	$491.1
Bioenergy	100	0.5	0.3%	$200.0
Coal	7	0.1	0.01%	$70
Other	186	1.6	1%	$116.3
Imports	251	4.9	3%	$51.2
Exports	(636)	(19.1)	(13%)	$33.3
Total	$11,749	145.3	Average	$80.9

Cost of Electricity – Coal

Niagara-on-the-Lake Hydro

- 2014 was the last year of any electricity generation from coal in Ontario
- In 2000 coal produced 28% of Ontario electricity (over 40 TWh) and was the cheapest source of electricity. Electricity demand in 2000 (147 TWh) was almost the same as 2014.
- Nuclear and gas have primarily replaced coal

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,900	94.9	65%	$62.2
Hydro	1,835	37.9	26%	$48.4
Gas/Oil	2,287	14.9	10%	$153.5
Wind	935	7.8	5%	$119.9
Solar	884	1.8	1%	$491.1
Bioenergy	100	0.5	0.3%	$200.0
Coal	7	0.1	0.01%	$70
Other	186	1.6	1%	$116.3
Imports	251	4.9	3%	$51.2
Exports	(636)	(19.1)	(13%)	$33.3
Total	$11,749	145.3	Average	$80.9

Cost of Electricity – Wind/Solar

Niagara-on-the-Lake Hydro

Cost of Wind/Solar	$ 1,819
Wind/Solar production (TWh)	9.6
Average price	$ 80.9
Value of Wind/Solar	$ 777
Excess cost	$ 1,042

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,900	94.9	65%	$62.2
Hydro	1,835	37.9	26%	$48.4
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Cost of Electricity – Capacity

Niagara-on-the-Lake Hydro

Cost of Gas/Oil	$ 2,287
Gas/Oil production (TWh)	14.9
Estimated true price	$ 60
Value of Gas/Oil	$ 894
Cost of capacity payments	$ 1,393

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,900	94.9	65%	$62.2
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Total	$11,749	145.3	Average	$80.9

Cost of Electricity – Exports

Niagara-on-the-Lake Hydro

Proceeds from Exports	$ 636
Exports (TWh)	14.9
Average price	$ 80.9
Cost of Exports	$ 1,205
Loss on Exports	$ 569

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
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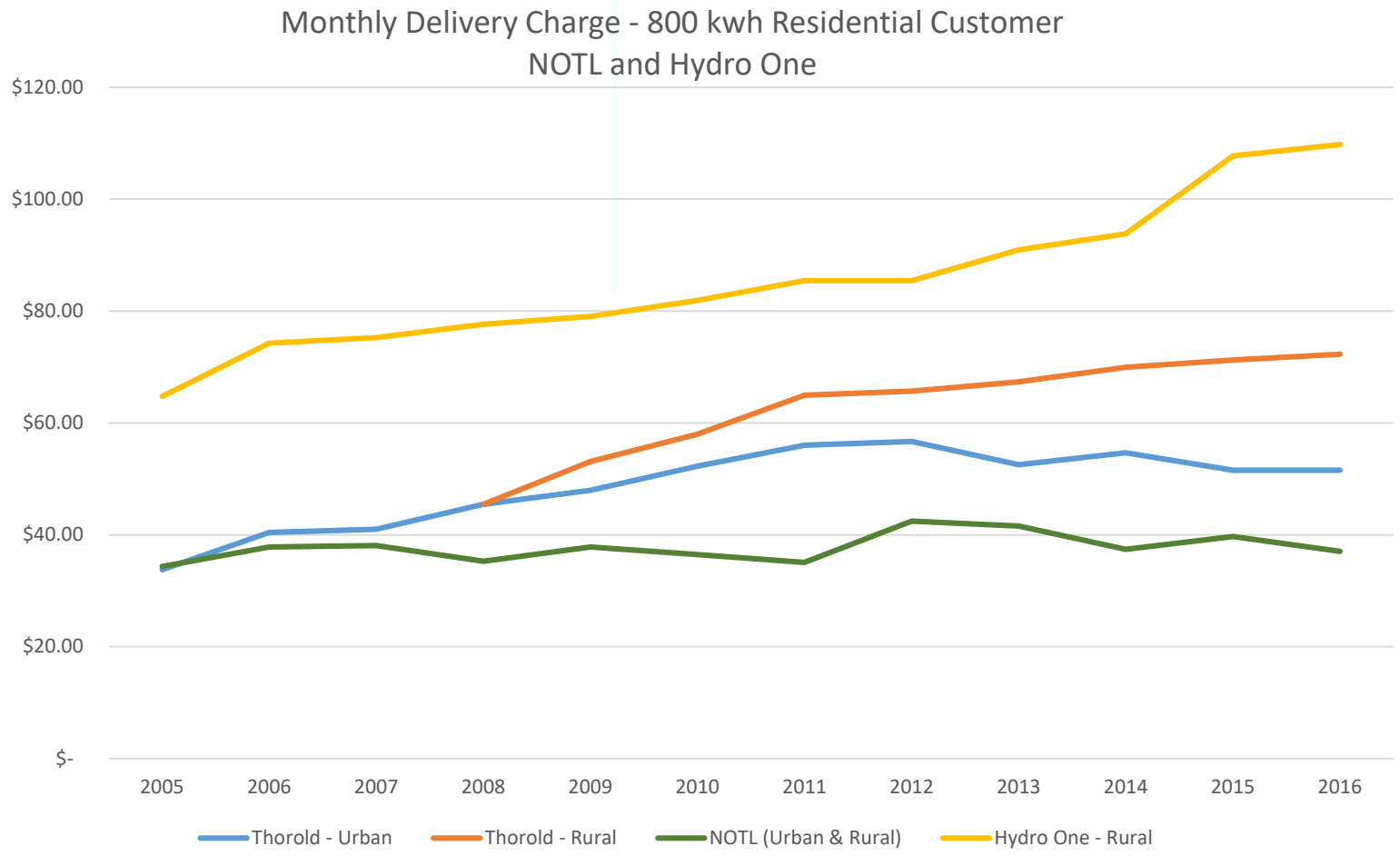
Hydro One Distribution Rates

Niagara-on-the-Lake Hydro



Cost of Electricity – Issues

1. If costs become too high or rise too quickly electricity rates become a political issue.
2. High public sector control and monopoly nature of business magnify issue
3. Ability of sector to absorb incremental costs therefore limited
4. Distributed generation decisions and technological trends can have unintended or unanticipated consequences

Pricing

Niagara-on-the-Lake Hydro

Pricing decisions by regulators and governments can have a significant impact on behavior.

Example #1 – Fixed monthly connection charges

MicroFIT generators	$ 5.40
Residential consumers	$21.06
Small business consumers	$38.44

Pricing

Niagara-on-the-Lake Hydro

Pricing decisions by regulators and governments can have a significant impact on behavior.

Example #2 – Total Electricity Costs across Rate Classes (2015: $US)

	Residential	Commercial	Industrial	Total
US Municipal	11.4	10.7	7.3	10.1
NOTL Hydro	12.7	13.3	12.4	12.8

Pricing

Niagara-on-the-Lake Hydro

Pricing decisions by regulators and governments can have a significant impact on behavior.

Example #3 – Net metering

Retail rate	Variable electricity commodity, transmission, distribution and regulatory charges
Avoided cost	Wholesale cost of electricity commodity
Fixed price	Set by regulator
Blended	Permutations of the above

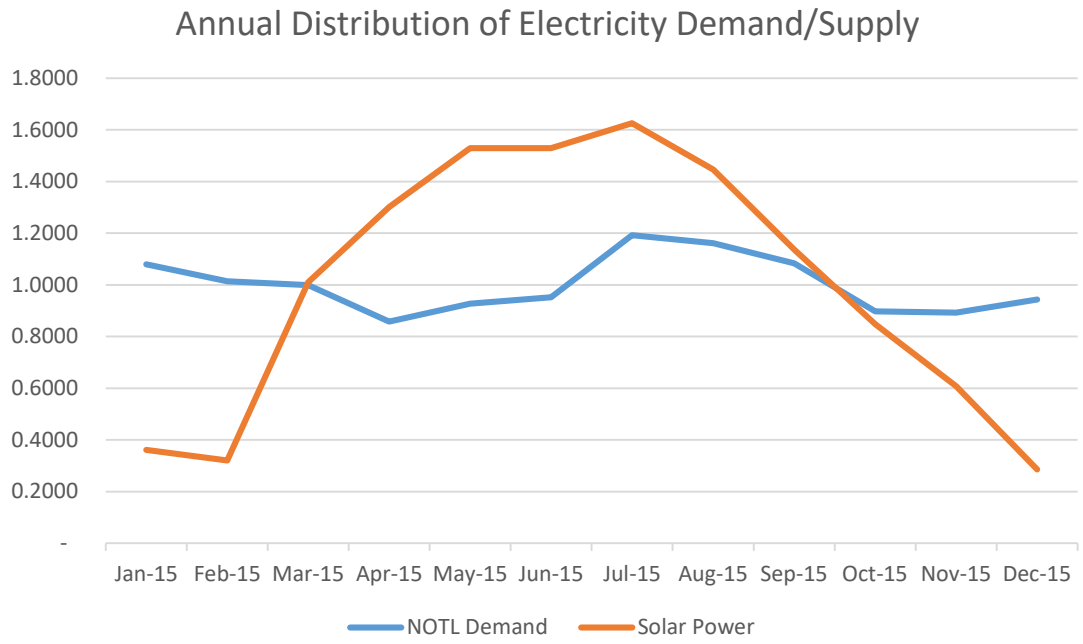
Pricing – Issues

1. Pricing decisions by regulators and governments can swing between trying to be “fair” and trying to influence behavior. End result is often an inconsistent pricing scheme.
2. Pricing can become very political
3. Pricing decisions can have a long-term impact
4. Distributed generation and the ability of customers to change their load requirements make pricing decisions all the more challenging.

Meeting demand and supply Solar

Niagara-on-the-Lake Hydro

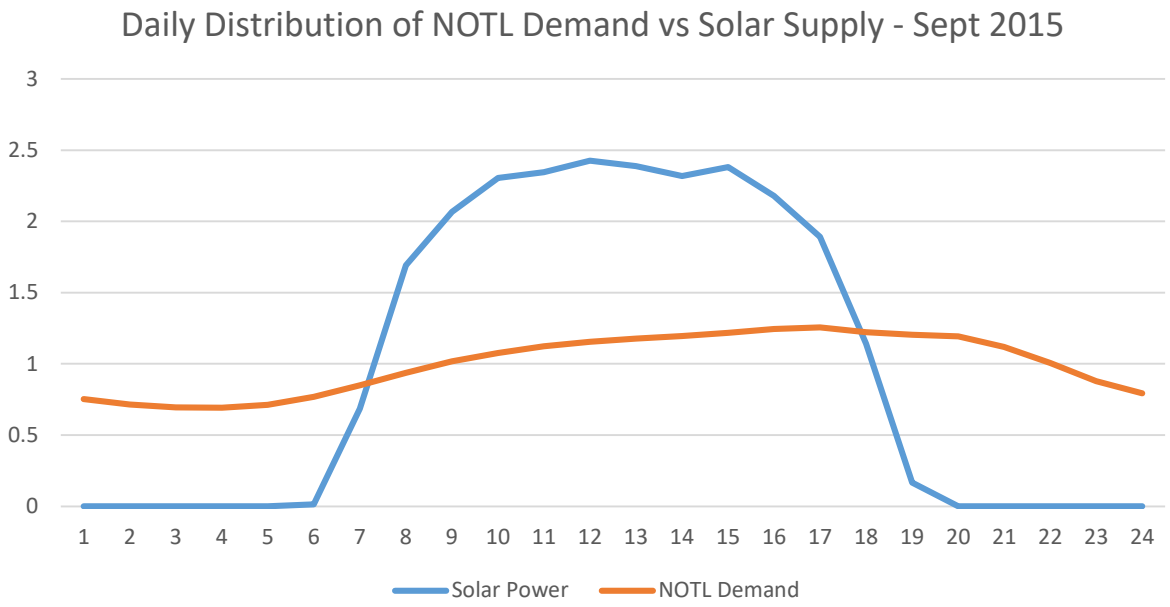
- Solar power generates little electricity in winter, even in NOTL
- This is fine for a house with solar power and net metering; but not for an entire system
- Generation still needed in winter to meet demand
- Storage not a solution over time line and with this volume



Meeting demand and supply Solar

Niagara-on-the-Lake Hydro

- Solar power generates no electricity at night
- Generation still needed at night to meet demand
- Storage is a solution but at what cost

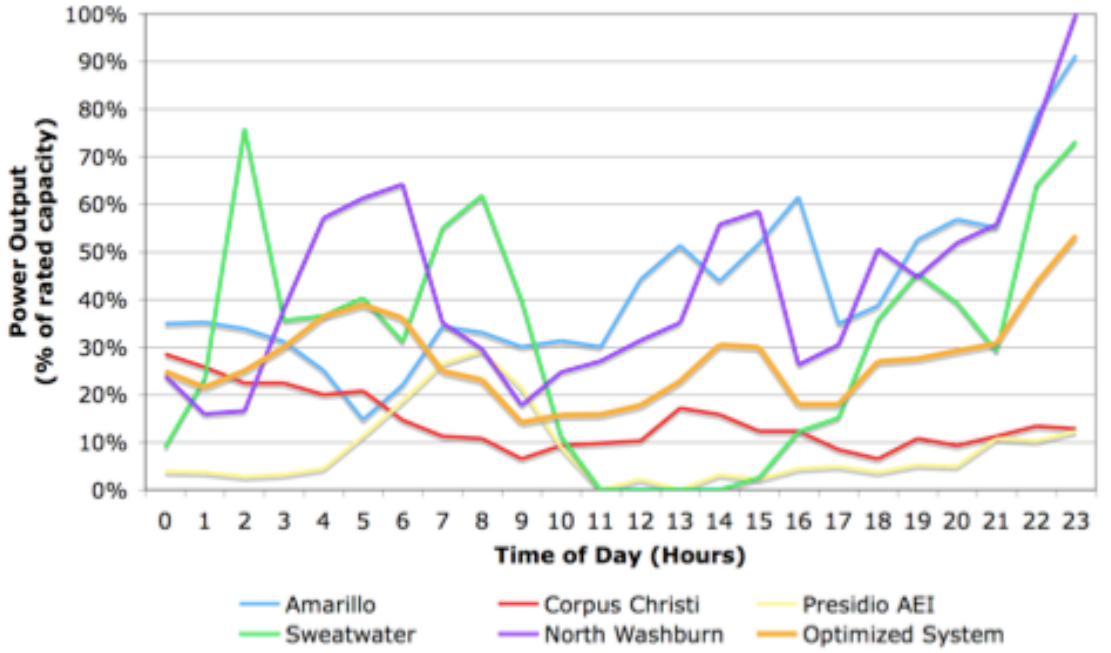


Meeting demand and supply Wind

Niagara-on-the-Lake Hydro

- Wind power can vary from minute to minute which means standby generation must always be available
- Timing of wind power also varies by site with some sites producing power at better times than others

Figure 5: Optimized output (5 sites in Texas, January 1, 2004)



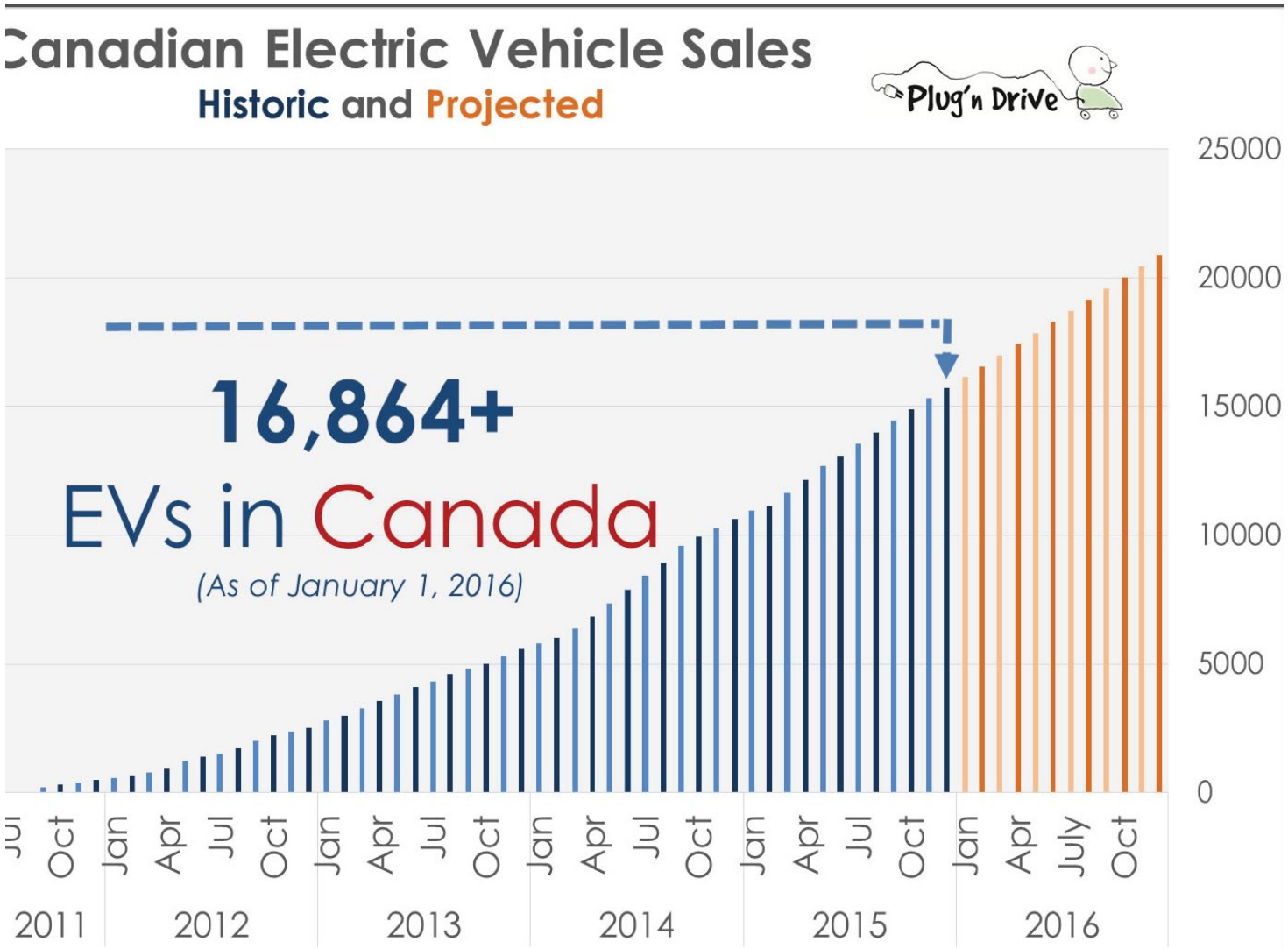
Meeting demand and supply Issues

Niagara-on-the-Lake Hydro

1. Distributed generation is largely intermittent which means standby generation capacity is always required
2. The additional cost of this standby generation should be factored into cost comparisons
3. Timing of distributed generation does not always match well against when the generation is actually needed

Growth of electric vehicles in Canada

Niagara-on-the-Lake Hydro



Impact of 1 million EVs on Ontario Grid – Load

Load

- Assume 5,000 kwh per annum per vehicle (GM est. 2,500 kwh)
- Total load 5 TWh for 1 million EVs
- Ontario load is 140 TWh so a 3.6% impact

- Ontario has sufficient electricity capacity to charge all electric vehicles

Impact of 1 million EVs on Ontario Grid – Provincial Demand

Niagara-on-the-Lake Hydro

Demand

- Level 2 charger has 7.2 kw demand
- Total demand 7,200 MW for 1 million EVs
  if all charged at once
- 2015 peak is 22,500 MW (avg. 15,600 MW)
  while capacity is 39,000 MW
- Peak is usually around 5:30 PM. If all vehicles (upon return from work) then could be an issue.
- Potential solution is to give utilities ability to curtail charging; cost and freedom issue

Impact of 1 million EVs on Ontario Grid – Local Demand

Niagara-on-the-Lake Hydro

Demand

- Level 2 charger has 7.2 kw demand
- Typical transformer has 50 kw capacity and serves around 7-10 houses; houses average 3-4 kw demand
- In many neighbourhoods transformers are already at capacity with growth in pools, hot tubs, etc.
- It would not take many electric vehicles to overload the local transformer

Electric Vehicles – Issues

Niagara-on-the-Lake Hydro

1. The Province can handle the additional load if drivers switch to electric vehicles; but the timing of the charging could make significant demands on the current system
2. Ways to mitigate this concern still being investigated and analyzed
3. Local distributors could have issues with potential loading of individual transformers

Policy Lessons

Niagara-on-the-Lake Hydro

1. Significant uncertainty as to magnitude and timing of impacts on grid of distributed generation, electric vehicles and greenhouse gas mitigation. Policies need to maintain flexibility to react as these become more certain.
2. Decisions should still be made based on the “market”. Ignoring this can lead to very expensive decisions.
3. There is no one answer. Need to let market participants experiment and vary their response according to the local environment.
4. Cost concerns need to be higher than demonstrated so far and cost/benefit analysis of decisions performed.

Policy Lessons

5. Players need to be constrained to their respective roles
   - Government (Ministry of Energy) should determine policy but not implement
   - Agencies with required expertise (IESO, Hydro One transmission, LDCs) should be responsible for implementation
   - Regulator (OEB) needs to be independent and strengthened
   - Allow private sector market participants wherever possible

6. New solutions may require new approach to grid management such as risk sharing

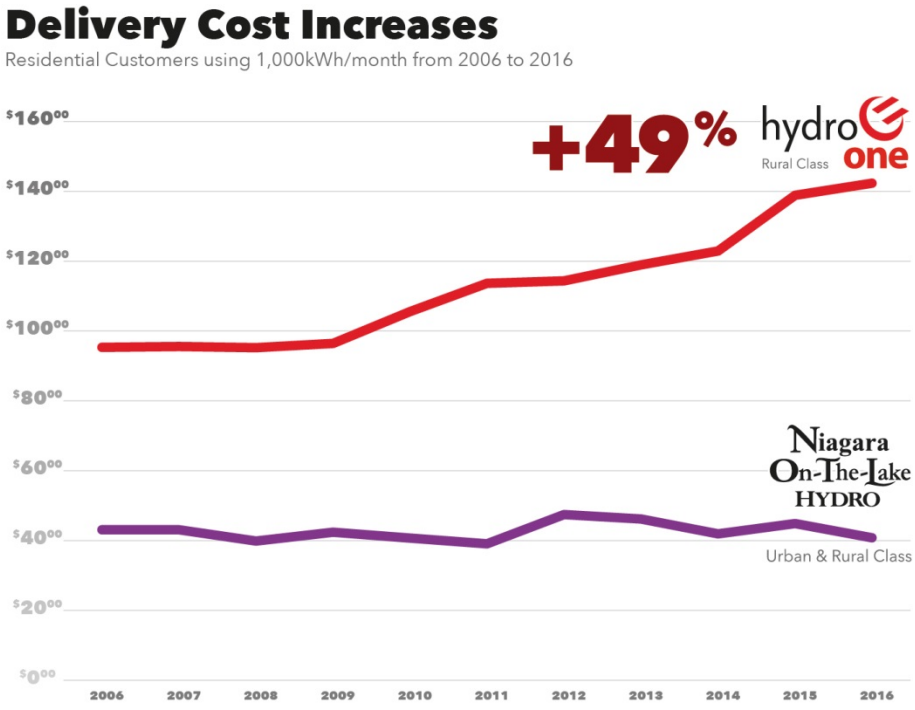
Niagara On-The-Lake HYDRO

Electricity Costs Rose Again on January 1, 2017

Small Increase a Symptom of Bigger Problems

February 1, 2017, Niagara-on-the-Lake - Electricity rates for all Ontario customers rose on January 1, 2017. The Ontario Energy Board has announced that the Rural and Remote Electricity Rate Protection (RRRP) Charge will rise from $0.0013 to $0.0021 per kWh. For the average Niagara-on-the-Lake (NOTL) residential customer the increase will be around $8.00 over a full year. The rate increase is needed to pay for the 60% increased funding of the program announced in the September 2016 throne speech.

The RRRP reduces electricity ***delivery*** costs for approximately 330,000 customers located in rural areas. Under the existing regulations, only customers of two utilities are eligible for the RRRP: Algoma Power Inc. and Hydro One Networks Inc. and almost all the customers (97%) receiving the RRRP are customers of Hydro One.



From 2006 to 2016, the monthly delivery cost for an average 1,000 kWh Hydro One rural residential customer (class R2), before the RPPP credit, increased 49% from $95.35 to $142.32. An average NOTL Hydro customer would have a delivery charge of $40.85. On average, municipally owned local distribution companies had rate increases at around the rate of inflation of 18%. It is understood that the cost of serving remote Hydro One customers will be higher than those in a community like NOTL, but the costs should not be increasing any faster.

The Board of NOTL Hydro encourages the Government of Ontario to deal with the underlying problem with rural distribution costs and get Hydro One costs down so that their rate increases are in line with the smaller, more efficient local distribution companies in Ontario. "This would eliminate the requirement for the remaining electricity customers in Ontario to further subsidize the services of Hydro One." Said Jim Ryan, Chair of NOTL Hydro, "Alternatively, if the increased RRRP is to assist rural customers with the increased cost of generated electricity then it should be made available to all rural customers and not just those of Hydro One and Algoma Power."

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

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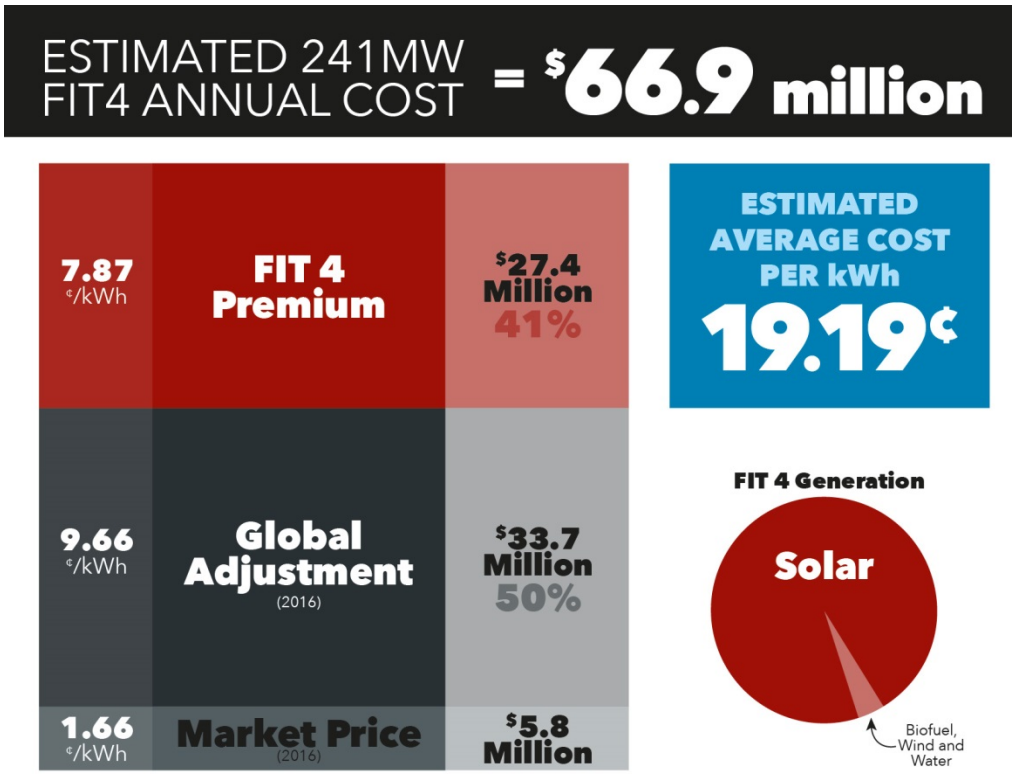
Niagara On-The-Lake HYDRO

NOTL Hydro Board urges Minister of Energy to cancel the FIT 5 Energy Procurement
An Opportunity to Stop Adding Additional Costs to the Ontario Electricity System

March 1, 2017, Niagara-on-the-Lake –Niagara-on-the-Lake Hydro's Board is calling on the Minister of Energy to cancel all new renewable generation projects in the FIT 5 program. The FIT (Feed-In Tariff) programs are a series of procurements of renewable energy and provide fixed rate contracts for 20 years and more at above market prices to successful applicants. They were introduced as part of Ontario's *Green Energy Act* of 2009 to facilitate the market transformation of renewable electricity generation.



An analysis of the last round of contracts (FIT 4), a total of 241 MW awarded in June 2016, shows that Ontario electricity consumers will be paying an estimated $27.4 million a year over and above the already high cost of electricity in Ontario and will contribute another $61 million to the Global Adjustment each year. The generation being built under these contracts, predominately solar, will begin producing electricity in 2017 and 2018 and will continue to generate high-priced electricity over the 20 year life of these contracts.

"We are not against renewable generation, we are against the method of how the Province is procuring it", said Jim Ryan, Chair of NOTL Hydro. "We cannot continue to add $30 million here and $20 million there to the overall cost and not realize that this is going to have a cumulative impact. Today's high prices are evidence of this. No FIT5 contracts have yet been awarded or signed so the Minister would have the right to cancel the process and save Ontario electricity consumers tens of millions of additional costs."

NOTL Hydro believes renewable energy is the future of electricity, but that its procurement should be driven by market demand at commercially acceptable prices. Many countries are seeing solar energy being offered at below market prices due to continued improvements in the technology.

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In his December 16, 2016 directive to the Independent Electricity System Operator (IESO), the Minister of Energy cancelled the planned 2017 program (FIT 6) and scaled back the current FIT 5 program to 150 MW. The Board of Niagara-on-the-Lake (NOTL) Hydro congratulates the Minister on taking this important step towards containing the rising cost of electricity generation in Ontario but thinks the Minister can do more by cancelling the current call for projects.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

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Niagara On-The-Lake HYDRO

NOTL Hydro Board urges Reduction in Electricity Costs for all Businesses

April 3, 2017, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) urges the Minister of Energy to provide the same electricity rate reduction to all businesses that is being provided to residential, small business and farm electricity users.

"Businesses have experienced the significant increase in the cost of electricity over the past few years just like residential customers," said Jim Ryan, Chair of NOTL Hydro, "and these businesses must compete globally and manage their costs. One wonders how many jobs have been lost or not been created because of these high electricity costs."

Business electricity customers have been discriminated against in a number of ways over the past few years:

- Large businesses were excluded from the 8% Ontario Rebate for Electricity Consumers introduced on January 1, 2017;
- The Debt Retirement Charge was removed for residential customers in 2016 and 2017 but not business customers;
- Business customers must pay the Ontario Electricity Support Program and the Rural and Remote Electricity Rate Protection Charge even though the only beneficiaries of these programs are residential customers (this is being corrected this year);
- Many businesses, particularly small businesses, cannot shift the times they operate so must pay more of the higher on-peak time of use rates; and
- It appears, based on the Premier's announcement, that large businesses will also not benefit from the planned further 17% reduction in the cost of electricity.

Many Ontario businesses are not able to take advantage of the Industrial Conservation Initiative which is the energy savings program offered to the large business sector as it requires the business to reduce their use of power at peak demand times.

A comparison of the all-in average cost of electricity between Ontario and the United States shows a pattern of providing relatively lower prices for business customers in the United States.

2015 Total average cost of electricity (¢/kWh) before DRC and HST in $CAD

	Residential	Commercial	Industrial	Total
Niagara-on-the-Lake Hydro (Ontario)	15.3	14.5	12.2	13.9
United States (Public Power Utilities)	14.6	13.7	9.3	12.9

Source: Niagara-on-the-Lake Hydro, American Public Power Association, Bank of Canada

While the Board of NOTL Hydro is not advocating mimicking the US pricing strategy it is clear steps should be taken to address the competitive challenge Ontario businesses face. The NOTL Hydro Board advocates adapting the Ontario Fair Hydro Plan to also reduce rates for Ontario businesses.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

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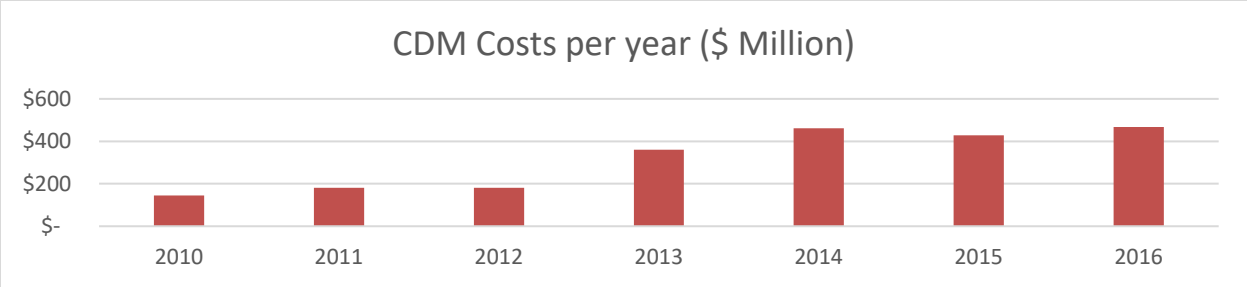
Niagara On-The-Lake HYDRO

NOTL Hydro Board urges Cancellation of $2 billion Electricity Conservation Programs

Need to Start Removing Costs from the Ontario Electricity System Now

May 1, 2017, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) urges the Minister of Energy to cancel the existing Conservation and Demand Management (CDM) programs and save electricity consumers over $400 million a year. The current 2015-2020 program has a budget of over $2 billion.

"We applaud the Government for announcing the end of offering high priced FIT and MicroFIT contracts and for providing rate relief for most consumers," said Jim Ryan, Chair of NOTL Hydro, "but until we take actual costs out of the system we are just moving money around. The CDM programs no longer meet the purpose for which they were created and are the biggest expense item that can be cut immediately."



The theory behind CDM programs is that it is less expensive to reduce the peak demand for electricity than to build and operate the new generation that would otherwise be needed. CDM programs were pioneered in California in the 1970's during a time of rapid growth in electricity usage when the alternative was building new nuclear power plants. Ontario is not currently in a similar situation:

- Consumption of electricity is down over 10% since 2005 and is not rising. While some of this decline is due to the CDM programs most is due to changing industrial demand and natural efficiencies;
- Ontario has an electricity surplus and is losing money on its exports of excess electricity. Declining demand for electricity in Ontario will make this worse.
- Many of the CDM programs, such as paying to convert streetlights to LED lighting, do nothing to reduce peak demand. The Environmental Commissioner of Ontario has noted this.
- The Government has already committed to the refurbishment of the Darlington Nuclear plant. The CDM program has not helped avoid this expensive undertaking.
- Over one-third of the CDM target could still be achieved by improved codes and standards which do not encumber electricity consumers with the costs of program subsidies.
- CDM costs are part of the Global Adjustment. Eliminating these costs would reduce the Global Adjustment.

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Niagara On-The-Lake HYDRO

According to the Board of NOTL Hydro, it is about setting priorities and right now, creating a culture of cost management in the Ontario electricity industry is more important. The current high prices will ensure a culture of conservation continues to be vibrant even without the CDM program expenditures.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

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Niagara-on-the-Lake Hydro
Meeting with MPP Todd Smith
May 1, 2017

Ideas for Removing Costs from Ontario Electricity System and improving Customer Focus

1. Cancel CDM - $400 million per year
2. Cancel MDM/R - $50 million per year
3. Downsize Ministry of Energy
4. Downsize OEB
5. Make OEB independent
6. Cancel Energy market – direct IESO to schedule electricity in most cost efficient manner
7. Give IESO (or someone else) ability to buy-out Electricity contracts
8. Establish trading floor to maximize value of exports
9. Maintain part of Ministry of Energy focused on future of energy
10. Break up Hydro One

Fixing Ontario's Electricity System

Niagara-on-the-Lake Hydro

May 4, 2017

Niagara-on-the-Lake Hydro

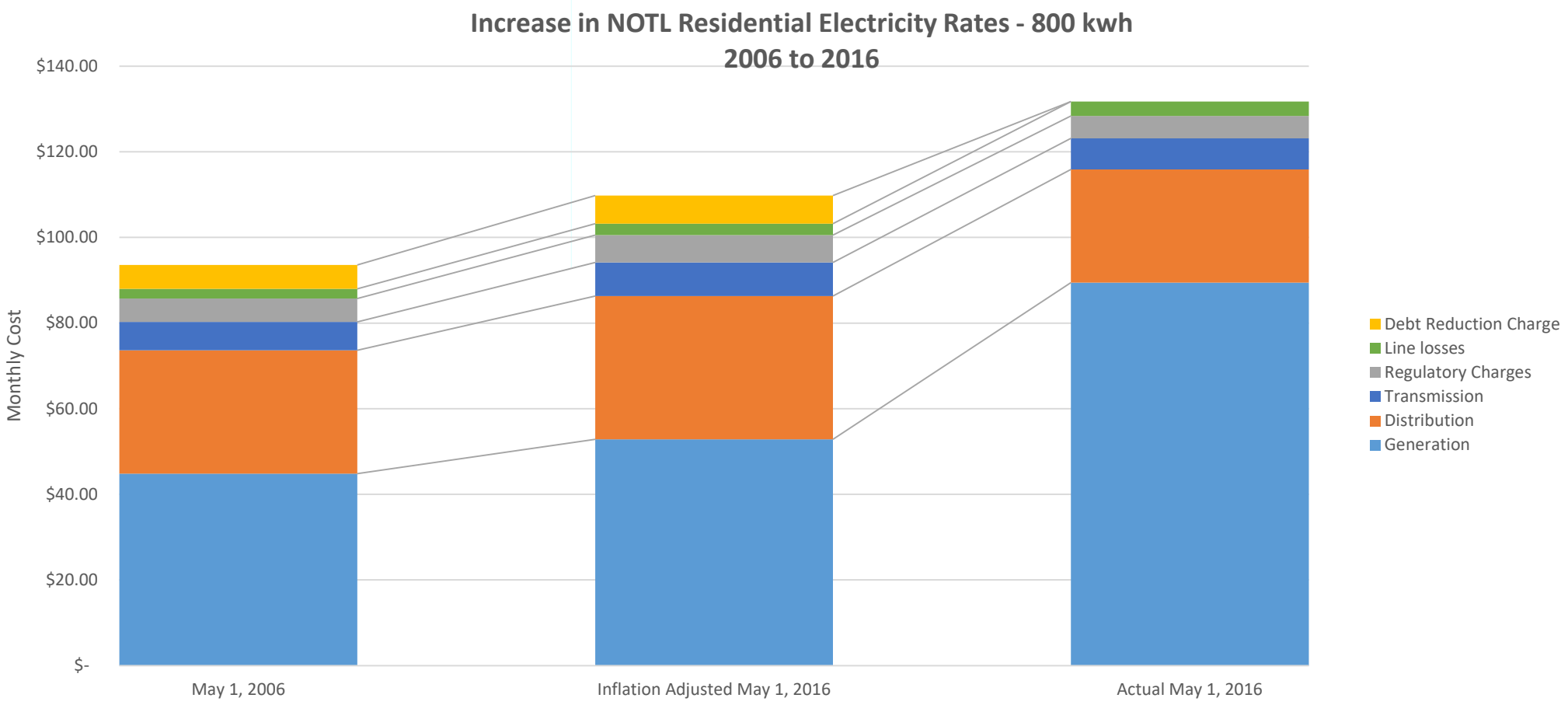
- Over 100 years of distributing electricity in Niagara-on-the-Lake
- NOTL Hydro is one of the smaller LDC's in Ontario
  - 9,000 Customers
  - 133km^2 operating territory
  - Over 400km underground and overhead distribution lines
- Summer peak is 50MW
- 16 full time employees
- Winner of National Research Canada Regional Utility of the Year award 2015
- Lowest Delivery Charge in the Niagara Region

www.notlhydro.com

Niagara On-The-Lake HYDRO

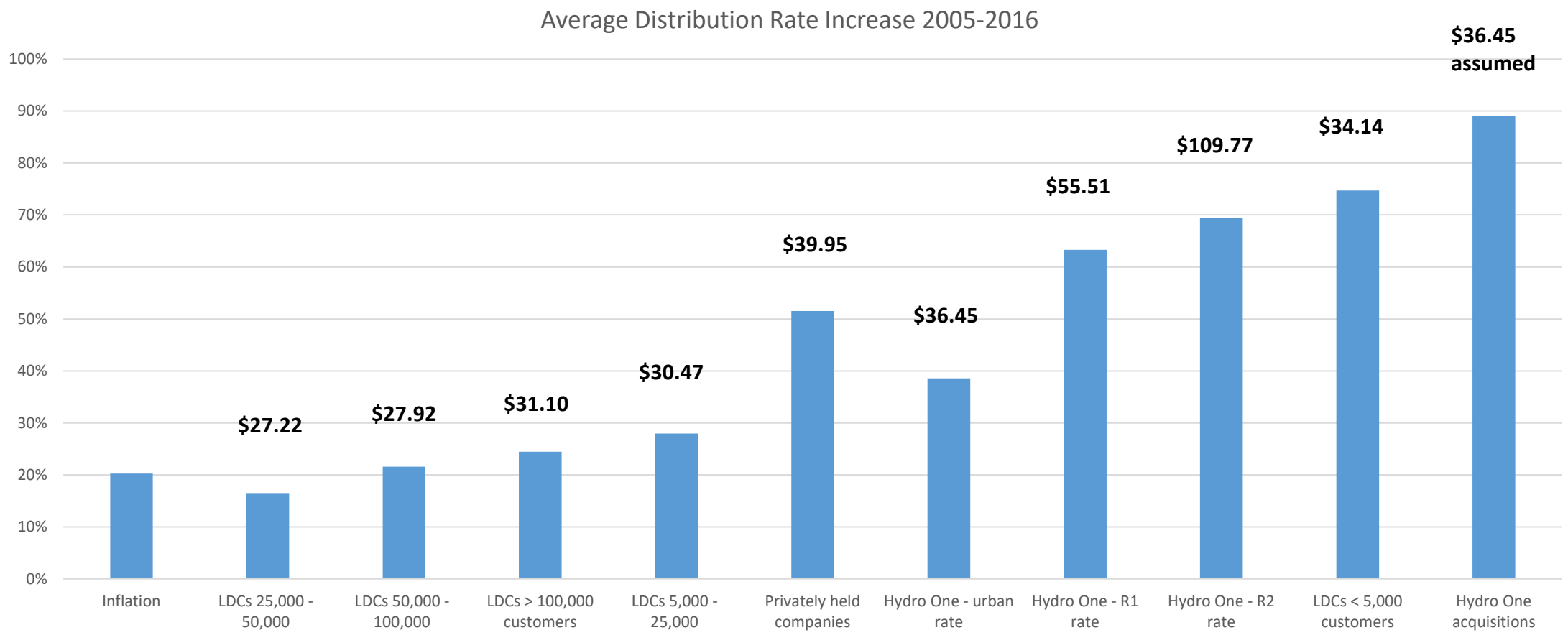
Rising Electricity Costs

Niagara-on-the-Lake Hydro



Distribution Rates

Niagara-on-the-Lake Hydro



Cost of Electricity – 2015

Niagara-on-the-Lake Hydro

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,864	92.3	64%	$63.6
Hydro	2,159	37.2	26%	$58.1
Gas/Oil	2,183	15.5	11%	$140.8
Wind	1,346	10.2	7%	$132.5
Solar	1,386	3.0	2%	$461.1
Bioenergy	194	0.6	0.4%	$306.7
Coal	-	-	0%	$-
Other	60	1.4	1%	$43.8
Imports	169	5.8	4%	$29.4
Exports	(606)	(22.6)	(16%)	$26.8
Total	$12,753	143.2	Average	$89.1

Ontario Supply Mix 2007-2015

Niagara-on-the-Lake Hydro

- 2014 was the last year of any electricity generation from coal in Ontario
- Demand for electricity has declined by 6%
- Cost of electricity has grown by 65% in eight years
- Inflation in this time period was 14%

Technology	Production 2007 (TWh)	Production 2015 (TWh)	Change in Production (TWh)
Nuclear	80.8	92.3	11.5
Hydro	33.0	37.2	4.2
Gas/Oil	12.2	15.5	3.3
Wind	1.1	10.2	9.1
Solar	-	3.0	3.0
Coal	28.4	0.0	(28.4)
Other	1.9	2.0	0.1
Imports	7.2	5.8	(1.4)
Exports	(12.3)	(22.6)	(10.3)
Total	152.2	143.2	(9.0)
Total Cost ($B)	$8.2	$12.8	+$4.6
Cost per MWh	$54.1	$89.1	+$35.0

Cost of Electricity – Coal

Niagara-on-the-Lake Hydro

2007 Coal production (TWh)		28.4
2007 avg. generation cost	$	54.1
2007 Coal cost	$	53.1
Increase in costs	$	1.0
Increased costs by removing Coal (millions)	$	28.4

- Coal was 19% of total supply in 2007

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,864	92.3	64%	$63.6
Hydro	2,159	37.2	26%	$58.1
Gas/Oil	2,183	15.5	11%	$140.8
Wind	1,346	10.2	7%	$132.5
Solar	1,386	3.0	2%	$461.1
Bioenergy	194	0.6	0.4%	$306.7
Coal	-	-	0%	$-
Other	60	1.4	1%	$43.8
Imports	169	5.8	4%	$29.4
Exports	(606)	(22.6)	(16%)	$26.8
Total	$12,753	143.2	Average	$89.1

Cost of Electricity – Nuclear

Niagara-on-the-Lake Hydro

2015 Nuclear production (TWh)	92.3
2015 avg. cost	$ 63.6
2007 avg. cost	$ 50.4
Increase in costs	$ 13.2
Increased costs of nuclear	$ 1,218

- Nuclear production grew by 14% from 2007-2015

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,864	92.3	64%	$63.6
Hydro	2,159	37.2	26%	$58.1
Gas/Oil	2,183	15.5	11%	$140.8
Wind	1,346	10.2	7%	$132.5
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Total	$12,753	143.2	Average	$89.1

Cost of Electricity – Wind/Solar

Niagara-on-the-Lake Hydro

Cost of Wind/Solar - 2015	$ 2,732
Wind/Solar production (TWh)	13.2
Average price (2006)	$ 54.1

Value of Wind/Solar	$ 714
Excess cost	$ 2,018
	=======

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
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Total	$12,753	143.2	Average	$89.1

Cost of Electricity – Capacity

Niagara-on-the-Lake Hydro

2015	
Cost of Gas/Oil	$ 2,183
Value of Gas/Oil	$ 476
Cost of capacity payments	$ 1,707
2007	
Cost of Gas/Oil	$ 1,147
Value of Gas/Oil	$ 688
Cost of capacity payments	$ 459
Increase in capacity costs	$ 1,248
	======

- Gas production increased 27% from 12.2 TWh to 15.5 TWh

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
Nuclear	5,864	92.3	64%	$63.6
Hydro	2,159	37.2	26%	$58.1
Gas/Oil	2,183	15.5	11%	$140.8
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Total	$12,753	143.2	Average	$89.1

Increase in Cost of Electricity 2007-2015

Niagara-on-the-Lake Hydro

Breakdown of the increase in the cost of electricity from 2007-2015:

Nuclear	$1.2	- cost per unit increase of 26%
Wind/solar contracts	2.0	- combined avg. price over 20¢ per kWh
Capacity Costs	1.2	- driven by intermittent wind/solar
Other	0.2	
Total	$4.6	

Cost of Electricity – Exports

Niagara-on-the-Lake Hydro

2015	
Proceeds from Exports	$ 606
Exports (TWh)	22.6
Average price (excl. exports)	$ 80.6
Cost of Exports	$ 1,821
Loss on Exports	$ 1,215
2007	
Proceeds from Exports	$ 594
Exports (TWh)	12.3
Average price (excl. exports)	$ 53.7
Cost of Exports	$ 660
Loss on Exports	$ 66
Increase in Loss on Exports	$ 1,149
	======

Technology	Cost ($MM)	Production (TWh)	Production (%)	Price ($/MWh)
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Cost of Electricity – Recommendations

Niagara-on-the-Lake Hydro

Recommendation	Status
1. Stop signing high priced green energy contracts	Largely done other than FIT 5 What contracts can be reasonably cancelled?
2. Write-off excess cost of green energy contracts	Effectively been done under Fair Hydro Plan Expect this cost to move to debt eventually.
3. Remove costs from system where possible	Nothing has been done
4. Independent regulator	OEB has been made less independent IESO needs mandate improved
5. Break-up Hydro One	30% sold, break-up highly unlikely
6. Prepare for future	Good work in Province High price is an impediment

Niagara-on-the-Lake Hydro Inc.
Submission to Standing Committee on Justice Policy
Ontario Fair Hydro Plan Act, 2017
May 23, 2017

Transcript

The Chair (Mr. Shafiq Qaadri): Our first presenter will have, like others, five minutes in which to present, followed by three three-minute rotations. Timothy Curtis, president of Niagara-on-the-Lake Hydro, please come forward.

Mr. Curtis, you've seen the drill. Timing is enforced with military precision. I invite you to be seated. Your time begins now.

Mr. Timothy Curtis: Thank you for the opportunity to present to this committee. I'm going to read my remarks, but they are also in the package passed to you.

If you are wondering why I am here and why Niagara-on-the-Lake Hydro, a small local distribution company owned by its town, has been so active on Ontario electricity issues, the reason is simple. Our services are only around 15% of our customers' total electricity bill. We have one of the lowest delivery costs in the province. We focus very closely on the costs of our service, but the impact of our actions are limited. The biggest part of our customer's bill, and the part that has risen so much, is the cost of electricity generation. If, by our efforts, we can reduce that cost, we will have provided our customers the biggest service possible.

As a result, overall, we support the fair hydro plan. However, there are ways it could be substantially improved, and I would like to provide these suggestions to you now.

We support moving the OESP to funding by provincial revenues. It is a social program rather than an electricity program. However, we question why you are continuing with this complex and expensive approach to delivering this benefit. A refundable tax credit would be simpler, have higher uptake and lower administration costs.

We support moving the rural and remote rate protection to funding by provincial revenues. However, this move, and the previous increase in the RRRP, would not have been necessary if Hydro One distribution had controlled its costs like most municipally owned LDCs.

Distribution rates for municipally owned LDCs have increased, on average, at around the rate of inflation over the last 10 years. This is around 20%. Distribution rates for Hydro One rural customers have gone up around 70%, and can be over $100 for an average customer. If you were a customer of an LDC that Hydro One purchased at around the time of the market opening, then the rates have more than doubled. There is a chart in your package with full details.

To be clear, I know rates must be higher in rural areas due to the low density, but they should not be going up faster. We recommend breaking up Hydro One between transmission and distribution as was originally proposed in the Ed Clark reports, and then breaking up the distribution business further.

We support the 8% rebate funded by provincial revenues. However, we disagree with not extending it to all business customers. Businesses are suffering from the high electricity costs as much as residential customers, and they create jobs. We recognize that this will double the cost, but if we are going to fix mistakes, let's fix them for everyone.

We support the reduction in the global adjustment. Again, we believe it should be extended to all customers rather than just residential and small business customers. If you did this, you could cancel the ICI program, in which only limited businesses can participate and which has a number of negative aspects.

Most importantly, though, we do not support borrowing the OPG balance sheet and creating a massive debt that will have to be paid by future electricity customers. The high cost of electricity is driven by procurement mistakes that we estimate are costing Ontario electricity consumers over $3 billion a year. The fair hydro plan basically acknowledges this. We also know that these costs cannot be avoided. Contractual commitments have been made.

Previous governments have tried this deferral trick before; the result was much of the stranded debt in 1999 and then the growth in the stranded debt in 2003 and 2004. Let's be responsible and fund this reduction with provincial revenues either annually or, even better, all up front.

All of the above parts of the fair hydro plan are nice, but they are also just financial engineering. None of them get rid of any of the real costs in the system. The fair hydro plan talks about potential future savings, but there is nothing concrete. What we really need is the hard, unsexy work of removing costs from the system. Here are a few ideas:

—Cancel FIT 5. The government has announced there will not be a FIT 6, but why do we still have a FIT 5? And are there other contracts that we can cancel or buy out more cheaply?

—Cancel the CDM program. It costs over $400 million a year and we have a surplus generation anyway.

—Cancel the MDM/R. It is costing $50 million a year and LDCs do not need it for time-of-use billing.

—As previously discussed, break up Hydro One and create smaller distribution utilities with a governance that is regional and consumer focused. We can bring down rates to customers.

—And do we need a market price and the associated costs of running a market when over 90% of supply is on contract or a regulated price? I do not know the answer to this but it is worth investigating.

Finally, the very need for the fair hydro plan came about because some basic rules of investing were ignored:

—Perform rigorous cost/benefit analysis before every investment decision.

—Allow an independent, knowledgeable body, potentially the OEB, the authority to review the cost/benefit analysis—

The Chair (Mr. Shafiq Qaadri): Thank you, Mr. Curtis. That's the five minutes for introductory remarks. Our first line of questioning begins with the PC Party, the honourable MPP Todd Smith.

Mr. Todd Smith: Mr. Curtis, good to see you this morning. Thanks for coming in. I appreciate your honesty on Bill 132.

I'm just curious, the fair hydro plan, what has that meant for your distribution company as far as the cost to advertise the 8% rebate? And then what will it cost when the fair hydro plan comes into effect? As far as stationery and staff time and those types of things, do you have any idea?

Mr. Timothy Curtis: I honestly do not have an idea. It's a bill insert, so we're able to do those basically as part of our negotiations anyway, because we have those continuously. It would really just be the cost of the paper and the cost of the advertising. The major cost would be any software changes needed to adapt our system.

Mr. Todd Smith: So there will be costs involved to advertise this savings for the government?

Mr. Timothy Curtis: There are some, yes.

Mr. Todd Smith: Who ultimately pays for that?

Mr. Timothy Curtis: They're included in our costs, so ultimately they get passed onto our customers, yes.

Mr. Todd Smith: Right. So it will increase the cost of electricity?

Mr. Timothy Curtis: Yes.

Mr. Todd Smith: Yes. Do you believe that the Ontario Energy Board has enough independence from government?

Mr. Timothy Curtis: No, I believe I made that statement. In fact, its independence has been eroded over the last number of years, particularly with the most recent bill. There have been—I think the number is up to—20 directives to the OEB from the government since market opening. Some of them are actually contradictory. It's clear by some of the OEB's decision-making that they are being made based on government policy, not based on any analysis that they have performed. So they have become less independent.

Mr. Todd Smith: Right, less arm's length—

Mr. Timothy Curtis: Very much.

Mr. Todd Smith: —than they lead you to believe on the government side.

In your opinion, and you touched on this, are ratepayers getting any benefit from the CDM, the conservation and demand management program?

Mr. Timothy Curtis: Certainly some of the businesses are able to take advantage of it, though as one business owner told me, "I pay for it here and I get it back here."

But I'm speaking about it more from an industry point of view. It is not creating offsetting savings to justify its cost. Certain businesses and certain towns do get good advantage of it, because the money has got to go to somebody, but if you look at it from the average consumer, they're worse off.

Mr. Todd Smith: The money from the CDM program, how could that be better spent?

Mr. Timothy Curtis: We would argue we would rather not spend it. Certainly, I think it should be much more targeted—a lot less of it is needed, and much more targeted in terms of what it's there for.

Mr. Todd Smith: In your opinion, you mentioned this earlier, the government continues to make the same mistakes that have driven up the cost of electricity when it comes to adding new generation to the system. Would you expand on that, in 15 seconds?

Mr. Timothy Curtis: Yes, as I said, let's stop signing anymore contracts.

Mr. Todd Smith: Yes. Thank you.

The Chair (Mr. Shafiq Qaadri): Thank you Mr. Smith. To the NDP: Mr. Gates.

Mr. Wayne Gates: Thank you very much. Good morning, Tim. How are you, buddy? We're really here to hear the presentation on behalf of Niagara-on-the-Lake, which obviously is in my riding.

I would like to open this with a straightforward question for you: This plan still commits to the sell-off of Hydro One. Do you believe selling off Hydro One has been in the best interest of the residents of Ontario?

Mr. Timothy Curtis: We approach this slightly differently—

Mr. Bob Delaney: Chair.

The Chair (Mr. Shafiq Qaadri): Mr. Delaney. Your time is ??upheld, Mr. Gates.

Mr. Bob Delaney: Chair, I'd like to raise a point of order on this. The sale of Hydro One is not opened in this particular bill. I would like to ask the Chair for a ruling on whether discussion of legislation that has not been opened in this bill is in order.

The Chair (Mr. Shafiq Qaadri): I think your point is well taken, but I would respectfully encourage all members—and, of course, our presenters—to speak to the issue at hand. There is obviously some leeway with regard to electricity pricing in general, it's a broad topic. But your point is well taken, Mr. Gates.

Mr. Tabuns.

Mr. Peter Tabuns: Yes, if I could just say that if you're talking about electricity prices, you're talking about the factors that feed in to the upward pressure on electricity prices. So talking about all of the factors is entirely legitimate.

The Chair (Mr. Shafiq Qaadri): Thank you, correct. Please go on.

Mr. Wayne Gates: Thank you very much. Go ahead. Sorry about that.

Mr. Timothy Curtis: Sure. Our view on the sale of Hydro One is—I mean, we don't have the strong opinion either way in terms of whether it's privately owned or publicly owned. Our concern is with the fact that the distribution of Hydro One has a very poor record, and all you have to do is look at how the rates have performed over the last 10 years to see that. On the flip side, I would say Hydro One transmission has kept their rates within the rate of inflation and is very well respected. Why not split the two, as was originally proposed? And then, further, why not re-break down the distribution business to more local companies where you can get local governance that are more focused on customer issues?

Mr. Wayne Gates: So as a local government, how do your rates compare?

Mr. Timothy Curtis: We have the lowest rates in the Niagara region and, according to the Financial Post; we're about the sixth or seventh lowest in Ontario.

Mr. Wayne Gates: I think that's important to say.

I know you had a chance to meet with each party on this topic. Can you comment on how this plan compares to the other party's plans to address the hydro crisis?

Mr. Timothy Curtis: With all respect to Mr. Smith, they don't have a platform yet, so I really can't comment on what's not out there.

I mean, obviously this is the most aggressive in terms of reducing prices, so as I said we support this from that point of view. Our position was that with all of the expensive high-priced contracts out there, we need to write them off down to what the real price of electricity should be. This effectively does that, but we would rather see it all done at once.

Mr. Wayne Gates: Okay, this was sort of touched on by the PCs. Do you feel the OEB mandate is currently best serving the people of Ontario, and if not, how could this be addressed? And I know you've talked on this quite a bit before.

Mr. Timothy Curtis: We believe that even though they're our regulator and we're going to be doing battle with them soon with our rate application, we still support a fully independent Ontario Energy Board that can provide independent analysis.

Mr. Wayne Gates: Okay. I can tell you a few things that make people angry in Ontario, and that's fact that we're selling our power at a loss to the United States. What do you recommend should be done when it comes to the issue of oversupply of energy?

Mr. Timothy Curtis: Right, that's because the IESO has not been able to properly plan for the matching of generation and the use because of a lot of the contracts for wind and solar where you can't control—

The Chair (Mr. Shafiq Qaadri): Thank you, Mr. Gates. To the government side and Mr. Delaney.

Mr. Bob Delaney: Thank you very much, Chair. Mr. Curtis, how many customers do you have at Niagara-on-the-Lake Hydro?

Mr. Timothy Curtis: Nine thousand.

Mr. Bob Delaney: Nine thousand. Last Thursday, I was out at Niagara Peninsula Energy to discuss the Fair Hydro Act. What differences do you have with your sister distribution company on this? They seem to be very much in favour of it.

Mr. Timothy Curtis: Well, I think I stated that we do support it. It's not that we're in favour of it; we just have suggestions for improvements. I have not discussed this with NPEI, so I can't comment on what our views would be.

Mr. Bob Delaney: What are you doing at Niagara-on-the-Lake Hydro to promote conservation?

Mr. Timothy Curtis: We're actually one of the top performers in terms of conservation promotion. I don't know the exact number, but we're certainly well above 50% in terms of our performance based on the IESO results that came out I think in April. One of our staff members is fully focused on it.

Mr. Bob Delaney: Thank you, Chair.

The Chair (Mr. Shafiq Qaadri): Thank you, Mr. Delaney, and thanks to you, Mr. Curtis, for your deputation on behalf of Niagara-on-the-Lake Hydro.

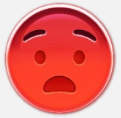
Niagara On-The-Lake HYDRO

Wasaga Distribution Inc.

Niagara-on-the-Lake chose not to sell

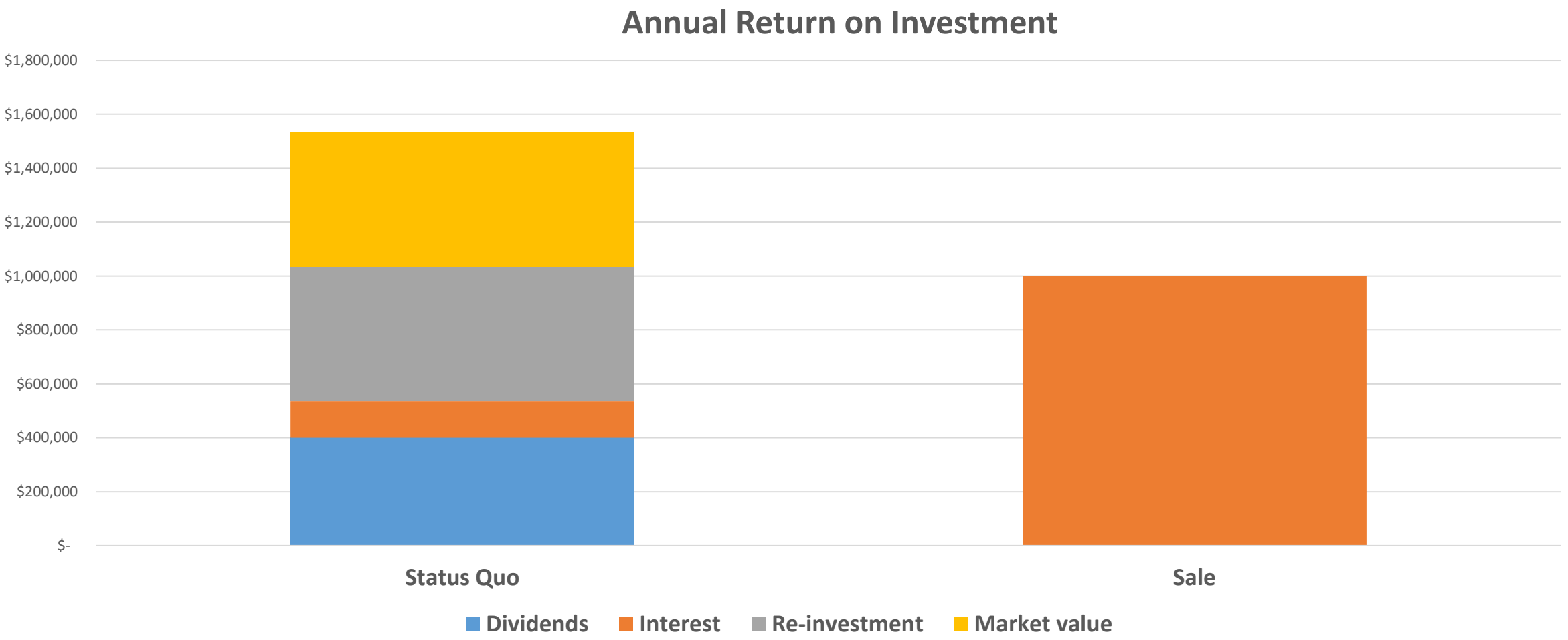
May 24, 2017

Keeping your LDC Makes $ense

	Status Quo	Merger	Sale
Return on investment			
Control over rates			
Local service guaranteed			
Reliability			
Extra benefits			
Future developments			

Benefits of keeping an LDC

Wasaga Distribution has an average ROI of 10% over the past ten years



Niagara On-The-Lake HYDRO

NOTL Hydro Board recommends the Government of Ontario not defer the cost of the Fair Hydro Plan

Let's not repeat more mistakes of the Past

June 1, 2017, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) urges the Provincial Government not to defer the costs of the Ontario Fair Hydro Plan but to fund the additional rebate from Provincial revenues.

The Fair Hydro Plan includes an annual rebate of around $1.8 billion a year for ten years which residential and small business electricity consumers (but not all consumers – see our April 3, 2017 media release) will realize as a reduction in the Regulated Price Plan rates. This rebate will be funded through Ontario Power Generation creating a massive $26.2 billion debt that will have to be repaid in the future; deferring the cost for future ratepayers. This rebate is in addition to the 8% reduction in electricity bills which commenced on January 1, 2017 and which is being funded by Provincial revenues.

The Government of Ontario has a history of deferring the costs of electricity price reductions. The result is always that further action is required at the end of the deferral period.

- In 1993 the Ontario Government froze the price of electricity. The resulting losses in Ontario Hydro were a major part of the $19.4 billion in stranded debt that is only now finally being repaid from the Debt Retirement Charge.
- In November 2002 the Ontario Government froze the price of electricity. As a result, the stranded debt rose in 2003 and 2004; prolonging the required life of the Debt Retirement Charge.
- In 2011 the Ontario Government introduced the 10% Ontario Clean Energy Benefit. Its expiry in 2016 contributed to the increased political pressure that lead to the Ontario Fair Hydro Plan.
- The Financial Accountability Office of Ontario has estimated that it will cost at least $21 billion in interest costs over the next 28 years to provide the $18.4 billion in Fair Hydro Plan rebates over the next ten years.

"Pushing the repayment of this rebate out 10 years is not responsible" said NOTL Board Chair Jim Ryan. "Let's pay for it in a responsible manner now so that we can focus going forward on the underlying cost issues in this industry."

The NOTL Hydro Board recognizes that there is an electricity cost issue for consumers that must be dealt with immediately and supports the goals of the Fair Hydro Plan. The NOTL Hydro Board has previously recommended that the Ontario Government write-off the excess cost of the wind and solar contracts all at once. The write-off would likely be over $25 billion and would be a one-time charge on the Provincial Government books. This would bring the cost of this generation down to a reasonable price and not be a burden for future electricity rate payers.

As the Fair Hydro Plan instead calls for an annual rebate, the NOTL Hydro Board recommends that this rebate be funded by Provincial revenues so will be either paid each year by tax revenues or recognized as a deficit on the books of the Provincial Government.

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The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

Niagara-on-the-Lake Hydro distributes power to over 9,000 customers in the Town of Niagara-on-the-Lake. We are committed to operating as a sustainable high-performance, customer-driven business and to providing the highest standard in safety, service and reliability. The Town of Niagara-on-the-Lake is the 100% shareholder of the corporation.

FOR MORE INFORMATION PLEASE CONTACT:

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Niagara-on-the-Lake Hydro Inc.
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Office Phone – 905-468-4235

Niagara On-The-Lake HYDRO

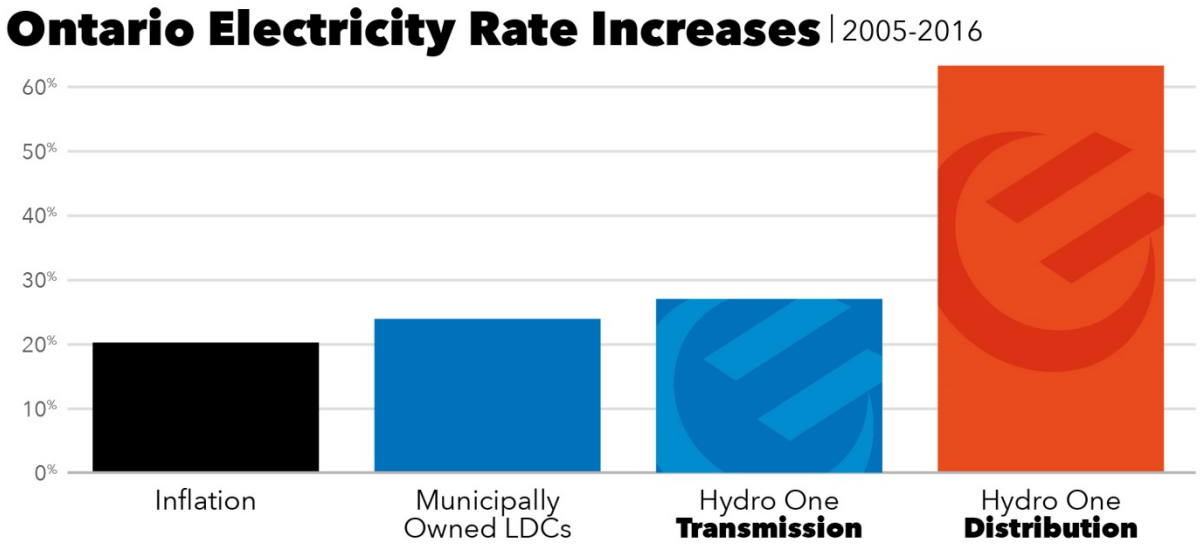
Lower Ontario's Electric Costs - Government of Ontario should Break-up Hydro One

Latest Rate Application Clear Indicator Current approach Not Working

July 3, 2017, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) urges the Provincial Government to break-up Hydro One with the goal of reducing distribution costs for Hydro One's 1.4 million customers. Hydro One should be split between its transmission and distribution business and the distribution business should be subsequently broken up into regional local distribution companies (LDCs).

"Given the proposed distribution rate increases, it is clear the current model is not working for Hydro One customers." stated NOTL Hydro Chair Jim Ryan, "Something has to change."

Hydro One Networks Inc. recently filed its distribution rate application in which it is looking for a 23% increase in distribution rates (based on a typical residential customer) over the next five years. This rate increase would be more than double the expected rate of inflation and would be in addition to the already substantial rate increases Hydro One has implemented over the past ten years (see chart).



The proposal to break up Hydro One is supported by the following:

- Breaking up Hydro One between transmission and distribution was originally supported by the Premiers Advisory Council on Government Assets (the Ed Clark Council). It was only when the goal became to sell Hydro One that their recommendation changed.
- Transmission costs have been consistently better managed by Hydro One than distribution costs and transmission is a natural provincial-wide activity.
- The issue is not that Hydro One's rates are higher than municipally owned LDCs. That is to be expected given the nature of the respective service territories. The issue is that their rates are rising so much faster. That is controllable and is an issue of management and governance.
- Hydro One has purchased close to 100 Ontario LDCs over the past 18 years. The resulting operational savings should have resulted in lower Hydro One rates. Instead, many of these former LDC customers have seen rates more than double.

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Phone: (905) 468-4235 Fax: (905) 468-3861

- The experience of municipally owned LDCs, and their lower rate increases, shows that regionally focused LDCs, with a governance that balances profitability and rates, is better for customers.

An analysis would be required to determine the number of regional Hydro One LDCs and their locations. The determining factors would be the structure of the distribution system and natural boundaries rather than political boundaries.

The recent sale of Hydro One shares would not be an obstacle to this course of action. A share swap would allow the private investors to own almost all of Hydro One Transmission (this should be less of an issue as is more easily regulated) while the Government would own all of Hydro One Distribution allowing it to make the necessary changes.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

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FOR MORE INFORMATION PLEASE CONTACT:

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Office Phone – 905-468-4235

Niagara On-The-Lake HYDRO

August 10, 2017

Financial Accountability Office of Ontario
2 Bloor Street West, Suite 900
Toronto, ON M4W 3E2

Dear Sirs:

Nuclear power is a very important part of electricity generation in Ontario, comprising 60% of current supply. Nuclear power is also one of the less expensive types of generation in Ontario with a current average cost of around $65 per MWh. Despite claims by some, our analysis shows that nuclear power has not been a large contributor to the significant increase in electricity costs in Ontario.

Over the past year the Government of Ontario has renewed its commitment to nuclear power with a combined commitment of almost $26 billion to refurbish both the Bruce and Darlington nuclear power plants. As a result, these two plants will continue to provide base load power until the mid-century. Nuclear power is expected to remain an important part of the next Long Term Energy Plan which is expected to be released shortly.

Nevertheless, there are some significant questions that still need to be adequately answered with regards to nuclear power. Three of these that Niagara-on-the-Lake Hydro considers important are:

1. What are the implications of cost over-runs? Nuclear projects have a history, both in Ontario and around the world, of costing substantially more than initially estimated. As noted below, this was one of the reasons cited for halting some of the projects in the US. The IESO Ontario Planning Outlook of September 2016 was limited in its cost analysis and did not appear to include any scenario analysis for higher nuclear generation costs. A substantial rise in nuclear generation costs would have a significant impact on expected future costs of electricity in Ontario. The FAO could analyze the implications of cost over-runs for the Ontario electricity consumers.

2. Are the decommissioning reserves sufficient? A large cost of nuclear power is decommissioning the plants after they have reached the end of their useful lives. This includes the ongoing storage of the spent nuclear fuel until a permanent solution to managing these can be found. One of the worries of those that object to nuclear power is the cost to decommission the plants and store the spent fuel far exceeding the reserves set aside during the life of the plant with the taxpayer or ratepayer being left to pay the balance. Worldwide we are starting to develop the experience and expertise in shutting down nuclear plants across North America and Europe. The FAO could analyze these,

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somewhat still limited, experiences to help assess if current reserves at Ontario Power Generation are sufficient.

3. Is nuclear power the right investment at this point in time? Several nuclear plants have closed or stopped construction in the United States. The low cost of gas is a significant factor in these decisions but so is the rising costs of nuclear construction and the lowering costs of distributed generation. The cost of solar power continues to fall rapidly and the cost of energy storage looks to be embarking on the same trend. Generators in the southern US are promoting solar and short-term storage combinations at rates substantially lower than the proposed cost of future nuclear power. We recognize that we are not comparing the same degrees of generation reliability but that will change over time and we run the risk of a huge investment in a thirty year fuel source that could be more expensive than readily available alternatives. We recognize that this is not a question the FAO can answer but it is a question that should be debated.

The commitments being made to nuclear power in the future will have an enormous impact on the future cost of electricity. It is important that we understand these impacts should the cost be significantly higher, either through project costs or decommissioning costs, than currently anticipated. An analysis of these potential rate impacts would be a positive contribution to the electricity debate in Ontario.

Niagara-on-the-Lake Hydro asks that some consideration be given to performing this analysis.

Yours truly,

Tim Curtis
President
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905-537-4512

c.c Minister of Energy Glenn Thibeault
Todd Smith, PC Energy Critic
Peter Tabuns, NDP Energy Critic
Mike Schreiner, Leader Green Party

Niagara On-The-Lake HYDRO

NOTL Hydro Board calls for a truly independent Ontario Energy Board

Protecting the customer must become the first priority

August 1, 2017, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) calls for a regulator independent of all participants in the Ontario electricity industry; including independence from the Provincial Government. Under its mandate, the Ontario Energy Board is described as independent[1] but the reality, as described below, has become otherwise.

The Ontario electricity industry is dominated by monopolies; both natural and due to government regulation. Without competition, there is no protection of the consumer. The consumer therefore needs a reliable representative. The Provincial Government, due to its active involvement in the industry and being subject to competing pressures, cannot fill this role; despite being the elected by the same consumers. The Provincial Government is responsible for the final policy but a truly independent regulator is needed to represent the consumers.

"It's not just about fixing the current high costs, it is also about ensuring we do not make similar mistakes again. We need an independent regulatory body that can raise concerns before final decisions are made. Waiting for the Auditor General to review results is too late," said NOTL Hydro Chair Jim Ryan.

Numerous changes in the past have prevented the Ontario Energy Board (OEB) from being able to fulfill this role:

- Bill 135, passed in 2016, removed from the OEB its ability to review long term energy plans. As can be seen with the Green Energy Act, for which no prior cost-benefit analysis has been found, an independent reviewer of the impact of electricity policies on consumers is needed. NOTL Hydro estimates the impact of the Green Energy Act on electricity rates to be over $3 billion a year.
- The Provincial Government has issued 20 letters and directives to the OEB since 1999 mandating specific and sometime contradictory actions. These directives reduce the independence aspect of the OEBs mandate.
- In 2014, the OEB increased the timeframe during which the shareholders of electricity distributors can keep any savings from mergers and acquisitions rather than pass them on to consumers from five to ten years. The OEB decision clearly indicated government policy rather than any analysis of the cost/benefits to consumers was the driver of this decision.
- The OEB has become an active participant in the electricity sector, managing the Ontario Electricity Support Program and other Government initiatives, rather than a neutral regulator.
- The OEB has never rejected or imposed rate restrictions in the applications by Hydro One to purchase municipal utilities despite clear evidence that previous acquisitions have resulted in substantially higher rates for customers of the acquired utilities. In contrast, in the United States where regulators are more independent, there are numerous examples of regulators blocking acquisitions due to concern for the customer impact or requiring immediate rate reductions.

The Board of NOTL Hydro believes that a consumer-centric approach to dealing with electricity industry in Ontario needs to be developed. An independent regulator would be an important part of this. A

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number of representatives of the legal community have also raised concerns with the independence of the Ontario Energy Board.[2]

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

Niagara-on-the-Lake Hydro distributes power to over 9,000 customers in the Town of Niagara-on-the-Lake. We are committed to operating as a sustainable high-performance, customer-driven business and to providing the highest standard in safety, service and reliability. The Town of Niagara-on-the-Lake is the 100% shareholder of the corporation.

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1. https://www.oeb.ca/about-us/mission-and-mandate

2. Robert Warren. *Regulatory Independence: The Impact of the Green Energy Act on the Regulation of Ontario's Energy Sector*. WeirFoulds LLP Comment | September 3, 2010

   Jay Shepherd. *Dismantling the Ontario Energy Board.* September 2, 2014

   George Vegh. *How Ontario can end the cycle of meddling in electricity markets*. Special to The Globe and Mail. April 5, 2017

   Robert B. Warren. *The Governance of Regulatory Agencies: A Case Study of the Ontario Energy Board*. Council for Clean & Reliable Electricity. January 2015

Niagara On-The-Lake HYDRO

Hydro One Customers Acquired in 2000-2001 have Paid over $465 million more than Necessary

Hydro One uses Acquisitions to Subsidize existing Customer Base; Creates Rate Distortions

September 5, 2017, Niagara-on-the-Lake – An analysis prepared for the Board of Niagara-on-the-Lake Hydro (NOTL Hydro) has determined that customers of local distribution companies (LDCs) acquired by Hydro One Networks Inc. (Hydro One) have paid over $465 million more than if the LDCs had sold to or merged with other local LDCs. A report on the analysis can be found here.

By harmonizing the distribution rates and the line loss rates of these acquired LDCs with Hydro One's existing services, Hydro One has effectively subsidized their existing customer base. This allowed Hydro One to reduce the rate increases they would otherwise have requested. Despite this subsidy, Hydro One has still had one of the highest rate increases in Ontario with residential rates rising, depending on the rate class, between 39-70% from 2005-2016. The customers of the acquired LDCs saw rate increases that averaged over 250%. Rate increases for municipally owned LDCs had rate increases closer to the rate of inflation of 20%.

Each step in the process of getting to this point was approved by the Ontario Energy Board and there is no indication Hydro One profited unfairly from these rate increases. However, Hydro One demonstrably structured their actions to achieve subsidization effect. As a result, you have situations where neighbours or residents of similar municipalities have substantially different hydro rates depending on whether they are served by Hydro One or a municipal LDC.

"It seems nobody is interested in protecting the customer." said NOTL Hydro Chair Jim Ryan. "The Government, the Ontario Energy Board and Hydro One itself all had opportunities to protect these customers but instead chose to focus on other goals. This was wrong."

The Board of NOTL Hydro reiterates their call for a truly independent Ontario Energy Board and for breaking up Hydro One between its transmission and distribution business and then into multiple smaller distribution companies.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

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Niagara-on-the-Lake Hydro Inc.
Analysis of Hydro One Acquisitions
August 2017

Executive Summary

Hydro One Networks Inc. (Hydro One") acquired 87 local distribution companies (LDCs) in 2000-2001 plus another in 2007. By harmonizing line loss rates and distribution rates of the customers of these LDCs with the Hydro One existing customer base, Hydro One has effectively used these acquisitions to subsidize its existing operations and keep its distribution rates lower than they otherwise would have been. This despite the fact that Hydro One already has one of the fastest increasing distribution rates in Ontario with residential distribution rates risng 39-70% from 2005-2016. We estimate this subsidy to have been over $465 million from 2005-2016 and growing.

This harmonization created rate disparities between Hydro One customers and customers of other LDCs that are either neighbours or in similar sized municipalities. Customers of the acquired LDCs had distribution rate increases that average 257% and one municipality saw their rates increase by over 800%. These distribution rates are now over 75% higher than the highest rate grouping of municipally owned LDCs.

There is no evidence that Hydro One inappropriately profited from these acquisitions other than in the approved manner but this high level of subsidization is an opportunity not available to other potential acquirers and an incentive to increase the LDC purchase price to ensure success.

Since 2014, Hydro One has purchased three more LDCs and has agreements to purchase another two. By their actions and statements it is clear Hydro One intends to use these acquisitions to provide additional subsidies which we estimate could be another $26.7 million a year.

Every step taken by Hydro One has had regulatory approval. It is clear from the review of these regulatory proceedings that a number of opportunities to prevent this abuse were missed. It is hoped that with the recent adjournment of the Orillia acquisition proceeding that the regulator is finally going to start to address this issue.

To correct this situation we reiterate the recommendations of the Board of Niagara-on-the-Lake Hydro that the Ontario Energy Board made clearly independent and that Hydro One be broken up between its transmission and distribution businesses and further into multiple smaller distribution businesses.

Introduction

Hydro One has acquired a number of Ontario LDCs over the past few years (see chart below). The prices paid for these LDCs were higher than what some competing bidders felt they could reasonably offer while still remaining financially prudent. This raises a few questions:

1. Was Hydro One being financially irresponsible or does their position as the high cost provider of electricity distribution provide them with a perverse competitive advantage?
2. What is the rate impact of these acquisitions on the customers of the acquired LDCs and would that rate impact be different with another successful bidder.
3. What conditions should the regulator impose on these acquisitions?

It is too early to analyze these acquisitions as the acquired LDCs are still in their initial 5 year rate freeze.

Recent Hydro One Acquisitions

Year	LDC Sold	Purchase Price ($ M)	# Customers	EBITDA ($ M)	Net Purchase Price ($ M)	LDC Equity ($ M)	Price Per Customer	EBITDA multiple	Equity Multiple
2014	Norfolk	$93.0	19,337	$6.4	$66.0	$30.7	$4,809	14.5	2.1
2015	Haldimand	$75.0	21,323	$6.4	$65.0	$38.9	$3,517	11.6	1.7
2015	Woodstock	$46.2	15,75	$4.2	$29.2	$14.9	$2,934	10.9	2.0
tbd	Orillia	$41.3	13,445	$3.1	$26.35	$12.6	$3,072	13.4	2.1
tbd	Peterborough	$105.0	36,317	$6.9	$62.7	$29.5	$2,891	15.3	2.1

Note: Customer count, EBITDA and Equity sourced from prior year Ontario Energy Board Yearbook of Electricity Distributors

However, it is noted that even the Ontario Energy Board (OEB) is having some second thoughts with their recent deferral of a decision on the Orillia acquisition.

This report will analyze the 87 LDCs Hydro One acquired in 2000 and 2001 and the impact their subsequent rates has had on Hydro One cash flows, Hydro One revenues and customer costs. In particular, we will try to answer the following:

1. What excess cash flow did Hydro One realize as a result of these acquisitions and subsequent rate treatment?
2. What excess revenues did Hydro One realize as a result of these acquisitions and subsequent rate treatment?
3. Would the customers of the acquired LDCs have been better off if they had not sold to Hydro One?

Hydro One Acquisitions

Hydro One has acquired a total of 92 LDCs and has agreements to purchase two more LDCs (Orillia and Peterborough) subject to OEB approval. They have since divested one of the acquisitions (Brampton). Hydro One has also purchased the transmission business of Great Lakes Power. These acquisitions and their related good will is summarized below:

Breakdown of Hydro One Goodwill Balance

Year	Acquisition	Goodwill ($ Million)
2000	16 LDCs	6
2001	71 LDCs	67
2007	Terrace Bay	< 1
2014	Norfolk	40
2015	Haldimand	33
2015	Woodstock	22
2016	Great Lakes Power transmission	159
Total		**327**

In theory, the distribution rates of any customer are based on the cost of the assets used to serve the customer. Therefore, a customer should be indifferent as to the ownership of these assets. Reality is, naturally, somewhat messier. Rates are not set on a customer by customer basis but for a service territory.

- If ownership changes and the service territory remains the same then rates should remain the same as they would otherwise have been.
- If ownership changes but the service territory is merged with a lower cost service territory then rates in the acquired territory should fall. This can be seen with some of the mergers or sales of small LDCs to their larger, urban neighbours.
- If ownership changes but the service territory is merged with a higher cost service territory then the rates in the acquired territory will rise. This has occurred with the Hydro One acquisitions.

The customers of the LDCs acquired in 2000 and 2001 all saw significant rate increases.

Analysis Methodology

The purpose of the analysis was to estimate how much incremental revenue Hydro One realized from their 200-2001 acquisitions. The annual revenue from the customer base at the time of the acquisition was estimated and compared to the equivalent revenue a small LDC would have charged.

The most recent year for which data is available on the LDCs acquired in 2000 and 2001 is the 1997 Ontario Hydro Municipal Electric Utility Financial & Statistical Summary. This provides us with the following for each LDC:

- Number of residential and general service customers
- Book value of assets sold to Hydro One
- Average monthly kwh for residential and general service customers
- Line loss rate for 1997

Distribution rates are available for all current LDCs from 2005-2016. Rates for each acquired LDC are available from 2005-2010. From 2011 there were no specific rates for the acquired LDCs, only the general Hydro One rates which had been harmonized with all the acquired LDCs.

For the purpose of the analysis the following assumptions were made:

- The number of customers were assumed to remain at 1997 levels. This is conservative as it is unlikely that the number of customers would have fallen. It also allows for the fact that after the acquisition Hydro One would have paid the capital costs of connecting any new customers subject to their conditions of service.
- A few of the LDCs had a large general service customer. These were ignored for the purpose of this analysis as it is possible these customers may not have continued. Ignoring these few customers was more conservative.
- The monthly kwh was assumed to decline by 1% per annum commencing in 2005. The decline is consistent with the experience of most LDCs who have seen per capita consumption decline over time though usually at a lower rate.
- Most of the LDCs were moved to the residential rate class R1 and its general service equivalent in 2011. Some of the larger acquired LDCs had customer bases sufficient that some or all of their customers were charged the residential rate class UR (urban) and its general service equivalent. For these LDCs we assumed all customers received the urban rates. As we did not have access to the breakdown and this was more conservative.
- Only the fixed service charge and the monthly variable rate were used for the analysis. Rate riders are more commonly cash flow and balance sheet related rather than revenue for the LDC so for simplicity were fully excluded from the analysis. As the rate riders were usually incremental charges (rather than credits) this was also more conservative.
- For comparative purposes the average annual rates of all the LDCs with less than 5,000 customers, as of 2016, was calculated for the purpose of determining the small LDC revenue requirement. LDCs with less than 5,000 customers were used as they have the highest rates of LDCs (other than Hydro One). Thought was given to using rates of LDCs

that were made up of a number of merged smaller LDCs such as Westario, Rideau St. Lawrence or Ottawa River Power as this was another option for the LDCs that sold to Hydro One. However, as their rates were lower this would have been a less conservative option.

Results of the Analysis - Line Loss Rates

In 1997 the average line loss rate for all 87 LDCs was 5.1%. In the years 2005-2007, Hydro One used a line loss rate of 5.45%. Though this rate is a little higher it appears reasonable.

In 2008, Hydro One switched to using its harmonized line loss rates. This resulted in an average line loss rate of around 8.8% for rural rate customers and 8.5% for urban customers. The total cost increase to customers as a result of this change in line loss rates was over $6 million each year and the cumulative impact from 2008-2016 was $71.4 million.

Funds collected for line losses are not revenue for the LDC but are applied against the cost of power. This line loss rate increase therefore did not increase the revenue or net income of Hydro One.

In 2008, Hydro One also decreased their line loss rate for residential classes UR and R1 from 9.2% to 7.8% and 8.2% respectively. A review of the 2008 Hydro One rate application did not indicate any specific references to incorporating the acquired LDCs into this analysis. Rather, the line loss rates were derived from an analysis of Hydro One's full distribution system.

It appears that customers of the acquired LDCs are therefore subsidizing a reduction in rates for other Hydro One residential customers. Also, if overall line loss revenue increased it could also be argued that Hydro One was easing their requirement to make investments to manage their line losses.

Either way, what is clear is that customers of the acquired LDCs are paying significantly more in line losses than if their LDC had not been sold to Hydro One.

Results of the Analysis – Distribution Revenue

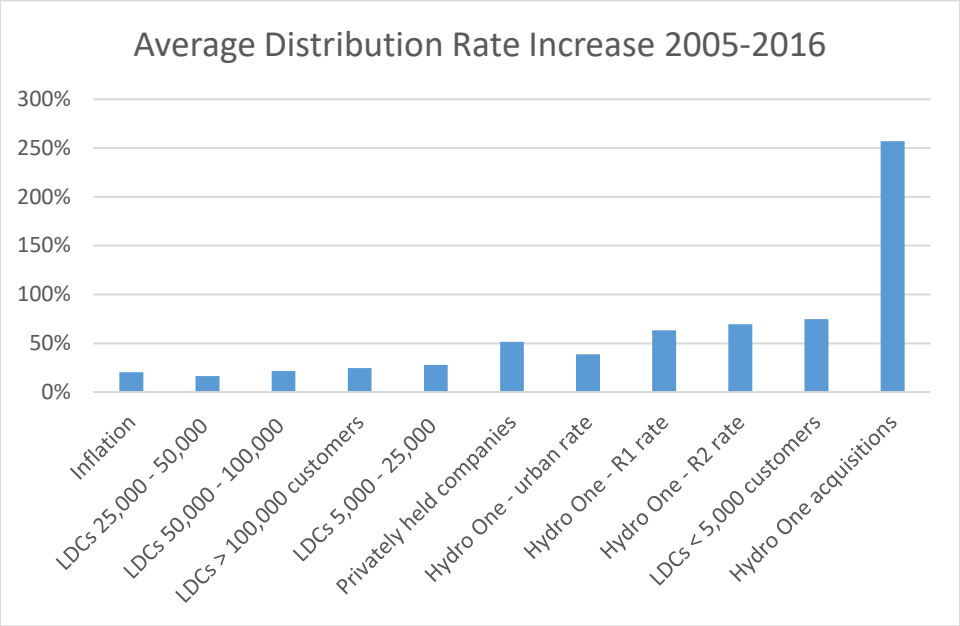
In 2005, the average distribution rates for the customers of the acquired LDCs were 16% lower than if they were charged the rates of the smallest municipally owned LDCs (those with less than 5,000 customers). By 2016, the average distribution rates for the customers of LDCs acquired by Hydro One were 76% higher.

The total excess cost to these customers over the period from 2005-2016 was $394 million and the annual excess cost was $55 million in 2016..

On average these customers have seen a 257% rate increase. The rate of inflation over this time period was 21%. The increases ranged from a 52% increase for the former customers of Caledon Hydro to an 816% increase for the customers of the Village of Arkona PUC.

By comparison, the increase in rates for customers of LDCs with less than 5,000 customers was 75% and for customers of municipally owned LDCs with more than 5,000 customers the rate increase was close to the rate of inflation of 21%.

Distribution Rate Increases by LDC Category 2005-2016



Funds collected from distribution rates are revenue for Hydro One so a fair question is whether any of this $394 million in excess revenue provided Hydro One with a return in excess over what they would have been allowed to earn on their rate base. Put another way, did Hydro One earn a return on the $133 million of goodwill booked with these acquisitions. The format of rate applications makes it difficult to analyze the data easily but there does not appear to be an excess return for Hydro One over what they were entitled to earn on their rate base.

In 2005, rates were still low as already noted so no excess returns were earned that year. In 2006, rates jumped an average of 25% but this adjustment was a catch-up from previously deferred rate increases. Rates were now higher than those of smaller LDCs but less than 2%. In 2007, rates increased at the rate of inflation. 2008 was the big jump when rates increased an average of 53%. However, Hydro One re-based their rates that year and included the acquired LDCs in their rebasing calculations. This means that Hydro One included the loads and costs of

the acquired LDCs in calculating their revenue requirements and desired rates and, in doing so, would have limited their returns to those based on their actual cost structure not including the goodwill on the acquisitions.

2008 was also the year Hydro One got permission to harmonize the rates of the acquired LDCs with their own rates over a four year period. As a result, the average customer rates in the acquired LDCs rose 143% (more than doubling) between 2007 and 2011. By 2011 the distribution rates for Hydro One customers were almost double those of the smallest LDCs.

Since 2011, distribution rates for customers of the acquired LDCs have remained harmonized with the rates of the traditional Hydro One customers and have risen at an average of around 3% per year or just a little more than the rate of inflation.

If Hydro One as a corporation did not generate an excess return from the large increases in distribution rates for the acquired LDC customers, existing Hydro One customers certainly benefitted as the revenue requirement allocated to them is $394 million lower than it otherwise would have been. Yet these customers have seen some of the highest increases in distribution rates in the province with a 39% increase for urban UR customers, a 63% increase for the rural R1 customers and a 75% increase for rural R2 customers. If Hydro One had not acquired these LDCs their rate increases would have been even higher.

Implications for Recent Acquisitions

Working on the assumption that Hydro One will want to harmonize the rates of its more recent acquisitions we can calculate the potential on the average customer rate for these LDCs. The one challenge is we do not know if the customers will be considered an urban (UR) or rural customer (R1) for the purposes of Hydro One's customer rate classification system. Our best estimate is as follows:

Potential Rate Impact at Recent Hydro One Acquisitions

Acquired LDC	Rate Year	Urban Rates		Rural Rates	
		% Change in Rates	Financial Impact ($ million)	% Change in Rates	Financial Impact ($ million)
Norfolk	2013	(3.4%)	($0.4)	50.4%	$5.8
Haldimand	2014	(3.2%)	($0.4)	55.7%	$6.2
Woodstock	2014	47.0%	$3.5	130.7%	$9.7
Orillia	2015	28.8%	$2.1	115.9%	$8.3
Peterborough	2015	66.0%	$9.1	177.2%	$24.5

Norfolk and Haldimand have customer densities well below 60 customers per km of line so it is expected their customers would be classified as rural for Hydro One rate purposes though some

towns may be classified as urban. Woodstock, Orillia and Peterborough have customer densities of around 60 so it is expected that their customers would be classified as urban though it is possible that some outlining areas may be classified as rural.

Based on this analysis it would appear that, on average, customers in these municipalities will eventually have a 50% increase in rates (Orillia customers will see a lower increase). In general, the lower the rates in each municipality the greater will be the increase. This rate increase will be higher if Hydro One distribution rates continue to increase more than LDCs each year.

Combined this totals an increase in cash flow to Hydro One of $26.7 million each year which will help suppress rates for existing Hydro One customers as of the next rate rebasing.

It can also be questioned whether the annual financial drain to the municipality offsets the gain from the sale of the LDC at a high price. In the case of Norfolk, Hydro One paid $40 million above book value for the LDC. At $5.8 million a year this gain will be offset in seven years after Norfolk rates are harmonized. The gain on the sale is held by the municipal government while the increase in distribution rates is born by individual residences and businesses.

Regulatory Oversight

Every step in this process has been made with the approval of the Ontario Energy Board.

The initial acquisitions were approved in 2000 and 2001. This was not surprising given that most of the LDCs purchased by Hydro One had less than 2,000 customers so would likely not have survived on their own, nobody new how the new electricity market was truly going to work and what the demands on LDCs would be and nobody knew that Hydro One's rate increases would be so high over the next ten years. However, in approving the sales it is not clear that thought had been given to how their rates would be managed in the future.

In 2006, after the five year rate freezes had expired, Hydro One applied to harmonize the rates within two years. The OEB was uncomfortable with such a substantial increase in rates and did not approve this proposal. The OEB requested Hydro One perform a cost allocation study to support its rate request.

In 2008, Hydro One again asked to harmonize rates but this time over a four year time period. This time the OEB agreed to the request. There were four features of interest in this decision.

1. As mentioned, the OEB in 2006 asked for a cost allocation study. Hydro One provided the cost allocation study but it allocated costs between the different proposed rate classes. The study did not analyze the costs between the acquired LDC territories and

the “legacy” Hydro One territory. The reason given by Hydro One for not performing this analysis was that the operations had become so integrated that the study was no longer possible. By not addressing this issue at the time of the acquisition the OEB has allowed itself to be put in a position where it had no choice but to accept the Hydro One proposal.

2. By 2008 other LDCs had started building a history of rate increases. An analysis of LDCs comparable in size the acquired LDCs, as we have used in our analysis, would have demonstrated that it was more than possible to manage these territories without requiring the rates that Hydro One was proposing. Instead of requiring this analysis during this hearing the OEB asked for it to be provided at future rate hearings at which point it would be too late.
3. Hydro One suggested that the low rates of the acquired LDCs were indicators that they were not recovering their costs. No evidence was provided for this argument and no suggestion of the alternative hypothesis that the smaller LDCs might have been more efficient. The intervenors did not accept this argument and the OEB avoided it in their decision.
4. In demonstrating the rate impact on customers of the acquired LDCs, Hydro One provided the impact of the increase as a percentage of the total customer bill. This is a standard analysis required by the OEB. The problem with this analysis is that it effectively assumes that all the other components of the customer bill remain unchanged. This is rarely the case. When this rate impact is combined with increases in other components of the customer bill such as the electricity commodity and regulated costs the total increase can be substantially more than 10%. It also allowed increases of over 50% in distribution costs to customers in a single year.

In 2014, Hydro One acquired Norfolk Power Distribution. Other than the acquisition of the small utility of Terrace Bay in 2007, which was included in the 2008 harmonization decision, this was the first acquisition since 2000-2001. As a result, a number of LDCs, including Niagara-on-the-Lake Hydro, intervened due to concerns Hydro One was using its higher rates to finance higher prices on acquisitions. The OEB approved the acquisition though there were features of interest in the decision.

1. As with previous acquisitions, Hydro One provided a five year rate freeze which was now enhanced by a 1% rate reduction. No commitments were made by Hydro One as to rates after the five years other than Hydro One would examine the options of a) create new rates classes for Norfolk customers, b) harmonize Norfolk rates with Hydro One rates as had been done with previous acquisitions or c) propose something else with rates. The OEB accepted this with the proviso that “it is the Board’s expectation that at the time of rate rebasing Hydro One will propose rate classes for Norfolk customers that

reflect costs to serve the Norfolk service area". One wonders if by the time of this rebasing Hydro One will once again have integrated the operations such that differentiating Norfolk customers is no longer possible.

2. The OEB focused on costs rather than prices in their decision-making. Presumably, the theory is that as Hydro One will reduce costs in consolidating Norfolk (this is accepted) and as there is a direct correlation between costs and rates any reduction in costs must be good for customers. The problem with this limited approach is that it ignores how costs are allocated. The OEB is effectively saying that it is OK for Norfolk customers to subsidize the rates of other Hydro One customers, as we saw with the previous Hydro One acquisitions, as long as the costs of the system as a whole decline.
3. Intervenors noted the past history of Hydro One rate increases for customers of acquired LDCs. The OEB's response was that "the Board does not consider that the rates of other acquired utilities are relevant to this proceeding". Given that the OEB noted in their decision that their number one objective under the Ontario Energy Board Act was "to protect the interests of consumers as to prices and the adequacy, reliability and quality of electrical service" this is a curious set of data to ignore.

In 2017, Hydro One filed its rate application for the period from 2017-2022. This application includes rates for the new acquisitions Norfolk, Haldimand and Woodstock for 2021-2022. Hydro One is proposing new rates classes which will serve all three of these acquisition customers. Whether this proposal is for a permanent new rate class or is a step on the harmonization process will not be known until future rate applications. However, in its application Hydro One acknowledged that "the increase in revenue from these classes is offset by decreasing the revenue collected from the UR, R1, Seasonal and USL classes" so customers of these acquisitions will also be subsidizing existing Hydro One customers.

Later in 2017, the OEB adjourned its hearing on the proposed acquisition of Orillia Power by Hydro One until the above Hydro One rate application is settled. In its decision to adjourn the OEB noted "that the rates proposed for previously acquired utilities (Norfolk, Haldimand and Woodstock) in Hydro One's distribution rate application suggest large distribution rate increases for some customers of these acquired utilities once the deferred rebasing period elapses". The OEB has finally realized that previous rate experiences of acquired utilities are relevant.

The arguments made by Hydro One are equally revealing. Hydro One submitted that intervenors "confused lower cost structures, which it states are used to test the validity of a merger or acquisition, with allocated costs used for rate setting" and that "how those costs are then allocated to rate classes is outside the merger or acquisition application". Given that the point of a regulatory review of proposed acquisitions is to protect the customers of these monopoly services this is a curious argument.

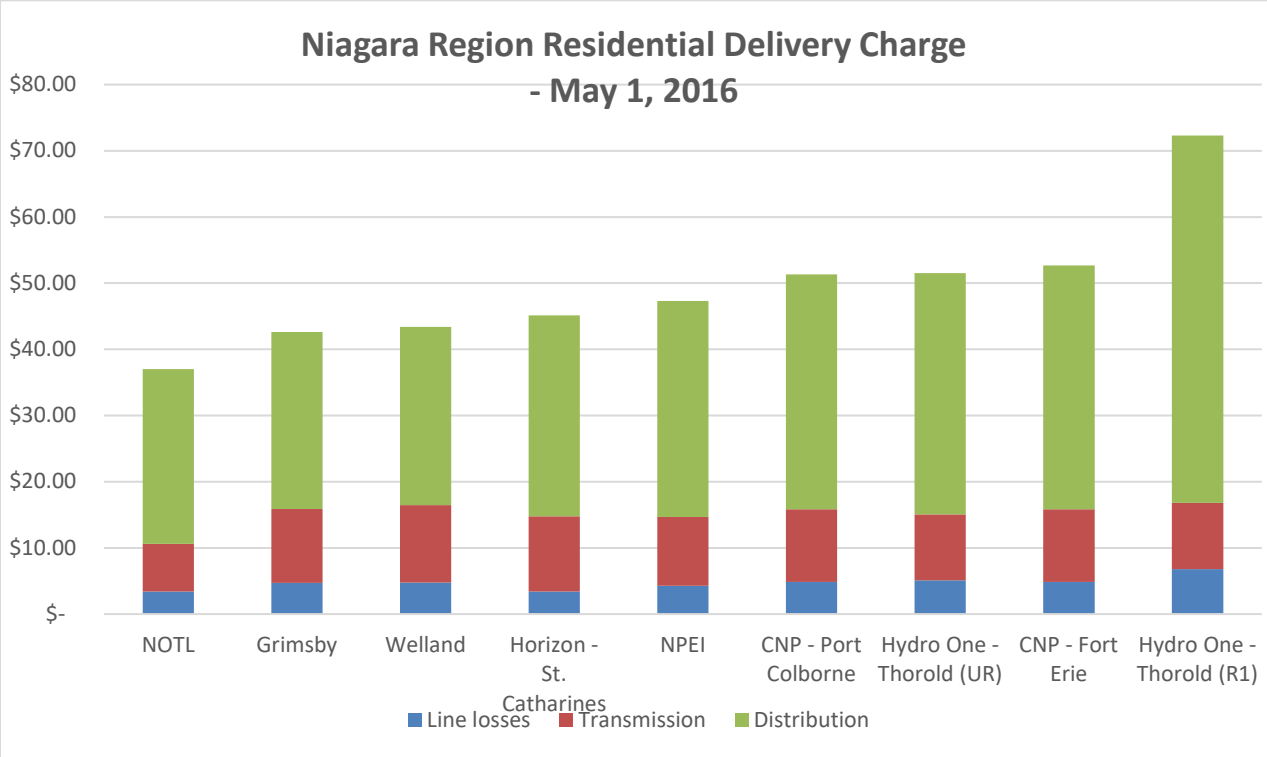
Regional Comparisons

Hydro One's strategy of harmonizing rates creates some significant regional rate distortions. You could choose any small or mid-sized LDC and compare it to a similar sized community served by Hydro One and see significant rate differences. For the purposes of this analysis we will use the Region of Niagara as it is served predominantly by independent LDCs.

Grimsby, Niagara-on-the-Lake and Welland have their own LDCs, Niagara Peninsula Energy serves Niagara Falls, Lincoln, West Lincoln and the urban part of Pelham, Canadian Niagara Power serves Fort Erie and Port Colborne and Hydro One serves Thorold, Wainfleet, and the rural part of Pelham.

Thorold has a sizable urban area which is indistinguishable from St. Catharines. Other parts of Thorold are rural and sparsely populated. Thorold was purchased by Hydro One in 2000-2001 and at that time had one distribution rate for all customers which was equivalent to its neighbours.

Niagara Region Residential Delivery Charges 2016



Rates for Thorold customers are now considerably higher than those of its neighbours; particularly for rural customers. The Hydro One rates would look worse if not for CNP's high rates.

Some other examples of regional distortions include:

Comparison of Rates at Hydro One and Similar Municipal LDC Territories

Hydro One Service area	Hydro One rate class	Delivery Charge	LDC Service Area	Delivery Charge	Difference	Reason for Comparison
Kemptville	R1	$66.12	Prescott, Rideau St. Lawrence	$45.53	$20.69	- similar size and location
Brockville	UR	$45.66	Cobourg, Lakefront	$38.38	$7.28	- similar size and location
Glanbrook	R1	$66.12	Dundas, Alectra	$39.78	$26.34	- suburbs of Hamilton

Political Implications

Hydro One is now majority owned by independent investors but until recently, and at the time most of the acquisitions and rate-setting took place, was 100% owned by the Government of Ontario. Discussions with MPPs in the past have indicated they were aware of this subsidization by some Hydro One customers though had never had it quantified. Their worry was that if the very rural and northern Hydro One customers had to pay rates that more closely reflected their true costs then the MPPs would have a big political issue. This is not to imply that the acquisition strategy was politically driven for this reason but this benefit did serve to lessen the political objections.

Hydro One has always characterized its acquisition strategy in terms of enhancing its return to investors. The reality is it was probably driven more by managements desire to expand their empire but the two objectives do correlate. The acquisition strategy also had implicit Provincial Government support. This was probably driven by the Government's desire to reduce the number of LDCs so as to make them more manageable from a policy perspective. Again, this lessened the political objections to the increased rates of customers of the acquired LDCs.

Recommendations Going Forward

The current policy of Hydro One subsidizing its existing customer base with rate increases for acquired customers is wrong for four reasons.

1. Customers of the acquired LDCs are seeing disproportionately large rate increases. This is unfair and wrong. No customer should be treated in such a cavalier fashion.
2. Customers have significantly different rates when the underlying cost structure of their locations are essentially the same. They may be neighbours served by different LDCs or they may be in similar municipalities served by different LDCs. The only significant difference is their LDC. This is also unfair and wrong. Sound policy should be to have their rates reflect their local underlying costs regardless of who the distributor is.
3. Some Hydro One customers are subsidizing other high cost customers while customers of other LDCs are not. We accept that it is appropriate to subsidize certain rural and northern customers. This is what the RRRP is for. A second hidden subsidy should not be tolerated.
4. The subsidization is hiding further inefficiencies of Hydro One. Hydro One has had the biggest rate increases since market opening. Yet, as the biggest LDC and as the biggest acquirer or other LDCs, Hydro One should have had the best opportunity to manage costs. Instead, Hydro One's rate increases would have been even bigger if not for the cost savings and subsidies of the acquisitions. As the LDC for most of rural Ontario it is accepted that Hydro One should have the highest rates. But they should not be increasing faster than other LDCs; that is inefficiency.

We have two recommendations to try tackle this problem.

1. Ensure the OEB has complete independence. Niagara-on-the-Lake Hydro's Board called for this with their August 1, 2017 press release. Only if the OEB has this independence will they be willing to stand up to the larger utilities on behalf of the customer and make the tough decisions. We are heartened by the Orillia adjournment and hope this is a first step in this direction. One wonders why this decision was only made now and not in 2008 or 2014. One is also left to wonder if the fact that the OEB and Hydro One ultimately answered to the same Minister had any influence.

2. Break-up Hydro One between distribution and transmission and then break-up the distribution business into a number of smaller regional LDCs. Niagara-on-the-Lake Hydro's Board called for this with their July 4, 2017 press release. It is posited that Hydro One is simply too big and unwieldy and that the inefficiencies of this scale have more than overcome any true efficiencies that consolidation provided. The relative performances of municipal LDCs and Hydro One is a demonstration that smaller, regionally focused LDCs are more efficient. The regional LDCs will have distribution rate that will more accurately reflect the underling costs in that region and the RRRP can be amended to openly subsidize those rural and northern customers that would be penalized.

Conclusion

A number of questions were raised at the start of this report. As a result of the analysis it can be concluded that:

1. Hydro One has a perverse competitive advantage in bidding to purchase other LDCs. As they have been allowed to harmonize rates they can use acquisitions as a means of lowering the cost of their services to existing customers. This allows Hydro One to present their rate management, though still bad, as better than it otherwise would have been. Other LDCs with lower rates do not have this option nor would any non-LDC acquirers.
2. Harmonization of rates have created the fastest rising rates by far in the Province of Ontario for customers of the acquired LDCs with distribution rates rising be over 250%. No other potential acquirer would have anywhere near this impact.
3. Unfortunately, just fixing the rates of the acquired LDCs to make them comparable to other LDCs is not sufficient. All of Hydro Ones rates are out of sync with municipal LDCs due to their significant rate increases over the past 12 years. For this reason we have

proposed the break-up of Hydro One as the best means of trying to bring down the existing rates for all Hydro One customers.

4. There is no evidence that Hydro One realized any excess cash flows or booked excess revenues as a result of these acquisitions. Rather, the one customer group from the acquired LDCs saw an excessive increase in rates while the other customer group of existing customers saw a rate increase that, while still very large, was lower than it would have been.
5. The customers of the acquired LDCs would have been better off if their LDC had been sold to another LDC or merged with other small local LDCs to create a bigger local LDC.

Appendix 1

2000-2001 Hydro One Acquisitions

Municipality	LDC (if different)	1997 Customer Count	1997 Book Value ($ thousands)	Hydro One Rate Type (density)	Subsidization 2005-2016 ($thousands)	Rate Increase 2005-2016
Ailsa Craig	-	386	$567	Medium	$1,502	313%
Alexandria	North Glengarry	1,845	$2,385	Medium	$12,719	388%
Arkona	-	236	$168	Medium	$528	816%

Niagara On-The-Lake HYDRO

NOTL Hydro Board calls for Removal of Smart Meter Entity Charge from Consumer Bills

Service Should be Competitive

October 3, 2017, Niagara-on-the-Lake – Embedded in the Delivery Charge on every electricity bill is a $0.79 monthly charge called the Smart Meter Entity Charge. This charge is not kept by the local distributor or transmitter but is sent to the Independent Electricity System Operator (IESO) where it funds the management of a Meter Data Management and Repository (MDM/R) at a total cost of around $50 million per year.

The MDM/R is a database which contains all smart meter data. It should be noted that this does not include the address of the meter, the account number or the name on the account so there is limited personal privacy risk. The IESO is investigating uses for the MDM/R data and has recently increased the scope of the data by adding postal codes and customer rate classes.

Current regulations require the local distribution companies (LDCs) to use the MDM/R as part of the customer billing process. However, if they were allowed, LDCs could obtain this service at lower cost from alternate service providers. This would allow for a reduction in rates for all customers.

The Board of Niagara-on-the-Lake (NOTL) Hydro calls for the removal of the Smart Meter Entity Charge from the electricity consumer's bill and for the removal of the regulatory requirement for LDCs to use the MDM/R. If there is value in the MDM/R database then the cost should be paid by those who want to use the data. The cost of the services actually used should be part of the LDCs distribution rates.

"With the current cost of electricity in Ontario we have to look at every cost and evaluate if it is warranted;" said Jim Ryan, Chair of the NOTL Hydro Board, "there are certain luxuries like the MDM/R that we can no longer afford."

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

Niagara-on-the-Lake Hydro distributes power to over 9,000 customers in the Town of Niagara-on-the-Lake. We are committed to operating as a sustainable high-performance, customer-driven business and to providing the highest standard in safety, service and reliability. The Town of Niagara-on-the-Lake is the 100% shareholder of the corporation.

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Niagara On-The-Lake HYDRO

November 2, 2017

The Honourable Charles Sousa
Minister of Finance
7 Queen's Park Crescent, 7th floor
Toronto, Ontario M7A 1Y7

Dear Sir:

I had the privilege to be part of the roundtable on October 11, 2017 organized by the Southern Golden Horseshoe Chapter of Financial Executive International (FEI) at which you and Minister Naidoo-Harris participated. Thank you for taking to time to meet with us and hear our thoughts on what can be done to help improve the Ontario economy.

I would like to correct one of the perceptions you elicited during the discussions.

One of the other participants in the roundtable raised the issue of high electricity rates in Ontario and compared them to Alberta where she had previously worked. During the following discussion you asked how many local distribution companies (LDCs) there were in Ontario and how many were there in Alberta. By the manner in which you asked this question you were implying that:

a) Having a large number of LDCs contributed to the higher rates in Ontario; and
b) Reducing the number of LDCs through consolidation, you mentioned Alectra, would help lower rates.

The reality is that there is no evidence that consolidation reduces rates. An analysis of distribution rates over the last twelve years will show that the rate performance of consolidating LDCs is no better than those LDCs that have stayed the same. In fact, some of the lowest rates are at standalone LDCs like Niagara-on-the-Lake and Hawkesbury while the LDC with one of the fastest rising rates is Hydro One; despite all the consolidation it has undertaken. Please note that I refer to Hydro One having one of the fastest rising rates. It is a given that with their rural services they will have the highest rates but their rates should not be rising faster than other LDCs.

I recognize that promoting voluntary consolidation is a policy of your Government. I believe this policy does a disservice to many of the electricity consumers in Ontario who in the future will regret that their LDC is no longer locally owned. In many communities this is already the case.

I would welcome the opportunity to meet with yourself or some of your staff to discuss this further and review the facts.

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Yours truly,

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Niagara On-The-Lake HYDRO

NOTL Hydro Board urges Government to make Electricity Bills Simple for Customers

Government of Ontario Continues to Politicize Electricity Invoices

December 5, 2017, Niagara-on-the-Lake – On October 26, 2017, as part of the release of the Long Term Energy Plan, the Government of Ontario promised it would be "Working with the OEB and local distribution companies (LDCs) to redesign electricity bills, making them more useful for consumers in understanding and managing their energy costs".

The first part of this promise has been kept and, in response, LDCs have consistently requested a much simpler electricity bill that customers can understand and can easily recalculate. The current electricity bills, whose format is mandated by the Ontario Energy Board, require a complicated spreadsheet and detailed knowledge of electricity rates to recalculate. Customers have consistently advised their LDCs that they find the current bills confusing and hard to understand.

Instead of taking any of the suggestions provided, the Government of Ontario is proposing to add further confusion to the electricity bill with the inclusion of the calculation of the 'savings' from the Fair Hydro Plan.

The Board of Niagara-on-the-Lake Hydro (NOTL Hydro) is concerned that this continues the politicization of the electricity bill which began when the Debt Reduction Charge (DRC) was reduced to zero for residential customers and continued with introduction of the 8% rebate. When the DRC was eliminated for residential customers the Government required that LDCs keep the DRC as a line item with a $0 charge and also provide a calculation of the 'savings' on the bill. The 8% rebate also had to be accompanied by a message that it was being provided by the Government of Ontario.

Calling all the rate reductions from the Fair Hydro Plan 'savings' is also questionable when much of it will have to be repaid in the future.

"Nobody likes to receive a bill but we owe it to our customers to make them as understandable and honest as possible." said Jim Ryan, Chair of NOTL Hydro, "Putting political messages on the invoice is simply wrong."

The Board of Niagara-on-the-Lake Hydro encourages the Government of Ontario to allow LDCs to make their electricity bills as simple to understand and as free of political messaging as possible.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

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Niagara On-The-Lake HYDRO

Niagara-on-the-Lake Hydro Board reviews the Ontario Political Parties on their Electricity Platforms

March 1, 2018, Niagara-on-the-Lake – The Board of Niagara-on-the-Lake Hydro does not endorse any particular candidate or political party and realizes votes take into account more than Ontario's electricity situation. However, the Board wishes to provide information on the issues it feels needs attention with respect to electricity policy in Ontario and its impact on electricity customers.

The NOTL Hydro Board will work with every party as part of the Board's goal of providing quality service at low cost to its customers. Over the past four years, the NOTL Hydro Board and Management have met with the energy leaders of all the parties and with Niagara region MPP's to discuss electricity policy and what should be done to help electricity customers.

Based on these discussions, as well as on an analysis of the published platforms and public comments of the NDP and PC Party and on a review of the actions and Long-Term Energy Plan (LTEP) of the ruling Liberal Party, the NOTL Hydro Board has had a summary of the platforms prepared. It can be found here. The summary provides our understanding of the position of each political party on all the major recommendations for improvement the NOTL Hydro Board has published over the last two years.

The NOTL Hydro Board encourages each party to update their positions based on what most helps the Ontario electricity consumer now and in the future.

The Board has previously provided concrete recommendations to the Minister of Energy and the Premier on how to reduce the high cost of electricity in Ontario.

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Niagara On-The-Lake HYDRO BOARD

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NOTL HYDRO BOARD RECOMMENDATION	LIBERAL ONTARIO	ONTARIOPC	ONTARIO NDP
MANAGING ELECTRICITY COMMODITY COSTS			
Cancel FIT and MicroFIT programs immediately and only sign new contracts when required based on independent evidence.	Continued FIT and MicroFIT programs to end of 2017 despite many opportunities to cancel. Have endorsed Market Renewal process for identifying and securing new supply.	Will cancel the FIT and MicroFIT programs and will seek to cancel or re-negotiate all contracts where legally and financially feasible. Announced a temporary moratorium on new contracts.	Want to bring electricity generation back to the public sector.
Write-off the excess costs of the FIT and MicroFIT contracts to tax base so they no longer impact electricity pricing. This also removes the proposed deferral of the cost of the Fair Hydro Plan.	While the Fair Hydro Plan effectively recognized these costs as problematic, its treatment with arbitrary rate setting and cost deferral to future ratepayers made the situation worse for ratepayers in the long-term.	Silent on treatment of costs of contracts they are not able to cancel, re-negotiate or buy-out. Platform assumes Fair Hydro Plan borrowing continues.	Silent on treatment of existing contracts.
Ensure decisions on nuclear power are based on realistic cost / benefit analysis.	Recent decisions with substantial cost implications have largely lacked in transparency though the Financial Accountability Office has provided evidentiary based support. OPG will be required to justify cost-prudency of continuing operations at the Pickering Nuclear Station to the OEB.	Largely silent other than supporting the extension of the life of the Pickering Nuclear Station.	Largely silent as focus on contracts with private companies rather than OPG. Support independent evaluation to determine Pickering Nuclear Station shut-down.
Integrate with Quebec and New York rather than always require generation in Ontario.	Signed new deal with Quebec and increased interties with both to some degree. See interties as a source for cheaper power rather than being willing to fully integrate.	Recognize that Ontario currently has too much generating capacity but silent on benefits of integration with Quebec and New York.	Recognize error in preference of new capacity versus imports and will have a panel to study use of imports. Require imports to be renewable which puts limits on imports.
Redesign of electricity pricing to take into account the competitive needs of business.	Have expanded eligibility for the Industrial Conservative Initiative (ICI) program but have not provided industry with the across-the-board breaks provided to the residential and small business sector.	Have recognized the issue and have promised a stable and competitive electricity system for business without committing to any specifics.	Would eliminate time-of-use pricing and go back to flat rate pricing. This is going backwards. Silent on any reforms specific to business pricing.
CANCEL UNNECESSARY PROGRAMS AND REMOVE COSTS OF SOCIAL PROGRAMS FROM RATES			
Cancel the Conservation and Demand Management (CDM) programs	Continue to support programs and a Conservation First policy where conservation will be considered before new generation where cost-effective.	Will move the cost of the CDM programs to the tax base but will continue them. Marginal short-term impact on electricity costs; longer-term risk of higher costs.	Silent on the CDM programs.
Eliminate the Meter Data Management and Repository (MDM/R)	Have voted to extend the services of the Smart Metering Entity for another five years and expand its scope.	Have committed to transferring the cost of the Smart Metering Entity and smart meter infrastructure to the tax base; platform is silent on future existence of the MDM/R.	Silent on the MDM/R.
Remove social programs such as the Ontario Electricity Support Program (OESP) and the Rural and Remote Rate Protection Program (RRRP) from electricity rates.	OESP and most of RRRP transferred to tax base as part of the Fair Hydro Plan.	Platform assumes full Fair Hydro Plan benefit to consumers continues. Platform makes references to transferring other costs that are not considered electricity (CDM, MDM/R).	Silent on OESP but plan to reduce rural delivery costs through tax subsidies (OPG water fees).

NOTL HYDRO BOARD RECOMMENDATION	LIBERAL ONTARIO	ONTARIOPC	ONTARIO NDP
MANAGING DISTRIBUTION COSTS			
Recognize the role and benefits of smaller LDCs and not promote consolidation.	Have increasingly promoted consolidation by both their words and actions.	Silent on LDC consolidation in their platform but have encouraged consolidation in the past.	Have recognized the benefits of smaller LDCs though mainly because they are publicly owned.
Separate the transmission and distribution businesses of Hydro One	No action taken on this.	Silent on this.	Silent on this.
Break-up the Hydro One distribution business into smaller local distributor companies.	No action taken on this.	Silent on this.	Silent on this.
Recognition of the value of the ownership position in Hydro One.	Have continued to dilute public ownership and value by selling Hydro One shares to the market as well as to company employees and First Nations. Committed to maintaining provincial ownership stake of 40%.	Want to dedicate Hydro One dividends to reduce electricity rates with a goal of preventing future sales. No repurchasing of shares.	Want to buy back 100% ownership of Hydro One.
PLANNING FOR THE FUTURE			
Make the Ontario Energy Board (OEB) fully independent	Recent actions have further eroded the independence of the OEB. Have recently announced an OEB Modernization Panel to independently assess how the OEB can better protect consumers amidst a rapidly changing sector, support innovation and new technologies, and how the OEB should be structured and resourced to deliver on its changing role.	Silent on independence though promise to make the OEB more efficient.	Will give the OEB a mandate to more effectively protect ratepayers. The NDP also propose to cap the return on investment at a lower rate. This latter action would be counter to the concept of independence.
Recognize the changes coming to the industry and plan accordingly.	With net metering are acting to give consumers choice with new technologies. Investigating potential applications with pilot projects.	Recognize need to adapt to new technologies by restoring decision-making to IESO and OEB and away from political branches.	Want generation to be publicly owned which could constrain adaptation of new technologies.

Cornerstone Hydro Electric Concepts
Ministry of Energy
OEB Modernization Review Panel

April 9, 2018

Tim Curtis, Ruth Tyrrell,
Vince Kulchycki, John Sherin

Discussion Themes

CHEC feedback:

- Current issues
- Relationship to Government
- Mandate and Activities
- Disruption and Innovation

Presentation to OEB Modernization Panel

Review of current issues with OEB governance:

- Consumer protection - regulating on behalf of the consumer who otherwise has little voice in this monopoly market
- Review the role of the OEB - review the intended “neutral role” of the regulator, with a goal of reinforcing regulatory independence vs. as a policy instrument of government
- Organizational structure – identifying existing gaps and skills needed going forward
- LDC model – recognize LDC’s will need to adopt as the centralized grid becomes de-centralized
- Enhanced oversight of all Mergers and Acquisitions - Representing the rate payer (vs shareholders) during M and A by a performing a longer term cost benefit analysis
- Review the current intervenor participation model and allow additional/direct public input

Presentation to OEB Modernization Panel

Relationship to Government

"How can the OEB best fulfil its adjudication responsibilities and obligations within an accountability framework set by the legislature?"

CHEC position:

- The OEB can only fulfil its responsibilities if the framework set by the legislature is appropriate.
- We hope the panel will make recommendations as to how that framework should be reset.

OEB Relationship to Government

The Ontario Government plays an outsized role in the electricity sector in Ontario:

- Owner of almost all of the generation either directly or as the provider of a long term contract
- Dominant shareholder of almost all transmission assets
- Dominant shareholder of largest distributor and significant leverage over most LDC's due to authority over municipalities
- Large role of Ministry of Energy in ongoing regulatory oversight

Independent voice therefore needed in sector

Ontario Energy Board Act

Board objectives, electricity

1 (1) The Board, in carrying out its responsibilities under this or any other Act in relation to electricity, shall be guided by the following objectives:

1. To protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service.

1.1 To promote the education of consumers.

2. To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry.

3. To promote electricity conservation and demand management in a manner consistent with the policies of the Government of Ontario, including having regard to the consumer's economic circumstances.

4. To facilitate the implementation of a smart grid in Ontario.

5. To promote the use and generation of electricity from renewable energy sources in a manner consistent with the policies of the Government of Ontario, including the timely expansion or reinforcement of transmission systems and distribution systems to accommodate the connection of renewable energy generation facilities.

OEB Relationship to Government

Implications of lack of independence in OEB as the regulator:

- Decisions are made based on government policy rather than the long term interests of the consumer (*example: 10 year rate holiday on consolidations*)
- Regulator is perceived by industry participants as an arm of the Ministry of Energy rather than an independent arbitrator (*creates lack of trust and unwillingness to share information*)
- OEB appears unwilling to engage in any independent analysis that might end up contradicting government policy (*annually approves new RPP rates with no analysis of cost efficiency*)
- OEB resources are diverted to program administration (*example: OESP*) rather than regulation

OEB Relationship to Government

Implications of lack of independence in OEB as the regulator:

- No participant in regulatory process actively engaged in protecting interests of consumers
- Impact of regulator decisions on consumer bill extremely limited
- Quality of staffing suffers due to limited role and nature of activities

OEB Relationship to Government

CHEC recommendation to modernization panel:

- Change the Ontario Energy Board Act to make OEB much more independent
- Appoint a Chair with the authority to implement the necessary changes
- Have the panel review the OEB in 3-5 years to determine if this change has been implemented and had the desired effect

Cornerstone Hydro Electric Concepts Association

Governance Framework

"What is the appropriate governance framework for a modern energy regulator?

- Dual position - Chair / CEO responsibilities – two separate positions may help protect ratepayers and "prudently" advance innovation in the sector
- Alberta has a governing Board for corporate oversight and a Chief Hearing Commissioner for independent adjudication
- Review current decision making framework (intervenor process) and develop a more cost effective and streamlined approach
- Recognize the limits and costs of regulations – perhaps a deeper evaluation whether non-regulatory approaches – such as appropriate private sector initiatives – could better meet objectives.

Cornerstone Hydro Electric Concepts Association

Stakeholder Relationships

"What are the effective mechanisms to provide stakeholders with appropriate opportunities to participate in OEB decision-making"

- OEB staff training may help to gain deeper insights of all impacts at the LDC level - from additional staff time to budget pressures resulting from the sector changes, minimizing the risks to LDC's
- Working closely with LDCs to pilot and test consumer reaction to new services and pricing models
- Allow sufficient time for LDC's to implement changes
- Evaluate the current effectiveness of communication methods used for stakeholder opportunities – these may not reach the appropriate channels

Cornerstone Hydro Electric Concepts Association

Disruption and Innovation

"How can the regulator ensure its policies and practices are best positioned to encourage innovation in Ontario's energy sector?"

- Allow LDC's flexibility to apply distributed energy resources within the rate setting process when it's of value to the community and its resiliency (emergency centre's, constrained area's,)
- Develop a financial recovery mechanism to compensate LDC's for DER assets - including the value of deferred capital
- Allow rate basing to include CCAP projects/benefits and can prove long term value to consumers. (e.g. transportation charging infrastructure, storage to mitigate future demand issues and could reduce grid export)
- Review the requirement of LDC's reporting on both Capital and Operational expenditures -
- Prioritize and align area's identified through the IRRP process led by IESO , and Municipalities Official Plans
- Engauge with Municipalities early to support community planning and resiliency strategies approved by Councils

Cornerstone Hydro Electric Concepts Association

Thank you

Tim Curtis, Ruth Tyrrell,

Vince Kulchycki, John Sherin

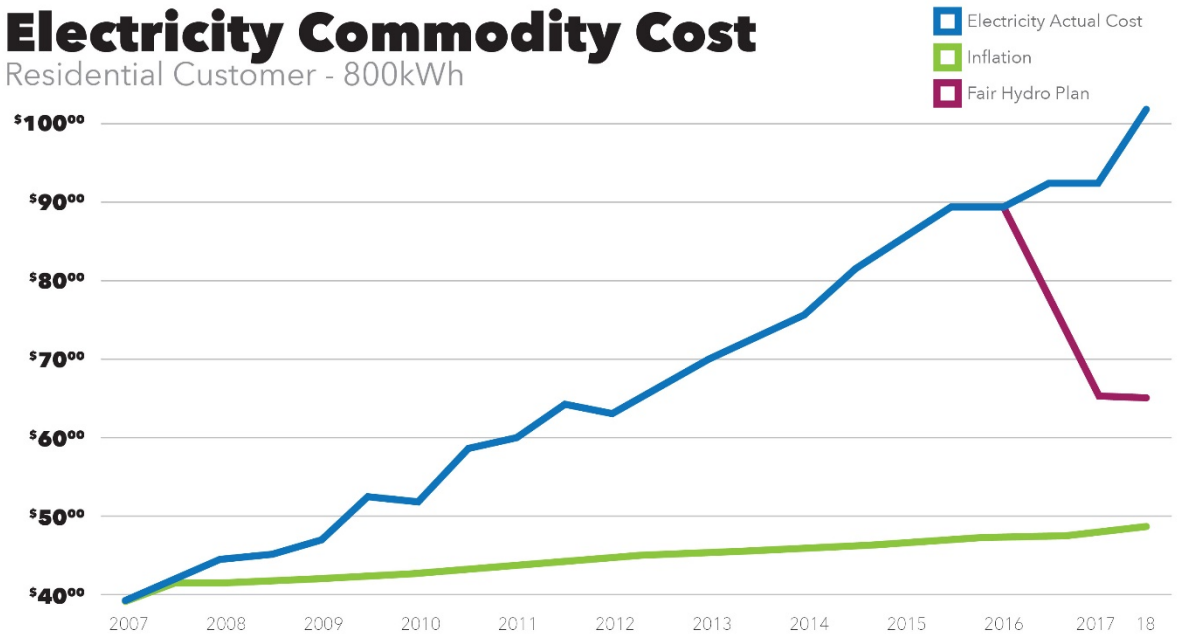
Niagara On-The-Lake HYDRO

Niagara-on-the-Lake Hydro Board Concerned with Continuing Rise in Cost of Electricity

May 1, 2018, Niagara-on-the-Lake – The Ontario Energy Board (OEB) recently released the Regulated Price Plan (RPP) rates for May 1, 2018 to April 30, 2019. Adjusted for the Fair Hydro Plan the rates decreased very slightly.

The OEB report also provided what the rates would have been without the Fair Hydro Plan based on actual expected costs. This shows a substantial increase in the cost of electricity as shown in Chart A.

CHART A



RPP rates rise for three reasons: increases in the actual cost of generating electricity, increases in savings provided to large industrial customers whose cost is passed on to be included in the RPP rates and decreases in overall demand for electricity which reduces the base over which the locked-in costs are spread.

The Board of NOTL Hydro believes that all these factors are driving up the actual cost of electricity but is growing increasingly concerned with the falling demand.

Chart B shows the worst case projection of total provincial consumption to 2035 provided by the IESO in their 2016 Ontario Planning Outlook. It also shows the actual electricity taken from the grid each year to 2017 as provided by the IESO. Prior to 2016 the difference between the two lines is generation on local distribution grids which is included in the consumption number used in the projection but not in the actual results provided annually by the IESO. For 2016 and thereafter the difference between forecast and actual consumption becomes a factor. Even allowing for this confusion, it is clear that in 2017 consumption for electricity fell more than the worst-case projection.

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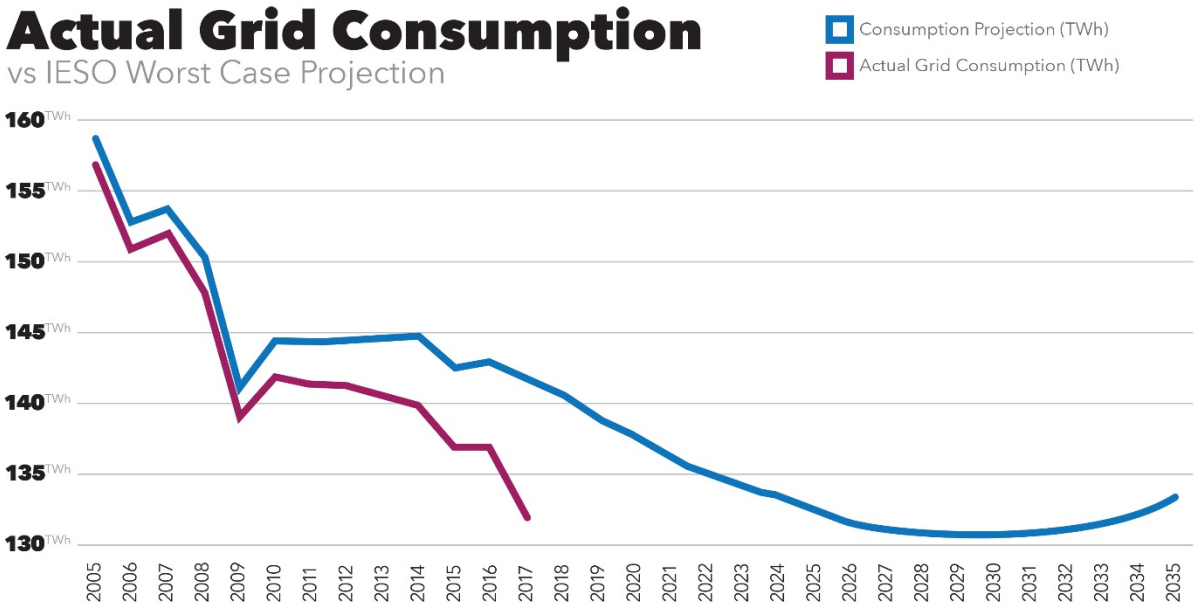
Niagara On-The-Lake HYDRO

CHART B



If this trend continues then the true cost of electricity will continue to rapidly rise.

The Board of NOTL Hydro calls on all the provincial parties to truly address the rising cost of electricity rather than just promising lower rates based on borrowing to cover ongoing costs.

The Board of NOTL Hydro has previously urged the Minister and the Premier to take steps to reduce the high cost of electricity in Ontario and has provided concrete suggestions.

ABOUT NIAGARA-ON-THE-LAKE HYDRO

Niagara-on-the-Lake Hydro distributes power to over 9,000 customers in the Town of Niagara-on-the-Lake. We are committed to operating as a sustainable high-performance, customer-driven business and to providing the highest standard in safety, service and reliability. The Town of Niagara-on-the-Lake is the 100% shareholder of the corporation.

FOR MORE INFORMATION PLEASE CONTACT:

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