



**London
Hydro**

London Hydro's Cost of Service (CoS) Application: Analysis and Perspective

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1. Purpose

The objective of this report is to highlight a set of challenges regarding the upcoming Cost of Service (CoS) rate application by London Hydro. This CoS application will be somewhat extraordinary, firstly, due to a larger time lapse since our last application and, secondly, due to the quantum of accumulated capital additions over the past five years as well as the annual increases in operation, maintenance & administration (OM&A). Traditionally in the utility sector, since the majority of costs are due to labour, the wages for whom have increased at a higher pace than inflation, the revenue requirements can often be greater than the cumulative inflationary increase. Although London Hydro has not experienced extraordinary volatility in operating expenses over the years and the capital expenses have also been steady but significant, the revenue requirement proposed in our next CoS rate application will be considerably higher primarily due to the elapsed time of five years and the steady operating and capital expenditure increases.

The purpose of this report is to review the next CoS application, discuss various challenges, highlight the revenue requirements, and to evaluate options to manage the rate application. In this report, we highlight the interconnections between operating and capital expenditures, financing, and the upcoming CoS application and settlement process. The information presented in this report is based on pre-COVID budgets and projections; though we are proposing strategies for filing a CoS application to account for COVID-19 data.

2. Introduction

One of the Ontario Energy Board's (OEB) key responsibilities is the oversight of a utility's operations for two principle reasons. The first reason is for consumer protection by ensuring rates applied by the utility are fair and reasonable. The second is for ensuring the financial stability of the utility in order for it to be an ongoing viable entity.

To ensure the financial stability of a utility, the OEB exercises economic regulation and, over the years, has used several frameworks for rate making, all of them reflecting a concept predicated on performance based regulation (PBR). The OEB has applied various regulatory frameworks since 2000. Barring a period of 2003-2008 when there was a moratorium on utility rate adjustments, the OEB has implemented four generation frameworks of rate making. Our next CoS application, due in 2021 for the 2022 rate year, will be made under the 4th generation of CoS frameworks. The CoS is, in essence, a refresh of where the utility is at a point in time and uses a forward test year to set the utility's distribution rates for the next 5 years until the next rebasing¹.

The OEB monitors a utility's annual performance through regulatory reporting requirements, which are filed quarterly and annually, commonly known as "RRR". In the "RRR", the OEB has set a standard level of expectations of financial and operational performance measures (commonly referred to as SQL's) to evaluate a utility's performance. Significant subpar performance measures reported without a reasonable explanation can result in an OEB investigation and the possibility of being directed to file a CoS earlier than scheduled. The OEB utilizes audit and compliance measures to ensure the veracity of reporting.

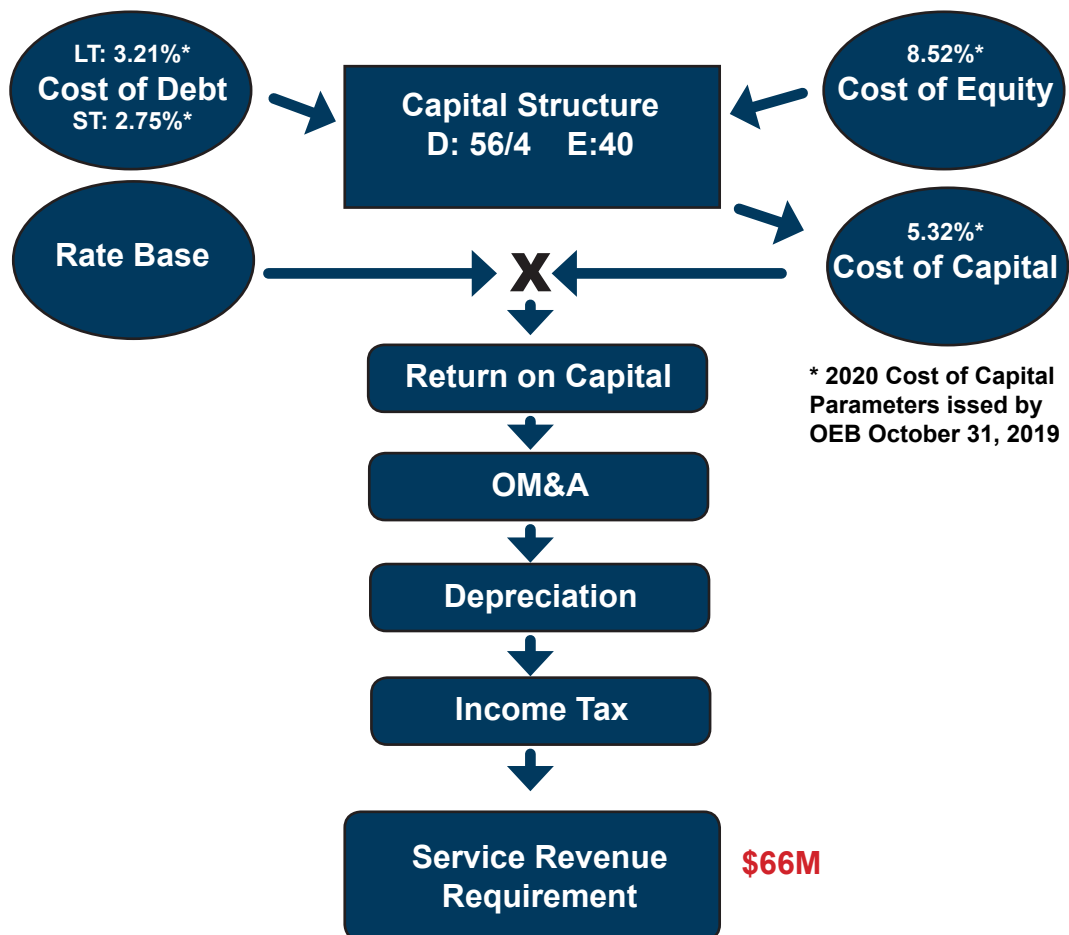
¹ During the 5 year period; however, the OEB allows the utility to file an annual application using an incentive rate mechanism (IRM) model for formulated inflation adjustments less an efficiency adjustment called a stretch factor.

3. Financial Stability

As a regulated utility, London Hydro is entitled to earn a rate of return equivalent to Return on Equity (ROE) that is calculated on the basis of a reformulated net income after taxes and the amount of equity formulated and approved at the time of the CoS application. The OEB last adjudicated London Hydro's CoS application in 2017 and as per the standard regulation, London Hydro will submit its next CoS rate application for 2022 in 2021. In the intervening years, London Hydro's distribution rates increased by approximately that of the rate of inflation and, as a result, London Hydro may continue to earn its last CoS approved net income levels contingent upon its annual costs. As part of the RRR filing, London Hydro reports its earned ROE annually to the OEB and if the annual ROE results in ± 300 basis points (i.e. $\pm 3\%$) off its last CoS approved ROE, then London Hydro is required to explain the reasons for over/under earnings. Should the OEB determine concern of harm for the utility and/or its customers, the OEB can order the utility to file a new CoS.

In 2017, the OEB approved London Hydro's CoS rate application and established a service revenue requirement of \$66M as the amount that London Hydro can recover from its customers in the form of distribution rates. As shown in Figure 1, the revenue requirement is intended to cover the cost of OM&A of the utility, interest expenses, and income taxes as well as non-cash items such as amortization expenses. The revenue requirement also includes the net income to be earned by the utility. The 2017 approved net income of \$10.5M, was based on a rate base of approximately \$300M.

Figure 1: Calculation of Revenue Requirement

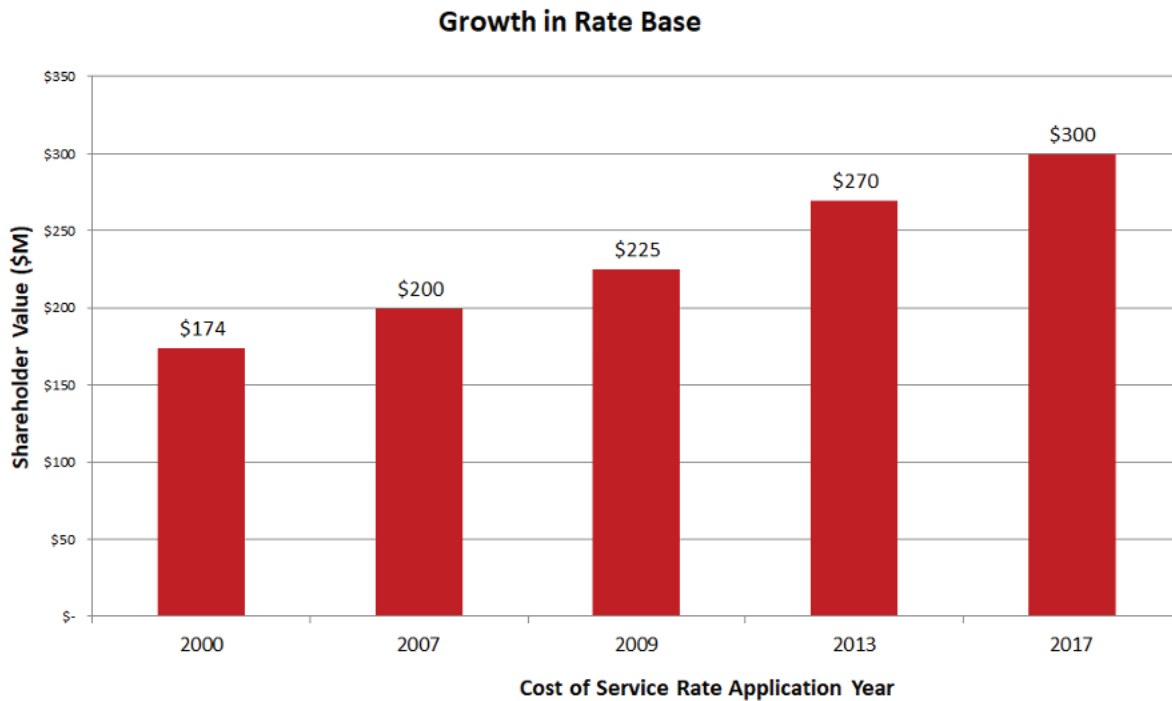


Since the last CoS, on average, London Hydro has been earning a net income level between \$8M to \$12M per year and ROE between 7-12%, respectively. This ensures the financial stability of the corporation and enables it to provide excellent service and a reliable distribution system for its customers.

4. Rate Base

Rate base is a unique term and usually applicable to regulated entities. It reflects the net book value of the utility assets, i.e. net property, plant, and equipment - representing the largest component of the calculation - together with working capital requirements. Working capital reflects the utility's obligation to pay for the purchase of electricity and transmission services from the IESO market. In 2017, London Hydro was approved for working capital equivalent to 7.5% of annual power cost and payroll. For a regulated utility like London Hydro, a steady growth in rate base is like a steady growth in capital in the case of a competitive business – the higher the rate base, the higher the net income. Figure 2 shows London Hydro approved rate bases for various discrete CoS rate making years.

Figure 2: Approved Rate Bases



As demonstrated from Figure 2, the rate base in 2017 was 11% higher from 2013, which is an annual growth of 2.7%. Since 2000, the annual growth has been approximately 3.3%. The rate base at London Hydro continues to grow, and in 2022, it is expected that the annual growth will be greater for the following reasons.

- i. The population of the city of London continues to grow and, as a result, new homes and subdivisions are being developed. As these new developments are constructed, London Hydro is increasing its customer base as well as installing new assets to account for the growth of the city.
- ii. City works are also closely tied to the growth of the city as new streets are being built or widened to accommodate the increased traffic.
- iii. Aging infrastructure is being replaced. Due to the inflationary impacts of time, older assets (usually 40 to 60 years old) that are being replaced today may cost several times more than their original cost. Furthermore, the book value of the initial asset is nearly zero because of the accumulated depreciation. In short, an asset that had been fully written off, is now replaced with a new asset, which would add significantly to London Hydro's rate base.
- iv. As per the OEB's regulation, the new accounting change pertaining to the life of an asset has reduced the depreciation rate going forward. Therefore, the relatively lower depreciation expenses against newly installed assets results in a higher net book value of the assets, which leads to a relatively higher rate base (as compared to past practices).

Therefore, London Hydro's rate base for the 2022 CoS rate application is anticipated to be relatively higher for the above-noted reasons, further compounded by the five-year lapse of time since the last CoS filing. It is projected that our next CoS rate base would be \$412M, which is a 37% increase from 2017 or approximately 6.6% annual growth. For a regulated utility, a steady growth in rate base, obviously, leads to higher net income; however, it also results in increased revenue requirements and, hence, increased rates for the customers.



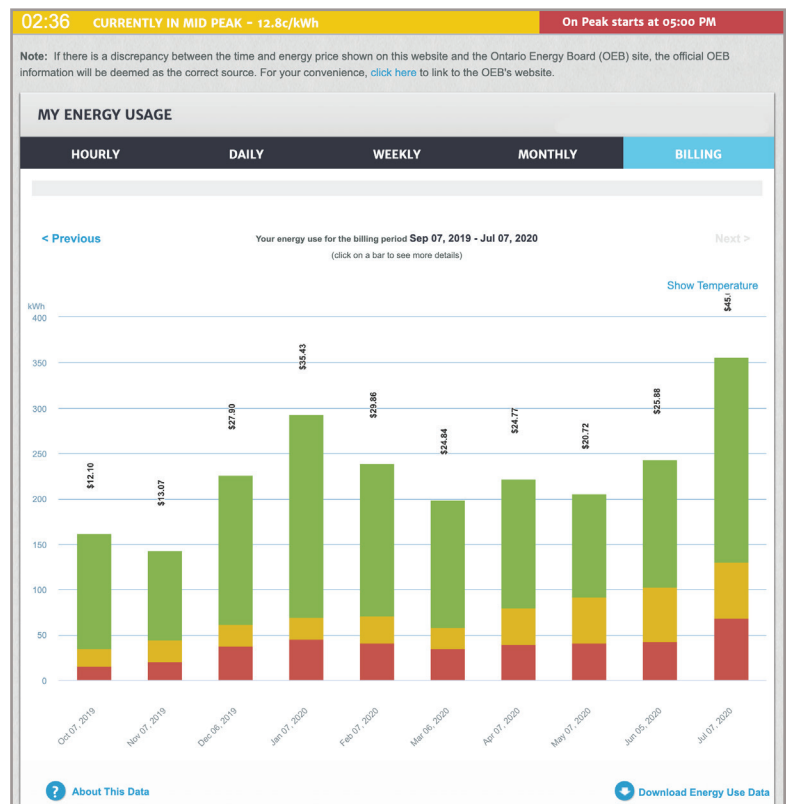
5. Distribution System Plan (DSP)

As part of the CoS requirements, in 2017, London Hydro submitted a document entitled the Distribution System Plan, which represents the planned capital replacements between 2017 and 2022. The document is extremely detailed and contains asset assessment information, reliability assessments and explanations on any capital expenditures that are anticipated to be completed over the next 5 years including the type of work, estimated cost of the work, and rationale for why the work is needed. The DSP is reviewed and, essentially, approved by the OEB as to the work the utility will perform between CoS applications. Any variances from the DSP, either in work performed or the amount spent, is required to be reported to the OEB at the time of the CoS rate application filing.

Since 2017, London Hydro has followed very closely to the last DSP that was submitted. The biggest variance on capital spending levels compared to that listed in the DSP is that of city and developer works. These are both programs that are initiated by third parties and London Hydro is required to work with these parties to complete the necessary work. In both cases, London Hydro receives partial recovery of the capital expenses through customer capital contribution, but the recovery is usually limited to 30-40% of the total cost of the project. The city of London continues to grow at an accelerated rate and the volume of projects continue to exceed initial projections, thus capital expenditures have been higher than anticipated.

5.1 Information System Plan (ISP)

Included within the DSP, London Hydro also filed an ISP in 2017 highlighting the capital plan for information technology and applications. Since the last CoS application, London Hydro has implemented and accomplished the stated objectives of its 2017 strategy. It is advisable to continue to report the variances from its previously submitted plan and submit a new plan for future capital expenses associated with information technology. In 2017, the capital expenses associated with the JDEdward upgrade were as an Advance Capital Module, the recovery of which was approved following the completion of the upgrade in 2019. A true up would be submitted along with the 2022 CoS rate application.



6. 2017 CoS Revenue Requirements

As discussed above, based on the 2017 rate base of \$300M and associated DSP and ISP, the 2017 total revenue requirements calculated in accordance with steps given in Figure 1 was \$66.4M made up of the components as shown below:

Table 1: 2017 COS Rate Application Major Components

OM&A	\$37.9M
Amortization	\$17.3M
Income Taxes	\$1.0M
Deemed Interest	\$4.7M
Other Revenue (offset)	-\$5.0M
Return on Deemed Equity	<u>\$10.5M</u>
Revenue Requirement	<u>\$66.4M</u>

Other than the cost of capital, various other components that make up the revenue requirements are detailed below:

6.1 Operation, Maintenance & Administration (OM&A)

OM&A represents over 50% of the total revenue requirement. The largest OM&A expenditure is payroll, which represents approximately 60% of the total OM&A expenses. Moreover, the following four factors significantly impact the OM&A expenses of London Hydro:

- i. Inflation – The cost of doing business increases each year as the value of the goods and services acquired also increases. Payroll changes are included in this category.
- ii. Change in Regulatory / Mandatory Requirements – Often new energy policies, regulation or legislation imposes new requirements on utilities, which add new costs on the utility. Examples of such mandatory obligations are several, including mandated rebates, MDM/R requirements, bill amendments, accounting adjustments, smart meters, and these changes impact London Hydro’s expenditures for designing and modifying the CIS.
- iii. Technology and Customer Convenience – Due to the advent of technology and increased customer demands, London Hydro may offer new products and/or services for its customers. For example, a new website to adapt to the requests of customers or accepting credit card payments as requested by customers. London Hydro also adapts to changing market conditions such as increased cyber security presence and disaster recovery plans. Other adjustments include increased tree-trimming services to reduce potential outages, thus increasing reliability.

- iv. Efficiencies and Automation – Increased efficiencies and automation reduce the OM&A expenditures as London Hydro is able to more effectively utilize the resources that it has to provide the same level of service.
 - a. Many of these efficiency gains are technology enabled. Examples of this are reduced meter reading costs from the implementation of AMI/smart meters. remotely rather than having an individual go out to physically read the meter.
 - b. Another example is by having shared service agreements with other utilities where the amount paid by the other utility exceeds the incremental cost of providing the service, which offsets London Hydro's costs.

The net impact of these factors is often manifested in annual OM&A cost changes, which over the past three years have been increasing at about 4-5%.

6.2 Amortization Expense

Amortization expense is a systematic write-off of each capital asset over the estimated useful life of the asset. It represents a mathematical accumulation of the depreciation that has been "written off" for accounting purposes of every asset that London Hydro owns. As it is a mathematical calculation, essentially, London Hydro has no control over current year expenditures as the expense is primarily predicated upon prior year capital expenditures and life of the assets. The only option to manage amortization expenses is to reduce the future capital expenditures.

As capital assets continue to be installed/acquired at amounts greater than the amortization expense that is recognized for accounting purposes, the rate base continues to increase. Nevertheless, as the rate base increases, the amortization expense also increases.

6.3 Income Taxes

As a for-profit entity, London Hydro is subject to pay income tax on the profit that it generates. London Hydro looks for tax saving opportunities to defer or eliminate the tax that it owes for the purpose of maximizing ROE; although, in most cases, the taxes will ultimately be required to be paid. The current income tax rate is 26.5%.

6.4 Deemed Interest

Deemed interest represents the mathematical amount of interest that the OEB anticipates the utility should need to fund its debt obligations. The OEB assumes that 60% of the rate base is funded through debt and 40% of the rate base is funded through equity; however, the actual debt and equity levels are irrelevant as far as the OEB is concerned. The revenue requirement for London Hydro is determined based on the deemed amounts, not the actual amounts.

The deemed interest is calculated using London Hydro's actual weighted average debt rate multiplied by the amount of debt the OEB deems London Hydro to have.

As the rate base increases, it is anticipated that London Hydro will require more debt and, hence, the interest included in the revenue requirement will also increase, subject to the prevailing interest rates.

6.5 Other Revenue

Other revenue represents the income earned by London Hydro that is not part of the distribution rates for distributing electricity. The most common items in other revenue are for things such as late payment charges, service fees for connection / disconnections, pole rental income, and sale of scrap. As a regulated utility, the OEB has oversight on these fixed rates charged for specific services with respect to the customer. The utility is restricted from casting new fixed rates to customers unless applied for in the CoS application and approved by the OEB. Non-regulated other revenue is variable in nature, i.e. applied on a time and materials basis, or at fair market value.

Other revenue represents a reduction (commonly referred to as an “offset”) to the revenue requirement calculation.

These other revenue amounts are a way to keep ROE at “higher levels”, while also keeping distribution rates at lower levels. Although many of the other revenue items relate to service fees associated with distribution activities (meaning they are primarily customer driven, i.e. late payment charges, connection charges for new customers, etc.), London Hydro is constantly looking for ways to maximize other revenue values through actions such as maximizing the value for the sale of scrap and government incentives.

6.6 Deemed Return on Equity (ROE)

This represents the profit level that London Hydro is allowed to earn. The deemed ROE level is based on the formulated rate of return, as calculated and approved by the OEB, multiplied by the deemed equity level (40% of rate base) at the time of the last CoS application.

London Hydro was approved for a revenue requirement of \$66M, which includes a net income of \$10.5M as shown in Table 1 for 2017. During the interim years, utilities can apply for an IRM that provides the ability to increase rates at a level which is intended to approximate inflation (less the stretch factor). London Hydro has been extremely successful in maintaining a net income level (in absolute dollars) between 2017 and 2019 to the approved level of approximately \$10.5M. Through the IRM adjustment, together with the increased number of customers, London Hydro may earn higher revenue than that of the CoS revenue; however, the actual net income earned may be impacted by the actual increase in OM&A costs.

Nonetheless, despite earning a reasonable net income, the ROE has declined since the last CoS. The reason is simple; although the net income levels remain relatively consistent with the approved amount, deemed equity continues to increase at a significant level (because rate base is increasing) and, therefore, the actual ROE that London Hydro is earning falls below the “approved” level.

In the DSP, submitted to the OEB in 2017, London Hydro recognized a relatively healthy investment in capital expenditures, which was much larger than the annual amortization amount. As explained previously, in Section 4. Rate Base, capital investment dollars are significantly higher than the amortization expenses embedded within existing rates. Between the discreet CoS years, therefore, as the incremental changes to rate base has not yet been approved, the ROE in the intervening years often declines.

7. 2017 to 2020 Financial Comparison

Table 2: 2017 and 2020 Financial Data (in thousands of dollars)

	2017 OEB Approved	2020 Budget	2020 Adjusted*	\$ Change	% Change
Distribution Revenue	66,339	69,369	70,969	4,630	6.98%
Other Revenue	5,007	6,082	6,082	1,075	21.47%
Total Revenue	71,346	75,451	77,051	5,705	8.00%
OM&A	37,881	43,671	43,671	5,790	15.28%
Amortization	17,273	19,322	19,322	2,049	11.86%
Income Taxes	982	-579	1,021	39	3.97%
Deemed Interest	<u>4,690</u>	<u>4,873</u>	<u>4,873</u>	<u>183</u>	<u>3.90%</u>
Total Expenses	60,826	67,287	68,887	8,061	13.25%
Deemed Return	10,520	8,164	8,164	-2,356	-22.40%
Rate Base	300,000	363,662	363,662	63,662	21.22%
Deemed Debt	<u>180,000</u>	<u>218,197</u>	<u>218,197</u>	<u>38,197</u>	<u>21.22%</u>
Deemed Equity	120,000	145,465	145,465	25,465	21.22%
Deemed ROE	8.77%	5.61%	5.61%	-3.15%	-35.98%

*Adjusted to eliminate the effect of the accelerated CCA adjustment.

7.1 Observations

- i. Net income has decreased by \$2.4M compared to the “approved” amount from the last CoS application.
- ii. OM&A has grown by approximately the same amount as distribution revenue and other revenue combined.
- iii. Since payroll increases are higher than that of inflation and payroll represents 60% of OM&A, London Hydro has done an adequate job of controlling overall OM&A expenses.
- iv. Other revenue has increased by \$1.0M. The increase in other revenue represents items such as service fees charged for capital jobs and income tax incentives.
- v. Amortization expense has grown by \$2.0M. This represents the increase in capital assets and, hence, an increase in rate base, which London Hydro has yet to be compensated for as it has not been examined as part of the CoS process.
- vi. Deemed interest has increased by \$200K. This increase represents the increased borrowings required to finance the increased capital expenditures. Similar to amortization expense, these represent expenses incurred that are in-line with the DSP, though London Hydro will not receive any sort of consideration until the next CoS application. Interest expenses should have increased by more than \$200K based on the additional borrowings, but London Hydro has been able to obtain new debt at lower rates, which has limited the interest expenses.
- vii. Between 2017 and 2020, the decrease in net income of \$2.4M can be explained almost entirely by the increase in amortization expense, which is a net increase of approximately \$2.0M. The other \$400K is a split between increased OM&A expenses, income taxes and interest expenses.
- viii. Based on the budget for 2020, if London Hydro had filed a CoS application, the expected return London Hydro would be entitled to earn would have been approximately \$13M due to the increased rate base that has been established between 2017 and 2020.
- ix. Based on the current deemed equity amount (as calculated by the estimated rate base *40%), the actual rate of return is projected to be only 5.6%, which is 36% lower than the amount approved in 2017. It is anticipated that the ROE amount will return to the appropriate level at the next CoS rate filing in 2022.

8. 2021 Forecasted Financial Results

Based on the significantly lower net income and return projected for 2020, the question remains to be what will the 2021 financial performance look like? The following is a summary of the anticipated financial results between 2017 and 2022.

Table 3: 2017-2022 Financial Results, Actual and Projected

	Actual	Actual	Actual	Budget	Estimated	Estimated
Years	2017	2018	2019	2020	2021	2022
Revenue	66,862	68,676	69,726	69,369	70,764	80,676
Operating Expenses	41,933	43,709	44,229	48,287	48,964	50,012
Regulatory Adjustment	-1,470	-2,191	-2,561			
Amortization	18,321	19,168	20,180	20,780	21,615	24,319
Other Revenue	- 10,504	- 13,121	- 11,778	- 12,656	- 12,809	- 13,235
Interest (Actual)	- 607	3,880	4,905	5,373	5,344	5,944
Income Tax Expense	<u>4,553</u>	<u>4,312</u>	<u>2,781</u>	<u>- 579</u>	-	-
Net Income	14,636	12,919	11,970	8,164	7,650	13,636
Unrealized Gain	- 2,586	251	308	-		
Net Income (excl) MTM	12,050	13,170	12,278	8,164	7,650	13,636

It appears that the budgeted net income will be approximately \$7.6M in 2021, which is a further reduction of \$500K from the 2020 net income levels and a larger drop in ROE (4%). Moreover, as given in the above table, the revenue is projected to increase from \$66.9M in 2017 to \$70.8M in 2021, a growth of 5.8% or about 1.4% CAGR (Compound Annual Growth Rate). Whereas the operating expense is projected to increase from \$41.9M in 2017 to \$49.0M in 2021, a 16.8% increase or 3.9% CAGR.

8.1 Operating Expenses

The increase in operating expenses is due to a number of considerable factors:

- i. Increased burden for mandated regulatory requirements such as bill print changes, increased cyber security compliance, increased OEB fees, etc.
- ii. Payroll increases. Labour and wage adjustments over the years have been 2.5-3% annually, which is a combination of negotiated settlements, job reclassifications, and merit increases. Although London Hydro has not increased its employee workforce significantly; however, there have been some voluntary increases in the number of trades' apprentices for succession planning as well as an increase in FTEs for cyber security compliance. Juxtaposed to that, London Hydro has also stayed away from increasing headcounts in areas where efficiencies have been achieved.
- iii. Due to the cancellation of the CDM framework, London Hydro had to accommodate five Union personnel into other departments, some of which were accommodated through attrition in other areas. Overall, there was a net increase in labour complement by two positions².
- iv. London Hydro has invested in developing smart apps and technology tools for advanced customer services and improved convenience. Some examples of these are: MyLondonHydro, paperless billing, self-service tools, etc. While these developments have added capital and operating costs, they have also provided increased efficiencies in customer services. Even though the number of customers continues to increase and customers have seen regulatory changes such as on bill rebates and bill redesign, the only increase to customer service staff was to accommodate CDM personnel (as mentioned above) as staff complement within customer service has been maintained at an optimum level.
- v. The increased technology and smart apps for customers have been implemented mostly as cloud solutions. These cloud solutions offer greater flexibility, enhanced cybersecurity as well as better application availability; however, cloud costs are often adding to increased operating expenses at slightly reduced capital investments, thereby having optimum total cost of ownership. Nevertheless, immediate increases in operating expenses for cloud subscription fees tends to erode the regulated net income.
- vi. In 2020 and 2021, London Hydro is projecting further increases in operating expenses due to these cloud services for the replacement of customer service contact centre technology as well as increased use of credit card payment options.

As the 2021 budget has not yet been completed, the estimate used to create the financial projections indicated that the number of employees would be reduced by one as a result of attrition, while payroll costs would increase by 2.1% (collective agreement). Additionally, other operating costs increased at a level of 2% (approximate inflation) and OM&A increased by \$200K for the factors as discussed above (regulatory requirements, new services, labour and wage adjustments, etc.).

² Any effort to lay off staff, temporary or permanent, has a myriad of implications from position bumping to short-term increases in cost. The best alternative to manage the staff complement in a regulated entity is not to overstaff and hire new employees judiciously and only for justified positions.

While London Hydro has experienced ongoing increases in operating expenses as noted above, it has also experienced a reduction in cost recoveries. This is mainly due to the OEB's mandate in 2019 to eliminate the special collection fees and the loss of recoveries and incentives due to the elimination of the CDM framework.

8.2 Capital Expenses

Another major impact on rates comes from the level of capital investment; these impacts have been explained previously in Section 4. Rate Base. Capital expenses are impacted by the following factors:

- i. On average, London Hydro's capital budget has been around \$29M per year, except in 2018 when it was \$33M. In addition to this, London Hydro spends approximately \$5-6M annually on IT capital projects.
- ii. London Hydro has been quite consistent in maintaining the above capital budgets and, to date, in all previous rate filings these expenses have been approved without any challenges. Moreover, capital expenses add significantly to London Hydro's revenue requirements in three ways: (1) capital expenses leads to increased annual amortization; (2) interest cost of debt for the investment; and, (3) the ROE.
- iii. In order to make a significant impact on the reduction of rates from capital expenditures, London Hydro has to cut the capital investment by a considerable amount. For example, if the decision was made to reduce the 2021 capital budget for distribution infrastructure assets by \$1M, then a reduction in amortization expense would be approximately \$10K for the same year. On the other hand, if investment in IT is reduced by \$1M, due to its shorter average useful life, the reduction in amortization expense would be approximately \$100K.
- iv. Obviously, if the intent is to decrease the rates substantially from a reduction in capital expenses, then such a reduction has to be significant in amount and over a larger period of time.
- v. There are synergies between maintaining a level of capital expenses and operating a reliable grid. Since London Hydro employs its internal staff for 70% of capital works and contract labour for the remaining, this helps in having an optimum level of crews for capital works who can also assist in operating and repairs during outages and storm conditions. Any sizable decrease in the capital budget would result in laying off members of our skilled trades crews, which might impact our reliability performance.

London Hydro's capital budget is largely driven by regulatory and/or legal requirements in addition to infrastructure investment resulting from rigorous analysis of the system and equipment. From the factors above, in the short run, it is apparent that a reduction to the capital budget has a somewhat less direct impact on the rates, but would increase risks, impacting public safety, the environment and reliability. While in the long run, a reduction would not only delay the capital program, but also deteriorate the earning capacity, quality of service and corporate value while the impact of the aforementioned risks of public safety, the environment and reliability would be amplified. Additionally, there are inherent obligations for London Hydro to meet the capital expense requirements driven by developers and city works.

It is anticipated that when filing the DSP for 2022, there will continue to be a significant difference between the capital investments proposed and the amortization expenses that will be recovered through rates. This will lead to a further increase in rate base in the following CoS application.

Thus, it is not prudent to make a significant arbitrary reduction to the capital outlay. Furthermore, by virtue of having submitted its first DSP in 2017, London Hydro has the onus, at least until 2021, to fulfill its DSP obligations³.

To summarize the above discussion on operating and capital expenses, it seems that a regulated entity like London Hydro has very limited mechanisms to significantly reduce the distribution rates. Although, it should be noted that in its last five CoS rate applications to date, London Hydro has successfully managed to maintain its position of competitive rates vis-à-vis other utilities in Ontario.

The above challenges described herein have been evident in previous rate applications as well. Hence, the best strategy for London Hydro is to proceed with what it has practiced over the years; namely prudent operating cost management, i.e. justifiable labour costs as well as a steady capital improvement program to maintain excellent reliability, and to provide an excellent level of customer service. Furthermore, any capital rate reduction is possible only in 2021 and beyond; however, the implication of those reductions in the next CoS rate application will be extremely minimal.

³ Any variances from the DSP must be explained and justified to the OEB.



9. The CoS Rate Application

From the above discussion and maintaining current capital expense levels, the following table displays the projected implications for the 2022 CoS rate application.

Table 4: 2022 Estimated CoS Application

	OEB Approved	Projected	\$ Change	% Change
	2017	2022		
Distribution Revenue	66,339	84,873	18,534	27.94%
Other Revenue	5,007	7,726	2,719	54.30%
Total Revenue	71,346	92,599	21,253	29.79%
OM&A	37,881	46,697	8,816	23.27%
Amortization	17,273	24,319	7,046	40.79%
Income Taxes	982		- 982	-100%
Deemed Interest	4,690	7,098	2,408	51.34%
Total Expenses	60,826	78,114	17,288	28.42%
Deemed Return	10,520	14,485	3,965	37.69%
Rate Base	300,000	412,398	112,398	37.47%
Deemed Debt	180,000	247,439	67,439	37.47%
Deemed Equity	120,000	164,959	44,959	37.47%
Deemed ROE	8.77%	8.78%	0.01%	0.16%

As shown in the above Table 4, London Hydro's revenue requirements between 2017 and 2022 might be increasing by 28%, which reflects a CAGR of 5.0% (assuming an annual inflation rate of approximately 2% over five years, which would represent a compounded increase of 10.5%). By comparison, London Hydro's operating expenses have increased by 23.3% or CAGR of 4.3%, while amortization expense has increased by 40.2% or CAGR of 7.1%. These two expenses make up about 85% of the revenue requirement. The amortization expense reflects a steady but healthy increase in capital expense, whereas operating expense reflects labour costs together with material costs increases including various mandatory cost increases.

Obviously, if our revenue requirement is increased by 11% or less, this would be in line with the OEB's preferred increases, which is comparable to inflation. However, it is also understood that capital expenditure investment and somewhat larger increases in operating expenses due to labour costs and other regulatory mandates, would potentially put upward pressure on rates. For these reasons, it is strongly recommended to continuously apply for the CoS rate adjustment. If inflationary increases were truly the case for London Hydro, then it is possible to avoid the CoS rate application and just accept the outcome of the annual IRM adjustments.

The above estimated increase in revenue requirement of 28% would result in an overall bill increase of approximately 2.8% for residential customers. To date, London Hydro distribution rates for residential customers have been very competitive vis-à-vis other utilities – 13th lowest in the entire province and 3rd lowest among peer and neighbouring utilities. Given the above estimated revenue increase, it could potentially change London Hydro's relative position.

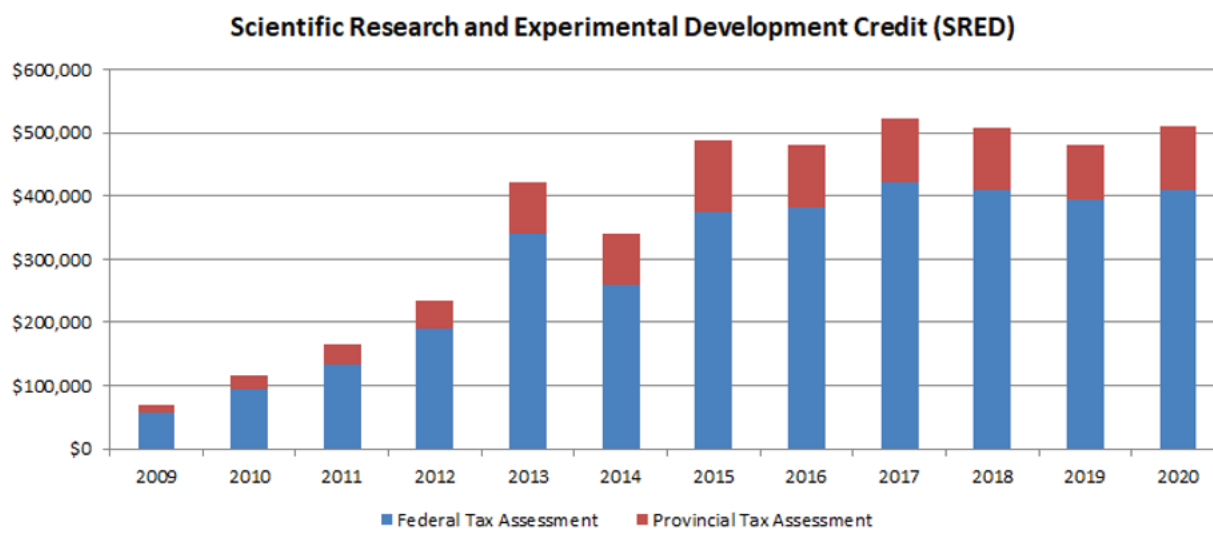


10. 2022 CoS Rate Application Core Question

It is appropriate, therefore, to ask how London Hydro should best manage the 2022 CoS rate application in regard to the probable implications for distribution rates given our revenue requirement estimates.

In the sections above, there has been a good discussion on both operating and capital expenses. London Hydro has managed its operating expenses reasonably well, for its labour increases have averaged about 2.3% annually, but many other added increases have been due to a number of external mandates⁴. On the other hand, capital expenses have been in accordance with London Hydro's previously submitted DSP with some annual adjustments. London Hydro's capital expenditure investment has led it to implement a much higher level of innovation resulting in increased efficiency. This innovation has brought about much success from such things as the downtown ring-bus system, to technological advancements in customer applications, to increased online usage for customers through programs like Aeroplan and/or credit card payments. These innovations have also brought London Hydro annual savings through the Scientific Research and Experimental Development Credit (SRED) as shown in Figure 3, albeit this benefit gets reconciled at the time of the CoS rate application.

Figure 3: SRED Benefits



In summary, the recommendation for OM&A costs is that London Hydro continues to take a diligent and prudent approach during the budget setting process and ensure that the costs being incurred throughout the organization are appropriate. This will ensure that the costs that are primarily in control of London Hydro will remain close to inflationary levels. In the next section, some options are discussed in support of the core question.

⁴ Further efficiencies in operating expenses can perhaps be achieved through MAAD transactions, which is outside the scope of discussion for this report.

11. CoS Rate Application Options

London Hydro has a very strong reputation with the OEB and the interveners for having a well-run utility and putting forward strong CoS rate applications that are both technically accurate but also having sound basis for the legitimacy of the requests for cost increases. This reputation is extremely beneficial for London Hydro, but also means that London Hydro should move forward with those same principles to maintain that relationship in the future.

In addition to meeting all of the filing requirements, the most important way to maintain that reputation is to ensure that London Hydro is sincere and coherent in its CoS rate application with little to nil errors. This entails a very rigorous budgeting process. A good CoS rate application is one which is well-documented, well explained, comprehensive, and coherent.

London Hydro should consider the following issues in relation to its 2022 CoS rate application:

1. Approach to COVID-19 Impact (Specifically revenue rate design for commercial and industrial customers.)
2. Importance of Advanced Capital Module (ACM) Applications
3. Rate Mitigation

11.1 Approach to COVID-19 Impact

COVID-19 has had, and will potentially continue to have, a significant impact on London Hydro's customers; especially on the commercial and industrial (C&I) customers. The C&I customers might have experienced considerable impacts on their operations. Although the CoS application is for the year 2022, it is filed in 2021 using data from 2017 to 2020 actuals with budgeted/forecasted amounts for 2021-2022. The 2021 budget is considered a bridge year budget and the 2022 forecast is a forward test year budget.

When the pandemic is over, things are unlikely to immediately return to normal as the economy will not instantly recover. It may take several years for the economy to return, if at all, to the levels that occurred in the 2017-2019 period. Therefore, because of COVID-19 and its broader implications for the local (as well as global) economy, London Hydro anticipates that its 2020 performance might be atypical. As such, London Hydro will request that, although the actual 2020 results will be submitted, a strong request will be made for the regulators/intervenors to place a greater emphasis on the 2017 to 2019 actual financial results. London Hydro will also consider presenting a normalized 2020 actual performance for comparative purposes. Furthermore, London Hydro will provide the budgeted amounts for the 2021 bridge year (and actual amounts later in early 2022), as well as the 2022 forward test year budgeted amounts. The actual performance in 2020 would be atypical for two reasons: firstly, there are additional expenses for pandemic management and additional relief for customers as well as some budget is underspent for such activities as training, travel, conferences, etc.; and, secondly, the revenues have been somewhat abnormal due to the economic lockdown. It is anticipated that in the long run when the economy is past the pandemic, these costs and revenues will return to typical levels.

For rate implementation, an innovative approach is being contemplated, which is explained in the following subsection.

11.2 Modified Rate Design due to COVID-19

As discussed above, 2020 is an atypical year due to the broader economic implications of COVID-19. The impact of this is more pronounced for C&I customers due to the reduced electricity demand during the economic lockdown. Note that C&I customers are charged a fixed monthly and a variable demand/energy distribution rate. Unlike C&I customers, residential customers are now on 100% fixed monthly distribution rates, a transition that began in 2017. Moreover, the variable distribution rates for small commercial (GS ≤ 50kW) is based on energy (kWh) and for larger commercial customers (GS < 50kW) it is based on kW demand. Rates for various classes are given in Table 5.

Table 5: London Hydro 2017 Approved Rates

Rate Class	Fixed Rate	Billing Determinant	Variable Rate	Fixed %	Variable %
Residential	\$16.51	kWh	\$0.0127	67.22%	32.78%
GS<50	\$32.25	kWh	\$0.0108	53.75%	46.25%
GS>50	\$157.55	kW	\$2.7202	22.25%	77.75%
Cogen	\$2,150.92	kW	\$3.7573	27.53%	72.47%
Standby	\$ -	kW	\$3.1034	0.00%	100.00%
Large User	\$20,286.64	kW	\$2.2638	37.02%	62.98%
Street Light	\$1.64	kW	\$8.2073	57.92%	42.08%
Sentinel Light	\$4.62	kW	\$15.2176	53.97%	46.03%
USL	\$2.32	kWh	\$0.0200	28.08%	71.92%

Due to the economic lockdown in 2020, there has been a significant reduction in the energy consumption and electricity demand levels by the commercial customers.

Therefore, if London Hydro were to use the 2020 energy consumption and power demand for C&I customers based on 2020 performance, it is quite apparent that the rate design based on 2020 consumptions can be relatively punitive as the total revenue requirement apportioned over the lower consumption levels would result in larger rates. Consequently, when these customers return to a normal level of consumption in the future, relatively higher rates will further amplify their bills.

Therefore, London Hydro is proposing to make use of consumption data based on a pre-COVID scenario (using 2017-2019 data) and not consider the reduced consumption due to COVID-19 during the economic lockdown, for its rate design. The impact of this decision is that the usage estimated in the models might be higher in 2022 for C&I customers. Using these levels in the rate design model will give rise to lower fixed and variable costs. The benefit of this for customers is that the distribution portion of their bill might be lower; and by reducing the costs of their electricity bill, this could be a small gesture that London Hydro could do in order to assist in the economic recovery.

Nevertheless, London Hydro would be requesting a deferral account to record the difference between the revenue collected from C&I customers and the revenue that was built into the rate design. Therefore, London Hydro will ultimately apply to the OEB for collection of the same revenue as was identified in the rate design, but the recovery will occur at a later time when the economy has recovered and the businesses have more ability to pay the increased rates.

In summary, the above ideation would have relatively lower rate implications for C&I customers, while London Hydro is ultimately kept whole recovering any lost revenue in future periods, albeit the full cost recovery would be somewhat delayed.

11.3 Importance of Advanced Capital Module (ACM) Applications

ACM is essentially a preapproval for cost recovery due to significant standalone capital projects between successive CoS rate applications. In the 2017 CoS rate application, London Hydro applied for the recovery of the JDE system as well as the Nelson TS. Approval of the ACM enables London Hydro to recover these costs upon completion of the capital project, i.e. London Hydro need not apply again to recover these costs assuming the project is scheduled for implementation before the next CoS rate filing. The cost recoveries are based on the projected amount of the capital expenditure; a true-up then takes place at the next CoS rate filing where both the cost and the project is examined for prudence (the same way that all capital expenditures are examined).

The distribution rates (i.e. revenue requirements) might increase significantly when comparing 2017 and 2022, the successive CoS rate application years; nevertheless, London Hydro anticipates that the rates from 2021 to 2022 would not see as large of an increase. This is based on the fact that in 2022, London Hydro would have inherent increases in rates because of another year of IRM, annual increases in customer accounts, and the effective ACM implications, which were filed in the 2017 CoS application. Therefore, the annual change in rates for 2021-2022 might be moderate.

In London Hydro's next CoS rate application, it is recommended to submit an ACM for the anticipated CIS replacement and capital projects associated with Bus Rapid Transit (BRT). This option will help London Hydro to firstly, start recovering these costs immediately upon implementation of the projects and, secondly, the CoS rate application for 2027 will result in relatively lower rate increases from 2026-2027 just as explained above for the 2022 CoS rate application.

11.4 Rate Mitigation

Although, as indicated above, rate increases between 2021 and 2022 will be moderate; nonetheless, the increase in revenue requirements between 2017 and 2022 might be seen as relatively large. One of the strategies which may be proposed during settlement proceedings is volunteering for rate mitigation by phasing the rate increases over a five year period. Usually rate mitigation is only utilized when the total bill impact will exceed 10%. Although the total bill impact as a result of the change in distribution rates will not exceed the 10% threshold (only 2.8%), London Hydro might be willing to allow a gradual increase to rates rather than implementing the entire rate increase to be effective in 2022.

The rate mitigation proposed for London Hydro is to seek a 40% increase in rates in 2022, the first year of the five year plan, with 15% in each of the following four years. This is done for two reasons, the first is so that much of the rate increase could be realized early for London Hydro to allow a reasonable return for 2022, but it also provides a smoother rate change for the entire period for two reasons. The first is that in addition to the 15% in years 2-5, the customers would also have rate increases associated with the IRM increases and potentially the annual change in the cost of electricity as well. The second factor is that as mentioned previously, London Hydro would be using two ACMs and the impact of those ACMs would cause rate increases at approximately the same time.

12. Conclusion

London Hydro's distribution rates have historically been very competitive; and the operating and capital expenses have been relatively moderate and justified.

One significant compounding factor for seemingly larger increases in the revenue requirement between 2017 and 2022, unlike prior years, is the five-year elapsed time. Most of all, despite the seemingly larger revenue requirement increase, the total bill impact, especially for residential customers, is estimated to be 2.8%, a much lower rate than the OEB's maximum guideline of 10%. Therefore, it is reasonable to stay on course of prudent investment in capital assets in addition to well-managed and efficient operations for the long-term success of London Hydro. Furthermore, for the 2022 CoS rate application, London Hydro proposes:

- i. To apply COVID-19 remedial measures for C&I customers.
- ii. To submit ACM applications.
- iii. To employ the above-noted rate mitigation of phasing in the rates over a five year period.

In summary, to ensure greater success, the CoS rate application needs to be well written, concise, well-articulated, coherent, and consistent as to the need for the programs which have been undertaken as well as showing evidence of the benefits of those programs provided to London Hydro's customers.