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## COST OF CAPITAL/CAPITAL STRUCTURE

## 1. INTRODUCTION

The purpose of this evidence is to summarize the method and cost of financing Hydro One Transmission's capital requirements for the rebasing year 2020.

The cost of capital as described in this Exhibit has been reflected in the revenue requirements for each year of this Application. Hydro One anticipates updating the revenue requirement for the 2020 to 2022 test years when the Board releases its 2020 cost of capital parameters, reflecting: (a) the Board-approved 2020 return on equity and shortterm debt rates; and (b) a long-term debt rate based on Hydro One’s actual 2019 debt issuances to-date and the September 2019 Consensus Forecast. Hydro One proposes that the 2020 cost of capital parameters established at that time be used to determine the final revenue requirements for 2020 to 2022 test years.

## 2. CAPITAL STRUCTURE

Hydro One Transmission's deemed capital structure for rate-making purposes is $60 \%$ debt and $40 \%$ common equity of utility rate base. This capital structure was approved by the Board, most recently as part of its Decision on Hydro One Transmission’s 2017 and 2018 Rate Application (EB-2016-0160). This is consistent with the report of the Board on the Cost of Capital for Ontario's Regulated Utilities, dated December 11, 2009, (EB-2009-0084), and its subsequent Review of the Existing Methodology of the Cost of Capital for Ontario’s Regulated Utilities, dated January 14, 2016. The 60\% debt component is comprised of $4 \%$ deemed short-term debt and $56 \%$ long-term debt.

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## 3. RETURN ON COMMON EQUITY

Hydro One Transmission's evidence reflects a return on equity ("ROE") of $8.98 \%$ as a placeholder for 2020 to 2022 based on the Cost of Capital Parameters released by the OEB on November 22, 2018, for rates effective January 1, 2019. It is calculated as per the Board's formulaic approach in Appendix B of the Cost of Capital for Ontario's Regulated Utilities report, dated December 11, 2009, (EB-2009-0084).

As set out above, Hydro One will update the equity cost of capital for the 2020 to 2022 test years using the 2020 ROE to be calculated and released by the Board in the fall of 2019.

## 4. DEEMED SHORT-TERM DEBT

The Board has determined that the deemed amount of short-term debt that should be factored into rate-setting be fixed at $4 \%$ of rate base. The deemed short-term rate of 2.82\% is being used by Hydro One as a placeholder for 2020 to 2022. This rate is based on the September 2018 average 3-month bankers’ acceptance rate of 1.923\% and the $0.9 \%$ average annual spread from the Cost of Capital Parameters released by the OEB on November 22, 2018, for rates effective January 1, 2019.

Hydro One will update the short-term debt rate for the 2020 to 2022 test years based on the 2020 deemed short-term debt rate to be calculated and released by the Board in the fall of 2019.

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## 5. LONG-TERM DEBT

The Board has determined that the deemed amount of long-term debt that should be factored into rate-setting be fixed at $56 \%$ of rate base. The long-term debt rate is calculated to be $4.52 \%$ for 2020 to 2022. The long-term debt rate is calculated as the weighted average rate on embedded debt, new debt, and forecast debt planned to be issued in 2020, as discussed in Exhibit G, Tab 1, Schedule 2. Details of Hydro One Transmission's long-term debt rate calculation for the 2020 rebasing year are identified at Exhibit G, Tab 1, Schedule 4. A detailed discussion of Hydro One Transmission's debt and forecast interest rate is provided at Exhibit G, Tab 1, Schedule 2.

Historical long-term debt cost information is available at Exhibit G, Tab 1, Schedule 4.

As discussed in this Exhibit, Hydro One proposes updating the long-term debt rate for 2020 to 2022 based on Hydro One’s actual 2019 debt issuances to-date and the September 2019 Consensus Forecast, consistent with the proposed update of the return on common equity and deemed short-term interest rate.

As Hydro One Transmission has a market-determined cost of debt, the weighted average long-term debt rate is also applied to any notional debt that is required to match the actual amount of long-term debt to the deemed amount of long-term debt, consistent with the Board's Decision in EB-2016-0160.

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## 6. COST OF CAPITAL SUMMARY

| Amount of Deemed | $\mathbf{( \$ M )}$ | $\mathbf{\%}$ | Cost <br> Rate (\%) | Return <br> $\mathbf{( \$ M )}$ |
| :---: | :---: | :---: | :---: | :---: |
| Long-term debt | $6,806.2$ | 54.9 | 4.52 | 307.7 |
| Short-term debt | 495.9 | 4.0 | 2.82 | 14.0 |
| Deemed Long-Term debt | 136.9 | 1.1 | 4.52 | 6.2 |
| Common equity | $4,959.3$ | 40.0 | 8.98 | 445.3 |
| Total | $12,398.3$ | 100.0 | 6.24 | 773.2 |

Historical, bridge, test and 2018 OEB approved debt and equity summary schedules are available at Exhibit G, Tab 1, Schedule 3.

## COST OF THIRD PARTY LONG-TERM DEBT

## 1. HYDRO ONE TRANSMISSION LONG-TERM DEBT

The debt portfolio for Hydro One Transmission is detailed in Exhibit G, Tab 1, Schedule 4. Hydro One Transmission is allocated a portion of the debt issued by Hydro One Networks Inc. to Hydro One Inc. Hydro One Networks Inc. issues debt to Hydro One Inc. to reflect debt issued by Hydro One Inc. to third-party public debt investors.

Third-party public debt investors hold all of the long-term debt issued by Hydro One Inc. Hydro One Inc.'s debt financing strategy takes into consideration the objectives of cost effectiveness, distributing debt maturities evenly over time, and ensuring the term of the debt portfolio is compatible with the long life of the Company's assets.

Hydro One Inc. has a Medium Term Note ("MTN") Program that provides ready access to issue debt with a term greater than one year into the Canadian debt capital markets. The standard maturity terms of five, ten and thirty years are preferred by investors and represent the main financing that Hydro One Inc. utilizes to execute its financing strategy and raise the required funds. The short form base shelf prospectus for the current $\$ 4.0$ billion MTN Program is provided in Exhibit A, Tab 6, Schedule 5.

## 2. CREDIT RATINGS

Credit ratings are a requirement because Hydro One Inc. issues medium term notes in the Canadian public debt markets. Table 1 lists the credit ratings of Hydro One Inc.'s debt obligations by DBRS, Moody's Investors Service and Standard \& Poor’s Rating Services:

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Table 1: Credit Ratings for Hydro One Inc.

| Rating Agency | Short-term Debt | Long-term Debt |
| :--- | :---: | :---: |
| Standard \& Poor's Rating Services (S\&P) | A-1(low) | A- |
| DBRS | R-1(low) | A(high) |
| Moody's Investors Service (Moody's) | Prime-2 | Baa1 |

The most recent rating agency reports are provided in Exhibit A, Tab 6, Schedule 3.

## 3. COST OF LONG-TERM DEBT

The long-term debt rate is calculated as the weighted average cost rate on embedded debt, new debt (debt issued after the last OEB-approved rate application) and forecast debt planned to be issued in 2019 and 2020. The weighted average rate on long-term debt is 4.63\% for 2019 and $4.52 \%$ for 2020. Details of Hydro One Transmission’s long-term debt rate calculation for the 2019 bridge year and 2020 test year are identified at Exhibit G, Tab 1, Schedule 4.

The amount of each Hydro One Networks Inc. debt issue that is allocated to the Transmission business is based on its most recent forecast of borrowing requirements. Borrowing requirements are driven mainly by debt retirement, capital expenditures net of internally generated funds, and the maintenance of its capital structure. For example, in June 2018, Hydro One Inc. issued $\$ 750$ million of 31 -year notes with a $3.63 \%$ coupon rate. Hydro One Transmission was allocated $\$ 468$ million, as shown on line 33 of Exhibit G, Tab 1, Schedule 4, page 4. The coupon rates of debt issues allocated to the Transmission business, as shown in Exhibit G, Tab 1, Schedule 4, are equal to the actual interest rates on debt issued by Hydro One Networks Inc. to Hydro One Inc., and by Hydro One Inc. to third-party public debt investors.

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### 3.1 EMBEDDED DEBT

The Board has determined in its Cost of Capital Report that for embedded debt, the rate approved in prior Board decisions shall be maintained for the life of each active instrument, unless a new rate is negotiated, in which case it will be treated as new debt. Hydro One Transmission's embedded long-term debt, which was issued during the period from 2000 to 2016, is shown on lines 1 to 36 of Exhibit G, Tab 1, Schedule 4, page 2. The effective cost rates on these embedded debt issues were approved by the Board as part of EB-2016-0160.

### 3.2 NEW DEBT

The Board has determined in its Cost of Capital Report that the rate for new debt that is held by a third-party public debt investor will be the prudently negotiated contract rate. This would include recognition of premiums and discounts.

In June of 2018, Hydro One Inc. issued \$350 million of seven-year notes with a $2.97 \%$ coupon rate, of which $\$ 218.4$ million was mapped to Hydro One Transmission, as shown on lines 34 of Exhibit G, Tab 1, Schedule 4, page 4.

In June 2018, Hydro One Inc. also issued three-year notes worth $\$ 300$ million. At the time of the issue, Hydro One entered into a $\$ 300$ million notional principal amount fixed to floating interest rate swap to convert this note into floating rate or short-term debt paying an effective interest rate of three-month bankers’ acceptance plus a spread. This short-term debt is being used to finance the deemed short-term debt amount equal to $4 \%$ of rate base.

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### 3.3 FORECAST DEBT

Hydro One Transmission's forecast borrowing requirements are $\$ 1,278.5$ million for 2019 and \$495.1 million for 2020.

Table 2 lists the fixed rate MTN's that Hydro One Transmission plans to issue in 2019, as shown in lines 35 to 37 of Exhibit G, Tab 1, Schedule 4, page 5.

Table 2: Forecast Debt Issues for 2019

| Year | Principal Amount <br> (\$Millions) | Term <br> (Years) | Coupon |
| :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 9}$ | 426.2 | 5 | $3.14 \%$ |
|  | 426.2 | 10 | $3.57 \%$ |
|  | 426.2 | 30 | $4.00 \%$ |

Table 3 lists the fixed rate MTN's which Hydro One Transmission plans to issue in 2020, as shown on lines 37 to 39 of Exhibit G, Tab 1, Schedule 4, page 6.

Table 3: Forecast Debt Issues for 2020

| Year | Principal Amount <br> (\$Millions) | Term <br> (Years) | Coupon |
| :---: | :---: | :---: | :---: |
| $\mathbf{2 0 2 0}$ | 165.0 | 5 | $3.74 \%$ |
|  | 165.0 | 10 | $4.17 \%$ |
|  | 165.0 | 30 | $4.60 \%$ |

### 3.4 INTEREST RATES FOR 2019 AND 2020 FORECAST DEBT ISSUES

Transmission business borrowing will be financed at market rates applicable to Hydro One Inc. Table 4 summarizes the derivation of the forecast Hydro One Inc. yield for each of the planned issuance terms for 2019 and 2020.

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Table 4: Forecast Yield for 2019-2020 Issuance Terms

|  | 2019 |  | 2020 |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5-year | 10-year | 30-year | 5-year | 10-year | 30-year |
| Government <br> of Canada | $2.43 \%$ | $2.60 \%$ | $2.64 \%$ | $3.03 \%$ | $3.20 \%$ | $3.24 \%$ |
| Hydro One <br> Spread | $0.72 \%$ | $0.97 \%$ | $1.36 \%$ | $0.72 \%$ | $0.97 \%$ | $1.36 \%$ |
| Forecast <br> Hydro One <br> Yield | $3.14 \%$ | $3.57 \%$ | $4.00 \%$ | $3.74 \%$ | $4.17 \%$ | $4.60 \%$ |

Each rate is comprised of the forecast Government of Canada bond yield plus the Hydro One Inc. credit spread applicable to that term. The ten-year Government of Canada bond yield forecast for 2019 is based on the average of the three-month and 12-month forecast from the 2018 Consensus Forecast. The ten-year Government of Canada bond yield forecast for 2020 is based on the 2018 Long Term Consensus Forecast. The five-year Government of Canada bond yield forecasts are derived by subtracting the 2018 average spreads (five-year to ten-year for the five-year forecast) from the ten-year Government of Canada bond yield forecast. The thirty-year Government of Canada bond yield forecasts are derived by adding the 2018 average spreads (30-year to ten-year for the 30 -year forecast) to the ten-year Government of Canada bond yield forecast. Hydro One's credit spreads over the Government of Canada bonds are based on the average of indicative new issue spreads for 2018 obtained from the Company's MTN dealer group for each planned issuance term.

Hydro One assumes that, for rates effective January 1, 2020, the forecast interest rate for Hydro One Transmission debt issues will be based on the September 2019 Consensus Forecasts and the average of indicative new issue spreads for September 2019 that will be obtained from the Company's MTN dealer group for each planned issuance term. In addition, Hydro One assumes that long-term debt rate will be updated to reflect the actual

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issuances of debt since the time of original application, consistent with the OEB's Decision on Hydro One Transmission’s 2017 to 2018 rate application in EB-2016-0160, and changes in the interest rate forecast.

### 3.5 TREASURY OM\&A COSTS

Treasury OM\&A costs are incurred to:

- execute borrowing plans and issue commercial paper and long-term debt;
- ensure compliance with securities regulations, bank and debt covenants;
- manage Hydro One's daily liquidity position, control cash, and manage the company's bank accounts;
- settle all transactions and manage relationships with creditors; and
- communicate with debt investors, banks and credit rating agencies.

Treasury OM\&A costs are provided in the long-term debt schedules for the bridge and test years in Exhibit G, Tab 1, Schedule 4 and are summarized in Table 5:

Table 5: Forecast Treasury OM\&A Costs

| Year | Amount <br> (\$Millions) | Line | Page |
| :---: | :---: | :---: | :---: |
| 2019 | 1.8 | 39 | 5 |
| 2020 | 1.9 | 41 | 6 |

### 3.6 OTHER FINANCING-RELATED FEES

Column (e) of Exhibit G, Tab 1, Schedule 4 ("Premium, Discount and Expenses") represents the costs of issuing debt. These costs are specific to each debt issue and

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include commissions, legal fees, debt discounts or premiums on issues or re-openings of issues relative to par, and hedge gains or losses.

Other financing-related fees include the Transmission allocation of Hydro One Inc.'s standby credit facility, annual credit rating agency, filing fees to security regulators, letter of credit, banking, custodial and trustee fees. The amount of these fees are summarized in Table 6 below and are also provided in the long term debt schedules for the bridge and test years in Exhibit G, Tab 1, Schedule 4:

Table 6: Forecast Other Financing-Related Fees

| Year | Amount <br> (\$Millions) | Line | Page |
| :---: | :---: | :---: | :---: |
| 2019 | 5.4 | 40 | 5 |
| 2020 | 5.3 | 42 | 6 |

## HYDRO ONE NETWORKS INC.

## TRANSMISSION

Debt and Equity Summary
Historical Years $(2015,2016,2017,2018)$ and Bridge Year (2019)
As at December 31
(\$ Millions)

| Updated Line No. |  | Amount Outstanding 2015 | Amount Outstanding 2016 | Amount Outstanding 2017 | Amount Outstanding 2018 | Amount Outstanding 2019 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Particulars | Actual | Actual | Actual | Forecast | Bridge |
|  |  | (a) | (b) | (c) | (d) | (e) |
| I | Long-term debt * | 4,819.1 | 5,489.1 | 5,084.1 | 6,261.2 | 6,628.0 |
| 2 | Short-term debt | 915.9 | 649.9 | 1,507.9 | 447.2 | 473.4 |
| 3 | Preference shares | - | - | - | - | - |
| 4 | Common equity | 4,125.0 | 4,273.0 | 4,458.0 | 4,472.3 | 4,734.3 |

* Includes debt payable within one year; excludes variable rate debt, unamortized debt premiums/discount, hedging gains/losses and marks to market

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## HYDRO ONE NETWORKS INC.

TRANSMISSION
Summary of Cost of Capital
Test Year 2020
Utility Capital Structure
Year Ending December 31 (\$ Millions)

| $\begin{gathered} \text { Line } \\ \text { No. } \end{gathered}$ | $\underline{\text { Particulars }}$ | 2020 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (\$M) | \% | Cost <br> Rate <br> (\%) | Return <br> (\$M) |
|  |  | (a) | (b) | (c) | (d) |
| I | Long-term debt | 6,806.2 | 54.9\% | 4.52\% | 307.7 |
| 2 | Short-term debt | 495.9 | 4.0\% | 2.82\% | 14.0 |
| 3 | Deemed long-term debt | 136.9 | 1.1\% | 4.52\% | 6.2 |
| 4 | Total debt | 7,439.0 | 60.0\% | 4.41\% | 327.9 |
| 5 | Common equity | 4,959.3 | 40.0\% | 8.98\% | 445.3 |
| 6 | Total rate base | 12,398.3 | 100.0\% | 6.24\% | 773.2 |

## HYDRO ONE NETWORKS INC.

TRANSMISSION
Summary of Cost of Capital
Last Board-approved year (2018)
Utility Capital Structure
Year Ending December 31
(\$ Millions)

| Line <br> No. | Particulars | 2018 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (\$M) | \% | Cost <br> Rate <br> (\%) | Return <br> (\$M) |
|  |  | (a) | (b) | (c) | (d) |
| I | Long-term debt | 5468.1 | 49.05\% | 4.68\% | 255.8 |
| 2 | Short-term debt | 445.9 | 4.00\% | 2.29\% | 10.2 |
| 3 | Deemed long-term debt | 774.8 | 6.95\% | 4.68\% | 36.2 |
| 4 | Total debt | 6688.8 | 60.00\% | 4.52\% | 302.3 |
| 5 | Common equity | 4459.2 | 40.00\% | 9.00\% | 401.3 |
| 6 | Total rate base | 11,148.0 | 100.00\% | 6.31\% | 703.6 |

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Cost of Long-Term Debt Capital
Historic Year (2015)
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Year ending December 31


HYDRO ONE NETWORKS INC.
TRANSMISSION
Cost of Long-Term Debt Capital Historic Year (2016)
Year ending December 31

| $\begin{aligned} & \text { Line } \\ & \text { No. } \\ & \hline \end{aligned}$ | Offering Date | Coupon Rate | Maturity Date | Principal Amount Offered (\$Millions) | Premium <br> Discount and <br> Expenses <br> (\$Millions) | Net Capital Employed |  | Effective <br> Cost Rate | $1 / 1 / 2015$ $1 / 1 / 2016$ <br> Total Amount  |  | 1/1/2016 <br> Avg. Monthly Averages (\$Millions) | Carrying Cost <br> (\$Millions) | Projected Average Embedded Cost Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Total Amount (\$Millions) | Per \$100 <br> Principal <br> Amount <br> (Dollars) |  | Total Amou at $12 / 31 / 15$ <br> (\$Millions) | utstanding at 12/31/16 (\$Millions) |  |  |  |
|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (I) | (m) |
| 1 | 3-Jun-00 | 7.350\% | 3-Jun-30 | 278.4 | 4.5 | 273.9 | 98.4 | 7.49\% | 278.4 | 278.4 | 278.4 | 20.8 |  |
| 2 | 22-Jun-01 | 6.930\% | 1-Jun-32 | 109.3 | 1.3 | 107.9 | 98.8 | 7.03\% | 109.3 | 109.3 | 109.3 | 7.7 |  |
| 3 | 17-Sep-02 | 6.930\% | 1-Jun-32 | 58.0 | (2.1) | 60.1 | 103.6 | 6.65\% | 58.0 | 58.0 | 58.0 | 3.9 |  |
| 4 | 31-Jan-03 | 6.350\% | 31-Jan-34 | 126.0 | 1.0 | 125.0 | 99.2 | 6.41\% | 126.0 | 126.0 | 126.0 | 8.1 |  |
| 5 | 22-Apr-03 | 6.590\% | 22-Apr-43 | 145.0 | 1.1 | 143.9 | 99.3 | 6.64\% | 145.0 | 145.0 | 145.0 | 9.6 |  |
| 6 | 25-Jun-04 | 6.350\% | 31-Jan-34 | 72.0 | (0.2) | 72.2 | 100.2 | 6.33\% | 72.0 | 72.0 | 72.0 | 4.6 |  |
| 7 | 20-Aug-04 | 6.590\% | 22-Apr-43 | 39.0 | (3.1) | 42.1 | 107.9 | 6.06\% | 39.0 | 39.0 | 39.0 | 2.4 |  |
| 8 | 24-Aug-04 | 6.350\% | 31-Jan-34 | 39.0 | (1.4) | 40.4 | 103.5 | 6.09\% | 39.0 | 39.0 | 39.0 | 2.4 |  |
| 9 | 19-May-05 | 5.360\% | 20-May-36 | 228.9 | 8.7 | 220.2 | 96.2 | 5.62\% | 228.9 | 228.9 | 228.9 | 12.9 |  |
| 10 | 3-Mar-06 | 4.640\% | 3-Mar-16 | 210.0 | 1.0 | 209.0 | 99.5 | 4.70\% | 210.0 | 0.0 | 48.5 | 2.3 |  |
| 11 | 24-Apr-06 | 5.360\% | 20-May-36 | 187.5 | 2.5 | 185.0 | 98.7 | 5.45\% | 187.5 | 187.5 | 187.5 | 10.2 |  |
| 12 | 22-Aug-06 | 4.640\% | 3-Mar-16 | 60.0 | 0.8 | 59.2 | 98.7 | 4.80\% | 60.0 | 0.0 | 13.8 | 0.7 |  |
| 13 | 19-Oct-06 | 5.000\% | 19-Oct-46 | 30.0 | 0.2 | 29.8 | 99.3 | 5.04\% | 30.0 | 30.0 | 30.0 | 1.5 |  |
| 14 | 13-Mar-07 | 4.890\% | 13-Mar-37 | 240.0 | 1.3 | 238.7 | 99.4 | 4.93\% | 240.0 | 240.0 | 240.0 | 11.8 |  |
| 15 | 18-Oct-07 | 5.180\% | 18-Oct-17 | 225.0 | 0.8 | 224.2 | 99.6 | 5.23\% | 225.0 | 225.0 | 225.0 | 11.8 |  |
| 16 | 3-Mar-08 | 5.180\% | 18-Oct-17 | 180.0 | (3.1) | 183.1 | 101.7 | 4.95\% | 180.0 | 180.0 | 180.0 | 8.9 |  |
| 17 | 3-Mar-09 | 6.030\% | 3-Mar-39 | 195.0 | 1.2 | 193.8 | 99.4 | 6.07\% | 195.0 | 195.0 | 195.0 | 11.8 |  |
| 18 | 16-Jul-09 | 5.490\% | 16-Jul-40 | 210.0 | 1.4 | 208.6 | 99.4 | 5.53\% | 210.0 | 210.0 | 210.0 | 11.6 |  |
| 19 | 15-Mar-10 | 5.490\% | 24-Jul-40 | 120.0 | (0.7) | 120.7 | 100.6 | 5.45\% | 120.0 | 120.0 | 120.0 | 6.5 |  |
| 20 | 15-Mar-10 | 4.400\% | 4-Jun-20 | 180.0 | 0.8 | 179.2 | 99.5 | 4.46\% | 180.0 | 180.0 | 180.0 | 8.0 |  |
| 21 | 13-Sep-10 | 5.000\% | 19-Oct-46 | 150.0 | (0.4) | 150.4 | 100.2 | 4.98\% | 150.0 | 150.0 | 150.0 | 7.5 |  |
| 22 | 26-Sep-11 | 4.390\% | 26-Sep-41 | 205.0 | 1.3 | 203.7 | 99.3 | 4.43\% | 205.0 | 205.0 | 205.0 | 9.1 |  |
| 23 | 22-Dec-11 | 4.000\% | 22-Dec-51 | 70.0 | 0.4 | 69.6 | 99.5 | 4.03\% | 70.0 | 70.0 | 70.0 | 2.8 |  |
| 24 | 13-Jan-12 | 3.200\% | 13-Jan-22 | 154.0 | 0.8 | 153.2 | 99.5 | 3.26\% | 154.0 | 154.0 | 154.0 | 5.0 |  |
| 25 | 22-May-12 | 3.200\% | 13-Jan-22 | 165.0 | (1.6) | 166.6 | 101.0 | 3.08\% | 165.0 | 165.0 | 165.0 | 5.1 |  |
| 26 | 22-May-12 | 4.000\% | 22-Dec-51 | 68.8 | 0.3 | 68.4 | 99.5 | 4.02\% | 68.8 | 68.8 | 68.8 | 2.8 |  |
| 27 | 31-Jul-12 | 3.790\% | 31-Jul-62 | 52.5 | 0.3 | 52.2 | 99.5 | 3.81\% | 52.5 | 52.5 | 52.5 | 2.0 |  |
| 28 | 16-Aug-12 | 3.790\% | 31-Jul-62 | 141.0 | 1.1 | 139.9 | 99.2 | 3.83\% | 141.0 | 141.0 | 141.0 | 5.4 |  |
| 29 | 9-Oct-13 | 4.590\% | 9-Oct-43 | 239.3 | 1.4 | 237.9 | 99.4 | 4.63\% | 239.3 | 239.3 | 239.3 | 11.1 |  |
| 30 | 9-Oct-13 | 2.780\% | 9-Oct-18 | 412.5 | 1.7 | 410.8 | 99.6 | 2.87\% | 412.5 | 412.5 | 412.5 | 11.8 |  |
| 31 | 29-Jan-14 | 4.290\% | 29-Jan-64 | 30.0 | 0.2 | 29.8 | 99.4 | 4.32\% | 30.0 | 30.0 | 30.0 | 1.3 |  |
| 32 | 3-Jun-14 | 4.170\% | 3-Jun-44 | 198.0 | 1.2 | 196.8 | 99.4 | 4.21\% | 198.0 | 198.0 | 198.0 | 8.3 |  |
| 33 | 24-Feb-16 | 3.910\% | 24-Feb-46 | 175.0 | 1.1 | 173.9 | 99.36 | 3.95\% | 0.0 | 175.0 | 148.1 | 5.8 |  |
| 34 | 24-Feb-16 | 2.770\% | 24-Feb-26 | 245.0 | 1.1 | 243.9 | 99.56 | 2.82\% | 0.0 | 245.0 | 207.3 | 5.8 |  |
| 35 | 24-Feb-16 | 1.840\% | 24-Feb-21 | 250.0 | 0.9 | 249.1 | 99.63 | 1.92\% | 0.0 | 250.0 | 211.5 | 4.1 |  |
| 36 | 18-Nov-16 | 3.720\% | 18-Nov-47 | 270.0 | 1.4 | 268.7 | 99.50 | 3.75\% | 0.0 | 270.0 | 41.5 | 1.6 |  |
| 37 |  | Subtotal |  |  |  |  |  |  | 4819.1 | 5489.1 | 5219.8 | 246.9 |  |
| 38 |  | Treasury OM | costs |  |  |  |  |  |  |  |  | 1.7 |  |
| 39 |  | Other financi | related fees |  |  |  |  |  |  |  |  | 4.6 |  |
| 40 |  | Total |  |  |  |  |  |  | 4819.1 | 5489.1 | 5219.8 | 253.2 | 4.85\% |

Witness: Samir Chhelavda


# HYDRO ONE NETWORKS INC. <br> TRANSMISSION 

Cost of Long-Term Debt Capital
Historic Year (2018)
Year ending December 31


HYDRO ONE NETWORKS INC. TRANSMISSION
Cost of Long-Term Debt Capital
Bridge Year (2019)
Year ending December 31

| Line <br> No. | Offering Date | Coupon <br> Rate | Maturity Date | Principal Amount Offered (\$Millions) | Premium <br> Discount and Expenses (\$Millions) | Net Capital Employed |  |  | $1 / 1 / 2018$ $1 / 1 / 2019$ <br> Total Amount Outstanding  |  |  |  | Projected <br> Average <br> Embedded <br> Cost Rates |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Total Amount (\$Millions) | Per \$100 <br> Principal <br> Amount <br> (Dollars) | Effective Cost Rate | $\begin{aligned} & \frac{\text { Total Amol }}{\text { at }} \\ & 12 / 31 / 2018 \\ & \text { (\$Millions) } \end{aligned}$ | utstanding at 12/31/2019 <br> (\$Millions) | 1/1/2019 <br> Avg. Monthly Averages (\$Millions) | Carrying Cost (\$Millions) |  |
|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (1) | (m) |
| 1 | 3-Jun-00 | 7.350\% | 3-Jun-30 | 278.4 | 4.5 | 273.9 | 98.37 | 7.49\% | 278.4 | 278.4 | 278.4 | 20.8 |  |
| 2 | 22-Jun-01 | 6.930\% | 1-Jun-32 | 109.3 | 1.3 | 107.9 | 98.78 | 7.03\% | 109.3 | 109.3 | 109.3 | 7.7 |  |
| 3 | 17-Sep-02 | 6.930\% | 1-Jun-32 | 58.0 | (2.1) | 60.1 | 103.57 | 6.65\% | 58.0 | 58.0 | 58.0 | 3.9 |  |
| 4 | 31-Jan-03 | 6.350\% | 31-Jan-34 | 126.0 | 1.0 | 125.0 | 99.21 | 6.41\% | 126.0 | 126.0 | 126.0 | 8.1 |  |
| 5 | 22-Apr-03 | 6.590\% | 22-Apr-43 | 145.0 | 1.1 | 143.9 | 99.26 | 6.64\% | 145.0 | 145.0 | 145.0 | 9.6 |  |
| 6 | 25-Jun-04 | 6.350\% | 31-Jan-34 | 72.0 | (0.2) | 72.2 | 100.22 | 6.33\% | 72.0 | 72.0 | 72.0 | 4.6 |  |
| 7 | 20-Aug-04 | 6.590\% | 22-Apr-43 | 39.0 | (3.1) | 42.1 | 107.89 | 6.06\% | 39.0 | 39.0 | 39.0 | 2.4 |  |
| 8 | 24-Aug-04 | 6.350\% | 31-Jan-34 | 39.0 | (1.4) | 40.4 | 103.48 | 6.09\% | 39.0 | 39.0 | 39.0 | 2.4 |  |
| 9 | 19-May-05 | 5.360\% | 20-May-36 | 228.9 | 8.7 | 220.2 | 96.19 | 5.62\% | 228.9 | 228.9 | 228.9 | 12.9 |  |
| 10 | 24-Apr-06 | 5.360\% | 20-May-36 | 187.5 | 2.5 | 185.0 | 98.68 | 5.45\% | 187.5 | 187.5 | 187.5 | 10.2 |  |
| 11 | 19-Oct-06 | 5.000\% | 19-Oct-46 | 30.0 | 0.2 | 29.8 | 99.29 | 5.04\% | 30.0 | 30.0 | 30.0 | 1.5 |  |
| 12 | 13-Mar-07 | 4.890\% | 13-Mar-37 | 240.0 | 1.3 | 238.7 | 99.45 | 4.93\% | 240.0 | 240.0 | 240.0 | 11.8 |  |
| 13 | 3-Mar-09 | 6.030\% | 3-Mar-39 | 195.0 | 1.2 | 193.8 | 99.41 | 6.07\% | 195.0 | 195.0 | 195.0 | 11.8 |  |
| 14 | 16-Jul-09 | 5.490\% | 16-Jul-40 | 210.0 | 1.4 | 208.6 | 99.36 | 5.53\% | 210.0 | 210.0 | 210.0 | 11.6 |  |
| 15 | 15-Mar-10 | 5.490\% | 24-Jul-40 | 120.0 | (0.7) | 120.7 | 100.58 | 5.45\% | 120.0 | 120.0 | 120.0 | 6.5 |  |
| 16 | 15-Mar-10 | 4.400\% | 4-Jun-20 | 180.0 | 0.8 | 179.2 | 99.55 | 4.46\% | 180.0 | 180.0 | 180.0 | 8.0 |  |
| 17 | 13-Sep-10 | 5.000\% | 19-Oct-46 | 150.0 | (0.4) | 150.4 | 100.25 | 4.98\% | 150.0 | 150.0 | 150.0 | 7.5 |  |
| 18 | 26-Sep-11 | 4.390\% | 26-Sep-41 | 205.0 | 1.3 | 203.7 | 99.35 | 4.43\% | 205.0 | 205.0 | 205.0 | 9.1 |  |
| 19 | 22-Dec-11 | 4.000\% | 22-Dec-51 | 70.0 | 0.4 | 69.6 | 99.47 | 4.03\% | 70.0 | 70.0 | 70.0 | 2.8 |  |
| 20 | 13-Jan-12 | 3.200\% | 13-Jan-22 | 154.0 | 0.8 | 153.2 | 99.47 | 3.26\% | 154.0 | 154.0 | 154.0 | 5.0 |  |
| 21 | 22-May-12 | 3.200\% | 13-Jan-22 | 165.0 | (1.6) | 166.6 | 100.97 | 3.08\% | 165.0 | 165.0 | 165.0 | 5.1 |  |
| 22 | 22-May-12 | 4.000\% | 22-Dec-51 | 68.8 | 0.3 | 68.4 | 99.51 | 4.02\% | 68.8 | 68.8 | 68.8 | 2.8 |  |
| 23 | 31-Jul-12 | 3.790\% | 31-Jul-62 | 52.5 | 0.3 | 52.2 | 99.47 | 3.81\% | 52.5 | 52.5 | 52.5 | 2.0 |  |
| 24 | 16-Aug-12 | 3.790\% | 31-Jul-62 | 141.0 | 1.1 | 139.9 | 99.20 | 3.83\% | 141.0 | 141.0 | 141.0 | 5.4 |  |
| 25 | 9-Oct-13 | 4.590\% | 9-Oct-43 | 239.3 | 1.4 | 237.9 | 99.42 | 4.63\% | 239.3 | 239.3 | 239.3 | 11.1 |  |
| 26 | 29-Jan-14 | 4.310\% | 29-Jan-64 | 30.0 | 0.2 | 29.8 | 99.44 | 4.34\% | 30.0 | 30.0 | 30.0 | 1.3 |  |
| 27 | 3-Jun-14 | 4.190\% | 3-Jun-44 | 198.0 | 1.2 | 196.8 | 99.40 | 4.23\% | 198.0 | 198.0 | 198.0 | 8.4 |  |
| 28 | 24-Feb-16 | 3.910\% | 24-Feb-46 | 175.0 | 1.1 | 173.9 | 99.36 | 3.95\% | 175.0 | 175.0 | 175.0 | 6.9 |  |
| 29 | 24-Feb-16 | 2.770\% | 24-Feb-26 | 245.0 | 1.1 | 243.9 | 99.56 | 2.82\% | 245.0 | 245.0 | 245.0 | 6.9 |  |
| 31 | 24-Feb-16 | 1.840\% | 24-Feb-21 | 250.0 | 0.9 | 249.1 | 99.63 | 1.92\% | 250.0 | 250.0 | 250.0 | 4.8 |  |
| 32 | 18-Nov-16 | 3.720\% | 18-Nov-47 | 270.0 | 1.4 | 268.7 | 99.50 | 3.75\% | 270.0 | 270.0 | 270.0 | 10.1 |  |
| 33 | 26-Jun-18 | 3.630\% | 25-Jun-49 | 468.0 | 2.4 | 465.6 | 99.48 | 3.66\% | 468.0 | 468.0 | 468.0 | 17.1 |  |
| 34 | 26-Jun-18 | 2.970\% | 26-Jun-25 | 218.4 | 0.9 | 217.5 | 99.60 | 3.03\% | 218.4 | 218.4 | 218.4 | 6.6 |  |
| 35 | 15-Mar-19 | 3.996\% | 15-Mar-49 | 426.2 | 2.1 | 424.1 | 99.50 | 4.02\% | 0.0 | 426.2 | 327.832 | 13.2 |  |
| 36 | 15-Jun-19 | 3.574\% | 15-Jun-29 | 426.2 | 2.1 | 424.1 | 99.50 | 3.63\% | 0.0 | 426.2 | 229.482 | 8.3 |  |
| 37 | 15-Sep-19 | 3.144\% | 15-Sep-24 | 426.2 | 2.1 | 424.1 | 99.50 | 3.25\% | 0.0 | 426.2 | 131.133 | 4.3 |  |
| 38 |  | Subtotal |  |  |  |  |  |  | 5358.0 | 6636.5 | 6046.4 | 272.5 |  |
| 39 |  | Treasury OM | A costs |  |  |  |  |  |  |  |  | 1.8 |  |
| 40 |  | Other financin | -related fees |  |  |  |  |  |  |  |  | 5.4 |  |
| 41 |  | Total |  |  |  |  |  |  | 5358.0 | 6636.5 | 6046.4 | 279.8 | 4.63\% |

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Test Year (2020)
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