

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: Staff.1 a), c), d), Energy probe.1, LPMA.3 a)

---

**Response:**

Staff. 1 a)

For its 2020 rate application legacy EGD used the same models as its 2014 to 2019 rate application (with addition of 2018 actual data to the estimation period). The key factor used to evaluate the accuracy of the General Service average use forecast is the percentage variance between normalized actual and normalized forecast average use per customer. As seen in Table 1 below, the average percentage variance from forecast over the last 10 years is -0.2% for Rate 1 and 1.0% for Rate 6.

Besides tracking historical accuracy through the percentage variances, the models also have been subjected to a battery of tests. The models' estimation and test results for 2020 forecast show that the models continued to have high R-squared, and to generate small forecast errors while passing key statistical specification tests. Therefore, they continued to be reliable predictors of average use.

Please see below the Actual to Board Approved Percentage variance table, and estimation and test results.

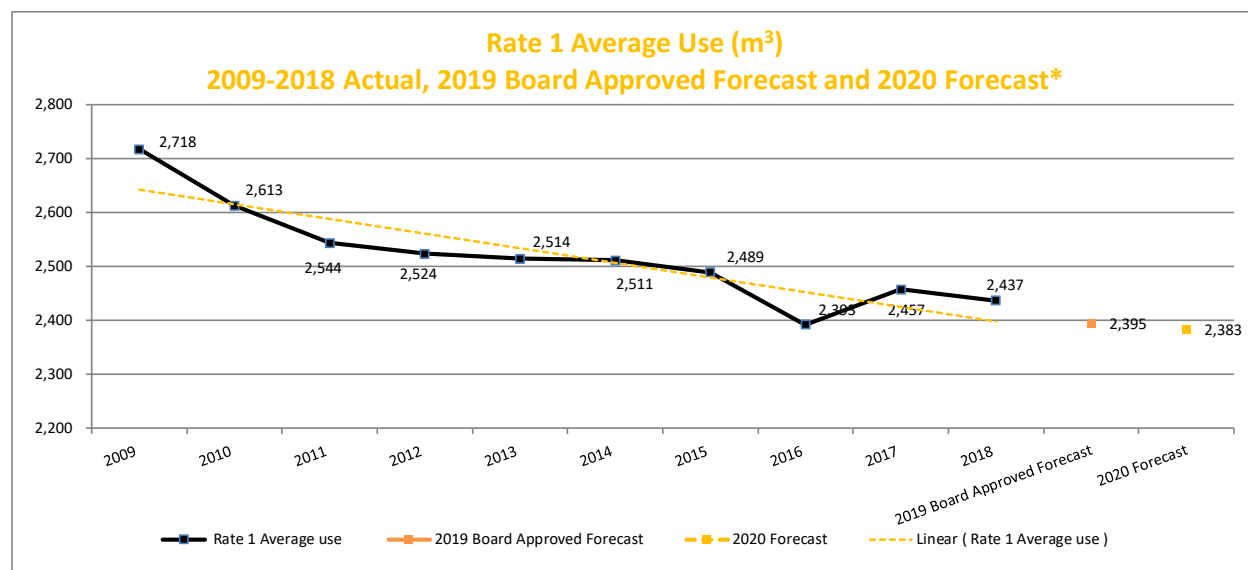
TABLE 1  
GENERAL SERVICE AVERAGE USE

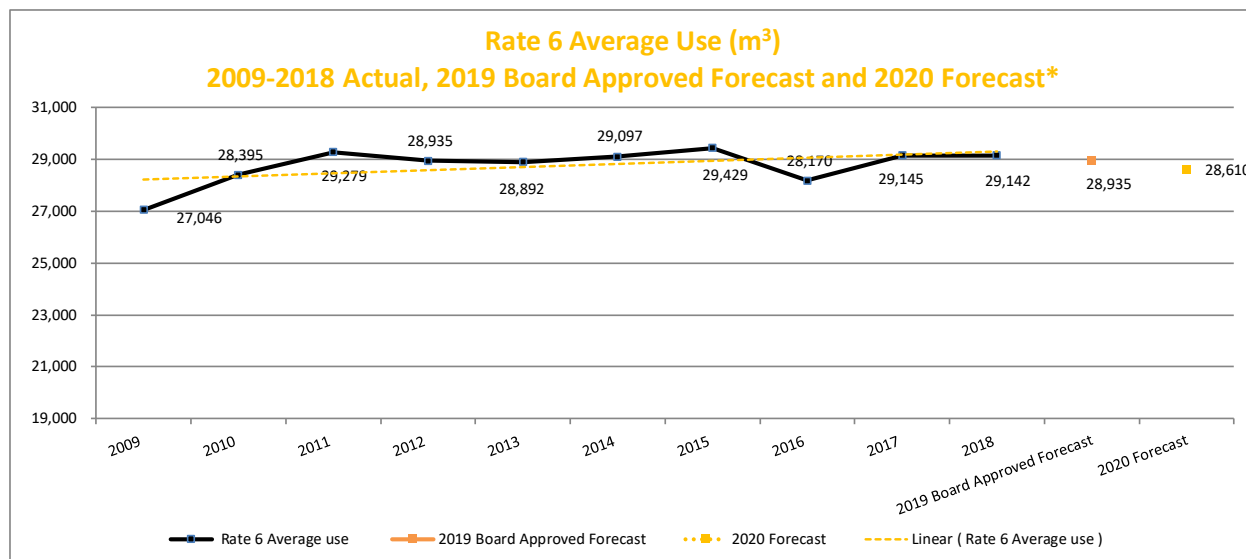
|                |              |                       | Col. 1                                      | Col. 2                                              | Col. 3                                         | Col. 4                                              |
|----------------|--------------|-----------------------|---------------------------------------------|-----------------------------------------------------|------------------------------------------------|-----------------------------------------------------|
|                |              |                       | Actual<br>Normalized<br>Average Use<br>(m³) | Board Approved<br>Normalized<br>Average Use<br>(m³) | Variance<br>Normalized<br>Average Use<br>(1-2) | %Variance<br>Normalized<br>Average Use<br>(3/2)*100 |
| FISCAL<br>YEAR | Test<br>Year | Rate Classes          |                                             |                                                     |                                                |                                                     |
|                | 2004*        | Rate 1                | 2,843                                       | 2,857                                               | (14)                                           | -0.5%                                               |
|                |              | Rate 6                | 21,472                                      | 21,612                                              | (140)                                          | -0.6%                                               |
|                |              | Total General Service | 4,461                                       | 4,502                                               | (41)                                           | -0.9%                                               |
|                | 2005         | Rate 1                | 2,890                                       | 2,953                                               | (63)                                           | -2.1%                                               |
|                |              | Rate 6                | 22,241                                      | 22,507                                              | (266)                                          | -1.2%                                               |
|                |              | Total General Service | 4,547                                       | 4,646                                               | (99)                                           | -2.1%                                               |
|                | 2006         | Rate 1                | 2,796                                       | 2,850                                               | (54)                                           | -1.9%                                               |
|                |              | Rate 6                | 22,272                                      | 21,999                                              | 273                                            | 1.2%                                                |
|                |              | Total General Service | 4,444                                       | 4,438                                               | 6                                              | 0.1%                                                |
|                | 2007         | Rate 1                | 2,726                                       | 2,687                                               | 39                                             | 1.5%                                                |
|                |              | Rate 6                | 22,783                                      | 21,010                                              | 1,773                                          | 8.4%                                                |
|                |              | Total General Service | 4,412                                       | 4,200                                               | 212                                            | 5.0%                                                |
|                | 2008         | Rate 1                | 2,636                                       | 2,647                                               | (11)                                           | -0.4%                                               |
|                |              | Rate 6                | 24,869                                      | 24,204                                              | 665                                            | 2.7%                                                |
|                |              | Total General Service | 4,493                                       | 4,449                                               | 44                                             | 1.0%                                                |
|                | 2009         | Rate 1                | 2,604                                       | 2,637                                               | (33)                                           | -1.3%                                               |
|                |              | Rate 6                | 27,281                                      | 28,165                                              | (884)                                          | -3.1%                                               |
|                |              | Total General Service | 4,659                                       | 4,770                                               | (111)                                          | -2.3%                                               |
|                | 2010         | Rate 1                | 2,579                                       | 2,622                                               | (43)                                           | -1.6%                                               |
|                |              | Rate 6                | 29,106                                      | 27,949                                              | 1,157                                          | 4.1%                                                |
|                |              | Total General Service | 4,403                                       | 4,705                                               | (302)                                          | -6.4%                                               |
|                | 2011         | Rate 1                | 2,594                                       | 2,643                                               | (49)                                           | -1.8%                                               |
|                |              | Rate 6                | 29,471                                      | 28,029                                              | 1,442                                          | 5.1%                                                |
|                |              | Total General Service | 4,764                                       | 4,726                                               | 38                                             | 0.8%                                                |
|                | 2012         | Rate 1                | 2,529                                       | 2,510                                               | 18                                             | 0.7%                                                |
|                |              | Rate 6                | 28,941                                      | 30,122                                              | (1,182)                                        | -3.9%                                               |
|                |              | Total General Service | 4,642                                       | 4,715                                               | (73)                                           | -1.5%                                               |
|                | 2013         | Rate 1                | 2,547                                       | 2,568                                               | (22)                                           | -0.8%                                               |
|                |              | Rate 6                | 29,878                                      | 29,878                                              | (0)                                            | 0.0%                                                |
|                |              | Total General Service | 4,665                                       | 4,719                                               | (54)                                           | -1.1%                                               |
|                | 2014         | Rate 1                | 2,475                                       | 2,433                                               | 41                                             | 1.7%                                                |
|                |              | Rate 6                | 28,634                                      | 28,383                                              | 251                                            | 0.9%                                                |
|                |              | Total General Service | 4,665                                       | 4,719                                               | (54)                                           | -1.1%                                               |
|                | 2015         | Rate 1                | 2,427                                       | 2,419                                               | 9                                              | 0.4%                                                |
|                |              | Rate 6                | 28,600                                      | 28,341                                              | 259                                            | 0.9%                                                |
|                |              | Total General Service | 4,485                                       | 4,465                                               | 20                                             | 0.4%                                                |
|                | 2016         | Rate 1                | 2,401                                       | 2,480                                               | (79)                                           | -3.2%                                               |
|                |              | Rate 6                | 28,203                                      | 28,753                                              | (550)                                          | -1.9%                                               |
|                |              | Total General Service | 4,413                                       | 4,537                                               | (124)                                          | -2.7%                                               |
|                | 2017         | Rate 1                | 2,485                                       | 2,472                                               | 13                                             | 0.5%                                                |
|                |              | Rate 6                | 29,462                                      | 29,058                                              | 404                                            | 1.4%                                                |
|                |              | Total General Service | 4,569                                       | 4,538                                               | 31                                             | 0.7%                                                |
|                | 2018         | Rate 1                | 2,456                                       | 2,358                                               | 98                                             | 4.2%                                                |
|                |              | Rate 6                | 29,377                                      | 28,656                                              | 721                                            | 2.5%                                                |
|                |              | Total General Service | 4,525                                       | 4,388                                               | 137                                            | 3.1%                                                |
|                |              |                       | Average % variance                          |                                                     | 2004-2018                                      | -0.3%                                               |
|                |              |                       | Average % variance                          |                                                     | 2009-2018                                      | -0.2%                                               |
|                |              |                       | Average % variance                          |                                                     | 2004-2018                                      | 1.1%                                                |
|                |              |                       | Average % variance                          |                                                     | 2009-2018                                      | 1.0%                                                |

The 2.3% increase for Rate 1 customers and the 1.7% increase for Rate 6 customers of the EGD rate zone represent the percentage change in average use from the 2018 Board Approved forecast to 2019 Forecast. It doesn't represent a change in actual average use. Similarly, the decline of 1.2% and 1.9% for Rate 1 and 6 respectively represent the percentage change in average use from the 2019 Board Approved forecast to 2020 forecast.

The 2019 Board Approved forecast was developed in an earlier proceeding using the actuals to 2017 and the assumptions from the 2018 Spring Economic Outlook while the 2020 forecast has been developed using the actuals to 2018 and the assumptions from 2019 Spring Economic Outlook. As a result, 1.2% and 1.9% decline in Rate 1 and 6 average uses, respectively, is not reflective of the actual average use trend.

The following table illustrates actual average use trend for the last 10 years, 2019 Board Approved forecast and the forecast for 2020. These figures have all been normalized to 2020 Budget degree days for comparability. The average annual decline in actual average use is 1.1% for Rate 1. Over the same period, Rate 6 shows an average annual increase of 1.25%, but it remains relatively flat since 2013.





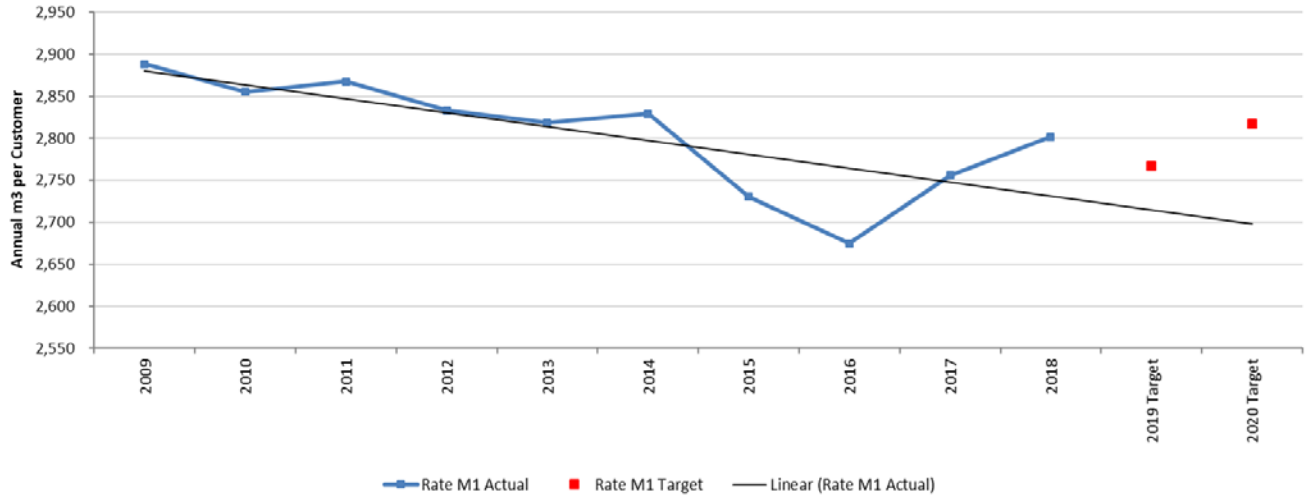
#### Staff. 1 d)

The percentage changes listed at Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 13 represent the actual NAC changes from 2017 to 2018, as well as an update from the 2019 Board-approved weather normal to the 2020 Board-approved weather normal for Union rate classes.

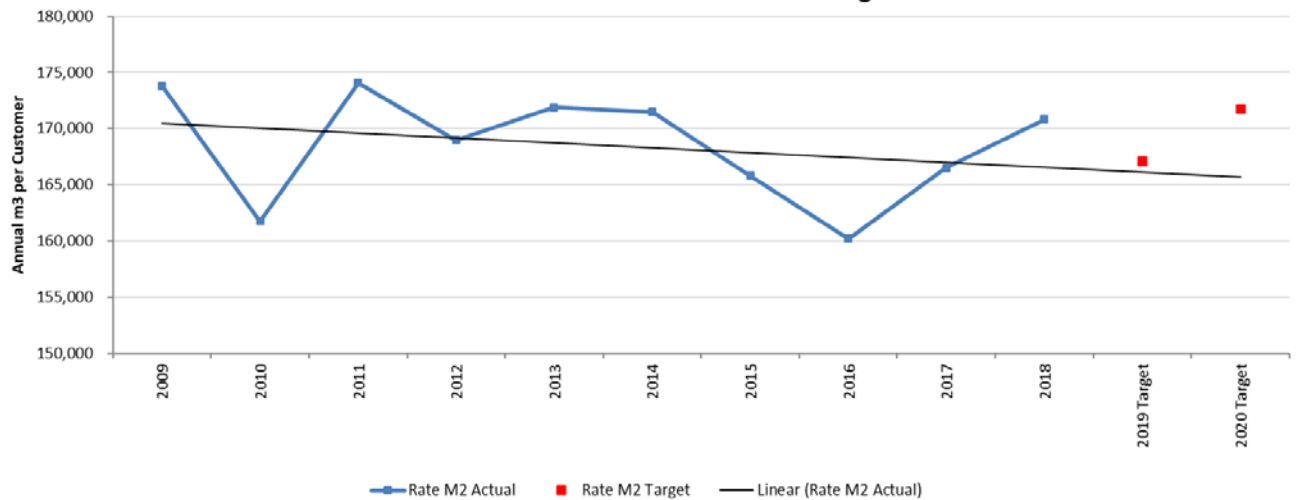
For comparability, the following charts illustrate actual NAC changes for each rate class over the past 10 years, calculated using the 2020 weather normal.

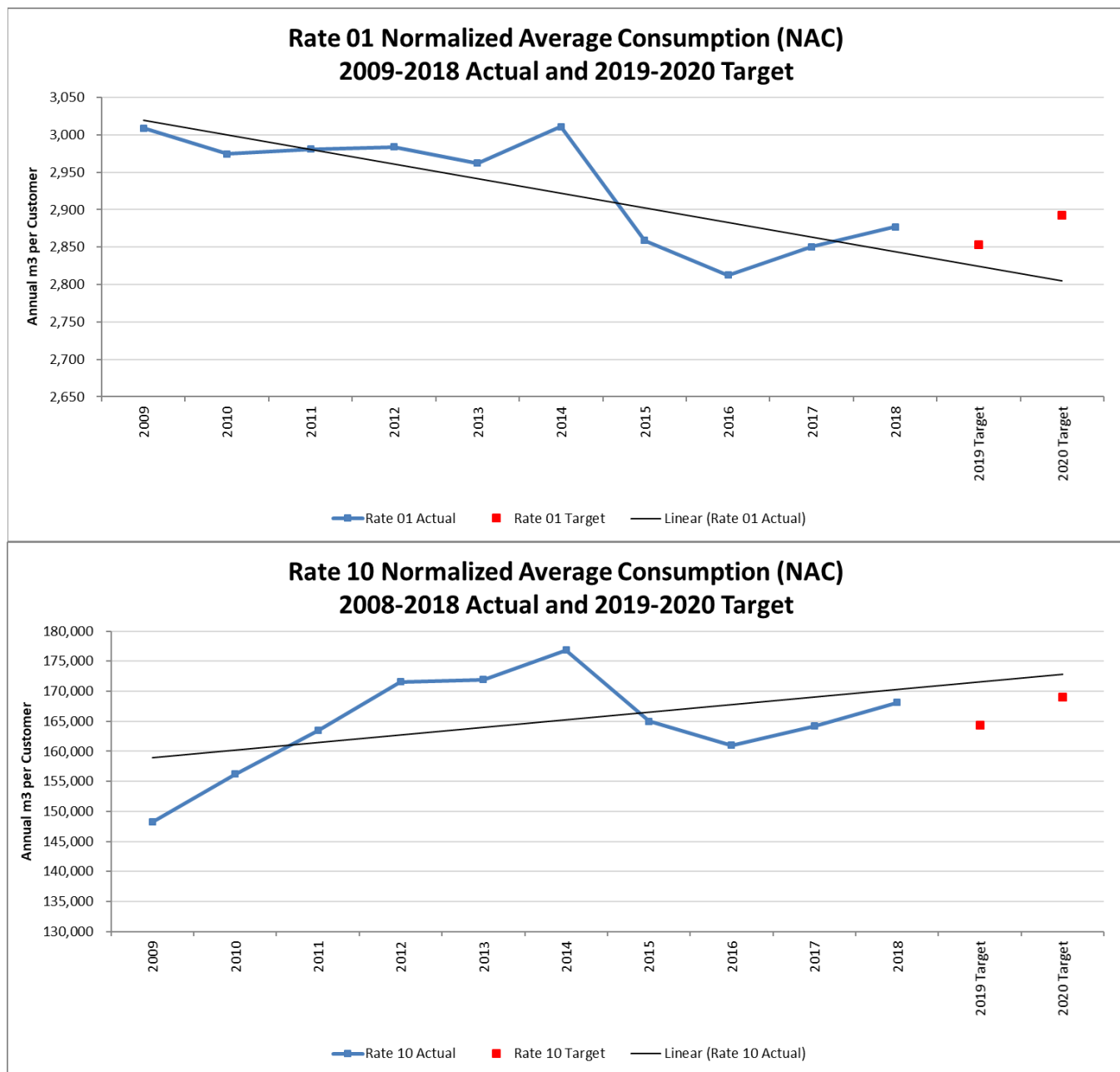
A simple trend line in each chart indicates that there is a declining trend present in the actual NAC for all Union Zone rate classes except Rate 10. The average annual decline in actual NAC is 0.6% for Rate M1 and 0.7% for Rate M2 and Rate 01. Over the same period, Rate 10 shows an average annual increase of 1.1%, but an average annual decline of 0.3% since 2013. The year-over-year actual consumption fluctuation around the trend line is attributable to price, economic drivers, efficiency levels, and the customer's comfort level given weather fluctuations.

**Rate M1 Normalized Average Consumption (NAC)  
2009-2018 Actual and 2019-2020 Target**



**Rate M2 Normalized Average Consumption (NAC)  
2009-2018 Actual and 2019-2020 Target**





### Energy Probe.1

Please refer to Board Staff #1 for:

- The historical Average Use graphs, and

Please refer to next question LPMA #3, a) for the

- The Average Use statistics- SD and T statistics

LPMA. 3. a)

Please see table below for the regression equations and the regression statistics.

TABLE 5 - RATE 1 REVENUE CLASS 20 REGRESSION EQUATIONS

Metro Region - Central Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 2.46        | 7.30        | 0.00    |
| LOG(CDD)           | 0.72        | 17.19       | 0.00    |
| LOG(REALCRCRPG)    | -0.03       | -1.32       | 0.20    |
| LOG(MET20VINT)     | 0.86        | 8.63        | 0.00    |
| DUM2008            | -0.05       | -2.89       | 0.01    |
| DUM2010            | -0.04       | -2.08       | 0.05    |
| R-squared          | 0.99        |             |         |
| Adjusted R-squared | 0.98        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 413.32      |             | 0.00    |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | 0.29        | 0.77    |
| DLOG(CDD)          | 0.77        | 25.55       | 0.00    |
| DLOG(MET20VINT)    | 1.26        | 1.66        | 0.11    |
| DUM2008            | 0.00        | -0.20       | 0.84    |
| ECM_MET20(-1)      | -0.44       | -1.92       | 0.06    |
| R-squared          | 0.96        |             |         |
| Adjusted R-squared | 0.96        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 176.65      |             | 0.00    |

Western Region - Central Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.75        | 0.70        | 0.49    |
| LOG(CDD)           | 0.71        | 18.86       | 0.00    |
| LOG(REALCRCRPG)    | -0.10       | -4.64       | 0.00    |
| LOG(WES20VINT)     | 0.45        | 3.95        | 0.00    |
| LOG(CENTEMP)       | 0.20        | 1.62        | 0.12    |
| DUM2008            | -0.04       | -2.58       | 0.02    |
| DUM2010            | -0.05       | -2.82       | 0.01    |
| R-squared          | 0.99        |             |         |
| Adjusted R-squared | 0.99        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 365.47      |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | -1.36       | 0.18    |
| DLOG(CDD)          | 0.75        | 26.82       | 0.00    |
| DLOG(REALCRCRPG)   | -0.08       | -2.75       | 0.01    |
| DUM2008            | 0.00        | -0.78       | 0.44    |
| ECM_WES20(-1)      | -0.65       | -2.40       | 0.02    |
| R-squared          | 0.96        |             |         |
| Adjusted R-squared | 0.96        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 181.71      |             | 0.000   |

Central Region - Central Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.14        | 0.13        | 0.90    |
| LOG(CDD)           | 0.72        | 16.40       | 0.00    |
| LOG(REALCRCRPG)    | -0.05       | -2.34       | 0.03    |
| LOG(CEN20VINT)     | 0.59        | 6.36        | 0.00    |
| LOG(CENTEMP)       | 0.27        | 2.32        | 0.03    |
| DUM2008            | -0.05       | -3.15       | 0.00    |
| R-squared          | 0.99        |             |         |
| Adjusted R-squared | 0.98        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 391.46      |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | 0.38        | 0.70    |
| DLOG(CDD)          | 0.73        | 22.30       | 0.00    |
| DLOG(REALCRCRPG)   | -0.05       | -1.43       | 0.16    |
| DUM2008            | 0.00        | -0.62       | 0.54    |
| DLOG(CEN20VINT)    | 0.49        | 1.62        | 0.12    |
| ECM_CEN20(-1)      | -0.83       | -3.36       | 0.00    |
| R-squared          | 0.95        |             |         |
| Adjusted R-squared | 0.94        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 107.43      |             | 0.000   |

TABLE 5 CONTINUED - RATE 1 REVENUE CLASS 20 REGRESSION EQUATIONS

Northern Region - Central Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.26        | 0.22        | 0.82    |
| LOG(CDD)           | 0.70        | 17.40       | 0.00    |
| LOG(REALCRCRPG)    | -0.09       | -4.20       | 0.00    |
| LOG(NOR20VINT)     | 0.52        | 5.52        | 0.00    |
| LOG(CENTEMP)       | 0.28        | 2.00        | 0.06    |
| DUM2009            | -0.05       | -2.94       | 0.01    |
| R-squared          | 0.99        |             |         |
| Adjusted R-squared | 0.99        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 524.17      |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | 0.15        | 0.88    |
| DLOG(CDD)          | 0.72        | 23.31       | 0.00    |
| DLOG(REALCRCRPG)   | -0.07       | -2.14       | 0.04    |
| DLOG(NOR20VINT)    | 0.41        | 1.54        | 0.13    |
| ECM_NOR20(-1)      | -0.78       | -3.08       | 0.00    |
| R-squared          | 0.95        |             |         |
| Adjusted R-squared | 0.95        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 139.73      |             | 0.000   |

Eastern Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 1.60        | 3.78        | 0.00    |
| LOG(EDD)           | 0.78        | 14.98       | 0.00    |
| LOG(REALCRCRPG)    | -0.05       | -2.13       | 0.04    |
| LOG(ERC20VINT)     | 0.40        | 11.59       | 0.00    |
| DUM2008            | -0.03       | -1.76       | 0.09    |
| DUM2010            | -0.03       | -1.58       | 0.12    |
| R-squared          | 0.99        |             |         |
| Adjusted R-squared | 0.99        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 437.61      |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | 0.26        | 0.80    |
| DLOG(EDD)          | 0.83        | 19.45       | 0.00    |
| DLOG(ERC20VINT)    | 0.57        | 2.43        | 0.02    |
| ECM_ERC20(-1)      | -0.86       | -2.43       | 0.02    |
| AR(1)              | -0.38       | -1.03       | 0.31    |
| R-squared          | 0.94        |             |         |
| Adjusted R-squared | 0.93        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 109.74      |             | 0.000   |

Niagara Weather Zone

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 2.13        | 4.07        | 0.00    |
| LOG(NDD)           | 0.73        | 11.08       | 0.00    |
| LOG(REALNRCRPG)    | 0.96        | 6.92        | 0.00    |
| LOG(NRC20VINT)     | -0.06       | -2.32       | 0.03    |
| DUM2008            | -0.04       | -1.25       | 0.22    |
| DUM2010            | -0.08       | -2.26       | 0.03    |
| R-squared          | 0.97        |             |         |
| Adjusted R-squared | 0.97        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 204.24      |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -0.01       | -2.31       | 0.03    |
| DLOG(NDD)          | 0.77        | 18.35       | 0.00    |
| ECM_NRC20(-1)      | -0.25       | -1.14       | 0.26    |
| R-squared          | 0.92        |             |         |
| Adjusted R-squared | 0.91        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 171.94      |             | 0.000   |

**TABLE 6 - RATE 1**  
**Model Diagnostic Tests**

| Col 1.                                        | Col 2.         | Col 3.          | Col 4.            | Col 5.            | Col 6.             | Col 7.                     | Col 8.                     |
|-----------------------------------------------|----------------|-----------------|-------------------|-------------------|--------------------|----------------------------|----------------------------|
| Test                                          |                | Metro<br>Region | Western<br>Region | Central<br>Region | Northern<br>Region | Eastern<br>Weather<br>Zone | Niagara<br>Weather<br>Zone |
| Breusch-Godfrey Serial<br>Correlation LM Test | Test Statistic | 1.19            | 2.69              | 0.57              | 0.11               | 0.32                       | 1.68                       |
|                                               | P Value        | 0.28            | 0.09              | 0.45              | 0.74               | 0.57                       | 0.19                       |
| ARCH Test                                     | Test Statistic | 0.00            | 3.60              | 0.56              | 0.00               | 0.36                       | 2.96                       |
|                                               | P Value        | 0.97            | 0.06              | 0.46              | 0.96               | 0.55                       | 0.09                       |
| Chow Forecast Test                            | Test Statistic | 0.00            | 1.25              | 1.00              | 1.09               | 1.03                       | 3.22                       |
|                                               | P Value        | 1.00            | 0.27              | 0.33              | 0.31               | 0.32                       | 0.06                       |
| Ramsey RESET Test                             | Test Statistic | 0.30            | 0.06              | 0.11              | 0.01               | 0.16                       | 0.53                       |
|                                               | P Value        | 0.59            | 0.81              | 0.74              | 0.92               | 0.69                       | 0.47                       |

TABLE 8 - RATE 6 REVENUE CLASS 12 REGRESSION EQUATIONS

Central Revenue Class 12 (Apartment)

Single Equation Model

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 1.10        | 0.71        | 0.48    |
| LOG(CDD)           | 0.63        | 7.22        | 0.00    |
| LOG(CENTEMP)       | 0.68        | 4.39        | 0.00    |
| DUM1996            | -0.10       | -3.54       | 0.00    |
| DUM2008            | 0.21        | 4.50        | 0.00    |
| AR(1)              | 0.56        | 2.48        | 0.02    |
| R-squared          | 0.97        |             |         |
| Adjusted R-squared | 0.96        |             |         |
| S.E. of regression | 0.04        |             |         |
| F-statistic        | 158.832     |             | 0.000   |

Eastern Revenue Class 12 (Apartment)

Single Equation Model

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 2.50        | 1.62        | 0.12    |
| LOG(EDD)           | 0.55        | 8.01        | 0.00    |
| LOG(TIME)          | -0.06       | -4.22       | 0.00    |
| DUMERC12           | 0.24        | 8.72        | 0.00    |
| DUM2011            | -0.15       | -5.34       | 0.00    |
| LOG(REALERCCPG)    | -0.17       | -3.68       | 0.00    |
| LOG(EASTEMP)       | 0.60        | 3.00        | 0.01    |
| DUM2014            | 0.07        | 3.84        | 0.00    |
| R-squared          | 0.97        |             |         |
| Adjusted R-squared | 0.96        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 121.32      |             | 0.000   |

Niagara Revenue Class 12 (Apartment)

Single Equation Model

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 5.08        | 3.77        | 0.00    |
| LOG(NDD)           | 0.51        | 6.74        | 0.00    |
| LOG(TIME)          | -0.02       | -2.06       | 0.05    |
| LOG(NIAGEMP)       | 0.30        | 1.60        | 0.12    |
| LOG(REALNRCCPG)    | -0.05       | -1.30       | 0.21    |
| DUMNRC12           | -0.06       | -3.13       | 0.00    |
| DUM2011            | -0.09       | -3.29       | 0.00    |
| AR(1)              | -0.17       | -0.74       | 0.47    |
| R-squared          | 0.88        |             |         |
| Adjusted R-squared | 0.85        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 27.01       |             | 0.000   |

TABLE 8 CONTINUED - RATE 6 REVENUE CLASS 48 REGRESSION EQUATIONS

Central Revenue Class 48 (Commercial)

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -3.42       | -2.87       | 0.01    |
| LOG(CDD)           | 0.84        | 13.61       | 0.00    |
| LOG(TIME)          | -0.17       | -9.93       | 0.00    |
| LOG(CRCCOMVAC)     | -0.05       | -2.62       | 0.01    |
| LOG(ONTGDP)        | 0.54        | 6.71        | 0.00    |
| LOG(REALCRCCPG)    | -0.10       | -4.04       | 0.00    |
| DUM2008            | 0.07        | 3.71        | 0.00    |
| R-squared          | 0.95        |             |         |
| Adjusted R-squared | 0.93        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 78.78       |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.01        | 2.04        | 0.05    |
| DLOG(CDD)          | 0.86        | 25.08       | 0.00    |
| DLOG(TIME)         | -0.10       | -3.89       | 0.00    |
| DLOG(CRCCOMVAC)    | -0.08       | -4.26       | 0.00    |
| DLOG(REALCRCCPG)   | -0.10       | -3.32       | 0.00    |
| ECM_CRC48(1)       | -0.80       | -4.32       | 0.00    |
| R-squared          | 0.96        |             |         |
| Adjusted R-squared | 0.95        |             |         |
| S.E. of regression | 0.02        |             |         |
| F-statistic        | 127.48      |             | 0.000   |

Eastern Revenue Class 48 (Commercial)

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -3.20       | -1.91       | 0.07    |
| LOG(EDD)           | 0.73        | 7.18        | 0.00    |
| LOG(TIME)          | -0.22       | -10.31      | 0.00    |
| LOG(ONTGDP)        | 0.58        | 5.60        | 0.00    |
| LOG(REALERCCPG)    | -0.15       | -4.14       | 0.00    |
| DUM2008            | 0.12        | 4.86        | 0.00    |
| R-squared          | 0.91        |             |         |
| Adjusted R-squared | 0.90        |             |         |
| S.E. of regression | 0.04        |             |         |
| F-statistic        | 58.46       |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.01        | 1.60        | 0.12    |
| DLOG(EDD)          | 0.74        | 10.15       | 0.00    |
| DLOG(TIME)         | -0.15       | -3.35       | 0.00    |
| DLOG(REALERCCPG)   | -0.11       | -2.15       | 0.04    |
| ECM_ERC48(1)       | -0.80       | -3.77       | 0.00    |
| R-squared          | 0.82        |             |         |
| Adjusted R-squared | 0.80        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 32.72       |             | 0.000   |

Niagara Revenue Class 48 (Commercial)

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -0.57       | -0.37       | 0.71    |
| LOG(NDD)           | 0.74        | 10.32       | 0.00    |
| LOG(TIME)          | -0.08       | -4.02       | 0.00    |
| LOG(REALNRCCPG)    | -0.14       | -3.81       | 0.00    |
| LOG(ONTGDP)        | 0.34        | 3.36        | 0.00    |
| DUM2009            | 0.04        | 1.60        | 0.12    |
| R-squared          | 0.86        |             |         |
| Adjusted R-squared | 0.84        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 35.69       |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 0.00        | 0.30        | 0.77    |
| DLOG(NDD)          | 0.78        | 13.62       | 0.00    |
| DLOG(REALNRCCPG)   | -0.12       | -2.43       | 0.02    |
| ECM_NRC48(1)       | -0.86       | -3.52       | 0.00    |
| R-squared          | 0.89        |             |         |
| Adjusted R-squared | 0.87        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 74.44       |             | 0.000   |

TABLE 8 CONTINUED - RATE 6 REVENUE CLASS 73 REGRESSION EQUATIONS

Central Revenue Class 73 (Industrial)

Long Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | 1.27        | 0.48        | 0.63    |
| LOG(CDD)           | 0.48        | 2.88        | 0.01    |
| LOG(TIME)          | -0.15       | -4.15       | 0.00    |
| LOG(ONTGDP)        | 0.48        | 3.10        | 0.00    |
| DUM2008            | 0.52        | 13.50       | 0.00    |
| R-squared          | 0.93        |             |         |
| Adjusted R-squared | 0.92        |             |         |
| S.E. of regression | 0.07        |             |         |
| F-statistic        | 98.75       |             | 0.000   |

Short Run Equation

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -0.02       | -2.08       | 0.05    |
| DLOG(CDD)          | 0.57        | 9.61        | 0.00    |
| DLOG(ONTGDP)       | 0.66        | 2.22        | 0.03    |
| DUM2008            | 0.24        | 6.42        | 0.00    |
| DUM2009            | -0.19       | -5.15       | 0.00    |
| ECM_CRC73(1)       | -0.63       | -6.54       | 0.00    |
| R-squared          | 0.87        |             |         |
| Adjusted R-squared | 0.84        |             |         |
| S.E. of regression | 0.03        |             |         |
| F-statistic        | 35.55       |             | 0.000   |

Eastern Revenue Class 73 (Industrial)

Single Equation Model

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -101.441    | -0.61       | 0.55    |
| EDD                | 19          | 0.73        | 0.47    |
| DUM2003            | 63.949      | 1.88        | 0.07    |
| DUM2004            | -170.155    | -3.86       | 0.00    |
| DUM2009            | 144.119     | 7.01        | 0.00    |
| EASTEMP            | 297         | 1.15        | 0.26    |
| TIME               | -2.120      | -1.04       | 0.31    |
| R-squared          | 0.87        |             |         |
| Adjusted R-squared | 0.84        |             |         |
| S.E. of regression | 30,749.24   |             |         |
| F-statistic        | 30.36       |             | 0.000   |

Niagara Revenue Class 73 (Industrial)

Single Equation Model

| Variable           | Coefficient | t-Statistic | p-Value |
|--------------------|-------------|-------------|---------|
| C                  | -1.28       | -0.36       | 0.72    |
| LOG(NDD)           | 0.74        | 3.56        | 0.00    |
| DUM2002            | -0.37       | -4.28       | 0.00    |
| DUM2007            | 0.49        | 4.66        | 0.00    |
| DUM2010            | 0.42        | 3.97        | 0.00    |
| LOG(NIAGEMP)       | 1.29        | 2.50        | 0.02    |
| AR(1)              | 0.69        | 4.08        | 0.00    |
| R-squared          | 0.97        |             |         |
| Adjusted R-squared | 0.96        |             |         |
| S.E. of regression | 0.10        |             |         |
| F-statistic        | 144.64      |             | 0.000   |

**TABLE 9-RATE 6**  
**Model Diagnostic Tests**

| Col 1.                                              | Col 2.         | Col 3.               | Col 4.                                               | Col 5.               | Col 6.               | Col 7.                                               | Col 8.               | Col 9.               | Col 10.              | Col 11.              |
|-----------------------------------------------------|----------------|----------------------|------------------------------------------------------|----------------------|----------------------|------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|
| Revenue Class 12 (Apartment) Model Diagnostic Tests |                |                      | Revenue Class 48 (Commercial) Model Diagnostic Tests |                      |                      | Revenue Class 73 (Industrial) Model Diagnostic Tests |                      |                      |                      |                      |
| Test                                                |                | Central Weather Zone | Eastern Weather Zone                                 | Niagara Weather Zone | Central Weather Zone | Eastern Weather Zone                                 | Niagara Weather Zone | Central Weather Zone | Eastern Weather Zone | Niagara Weather Zone |
| Breusch-Godfrey Serial Correlation LM Test          | Test Statistic | 1.72                 | 1.27                                                 | 0.27                 | 0.21                 | 0.15                                                 | 0.36                 | 0.72                 | 3.04                 | 1.56                 |
|                                                     | P Value        | 0.19                 | 0.26                                                 | 0.60                 | 0.65                 | 0.70                                                 | 0.55                 | 0.40                 | 0.08                 | 0.21                 |
| ARCH Test                                           | Test Statistic | 0.24                 | 0.13                                                 | 1.37                 | 0.15                 | 0.21                                                 | 0.06                 | 0.49                 | 1.09                 | 2.32                 |
|                                                     | P Value        | 0.62                 | 0.72                                                 | 0.24                 | 0.70                 | 0.64                                                 | 0.81                 | 0.48                 | 0.30                 | 0.13                 |
| Chow Forecast Test                                  | Test Statistic | 0.63                 | 0.04                                                 | 1.74                 | 0.93                 | 1.11                                                 | 1.92                 | 0.02                 | 2.71                 | 1.07                 |
|                                                     | P Value        | 0.44                 | 0.84                                                 | 0.20                 | 0.34                 | 0.30                                                 | 0.18                 | 0.89                 | 0.11                 | 0.31                 |
| Ramsey RESET Test                                   | Test Statistic | 1.00                 | 0.74                                                 | 0.06                 | 0.66                 | 0.51                                                 | 0.00                 | 0.66                 | 2.27                 | 2.77                 |
|                                                     | P Value        | 0.33                 | 0.40                                                 | 0.80                 | 0.42                 | 0.48                                                 | 0.99                 | 0.42                 | 0.14                 | 0.11                 |

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: LPMA.1

**Response:**

a) The quarterly GDP IPI (FDD) figures are provided in the table below:

GDP-IPI (FDD)

As Published in the OEB Website

|      | Q1     | Q2     | Q3     | Q4     | Annual | Annual<br>%<br>change |
|------|--------|--------|--------|--------|--------|-----------------------|
| 2017 | 108.00 | 108.50 | 108.30 | 109.00 | 108.45 |                       |
| 2018 | 109.40 | 109.80 | 110.50 | 111.10 | 110.20 | 1.61%                 |
|      | 1.30%  | 1.20%  | 2.03%  | 1.93%  |        | 1.61%                 |

As per EGI Evidence

|      | Q1     | Q2     | Q3     | Q4     | Annual | Annual<br>%<br>change |
|------|--------|--------|--------|--------|--------|-----------------------|
| 2017 | 108.00 | 108.50 | 108.30 | 109.00 | 108.45 |                       |
| 2018 | 109.40 | 109.90 | 110.60 | 111.10 | 110.25 | 1.66%                 |
|      | 1.30%  | 1.29%  | 2.12%  | 1.93%  |        |                       |

b) The difference in the calculation between the OEB and EGI resides in the Q2 and Q3 figures. The data that EGI has used in its evidence corresponds to the figures that was available at the Stats Canada website on March 1<sup>st</sup>, 2019. Stats Canada has indicated that they update their data in their quarterly revision process. Their revision that takes place at the time of the Q3 releases follows a 3-year revision period along with the current year.

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: LPMA.3 b), Energy probe.1 part c)

---

**Response:**

LPMA. 3. b) and

Energy Probe.1 part c)

## BUDGET DEGREE DAYS

1. The purpose of this evidence is to provide the forecast of degree days for the 2020 test year.
2. The 2020 degree day forecasts were prepared in accordance with the Ontario Energy Board's (the "Board") EB-2012-0459 Decision with Reasons dated July 17, 2014. The Board has approved the use of the 50:50 Hybrid method for the Central weather zone, the de Bever with Trend method for the Eastern weather zone and the 10-year moving average method for the Niagara weather zone. Table 1 displays the 2020 degree day forecasts that were generated according to the approved methodologies for each weather zone within the franchise using Environment Canada degree days. Conversions to Gas Supply degree days are described in the latter part of this evidence.

**Table 1**  
Forecast of 2020 Environment Canada Degree Days

| <i>Region</i> | <i>Methodology</i>     | <i>Forecast</i> |
|---------------|------------------------|-----------------|
| Central       | 50:50 Hybrid           | 3,660           |
| Eastern       | De Bever with Trend    | 4,375           |
| Niagara       | 10-year moving average | 3,404           |

### Degree Day Forecast Methodology

3. The degree day forecast for the Central weather zone was prepared using the 50:50 Hybrid method which is an average of the 10-year Moving Average and the 20-year Trend forecast. Table 2 provides the actual Environment Canada degree day data for the Central weather zone and the resultant 10-year moving average, 20-year Trend, and 50:50 Hybrid forecast. The 10-year moving average is calculated using data covering the period 2009 to 2018<sup>1</sup>, while 20-year Trend model is estimated for the period 1999 to 2018. The 20-year Trend model results are provided in Table 3.

<sup>1</sup> The 10 year moving average for year  $t$  is calculated as  $(DD_{t-2} + DD_{t-3} + \dots + DD_{t-10} + DD_{t-11})/10$  where DD is the actual degree day value.

**Table 2**  
Environment Canada Degree Day Forecast – Central

| <i>Col. 1</i>                              | <i>Col. 2</i>       |
|--------------------------------------------|---------------------|
| Calendar Year                              | Actual <sup>1</sup> |
| 1999                                       | 3,539               |
| 2000                                       | 3,826               |
| 2001                                       | 3,420               |
| 2002                                       | 3,630               |
| 2003                                       | 3,982               |
| 2004                                       | 3,798               |
| 2005                                       | 3,797               |
| 2006                                       | 3,378               |
| 2007                                       | 3,722               |
| 2008                                       | 3,837               |
| 2009                                       | 3,836               |
| 2010                                       | 3,501               |
| 2011                                       | 3,648               |
| 2012                                       | 3,215               |
| 2013                                       | 3,775               |
| 2014                                       | 4,103               |
| 2015                                       | 3,766               |
| 2016                                       | 3,462               |
| 2017                                       | 3,502               |
| 2018                                       | 3,758               |
| 2020 Forecast (10-year Moving average)     | 3,656               |
| 2020 Forecast (20-year Trend) <sup>2</sup> | 3,664               |
| 2020 Forecast (50:50 Hybrid) <sup>3</sup>  | 3,660               |

<sup>1</sup>Environment Canada heating degree day observations from Pearson Int'l Airport until June 2013. Effective June 13th, 2013 Environment Canada is no longer able to provide degree day data for Pearson Int'l Airport. Data from June 12th, 2013 and thereafter are obtained from the Toronto Int'l A station.

<sup>2</sup>Calculated using the 20-year Trend regression equation from Table 3.

<sup>3</sup>Average of 10-year Moving average and 20-year Trend forecasts.

**Table 3**  
Model Results & Test Statistics: Central\_20-year Trend Methodology

Sample: 1999 2018

Included observations: 20

| <i>Col. 1</i> | <i>Col. 2</i> | <i>Col. 3</i> | <i>Col. 4</i> | <i>Col. 5</i> |
|---------------|---------------|---------------|---------------|---------------|
| Variable      | Coefficient   | Std. Error    | t-Statistic   | Prob.         |
| C             | 3,684.3       | 103.86        | 35.47         | 0.000         |
| TREND         | -0.9171       | 8.67          | -0.11         | 0.917         |
| R-squared     | 0.001         | F-statistic   | 0.01          |               |
|               |               | F-prob        | 0.92          |               |

Environment Canada Central Degree Day= 3,684.3-0.9171\*TREND

The trend variable takes the values of 1 through 20 for each of the years from 1999 to 2018. The value of 22 is used for 2020 to generate 2020 degree day forecast.

- The degree day forecast for the Eastern weather zone was prepared using the de Bever with Trend method. This method regresses actual Environment Canada degree days on a constant, a 5-year weighted average of Environment Canada degree days<sup>2</sup> and a trend. The 5-year weighted averages are lagged two years. Table 4 displays the actual Environment Canada degree day data for the Eastern weather zone, the 5-year weighted averages used to estimate the model, and the resultant degree day forecast for 2020. The model is estimated over the period 1950 to 2018 for a total of 69 years which is determined by the cycle length with smallest variance. Estimation results are provided in Table 5.

<sup>2</sup> The five-year weighted average for year  $t$  is calculated as  $(5*DD_{t-2}+4*DD_{t-3}+3*DD_{t-4}+2*DD_{t-5}+DD_{t-6})/15$  where DD is the actual degree day value.

**Table 4**  
Environment Canada Degree Day Forecast – Eastern

| <i>Col. 1</i>                                    | <i>Col. 2</i>       | <i>Col. 3</i>                   |
|--------------------------------------------------|---------------------|---------------------------------|
| Calendar Year                                    | Actual <sup>1</sup> | 5-year Weighted MA <sup>2</sup> |
| 1950                                             | 4,824               | 4,665                           |
| 1951                                             | 4,587               | 4,594                           |
| 1952                                             | 4,404               | 4,661                           |
| 1953                                             | 4,059               | 4,641                           |
| 1954                                             | 4,707               | 4,556                           |
| 1955                                             | 4,689               | 4,385                           |
| 1956                                             | 4,799               | 4,465                           |
| 1957                                             | 4,405               | 4,523                           |
| 1958                                             | 4,736               | 4,626                           |
| 1959                                             | 4,718               | 4,584                           |
| 1960                                             | 4,451               | 4,652                           |
| 1961                                             | 4,586               | 4,669                           |
| 1962                                             | 4,826               | 4,596                           |
| 1963                                             | 4,921               | 4,584                           |
| 1964                                             | 4,569               | 4,667                           |
| 1965                                             | 4,810               | 4,753                           |
| 1966                                             | 4,683               | 4,709                           |
| 1967                                             | 4,882               | 4,755                           |
| 1968                                             | 4,780               | 4,735                           |
| 1969                                             | 4,698               | 4,775                           |
| 1970                                             | 4,899               | 4,778                           |
| 1971                                             | 4,797               | 4,762                           |
| 1972                                             | 5,014               | 4,805                           |
| 1973                                             | 4,420               | 4,808                           |
| 1974                                             | 4,725               | 4,876                           |
| 1975                                             | 4,514               | 4,736                           |
| 1976                                             | 5,008               | 4,723                           |
| 1977                                             | 4,597               | 4,637                           |
| 1978                                             | 4,939               | 4,741                           |
| 1979                                             | 4,589               | 4,695                           |
| 1980                                             | 4,920               | 4,790                           |
| 1981                                             | 4,438               | 4,735                           |
| 1982                                             | 4,647               | 4,798                           |
| 1983                                             | 4,536               | 4,674                           |
| 1984                                             | 4,535               | 4,658                           |
| 1985                                             | 4,659               | 4,601                           |
| 1986                                             | 4,501               | 4,570                           |
| 1987                                             | 4,328               | 4,585                           |
| 1988                                             | 4,640               | 4,564                           |
| 1989                                             | 4,931               | 4,482                           |
| 1990                                             | 4,250               | 4,524                           |
| 1991                                             | 4,303               | 4,657                           |
| 1992                                             | 4,861               | 4,537                           |
| 1993                                             | 4,780               | 4,461                           |
| 1994                                             | 4,730               | 4,585                           |
| 1995                                             | 4,585               | 4,646                           |
| 1996                                             | 4,603               | 4,681                           |
| 1997                                             | 4,786               | 4,680                           |
| 1998                                             | 3,828               | 4,664                           |
| 1999                                             | 4,137               | 4,689                           |
| 2000                                             | 4,543               | 4,399                           |
| 2001                                             | 4,115               | 4,276                           |
| 2002                                             | 4,381               | 4,328                           |
| 2003                                             | 4,715               | 4,240                           |
| 2004                                             | 4,637               | 4,273                           |
| 2005                                             | 4,421               | 4,444                           |
| 2006                                             | 4,037               | 4,531                           |
| 2007                                             | 4,447               | 4,511                           |
| 2008                                             | 4,488               | 4,373                           |
| 2009                                             | 4,534               | 4,376                           |
| 2010                                             | 3,973               | 4,388                           |
| 2011                                             | 4,144               | 4,430                           |
| 2012                                             | 4,055               | 4,293                           |
| 2013                                             | 4,402               | 4,242                           |
| 2014                                             | 4,632               | 4,155                           |
| 2015                                             | 4,486               | 4,209                           |
| 2016                                             | 4,322               | 4,346                           |
| 2017                                             | 4,378               | 4,428                           |
| 2018                                             | 4,547               | 4,421                           |
| 2020 Forecast (de Bever with Trend) <sup>3</sup> | 4,375               |                                 |

<sup>1</sup>Environment Canada heating degree day observations from MacDonald-Cartier Airport until December 2011. Effective December 15th, 2011, Environment Canada is no longer able to provide degree day data for MacDonald-Cartier Airport. Data from December 15th, 2011 and thereafter are obtained from the Ottawa Int'l A station.

<sup>2</sup>5-year weighted average lagged 2 years.

<sup>3</sup>Calculated using the de Bever with Trend regression equation from Table 5.

| <p><b>Table 5</b><br/> Model Results &amp; Test Statistics: Eastern_De Bever with Trend Methodology</p>                                                                                                                                                                                                                    |             |                           |             |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------|-------------|--------|
| Sample: 1950 2018                                                                                                                                                                                                                                                                                                          |             | Included observations: 69 |             |        |
| Col. 1                                                                                                                                                                                                                                                                                                                     | Col. 2      | Col. 3                    | Col. 4      | Col. 5 |
| Variable                                                                                                                                                                                                                                                                                                                   | Coefficient | Std. Error                | t-Statistic | Prob.  |
| C                                                                                                                                                                                                                                                                                                                          | 3,889.55    | 1,030.79                  | 3.77        | 0.00   |
| ECEDD5WA                                                                                                                                                                                                                                                                                                                   | 0.1829      | 0.22                      | 0.85        | 0.40   |
| DBWT TREND                                                                                                                                                                                                                                                                                                                 | -4.6336     | 1.84                      | -2.52       | 0.01   |
| R-squared                                                                                                                                                                                                                                                                                                                  | 0.19        | F-statistic               | 7.80        |        |
|                                                                                                                                                                                                                                                                                                                            |             | F-prob                    | 0.00        |        |
| <p>Environment Canada Eastern Degree Day= 3,889.55+0.1829*ECEDD5WA-4.6336*TREND<br/> 5-year weighted average of 4,454 is used for 2020 to generate 2020 degree day forecast.<br/> Trend variables takes the values from 1 to 69 for the period of 1950-2018. 71 is used for 2020 to generate 2020 degree day forecast.</p> |             |                           |             |        |

- The degree day forecast for the Niagara weather zone was prepared using the 10-year Moving Average method. Table 6 displays the actual Environment Canada degree day data for the Niagara weather zone and the resultant degree day forecast which is calculated using data covering the period 2009 to 2018<sup>3</sup>.

<sup>3</sup> The 10 year moving average for year  $t$  is calculated as  $(DD_{t-2}+DD_{t-3}+ \dots +DD_{t-10}+DD_{t-11})/10$  where DD is the actual degree day value.

**Table 6**  
Environment Canada Degree Day Forecast – Niagara

| <i>Col. 1</i>                        | <i>Col. 2</i>       |
|--------------------------------------|---------------------|
| Calendar Year                        | Actual <sup>1</sup> |
| 2009                                 | 3,565               |
| 2010                                 | 3,344               |
| 2011                                 | 3,458               |
| 2012                                 | 3,021               |
| 2013                                 | 3,527               |
| 2014                                 | 3,832               |
| 2015                                 | 3,450               |
| 2016                                 | 3,100               |
| 2017                                 | 3,258               |
| 2018                                 | 3,488               |
| 2020 Forecast (10-yr Moving average) | 3,404               |

<sup>1</sup>Environment Canada heating degree day observations from St. Catherines Airport until August 2008. Effective September 2008 Environment Canada is no longer able to provide degree day data for St.Catherines Airport. Data from September 2008 and thereafter are obtained from the Vineland Climate Station.

### Gas Supply Degree Day Conversion

- The final step in the degree day forecast involves the conversion of Environment Canada degree days to Gas Supply degree days. Environment Canada daily degree days are calculated as the average of daily minimum and maximum temperatures within a 24-hour period. On the other hand, Gas Supply degree days are determined relative to average hourly temperatures within a 24-hour period. The latter is used by EGD's Gas Control as it is perceived to be more representative of temperature variations within a given day. Although there are differences between the two measurements, the data sets are highly correlated.

7. The conversion leverages the correlation between both series and is carried out by regressing actual Gas Supply degree days onto actual Environment Canada degree days. The resultant equation (one for each weather zone) is used to convert the Environment Canada degree day forecast to the Gas Supply degree day forecast. Tables 7, 8 and 9 display actual Environment Canada degree days, actual Gas Supply degree days and the resultant Gas Supply degree day forecasts for the 2020 for each of the Central, Eastern, and Niagara regions, respectively. Each conversion model uses a sample that is consistent with the prescribed approved methodology to generate the forecasts. The sample for the Eastern region utilizes all the historical data available for Gas Supply degree days.

**Table 7**  
Determination of Gas Supply Equivalent Degree Days - Central

| <i>Col. 1</i>                                       | <i>Col. 2</i>                         | <i>Col. 3</i>                 |
|-----------------------------------------------------|---------------------------------------|-------------------------------|
| Calendar Year                                       | Actual Environment Canada Degree Days | Actual Gas Supply Degree Days |
| 1997                                                | 4,026                                 | 3,966                         |
| 1998                                                | 3,220                                 | 3,202                         |
| 1999                                                | 3,539                                 | 3,497                         |
| 2000                                                | 3,826                                 | 3,784                         |
| 2001                                                | 3,420                                 | 3,400                         |
| 2002                                                | 3,630                                 | 3,597                         |
| 2003                                                | 3,982                                 | 3,949                         |
| 2004                                                | 3,798                                 | 3,766                         |
| 2005                                                | 3,797                                 | 3,750                         |
| 2006                                                | 3,378                                 | 3,355                         |
| 2007                                                | 3,722                                 | 3,659                         |
| 2008                                                | 3,837                                 | 3,801                         |
| 2009                                                | 3,836                                 | 3,767                         |
| 2010                                                | 3,501                                 | 3,466                         |
| 2011                                                | 3,215                                 | 3,597                         |
| 2012                                                | 3,775                                 | 3,194                         |
| 2013                                                | 4,103                                 | 3,746                         |
| 2014                                                | 4,103                                 | 4,044                         |
| 2015                                                | 3,766                                 | 3,710                         |
| 2016                                                | 3,462                                 | 3,412                         |
| 2017                                                | 3,502                                 | 3,499                         |
| 2018                                                | 3,758                                 | 3,728                         |
| 2020 Forecast (10-year Moving average) <sup>1</sup> |                                       | 3,616                         |
| 2020 Forecast (20-year Trend) <sup>2</sup>          |                                       | 3,626                         |
| 2020 Forecast (50:50 Hybrid) <sup>3</sup>           |                                       | 3,621                         |

<sup>1</sup>2020 forecast (10-year Moving average) is calculated using the following regression equation:  
Gas Supply degree day =132.1691+0.9528\*(Environment Canada degree day)  
R-squared=0.9952, Adjusted R-squared=0.9946, F-statistic=1651.55, Prob(F-statistic)=0.000000

<sup>2</sup>2020 forecast (20-year Trend) is calculated using the following regression equation:  
Gas Supply degree day =98.2605+0.9627\*(Environment Canada degree day)  
R-squared=0.9955, Adjusted R-squared=0.9953, F-statistic=4,001.4, Prob(F-statistic)=0.000000

<sup>3</sup>2020 forecast (50:50 Hybrid) is an average of 10-year Moving average and 20-year Trend.

**Table 8**  
Determination of Gas Supply Equivalent Degree Days - Eastern

| <i>Col. 1</i>              | <i>Col. 2</i>                         | <i>Col. 3</i>                 |
|----------------------------|---------------------------------------|-------------------------------|
| Calendar Year              | Actual Environment Canada Degree Days | Actual Gas Supply Degree Days |
| 1970                       | 4,899                                 | 5,018                         |
| 1971                       | 4,797                                 | 4,584                         |
| 1972                       | 5,014                                 | 4,816                         |
| 1973                       | 4,420                                 | 4,480                         |
| 1974                       | 4,725                                 | 4,858                         |
| 1975                       | 4,514                                 | 4,229                         |
| 1976                       | 5,008                                 | 4,901                         |
| 1977                       | 4,597                                 | 4,604                         |
| 1978                       | 4,939                                 | 4,920                         |
| 1979                       | 4,589                                 | 4,550                         |
| 1980                       | 4,920                                 | 4,853                         |
| 1981                       | 4,438                                 | 4,361                         |
| 1982                       | 4,647                                 | 4,617                         |
| 1983                       | 4,536                                 | 4,515                         |
| 1984                       | 4,535                                 | 4,504                         |
| 1985                       | 4,659                                 | 4,648                         |
| 1986                       | 4,501                                 | 4,507                         |
| 1987                       | 4,328                                 | 4,268                         |
| 1988                       | 4,640                                 | 4,601                         |
| 1989                       | 4,931                                 | 4,883                         |
| 1990                       | 4,250                                 | 4,225                         |
| 1991                       | 4,303                                 | 4,270                         |
| 1992                       | 4,861                                 | 4,746                         |
| 1993                       | 4,780                                 | 4,715                         |
| 1994                       | 4,730                                 | 4,700                         |
| 1995                       | 4,585                                 | 4,530                         |
| 1996                       | 4,603                                 | 4,561                         |
| 1997                       | 4,786                                 | 4,711                         |
| 1998                       | 3,828                                 | 3,802                         |
| 1999                       | 4,137                                 | 4,112                         |
| 2000                       | 4,543                                 | 4,506                         |
| 2001                       | 4,115                                 | 4,071                         |
| 2002                       | 4,381                                 | 4,317                         |
| 2003                       | 4,715                                 | 4,663                         |
| 2004                       | 4,637                                 | 4,598                         |
| 2005                       | 4,421                                 | 4,397                         |
| 2006                       | 4,037                                 | 4,012                         |
| 2007                       | 4,447                                 | 4,411                         |
| 2008                       | 4,488                                 | 4,431                         |
| 2009                       | 4,534                                 | 4,472                         |
| 2010                       | 3,973                                 | 3,947                         |
| 2011                       | 4,144                                 | 4,108                         |
| 2012                       | 4,055                                 | 4,048                         |
| 2013                       | 4,402                                 | 4,484                         |
| 2014                       | 4,632                                 | 4,552                         |
| 2015                       | 4,486                                 | 4,397                         |
| 2016                       | 4,322                                 | 4,231                         |
| 2017                       | 4,378                                 | 4,318                         |
| 2018                       | 4,547                                 | 4,459                         |
| 2020 Forecast <sup>1</sup> |                                       | 4,336                         |

<sup>1</sup>2020 forecast is calculated using the following regression equation:  
Gas Supply degree days = 150.2579+0.9567\*(Environment Canada degree days)  
R-squared=0.9379, Adjusted R-squared=0.9366, F-statistic=709.54, Prob(F-statistic)=0.000000

**Table 9**  
Determination of Gas Supply Equivalent Degree Days - Niagara

| <i>Col. 1</i>              | <i>Col. 2</i>                         | <i>Col. 3</i>                 |
|----------------------------|---------------------------------------|-------------------------------|
| Calendar Year              | Actual Environment Canada Degree Days | Actual Gas Supply Degree Days |
| 2006                       | 3,163                                 | 3,079                         |
| 2007                       | 3,296                                 | 3,349                         |
| 2008                       | 3,480                                 | 3,510                         |
| 2009                       | 3,565                                 | 3,547                         |
| 2010                       | 3,344                                 | 3,322                         |
| 2011                       | 3,458                                 | 3,334                         |
| 2012                       | 3,021                                 | 3,013                         |
| 2013                       | 3,527                                 | 3,537                         |
| 2014                       | 3,832                                 | 3,814                         |
| 2015                       | 3,450                                 | 3,548                         |
| 2016                       | 3,100                                 | 3,233                         |
| 2017                       | 3,258                                 | 3,282                         |
| 2018                       | 3,488                                 | 3,537                         |
| 2020 Forecast <sup>1</sup> |                                       | 3,417                         |

<sup>1</sup>2020 forecast is calculated using the following regression equation:

Gas Supply degree days =  $344.14 + 0.9027 * (\text{Environment Canada degree days})$

R-squared=0.91, Adjusted R-squared=0.90, F-statistic=82.10, Prob(F-statistic)=0.0000

### 2020 Degree Day Forecasts:

**Table 10**  
Summary of 2020 Degree Days Forecast

| <b>Region</b> | <b>Environment Canada Degree Days</b> | <b>Gas Supply Degree Days</b> |
|---------------|---------------------------------------|-------------------------------|
| Central       | 3,660                                 | 3,621                         |
| Eastern       | 4,375                                 | 4,336                         |
| Niagara       | 3,404                                 | 3,417                         |

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: LPMA.4 a) and 4 b)

---

**Response:**

Please see tables below.

## Union South Rate Zone Degree Days

|      | Annual Htg.<br>Deg.Days | 30 Year<br>Average | 20 Yr Trend | Nomal Htg.<br>Deg.Days before<br>Leap Year<br>Adjustment | Leap Year<br>Adjustment | Nomal Htg.<br>Deg.Days |
|------|-------------------------|--------------------|-------------|----------------------------------------------------------|-------------------------|------------------------|
|      | (1)                     | (2)                | (3)         | (4)=(2+3)/2                                              | (5)                     | (6) = (4+5)            |
| 1989 | 4,153.9                 |                    |             |                                                          |                         |                        |
| 1990 | 3,571.5                 |                    |             |                                                          |                         |                        |
| 1991 | 3,631.2                 |                    |             |                                                          |                         |                        |
| 1992 | 4,030.7                 |                    |             |                                                          |                         |                        |
| 1993 | 4,104.9                 |                    |             |                                                          |                         |                        |
| 1994 | 4,054.8                 |                    |             |                                                          |                         |                        |
| 1995 | 3,987.0                 |                    |             |                                                          |                         |                        |
| 1996 | 4,152.5                 |                    |             |                                                          |                         |                        |
| 1997 | 4,005.1                 |                    |             |                                                          |                         |                        |
| 1998 | 3,174.9                 |                    |             |                                                          |                         |                        |
| 1999 | 3,553.5                 |                    | 3,680.1     |                                                          |                         |                        |
| 2000 | 3,791.6                 |                    | 3,683.7     |                                                          |                         |                        |
| 2001 | 3,468.6                 |                    | 3,687.3     |                                                          |                         |                        |
| 2002 | 3,652.1                 |                    | 3,690.9     |                                                          |                         |                        |
| 2003 | 3,988.1                 |                    | 3,694.4     |                                                          |                         |                        |
| 2004 | 3,806.6                 |                    | 3,698.0     |                                                          |                         |                        |
| 2005 | 3,837.5                 |                    | 3,701.6     |                                                          |                         |                        |
| 2006 | 3,407.4                 |                    | 3,705.2     |                                                          |                         |                        |
| 2007 | 3,699.9                 |                    | 3,708.8     |                                                          |                         |                        |
| 2008 | 3,869.1                 |                    | 3,712.3     |                                                          |                         |                        |
| 2009 | 3,824.1                 |                    | 3,715.9     |                                                          |                         |                        |
| 2010 | 3,573.6                 |                    | 3,719.5     |                                                          |                         |                        |
| 2011 | 3,695.1                 |                    | 3,723.1     |                                                          |                         |                        |
| 2012 | 3,274.2                 |                    | 3,726.7     |                                                          |                         |                        |
| 2013 | 3,874.6                 |                    | 3,730.2     |                                                          |                         |                        |
| 2014 | 4,221.1                 |                    | 3,733.8     |                                                          |                         |                        |
| 2015 | 3,834.2                 |                    | 3,737.4     |                                                          |                         |                        |
| 2016 | 3,509.8                 |                    | 3,741.0     |                                                          |                         |                        |
| 2017 | 3,562.4                 |                    | 3,744.6     |                                                          |                         |                        |
| 2018 | 3,839.0                 | 3,771.6            | 3,748.1     |                                                          |                         |                        |
| 2019 |                         | 3,771.6            | 3,751.7     |                                                          |                         |                        |
| 2020 |                         | 3,771.6            | 3,755.3     | 3,763.5                                                  | 22.4                    | 3,785.9                |

Notes:

- (2) The 30 years average corresponds for years from 1989 to 2018
- (3) The 20 years trend regression corresponds for years from 1999 to 2018
- (5) Leap year adjustment accounts for the February 29th day in 2020. Daily Average Degree Day

20 YEAR TREND REGRESSION RESULTS: SUMMARY OUTPUT

| <i>Regression Statistics</i> |        |
|------------------------------|--------|
| Multiple R                   | 9.6%   |
| R Square                     | 0.9%   |
| Adjusted R Square            | -4.6%  |
| Standard Error               | 224.59 |
| Observations                 | 20     |

| <i>ANOVA</i> |           |            |           |          |                       |
|--------------|-----------|------------|-----------|----------|-----------------------|
|              | <i>df</i> | <i>SS</i>  | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
| Regression   | 1         | 8,520.26   | 8,520.26  | 0.17     | 0.69                  |
| Residual     | 18        | 907,906.56 | 50,439.25 |          |                       |
| Total        | 19        | 916,426.82 |           |          |                       |

|           | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> |
|-----------|---------------------|-----------------------|---------------|----------------|------------------|------------------|
| Intercept | (3,475.19)          | 17,492.31             | (0.20)        | 0.84           | (40,225.16)      | 33,274.79        |
| Trend     | 3.58                | 8.71                  | 0.41          | 0.69           | (14.72)          | 21.88            |

## Union North Rate Zone Degree Days

|      | Annual Htg.<br>Deg.Days | 30 Year Average | 20 Yr Trend | Nomal Htg.<br>Deg.Days<br>before Leap<br>Year<br>Adjustment | Leap Year<br>Adjustment | Nomal Htg.<br>Deg.Days |
|------|-------------------------|-----------------|-------------|-------------------------------------------------------------|-------------------------|------------------------|
|      | (1)                     | (2)             | (3)         | (4)=(2+3)/2                                                 | (5)                     | (6) = (4+5)            |
| 1989 | 5,654.2                 |                 |             |                                                             |                         |                        |
| 1990 | 4,993.8                 |                 |             |                                                             |                         |                        |
| 1991 | 5,018.5                 |                 |             |                                                             |                         |                        |
| 1992 | 5,488.9                 |                 |             |                                                             |                         |                        |
| 1993 | 5,460.3                 |                 |             |                                                             |                         |                        |
| 1994 | 5,293.6                 |                 |             |                                                             |                         |                        |
| 1995 | 5,357.8                 |                 |             |                                                             |                         |                        |
| 1996 | 5,550.0                 |                 |             |                                                             |                         |                        |
| 1997 | 5,384.1                 |                 |             |                                                             |                         |                        |
| 1998 | 4,457.4                 |                 |             |                                                             |                         |                        |
| 1999 | 4,754.0                 |                 | 4,886.7     |                                                             |                         |                        |
| 2000 | 5,065.1                 |                 | 4,886.1     |                                                             |                         |                        |
| 2001 | 4,612.9                 |                 | 4,885.5     |                                                             |                         |                        |
| 2002 | 5,006.5                 |                 | 4,884.9     |                                                             |                         |                        |
| 2003 | 5,146.5                 |                 | 4,884.3     |                                                             |                         |                        |
| 2004 | 5,216.2                 |                 | 4,883.6     |                                                             |                         |                        |
| 2005 | 4,865.8                 |                 | 4,883.0     |                                                             |                         |                        |
| 2006 | 4,472.7                 |                 | 4,882.4     |                                                             |                         |                        |
| 2007 | 4,887.8                 |                 | 4,881.8     |                                                             |                         |                        |
| 2008 | 5,039.7                 |                 | 4,881.2     |                                                             |                         |                        |
| 2009 | 5,049.0                 |                 | 4,880.6     |                                                             |                         |                        |
| 2010 | 4,461.5                 |                 | 4,880.0     |                                                             |                         |                        |
| 2011 | 4,741.0                 |                 | 4,879.3     |                                                             |                         |                        |
| 2012 | 4,367.3                 |                 | 4,878.7     |                                                             |                         |                        |
| 2013 | 5,130.6                 |                 | 4,878.1     |                                                             |                         |                        |
| 2014 | 5,360.7                 |                 | 4,877.5     |                                                             |                         |                        |
| 2015 | 4,912.0                 |                 | 4,876.9     |                                                             |                         |                        |
| 2016 | 4,627.9                 |                 | 4,876.3     |                                                             |                         |                        |
| 2017 | 4,828.3                 |                 | 4,875.6     |                                                             |                         |                        |
| 2018 | 5,072.0                 | 5,009.2         | 4,875.0     |                                                             |                         |                        |
| 2019 |                         | 5,009.2         | 4,874.4     |                                                             |                         |                        |
| 2020 |                         | 5,009.2         | 4,873.8     | 4,941.5                                                     | 27.9                    | 4,969.4                |

Notes:

(2) The 30 years average corresponds for years from 1989 to 2018

(3) The 20 years trend regression corresponds for years from 1999 to 2018

(5) Leap year adjustment accounts for the February 29th day in 2020. Daily Average Degree Day

20 YEAR TREND REGRESSION RESULTS: SUMMARY OUTPUT

| <i>Regression Statistics</i> |        |
|------------------------------|--------|
| Multiple R                   | 1.3%   |
| R Square                     | 0.0%   |
| Adjusted R Square            | -5.5%  |
| Standard Error               | 278.57 |
| Observations                 | 20     |

| <i>ANOVA</i> |           |              |           |          |                       |
|--------------|-----------|--------------|-----------|----------|-----------------------|
|              | <i>df</i> | <i>SS</i>    | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
| Regression   | 1         | 252.32       | 252.32    | 0.00     | 0.96                  |
| Residual     | 18        | 1,396,857.03 | 77,603.17 |          |                       |
| Total        | 19        | 1,397,109.36 |           |          |                       |

|           | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> |
|-----------|---------------------|-----------------------|---------------|----------------|------------------|------------------|
| Intercept | 6,118.08            | 21,697.14             | 0.28          | 0.78           | (39,465.93)      | 33,274.79        |
| Trend     | (0.62)              | 10.80                 | (0.06)        | 0.96           | (23.31)          | 21.88            |

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: Energy probe.2

**Response:**

Energy Probe. 2

Please see below the updated Average Use Tables provided in EB-2018-0305 Undertaking JT1.14

| Year    | Rate M1 |        | Actual vs<br>Target<br>%<br>variance | Rate M2 |         | Actual vs<br>Target<br>%<br>variance |
|---------|---------|--------|--------------------------------------|---------|---------|--------------------------------------|
|         | Actual  | Target |                                      | Actual  | Target  |                                      |
| 2013    | 2,768   | 2,778  | -0.4%                                | 169,422 | 143,867 | 17.8%                                |
| 2014    | 2,748   | 2,751  | -0.1%                                | 167,537 | 165,085 | 1.5%                                 |
| 2015    | 2,676   | 2,761  | -3.1%                                | 163,129 | 169,121 | -3.5%                                |
| 2016    | 2,667   | 2,852  | -6.5%                                | 159,933 | 172,693 | -7.4%                                |
| 2017    | 2,764   | 2,738  | 0.9%                                 | 166,969 | 166,297 | 0.4%                                 |
| 2018    | 2,810   | 2,654  | 5.9%                                 | 171,248 | 159,319 | 7.5%                                 |
| Average |         |        | -0.5%                                |         |         | 2.7%                                 |

| Year    | Rate 01 |        | Actual vs<br>Target<br>% variance | Rate 10 |         | Actual vs<br>Target<br>% variance |
|---------|---------|--------|-----------------------------------|---------|---------|-----------------------------------|
|         | Actual  | Target |                                   | Actual  | Target  |                                   |
| 2013    | 2,900   | 2,765  | 4.9%                              | 168,975 | 157,381 | 7.4%                              |
| 2014    | 2,923   | 2,898  | 0.9%                              | 172,516 | 167,443 | 3.0%                              |
| 2015    | 2,799   | 2,901  | -3.5%                             | 162,078 | 169,025 | -4.1%                             |
| 2016    | 2,788   | 3,015  | -7.5%                             | 159,855 | 177,214 | -9.8%                             |
| 2017    | 2,835   | 2,844  | -0.3%                             | 163,483 | 164,329 | -0.5%                             |
| 2018    | 2,864   | 2,771  | 3.3%                              | 167,467 | 158,894 | 5.4%                              |
| Average |         |        | -0.4%                             |         |         | 0.2%                              |

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: Kitchener 1, Kitchener 2

---

**Response:**

Please see Attachment 1.

UNION RATE ZONES  
Analysis of Rate T1, T2 and T3 2020 PDO and ICM Unit Rates

| Line No.                           | Particulars           | Proposed 2020 Base | Proposed 2019 Base | 2020 Rates              |             | 2019 Rates              |             | Change                  |             |
|------------------------------------|-----------------------|--------------------|--------------------|-------------------------|-------------|-------------------------|-------------|-------------------------|-------------|
|                                    |                       | Rates (1)          | Rates (2)          | Rate (3)                | % of 2020   | Rate (4)                | % of 2019   | Rate                    | %           |
|                                    |                       | (a)                | (b)                | (cents/m <sup>3</sup> ) | Base Rate   | (cents/m <sup>3</sup> ) | Base Rate   | (cents/m <sup>3</sup> ) | Change      |
|                                    |                       |                    |                    | (c)                     | (d) = (c/a) | (e)                     | (f) = (e/b) | (g) = (c-e)             | (h) = (g/e) |
| <u>Parkway Delivery Obligation</u> |                       |                    |                    |                         |             |                         |             |                         |             |
|                                    | Rate T1               |                    |                    |                         |             |                         |             |                         |             |
|                                    | Monthly Demand Charge |                    |                    |                         |             |                         |             |                         |             |
| 1                                  | First 28,150 m³       | 31.1523            | 31.0068            | 2.8239                  | 9.1%        | 2.6564                  | 8.6%        | 0.1675                  | 6.3%        |
| 2                                  | Next 112,720 m³       | 21.5227            | 21.4222            | 1.9510                  | 9.1%        | 1.8353                  | 8.6%        | 0.1157                  | 6.3%        |
|                                    | Rate T2               |                    |                    |                         |             |                         |             |                         |             |
|                                    | Monthly Demand Charge |                    |                    |                         |             |                         |             |                         |             |
| 3                                  | First 140,870 m³      | 26.2501            | 26.3314            | 2.0293                  | 7.7%        | 2.0897                  | 7.9%        | (0.0604)                | -2.9%       |
| 4                                  | All Over 140,870 m³   | 13.8850            | 13.9280            | 1.0734                  | 7.7%        | 1.1054                  | 7.9%        | (0.0320)                | -2.9%       |
|                                    | Rate T3               |                    |                    |                         |             |                         |             |                         |             |
| 5                                  | Monthly Demand Charge | 13.5245            | 13.3051            | 3.9304                  | 29.1%       | 3.6780                  | 27.6%       | 0.2524                  | 6.9%        |
| <u>Incremental Capital Module</u>  |                       |                    |                    |                         |             |                         |             |                         |             |
|                                    | Rate T1               |                    |                    |                         |             |                         |             |                         |             |
|                                    | Monthly Demand Charge |                    |                    |                         |             |                         |             |                         |             |
| 6                                  | First 28,150 m³       | 31.1523            | 31.0068            | 1.1130                  | 3.6%        | 1.1130                  | 3.6%        | -                       | 0.0%        |
| 7                                  | Next 112,720 m³       | 21.5227            | 21.4222            | 1.1130                  | 5.2%        | 1.1130                  | 5.2%        | -                       | 0.0%        |
|                                    | Rate T2               |                    |                    |                         |             |                         |             |                         |             |
|                                    | Monthly Demand Charge |                    |                    |                         |             |                         |             |                         |             |
| 8                                  | First 140,870 m³      | 26.2501            | 26.3314            | 0.9649                  | 3.7%        | 0.9649                  | 3.7%        | -                       | 0.0%        |
| 9                                  | All Over 140,870 m³   | 13.8850            | 13.9280            | 0.9649                  | 6.9%        | 0.9649                  | 6.9%        | -                       | 0.0%        |
|                                    | Rate T3               |                    |                    |                         |             |                         |             |                         |             |
| 10                                 | Monthly Demand Charge | 13.5245            | 13.3051            | 0.9910                  | 7.3%        | 0.9910                  | 7.4%        | -                       | 0.0%        |

Notes:

- (1) Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 6, column (a).
- (2) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 6, column (a).
- (3) Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 6, columns (c) & (d).
- (4) EB-2018-0305, Exhibit F1, Tab 2, Rate Order, Working Papers, Schedule 6, columns (c) & (d).

UNION RATE ZONES  
Derivation of Rate T1, T2 and T3 2020 PDO and ICM Demand Unit Rates

| Line No.                                | Particulars                     | 2020 Forecast<br>Dawn-Parkway<br>Design Day<br>Demands (1)<br>(10 <sup>3</sup> m <sup>3</sup> /d)<br>(a) | 2020 Forecast<br>Other Transmission<br>Design Day<br>Demands (2)<br>(10 <sup>3</sup> m <sup>3</sup> /d)<br>(b) | Total<br>Demand<br>Costs (3) (4)<br>(\$000's)<br>(c) | Annual<br>Forecast<br>Usage (5)<br>(10 <sup>3</sup> m <sup>3</sup> /d)<br>(d) | Average<br>Monthly<br>Forecast<br>Usage<br>(10 <sup>3</sup> m <sup>3</sup> /d)<br>(e) = (d/12) | 2020<br>Rate<br>(cents/m <sup>3</sup> )<br>(f) = (c/d * 100) |
|-----------------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <u>2020 Parkway Delivery Obligation</u> |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| Rate T1                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 1                                       | Monthly Demand Charge           |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 2                                       | First 28,150 m <sup>3</sup>     |                                                                                                          |                                                                                                                | 413                                                  | 14,609                                                                        |                                                                                                | 2.8239                                                       |
| 3                                       | Next 112,720 m <sup>3</sup>     |                                                                                                          |                                                                                                                | 229                                                  | 11,721                                                                        |                                                                                                | 1.9510                                                       |
|                                         | Total                           | 1,462                                                                                                    |                                                                                                                | 641                                                  | 26,330                                                                        | 2,194                                                                                          |                                                              |
| Rate T2                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 4                                       | Monthly Demand Charge           |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 5                                       | First 140,870 m <sup>3</sup>    |                                                                                                          |                                                                                                                | 1,199                                                | 59,066                                                                        |                                                                                                | 2.0293                                                       |
| 6                                       | All Over 140,870 m <sup>3</sup> |                                                                                                          |                                                                                                                | 2,289                                                | 213,243                                                                       |                                                                                                | 1.0734                                                       |
|                                         | Total                           | 7,951                                                                                                    |                                                                                                                | 3,488                                                | 272,309                                                                       | 22,692                                                                                         |                                                              |
| Rate T3                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 7                                       | Monthly Demand Charge           | 2,527                                                                                                    |                                                                                                                | 1,108                                                | 28,200                                                                        | 2,350                                                                                          | 3.9304                                                       |
| 8                                       | Other                           | 37,464                                                                                                   |                                                                                                                | 16,432                                               |                                                                               |                                                                                                |                                                              |
| 9                                       | Total                           | 49,404                                                                                                   |                                                                                                                | 21,669                                               |                                                                               |                                                                                                |                                                              |
| <u>2019 Incremental Capital Module</u>  |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| Rate T1                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 10                                      | Monthly Demand Charge           |                                                                                                          | 2,572                                                                                                          | 287                                                  | 25,824                                                                        | 2,152                                                                                          | 1.1130                                                       |
| Rate T2                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 11                                      | Monthly Demand Charge           |                                                                                                          | 23,429                                                                                                         | 2,618                                                | 271,326                                                                       | 22,610                                                                                         | 0.9649                                                       |
| Rate T3                                 |                                 |                                                                                                          |                                                                                                                |                                                      |                                                                               |                                                                                                |                                                              |
| 12                                      | Monthly Demand Charge           |                                                                                                          | 2,501                                                                                                          | 279                                                  | 28,200                                                                        | 2,350                                                                                          | 0.9910                                                       |
| 13                                      | Other                           |                                                                                                          | 51,953                                                                                                         | 5,805                                                |                                                                               |                                                                                                |                                                              |
| 14                                      | Total                           |                                                                                                          | 80,456                                                                                                         | 8,990                                                |                                                                               |                                                                                                |                                                              |

Notes:

- (1) Dawn-Parkway design day demands per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, p. 3, column (a).
- (2) Other Transmission design day demands per EB-2018-0305, Exhibit M1, Tab 1, Appendix C, column (a).
- (3) Total demand costs allocated to rate classes in proportion to column (a) or (b).  
2020 PDO demand costs per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, p. 2, column (g).  
2019 ICM demand costs per EB-2018-0305, Exhibit M1, Tab 1, Appendix C, column (d).
- (4) 2020 PDO costs allocated to demand blocks in proportion to current approved revenue.
- (5) 2020 forecast usage per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 11, p. 10, column (a).  
2019 forecast usage per EB-2018-0305, Exhibit M1, Tab 1, Appendix D, column (b).

ENBRIDGE GAS INC.

Interrogatory Response

Response to Interrogatory: Kitchener 3, Kitchener 4

---

**Response:**

Please see Attachment 1.

UNION RATE ZONES  
Derivation of Rate T3 2020 Monthly Charge and Transportation Fuel Ratio

| Line No. | Particulars               |         | 2019<br>Rate (1) | 2020 Rate Adjustments |                                            |                        | 2020<br>Rate (1) | Increase/<br>(Decrease) |
|----------|---------------------------|---------|------------------|-----------------------|--------------------------------------------|------------------------|------------------|-------------------------|
|          |                           |         |                  | 1.36%<br>PCI (2)      | 2020 Capital<br>Pass-through<br>Change (3) | 2020 PDO<br>Change (4) |                  |                         |
|          |                           |         | (a)              | (b)                   | (c)                                        | (d)                    | (e) = (a+b+c+d)  | (f) = (e-a)             |
| 1        | Monthly charge (\$/month) | Rate T3 | 20,622.21        | 291.57                | 93.19                                      | -                      | 21,006.97        | 384.76                  |
| 2        | Transportation fuel ratio | Rate T1 | 0.326%           | 0.004%                | -                                          | 0.009%                 | 0.338%           | 0.012%                  |
| 3        |                           | Rate T2 | 0.291%           | 0.003%                | -                                          | -0.001%                | 0.294%           | 0.003%                  |
| 4        |                           | Rate T3 | 0.402%           | 0.004%                | -                                          | -0.005%                | 0.401%           | -0.001%                 |

Notes:

- (1) Exhibit D, Tab 2, Rate Order, Appendix A.
- (2) Monthly charge PCI per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 5, p. 20, line 11, column (g) divided by 12.  
Transportation fuel ratio PCI per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 7, p. 1, column (d).
- (3) Monthly charge capital pass-through per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 5, p. 19 & 20, line 11, column (e) + (j) divided by 12.
- (4) Transportation fuel ratio PDO per Exhibit D, Tab 2, Rate Order, Working Papers, Schedule 7, p. 1, column (b) + (i).