## CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2018 - April 30, 2019

| (Col 1) | (Col 2) | (Col 3) |  |
| :---: | :---: | :---: | :---: |
| Total Anticipated Direct Cost of Gas | \$27,122,704 |  |  |
| Projected Prorated Sales (11/01/18-04/30/19) | 34,882,919 |  |  |
| Direct Cost of Gas Rate |  | \$0.7775 | per therm |
| Demand Cost of Gas Rate | \$11,747,382 | \$0.3368 | per therm |
| Commodity Cost of Gas Rate | \$15,382,305 | \$0.4410 | per therm |
| Total Direct Cost of Gas Rate | \$27,128,686 | \$0.7778 | per therm |
| Total Anticipated Indirect Cost of Gas | \$1,719,515 |  |  |
| Projected Prorated Sales (11/01/18-04/30/19) | 34,882,919 |  |  |
| Indirect Cost of Gas |  | \$0.0493 | per therm |
| TOTAL PERIOD AVERAGE COST OF GAS |  | \$0.8271 | per therm |
| Period endig under-collection to be recovered as determined on 11/20/2018 | \$2,089,524 |  |  |
| Projected Sales (12/01/18-04/30/2019) | 30,651,027 |  |  |
| Per unit change in Cost of Gas (12/01/18-04/30/19) | \$0.0682 |  |  |
| Period endig under-collection to be recovered as determined on 12/21/2018 | $(\$ 803,174)$ |  |  |
| Projected Sales (01/01/19-04/30/2019) | 24,024,712 |  |  |
| Per unit change in Cost of Gas (01/01/19-04/30/19) | (\$0.0334) |  |  |
| Period endig under-collection to be recovered as determined on 2/22/2019 | (\$894,495) |  |  |
| Projected Sales (03/01/19-04/30/2019) | 9,240,858 |  |  |
| Per unit change in Cost of Gas (03/01/19-04/30/19) | (\$0.0968) |  |  |


| RESIDENTIAL COST OF GAS RATE -03/01/19 | COGwr | \$0.7650 |
| :--- | :--- | :---: |
|  | per therm |  |
|  | Maximum (COG+25\%) | $\$ 1.0339$ |
| RESIDENTIAL COST OF GAS RATES $-11 / 01 / 2018$ |  | $\$ 0.8271$ |
| CHANGE IN PER UNIT COST |  | $\$ 0.0682$ |
| RESIDENTIAL COST OF GAS RATES -12/01/2018 |  | $\mathbf{( \$ 0 . 8 9 5 3}$ |
| CHANGE IN PER UNIT COST | $\$ 0.834)$ |  |
| RESIDENTIL COST OF GAS RATES -01/01/2019 |  | $\mathbf{( \$ 0 . 0 9 6 8 )}$ |
| CHANGE IN PER UNIT COST | $\$ 0.7650$ |  |


| COM/IND LOW WINTER USE COST OF GAS RATE - 03/01/19 | COGwI | \$0.6633 |
| :--- | :--- | :--- | per therm


| COM/IND HIGH WINTER USE COST OF GAS RATE - 03/01/19 | COGwh | \$0.7803 per therm |
| :--- | :--- | :--- |


| COM/IND HIGH WINTER USE COST OF GAS RATES $-11 / 01 / 2018$ | $\$ 0.8424$ |
| :--- | :---: |
| CHANGE IN PER UNIT COST | $\$ 0.0682$ |
| COM/IND HIGH WINTER USE COST OF GAS RATES $-12 / 01 / 2018$ | $\$ 0.9106$ |
| CHANGE IN PER UNIT COST | $\mathbf{( \$ 0 . 0 3 3 4 )}$ |
| COM/IND HIGH WINTER USE COST OF GAS RATES $-01 / 01 / 2019$ | $\$ 0.8771$ |
| CHANGE IN PER UNIT COST | $\mathbf{( \$ 0 . 0 9 6 8 )}$ |
| COM/IND HIGH WINTER USE COST OF GAS RATES $-03 / 01 / 2019$ | $\$ 0.7803$ |

$\qquad$
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## NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES

|  | Winter Season November 2018 - April 2019 | Tariff Rates | Total Delivery Rates (Includes LDAC) | Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas |
| :---: | :---: | :---: | :---: | :---: |
| Residential Heating | Tariff Rate R 5: <br> Monthly Customer Charge First 50 therms All usage over 50 therms LDAC Gas Cost Adjustment: Cost of Gas | $\begin{array}{r} \$ 21.36 \\ \$ 0.6660 \\ \$ 0.6660 \\ \$ 0.0691 \\ \\ \$ 0.7650 \end{array}$ | $\begin{array}{ll}  & \$ 21.36 \\ \$ 0.7351 \\ \$ 0.7351 \end{array}$ | $\begin{array}{ll}  & \$ 21.36 \\ \$ 1.5001 \\ \$ 1.5001 \end{array}$ |


| Residential Heating | Tariff Rate R 10: |  |  |  |
| :--- | :--- | ---: | ---: | ---: |
| Low Income | Monthly Customer Charge | $\$ 8.54$ |  | $\mathbf{\$ 8 . 5 4}$ |
|  | First 50 therms | $\$ 0.2664$ | $\mathbf{\$ 0 . 3 3 5 5}$ |  |
|  | All usage over 50 therms | $\$ 0.2664$ | $\$ 0.3355$ |  |
|  | LDAC | $\mathbf{\$ 1 . 1 0 0 5}$ | $\mathbf{\$ 8 . 5 4}$ |  |
|  | Gas Cost Adjustment: |  |  |  |
|  | Cost of Gas | $\mathbf{\$ 0 . 7 6 5 0}$ |  |  |



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## NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON C\&I RATES

|  | Winter Season <br> November 2018 - April 2019 | Tariff Rates | Total Delivery Rates (Includes LDAC) | ```Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas``` |
| :---: | :---: | :---: | :---: | :---: |
| C\&I Low Annual/High Winter | Tariff Rate G 40: <br> Monthly Customer Charge <br> First 75 therms <br> All usage over 75 therms <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 72.26 \\ \$ 0.1795 \\ \$ 0.1795 \\ \mathbf{\$ 0 . 0 3 9 6} \\ \\ \mathbf{\$ 0 . 7 8 0 3} \\ \hline \end{array}$ | $\quad$ \$72.26 $\$ 0.2191$ $\$ 0.2191$ |  $\$ 72.26$ <br> $\$ 0.9994$  <br> $\$ 0.9994$  |
| C\&I Low Annual/Low Winter | Tariff Rate G 50: <br> Monthly Customer Charge <br> First 75 therms <br> All usage over 75 therms LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 72.26 \\ \$ 0.1795 \\ \$ 0.1795 \\ \mathbf{\$ 0 . 0 3 9 6} \\ \\ \$ 0.6633 \\ \hline \end{array}$ | $\begin{aligned} & \quad \$ 72.26 \\ & \$ 0.2191 \\ & \$ 0.2191 \end{aligned}$ |   <br> $\$ 0.8824$  <br> $\$ 0.8824$  |
| C\&I Medium Annual/High Winter | Tariff Rate G 41: <br> Monthly Customer Charge <br> All usage <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 214.26 \\ \$ 0.2334 \\ \$ 0.0396 \\ \\ \$ 0.7803 \end{array}$ | $\begin{aligned} & \$ 214.26 \\ & \$ 0.2730 \end{aligned}$ | $\$ 1.0533{ }^{\$ 214.26}$ |
| C\&I Medium Annual/Low Winter | Tariff Rate G 51: <br> Monthly Customer Charge <br> First 1,300 therms <br> All usage over 1,300 therms <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 214.26 \\ \$ 0.1648 \\ \$ 0.1346 \\ \text { \$0.0396 } \\ \\ \hline \$ 0.6633 \\ \hline \end{array}$ | $\begin{aligned} & \quad \$ 214.26 \\ & \$ 0.2044 \\ & \$ 0.1742 \end{aligned}$ | $\begin{aligned} & \quad \$ 0.8677 \\ & \$ 0.8375 \end{aligned}$ |
| C\&I High Annual/High Winter | Tariff Rate G 42: <br> Monthly Customer Charge <br> All usage <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{gathered} \$ 1,285.55 \\ \$ 0.1909 \\ \$ 0.0396 \\ \\ \$ 0.7803 \\ \hline \end{gathered}$ | $\begin{aligned} & \text { \$1,285.55 } \\ & \$ 0.2305 \end{aligned}$ | $\begin{aligned} & \$ 1,285.55 \\ & \$ 1.0108 \end{aligned}$ |
| C\&I High Annual/Low Winter | Tariff Rate G 52: <br> Monthly Customer Charge <br> All usage <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 1,285.55 \\ \$ 0.1655 \\ \$ 0.0396 \\ \\ \$ 0.6633 \\ \hline \end{array}$ | $\begin{gathered} \$ 1,285.55 \\ \$ 0.2051 \end{gathered}$ | $\begin{gathered} \text { \$1,285.55 } \\ \$ 0.8684 \end{gathered}$ |

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## CALCULATION OF FIRM SALES COST OF GAS RATE

Period Covered: November 1, 2018 - April 30, 2019

| (Col 1) | (Col 2) | (Col 3) |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Total Anticipated Direct Cost of Gas | \$27,122,704 | \$0.7775 |  | per therm |
| Projected Prorated Sales (11/01/18-04/30/19) Direct Cost of Gas Rate | 34,882,919 |  |  |  |
|  |  |  |  |  |
| Demand Cost of Gas Rate | \$11,747,382 |  | \$0.3368 | per therm |
| Commodity Cost of Gas Rate | \$15,382,305 |  | \$0.4410 | per therm |
| Total Direct Cost of Gas Rate | \$27,128,686 | \$0.7778 |  | per therm |
| Total Anticipated Indirect Cost of Gas | 34,882,919 | \$0.0493 |  | per therm |
| Projected Prorated Sales (11/01/18-04/30/19) |  |  |  |  |
| Indirect Cost of Gas |  |  |  |  |
| TOTAL PERIOD AVERAGE COST OF GAS |  | \$0.8271 |  | per therm |
| Period endig under-collection to be recovered as determined on 11/20/2018 | \$2,089,524 |  |  |  |
| Projected Sales (12/01/18-04/30/2019) | 30,651,027 |  |  |  |
| Per unit change in Cost of Gas (12/01/18-04/30/18) | \$0.0682 |  |  |  |
| Period endig under-collection to be recovered as determined on 12/21/2018 | $(\$ 803,174)$ |  |  |  |
| Projected Sales (01/01/19-04/30/2019) | 24,024,712 |  |  |  |
| Per unit change in Cost of Gas (01/01/19-04/30/19) | (\$0.0334) |  |  |  |
| Period endig under-collection to be recovered as determined on 2/22/2019 | (\$894,495) |  |  |  |
| Projected Sales (03/01/19-04/30/2019) | 9,240,858 |  |  |  |
| Per unit change in Cost of Gas (03/01/19-04/30/19) | (\$0.0968) |  |  |  |
| RESIDENTIAL COST OF GAS RATE -01/01/1903/01/19 | COGwr | \$0.8618 | \$0.7650 | per therm |
|  | Maximum (COG+25\%) | \$1.0339 |  |  |
| RESIDENTIAL COST OF GAS RATES - 11/01/2018 | \$0.8271 |  |  |  |
| CHANGE IN PER UNIT COST | \$0.0682 |  |  |  |
| RESIDENTIAL COST OF GAS RATES - 12/01/2018 | $\$ 0.8953$(\$0.0334) |  |  |  |
| CHANGE IN PER UNIT COST |  |  |  |  |  |  |  |
| RESIDENTIAL COST OF GAS RATES - 01/01/2019 | \$0.8618 |  |  |  |
| CHANGE IN PER UNIT COST | (\$0.0968) |  |  |  |
| RESIDENTIAL COST OF GAS RATES - 03/01/2019 | \$0.7650 |  |  |  |
| COMIIND LOW WINTER USE COST OF GAS RATE - 01/01/19-03/01/19 | COGwl | \$0.7601 \$0.6633 |  | per therm |
|  | Maximum (COG+25\%) | \$0.9068 |  |  |
| COM/IND LOW WINTER USE COST OF GAS RATES - 11/01/2018 | \$0.7254 |  |  |  |
| CHANGE IN PER UNIT COST | \$0.0682 |  |  |  |
| COM/IND LOW WINTER USE COST OF GAS RATES - 12/01/2018 | \$0.7936 |  |  |  |
| CHANGE IN PER UNIT COST | (\$0.0334) |  |  |  |
| COM/IND LOW WINTER USE COST OF GAS RATES - 01/01/2019 | \$0.7601 |  |  |  |
| CHANGE IN PER UNIT COST | (\$0.0968) |  |  |  |
| COM/IND LOW WINTER USE COST OF GAS RATES - 03/01/2019 | \$0.6633 |  |  |  |
| COMIIND HIGH WINTER USE COST OF GAS RATE - 01/01/19 03/01/19 | COGwh | \$0.8771 \$0.7803 |  | per therm |
|  | Maximum (COG+25\%) | \$1.0530 |  |  |
| COM/IND HIGH WINTER USE COST OF GAS RATES - 11/01/2018 | \$0.8424 |  |  |  |
| CHANGE IN PER UNIT COST | $\begin{aligned} & \$ 0.0682 \\ & \$ 0.9106 \end{aligned}$ |  |  |  |
| COM/IND HIGH WINTER USE COST OF GAS RATES - 12/01/2018 |  |  |  |  |  |  |  |
| CHANGE IN PER UNIT COST | (\$0.0334) |  |  |  |
| COM/IND HIGH WINTER USE COST OF GAS RATES - 01/01/2019 | \$0.8771 |  |  |  |
| CHANGE IN PER UNIT COST | (\$0.0968) |  |  |  |
| COM/IND HIGH WINTER USE COST OF GAS RATES - 03/01/2019 | \$0.7803 |  |  |  |

## NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION WINTER SEASON RESIDENTIAL RATES





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## NORTHERN UTILITIES - NEW HAMPSHIRE DIVISION

 WINTER SEASON C\&I RATES|  | Winter Season November 2018 - April 2019 | Tariff Rates | Total Delivery Rates (Includes LDAC) | Total Billed Rates Tariff Rates, LDAC Plus Cost of Gas |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| C\&I Low Annual/High Winter | Tariff Rate G 40: <br> Monthly Customer Charge First 75 therms All usage over 75 therms LDAC <br> Gas Cost Adjustment: Cost of Gas | $\begin{aligned} & \$ 72.26 \\ & \$ 0.1795 \\ & \$ 0.1795 \\ & \$ 0.0396 \\ & \\ & \$ 0.8771 \quad \$ 0.7803 \end{aligned}$ | $\begin{aligned} & \$ 72.26 \\ & \$ 0.2191 \\ & \$ 0.2191 \end{aligned}$ | $\begin{aligned} & \$ 72.26 \\ & \$ 1.0962 \\ & \$ 1.0962 \end{aligned}$ | $\begin{aligned} & \$ 0.9994 \\ & \$ 0.9994 \end{aligned}$ |



| C\&I Medium Annual/High Winter | Tariff Rate G 41: <br> Monthly Customer Charge All usage <br> LDAC <br> Gas Cost Adjustment: <br> Cost of Gas | $\begin{array}{r} \$ 214.2 \\ \$ 0.233 \\ \$ 0.035 \\ \$ 0.8771 \end{array}$ | $\$ 0.7803$ | $\begin{array}{r} \$ 214.26 \\ \$ 0.2730 \end{array}$ | $\begin{aligned} & \$ 214.26 \\ & \$ 1.1501 \end{aligned}$ | \$1.0533 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |



| C\&I High Annual/High Winter | Tariff Rate G 42: |  |  |  |  | \$1.0108 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Monthly Customer Charge | $\begin{array}{r} \$ 1,285.55 \\ \$ 0.1909 \\ \$ 0.0396 \end{array}$ |  | $\begin{array}{r} \$ 1,285.55 \\ \$ 0.2305 \end{array}$ | $\begin{aligned} & \$ 1,285.55 \\ & \$ 1.1076 \end{aligned}$ |  |
|  | All usage |  |  |  |  |  |
|  | LDAC |  |  |  |  |  |
|  | Gas Cost Adjustment: <br> Cost of Gas |  |  |  |  |  |



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