## CALCULATION OF THE DEFAULT SERVICE CHARGE



| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 | Reconciliation | $(\$ 87,444)$ | $(\$ 106,790)$ | $(\$ 120,333)$ | (\$101,209) | (\$83,799) | $(\$ 87,903)$ | $(\$ 587,478)$ |
| 18 | Total Costs | \$187,484 | \$228,962 | \$257,993 | \$216,996 | \$179,670 | \$188,467 | \$1,259,573 |
| 19 | Reconciliation plus Total Costs (L. 17 + L.18) | \$100,040 | \$122,172 | \$137,660 | \$115,787 | \$95,871 | \$100,564 | \$672,095 |
| 20 | kWh Purchases | 48,769,983 | 59,559,604 | 67,112,934 | 56,447,027 | 46,736,945 | 49,026,037 | 327,652,529 |
| 21 | Total, Before Losses (L. 19 / L.20) | \$0.00205 | \$0.00205 | \$0.00205 | \$0.00205 | \$0.00205 | \$0.00205 | \$0.00205 |
| 22 | Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% |
| 23 | Total Retail Rate - Variable RPS Charge (L. 21 * (1+L.22)) | \$0.00218 | \$0.00218 | \$0.00218 | \$0.00218 | \$0.00218 | \$0.00218 |  |
| 24 | Total Retail Rate - Fixed RPS Charge (L. 21 * (1+L.22)) |  |  |  |  |  |  | \$0.00218 |

## TOTAL DEFAULT SERVICE CHARGE

Total Retail Rate - Residential Variable Default Service
25 Charge (L. 7 + L. 23 ) $\quad \begin{aligned} & \text { Total Retail Rate - Residential Fixed Default Service }\end{aligned}$
26 Charge (L.8+L.24)
$\begin{array}{llllll}\mathbf{\$ 0 . 0 5 7 8 1} & \mathbf{\$ 0 . 0 6 5 6 0} & \mathbf{\$ 0 . 0 6 0 2 2} & \mathbf{\$ 0 . 0 5 5 3 0} & \mathbf{\$ 0 . 0 5 6 7 7} & \mathbf{\$ 0 . 0 6 1 9 5}\end{array}$
\$0.05978

Total Retail Rate - G2 and OL Variable Default Service
$\begin{array}{llllllll}27 & \text { Charge (L. } 15+\mathbf{L} .23) & \mathbf{\$ 0 . 0 5 6 0 9} & \mathbf{\$ 0 . 0 6 4 2 5} & \mathbf{\$ 0 . 0 6 0 1 6} & \mathbf{\$ 0 . 0 5 4 4 4} & \mathbf{\$ 0 . 0 5 4 5 4} & \mathbf{\$ 0 . 0 6 1 3 1}\end{array}$
Total Retail Rate - G2 and OL Fixed Default Service
28 Charge (L.16+L.24)

## CALCULATION OF THE DEFAULT SERVICE CHARGE



| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 | Reconciliation | $(\$ 90,817)$ | (\$95,068) | (\$91,182) | (\$84,547) | (\$77,401) | $(\$ 72,806)$ | (\$511,822) |
| 18 | Total Costs | \$194,365 | \$417,212 | \$400,160 | \$371,049 | \$339,688 | \$319,525 | \$2,042,000 |
| 19 | Reconciliation plus Total Costs (L. 17 + L. 18) | \$103,548 | \$322,144 | \$308,978 | \$286,502 | \$262,287 | \$246,719 | \$1,530,178 |
| 20 | kWh Purchases | 57,319,256 | 60,002,329 | 57,549,411 | 53,362,007 | 48,851,576 | 45,951,709 | 323,036,288 |
| 21 | Total, Before Losses (L. 19 / L.20) | \$0.00181 | \$0.00537 | \$0.00537 | \$0.00537 | \$0.00537 | \$0.00537 | \$0.00474 |
| 22 | Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% |
| 23 | Total Retail Rate - Variable RPS Charge (L. 21 * (1+L.22)) | \$0.00192 | \$0.00571 | \$0.00571 | \$0.00571 | \$0.00571 | \$0.00571 |  |
|  | Total Retail Rate - Fixed RPS Charge (L.21* (1+L.22)) |  |  |  |  |  |  | \$0.00504 |

## TOTAL DEFAULT SERVICE CHARGE

## Total Retail Rate - Residential Variable Default Service

25 Charge (L. 7 + L. 23 )
26 Charge (L.8+L.24)
$\begin{array}{llllll}\mathbf{\$ 0 . 0 9 1 2 9} & \$ 0.11782 & \$ 0.11650 & \$ 0.09236 & \$ 0.07184 & \$ 0.06079\end{array}$
0.09409

Total Retail Rate - G2 and OL Variable Default Service
$\begin{array}{llllllll}27 & \text { Charge (L. } 15+\mathbf{L} .23) & \$ 0.09139 & \$ 0.11673 & \$ 0.11487 & \$ 0.09096 & \$ 0.07026 & \$ 0.05936\end{array}$
Total Retail Rate - G2 and OL Fixed Default Service
28 Charge (L.16+L.24)

## CALCULATION OF THE DEFAULT SERVICE CHARGE

## G1 Class Default Service:

Jun-16 Jul-16 $\underline{\text { Aug-16 Sep-16 }}$ Oct-16 Nov-16 Total

## Power Supply Charge

1 Reconciliation
(\$101,257)

2 Total Costs excl. wholesale supplier charge
3 Reconciliation plus Total Costs excl. wholesale supplier charge (L. $1+$ L. 2 )

4 kWh Purchases

5 Total, Before Losses (L. 3 / L.4)

6 Losses

7 Power Supply Charge excl. wholesale supplier charge (L. 5 * (1+L.6)) (2)

| 8a Wholesale Supplier Charge | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8b Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 8 Retail Rate - Wholesale Supplier Charge (L.8a * $(1+\mathrm{L} .8 \mathrm{~b}))$ | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| 9 Total Retail Rate - Power Supply Charge (L. $7+$ L. <br> 8) | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |
| 10 Reconciliation | \$1,893 | \$2,075 | \$2,110 | \$2,015 | \$1,865 | \$1,788 | \$11,744 |
| 11 Total Costs | \$14,531 | \$15,934 | \$16,197 | \$15,467 | \$14,316 | \$13,725 | \$90,170 |
| 12 Reconciliation plus Total Costs (L.10+ L.11) | \$16,424 | \$18,009 | \$18,306 | \$17,482 | \$16,181 | \$15,512 | \$101,915 |
| 13 kWh Purchases | 3,721,650 | 4,080,920 | 4,148,210 | 3,961,399 | 3,666,624 | 3,515,052 | 23,093,855 |
| 14 Total, Before Losses (L. 12 / L.13) | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 |  |
| 15 Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 16 Total Retail Rate - RPS Charge (L. 14 * (1+L.15)) | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 |  |

## TOTAL DEFAULT SERVICE CHARGE

17 Total Retail Rate - Default Service Charge (L. 9 + L.16)

MARKET MARKET MARKET MARKET MARKET MARKET

## CALCULATION OF THE DEFAULT SERVICE CHARGE

## G1 Class Default Service:

|  |  | Dec 15 | Jan-16 | Feb-16 | Mar-16 | Apr 16 | May 16 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Power Supply Charge |  |  |  |  |  |  |  |
| 1 | Reconciliation |  |  |  |  |  |  | (\$217,072) |
| 2 | Total Costs excl. wholesale supplier charge |  |  |  |  |  |  | \$21,966 |
|  | Reconciliation plus Total Costs excl. wholesale supplier charge (L. $1+\mathrm{L} .2$ ) |  |  |  |  |  |  | $(\$ 195,105)$ |
| 4 | kWh Purchases |  |  |  |  |  |  | 20,996,114 |
| 5 | Total, Before Losses (L. 3 / L.4) |  |  |  |  |  |  | (\$0.00929) |
| 6 | Losses |  |  |  |  |  |  | 4.591\% |
| 7 | Power Supply Charge excl. wholesale supplier charge (L. 5 * (1+L.6)) (2) | (\$0.00972) | (\$0.00972) | (\$0.00972) | (\$0.00972) | (\$0.00972) | (\$0.00972) | (\$0.00972) |
| 8a | Wholesale Supplier Charge | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| 8b | Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 8 | Retail Rate - Wholesale Supplier Charge (L.8a * $(1+\mathrm{L} .8 \mathrm{~b}))$ | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
|  | Total Retail Rate - Power Supply Charge (L. 7 + L. <br> 8) | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
|  | Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |
| 10 | Reconciliation | $(\$ 6,910)$ | (\$6,630) | (\$6,718) | (\$7,010) | (\$6,565) | (\$6,799) | $(\$ 40,632)$ |
| 11 | Total Costs | \$12,319 | \$24,237 | \$24,558 | \$25,625 | \$23,999 | \$24,856 | \$135,593 |
| 12 | Reconciliation plus Total Costs (L.10+ L.11) | \$5,409 | \$17,607 | \$17,840 | \$18,615 | \$17,434 | \$18,057 | \$94,961 |
| 13 | kWh Purchases | 3,570,608 | 3,426,028 | 3,471,343 | 3,622,174 | 3,392,414 | 3,513,544 | 20,996,114 |
| 14 | Total, Before Losses (L. 12 / L.13) | \$0.00151 | \$0.00514 | \$0.00514 | \$0.00514 | \$0.00514 | \$0.00514 |  |
| 15 | Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 16 | Total Retail Rate - RPS Charge (L. 14 * (1+L.15)) | \$0.00158 | \$0.00538 | \$0.00538 | \$0.00538 | \$0.00538 | \$0.00538 |  |

## TOTAL DEFAULT SERVICE CHARGE

17 Total Retail Rate - Default Service Charge (L. 9 + L.16)

MARKET MARKET MARKET MARKET MARKET MARKET

Authorized by NHPUC Order No. 25,823 in Case No. DE $15-079$, dated Өctober 9, 2015

## ELECTRIC ASSISTANCE PROGRAM DISCOUNTS

Low-Income Electric Assistance Program (LI-EAP) Discounts for Eligible Customers

(1) Discount calculated using total utility charges from Page 4 (excluding the Electricity Consumption Tax) multiplied by the appropriate discount. These figures exclude default service and are applicable to customers choosing a

Competitive Supplier or self-supply. Customers taking default service from the Company would receive these discounts plus the appropriate discount applicable to default service supply
(2) Discount calculated using Non-G1 class (Residential) Fixed Default Service Rate multiplied by the appropriate discount. These figures exclude delivery
(3) Discount calculated using Non-G1 class (Residential) Variable Default Service Rate, for the applicable month, multiplied by the appropriate discount. These figures exclude delivery.
(4) Tier 1 was eliminated by Order No. 25,200 in DE 10-192 dated March 4, 2011.
(5) Discounts effective May 1, 2014 and in effect for 24 months in accordance with Order No. 25-643 in DE 14-078. UES received a waiver to implement these on May 1, 2014. Pursuant to Secretarial Letter dated March 15 , 2016 in DE 14-078, current discount levels have been extended until June $30,2016$.

Authorized by NHPUC Order No. in Case No. DE 16-250, dated

## ELECTRIC ASSISTANCE PROGRAM DISCOUNTS

Low-Income Electric Assistance Program (LI-EAP) Discounts for Eligible Customers

|  |  |  |  | LI-EAP discount Delivery Only; Excludes Supply | LI-EAP discount Fixed Default Service Supply Only | LI-EAP discount Variable Default Service Supply Only |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tier $1(4)$ | Pede <br> Federal Poverty Guidelines <br> N/A | Discount (5) <br> N/A | Blocks | Dee 2015-May 2016 (1) | Dee 2015-May 2016 (2) | Dec-15 (3) | Jan-16(3) | Feb-16(3) | Mar-16 (3) | Apr-16(3) | May-16 (3) |
| 2 | 151-200 | 9\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $(\$ 0.92)$ $(\$ 0.00549)$ $(\$ 0.00594)$ $\$ 0.00000$ | (\$0.00847) (\$0.00847) $\$ 0.00000$ | (\$0.00822) (\$0.00822) $\$ 0.00000$ | (\$0.01060) (\$0.01060) $\$ 0.00000$ | (\$0.01049) (\$0.01049) $\$ 0.00000$ | (\$0.00831) (\$0.00831) $\$ 0.00000$ | (\$0.00647) (\$0.00647) $\$ 0.00000$ | $\begin{aligned} & (\$ 0.00547) \\ & (\$ 0.00547) \\ & \$ 0.00000 \end{aligned}$ |
| 3 | 126-150 | 23\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 2.36) \\ (\$ 0.01404) \\ (\$ 0.01519) \\ \$ 0.00000 \\ \hline \end{gathered}$ | (\$0.02164) (\$0.02164) $\$ 0.00000$ | (\$0.02100) ( $\$ 0.02100$ ) $\$ 0.00000$ | (\$0.02710) ( $\$ 0.02710$ ) $\$ 0.00000$ | (\$0.02680) (\$0.02680) $\$ 0.00000$ | (\$0.02124) (\$0.02124) $\$ 0.00000$ | (\$0.01652) (\$0.01652) $\$ 0.00000$ | (\$0.01398) <br> (\$0.01398) <br> $\$ 0.00000$ |
| 4 | 101-125 | 37\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 3.80) \\ \\ (\$ 0.02258) \\ (\$ 0.02443) \\ \$ 0.00000 \\ \hline \end{gathered}$ | (\$0.03481) (\$0.03481) $\$ 0.00000$ | (\$0.03378) (\$0.03378) $\$ 0.00000$ | (\$0.04359) ( $\$ 0.04359$ ) $\$ 0.00000$ | (\$0.04311) <br> (\$0.04311) $\$ 0.00000$ | (\$0.03417) (\$0.03417) $\$ 0.00000$ | (\$0.02658) (\$0.02658) $\$ 0.00000$ | (\$0.02249) <br> (\$0.02249) <br> $\$ 0.00000$ |
| 5 | 76-100 | 53\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 5.44) \\ (\$ 0.03235) \\ (\$ 0.03500) \\ \$ 0.00000 \\ \hline \end{gathered}$ | (\$0.04987) (\$0.04987) $\$ 0.00000$ | (\$0.04838) <br> (\$0.04838) <br> $\$ 0.00000$ | (\$0.06244) <br> (\$0.06244) <br> $\$ 0.00000$ | (\$0.06175) (\$0.06175) $\$ 0.00000$ | (\$0.04895) (\$0.04895) $\$ 0.00000$ | (\$0.03808) <br> (\$0.03808) <br> $\$ 0.00000$ | $\begin{aligned} & (\$ 0.03222) \\ & (\$ 0.03222) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ |
| 6 | 0-75 | 77\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 7.91) \\ (\$ 0.04700) \\ (\$ 0.05085) \\ \$ 0.00000 \end{gathered}$ | (\$0.07245) (\$0.07245) $\$ 0.0000$ | (\$0.07029) (\$0.07029) $\$ 0.0000$ | (\$0.09072) (\$0.09072) $\$ 0.00000$ | (\$0.08971) (\$0.08971) $\$ 0.0000$ | (\$0.07112) (\$0.07112) $\$ 0.00000$ | $(\$ 0.05532)$ $(\$ 0.05532)$ $\$ 0.00000$ | (\$0.04681) <br> (\$0.04681) <br> $\$ 0.00000$ |

(1) Discount calculated using total utility charges from Page 4 (excluding the Electricity Consumption Tax) multiplied by the appropriate discount. These figures exclude default service and are applicable to customers choosing a

Competitive Supplier or self-supply. Customers taking default service from the Company would receive these discounts plus the appropriate discount applicable to default service supply
(2) Discount calculated using Non-G1 class (Residential) Fixed Default Service Rate multiplied by the appropriate discount. These figures exclude delivery
(3) Discount calculated using Non-G1 class (Residential) Variable Default Service Rate, for the applicable month, multiplied by the appropriate discount. These figures exclude delivery.
(4) Tier 1 was eliminated by Order No. 25,200 in DE 10-192 dated March 4, 2011.
(5) Discoumts effective May 1, 2014 and in effect for 24 months in accordance with Order No. 25-643 in DE 14 -078. UES received a waiver to implement these on May $1,2014$.

Authorized by NHPUC Order No. 25,823 in Case No. DE 15-079, dated October 9, 2015

Unitil Energy Systems, Inc.
Calculation of Non-G1 Class Default Service Power Supply Charge

Schedule LSM-2
Page 1 of 6

## $\frac{\text { Residential Class }}{\text { Reconciliation (1) }}$

Total Costs (Page 5)
3 Reconciliation plus Total Costs (L.1 + L.2)
kWh Purchases
5 Total, Before Losses (L. 3 / L.4)
6 Losses
7 Total Retail Rate - Residential Variable Power Supply Charge (L.5 * (1+L.6))
Total Retail Rate - Residential Fixed Power Supply Charge (L. 5 * (1+L.6))

## G2 and OL Class

Reconciliation (1)
0 Total Costs (Page 5)
11 Reconciliation plus Total Costs (L. $9+\mathrm{L} .10)$
12 kWh Purchases
13 Total, Before Losses (L. 11 / L.12)
14 Losses
15 Total Retail Rate - G2 and OL Variable Power Supply Charge (L.13 * (1+L.14)) 16 Total Retail Rate - G2 and OL Fixed Power Supply Charge (L. $13 *(1+\mathrm{L} .14)$ )

| Jun-16 <br> Estimated |
| :---: |


| $\$ 104,328$ | $\$ 128,139$ | $\$ 151,730$ | $\$ 121,768$ | $\$ 98,341$ | $\$ 106,962$ | $\$ 711,268$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 1,637,247$ | $\$ 2,310,464$ | $\$ 2,490,960$ | $\$ 1,819,241$ | $\$ 1,512,638$ | $\$ 1,811,726$ | $\$ 11,582,276$ |
| $\$ 1,741,575$ | $\$ 2,438,603$ | $\$ 2,642,690$ | $\$ 1,941,009$ | $\$ 1,610,979$ | $\$ 1,918,688$ | $\$ 12,293,544$ |


| $\$ 3,312,001$ | $\underline{40,914,823}$ | $\underline{48,447,343}$ | $\frac{38,880,510}{}$ | $\underline{31,400,422}$ | $\underline{34,152,917}$ | $\underline{227,108,015}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{\$ 0 , 0 5 2 2 8}$ | $\$ 0,05960$ | $\$ 0,05455$ | $\$ 0,0499$ | $\$ 0,05130$ |  | $\$ 0,05618$ |


| $6.40 \%$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| $\$ 0.05563$ | $\$ 0.06342$ | $\$ 0.05804$ | $\$ 0.05312$ | $\$ 0.05459$ | $\$ 0.05977$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| $\$ 48,420$ | $\$ 58,403$ | $\$ 58,468$ | $\$ 55,025$ | $\$ 48,040$ | $\$ 46,588$ | $\$ 314,945$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ \mathbf{\$ 7 3 4 , 8 5 5}$ | $\underline{\$ 1,029,194}$ | $\underline{\$ 958,587}$ | $\underline{\$ 807,719}$ | $\underline{\$ 706,746}$ | $\underline{\$ 779,909}$ | $\underline{\$ 5,017,009}$ |
| $\$ 783,275$ | $\$ 1,087,596$ | $\$ 1,017,055$ | $\$ 862,744$ | $\$ 754,786$ | $\$ 826,497$ | $\$ 5,331,953$ |
| $\underline{15,457,982}$ | $\underline{18,644,781}$ | $\underline{18,665,591}$ | $\underline{17,566,517}$ | $\underline{15,336,523}$ | $\underline{14,873,121}$ | $\underline{100,544,514}$ |
| $\$ 0.05067$ | $\$ 0.05833$ | $\$ 0.05449$ | $\$ 0.04911$ | $\$ 0.04921$ | $\$ 0.05557$ | $\$ 0.05303$ |
| $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ |
| $\$ 0.05391$ | $\$ 0.06207$ | $\$ 0.05798$ | $\$ 0.05226$ | $\$ 0.05236$ | $\$ 0.05913$ |  |
|  |  |  |  |  |  | $\$ 0.05642$ |

(1) Balance as of February 29, 2016 modified, as detailed below, to include the reconciliation of estimated costs and revenues for March, April and May 2016. Figure is then allocated between rate periods (June-November 2016 and December 2016-May 2017) and rate classes (Residential and G2/OL), and then to each month, June through November 2016, on equal per kWh basis.
a February 29, 2016 balance - Schedule LSM-2, Page 2
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2016:
c Estimated costs - Mar, Apr, May 2016 as filed in DE 15-079
d Estimated revenue-Mar, Apr, May 2016
e line c-line d
$f$ Reconciliation for June 1, 2016-May 31, 2017 (line $a+$ line e)
$g$ Rate period: June-November 2016
h Rate period: December 2016-May 2017
$i$ Total
$\$ 4,400,619$
\$9,777,758
\$12,146,675
$\frac{(\$ 2,368,917)}{(212,17}$
\$2,031,702

| n-G1 total |  | Reconciliation |
| :---: | :---: | :---: |
| kWh purchases | \% per period | per period |
| 327,652,529 | 50.51\% | \$1,026,213 |
| 321,026,081 | 49.49\% | \$1,005,489 |
| 648,678,611 |  | \$2,031,702 |
|  |  | Jun-Nov 2016 |
| Jun-Nov 2016 |  | Reconciliation |
| kWh purchases | \% by class | by class |
| 227,108,015 | 69.31\% | \$711,268 |
| 100,544,514 | 30.69\% | \$314,945 |
| 327,652,529 |  | \$1,026,213 |

Unitil Energy Systems, Inc.
Reconciliation of Non-G1 Class Power Supply Charge Costs and Revenues

Schedule LSM-2
Page 2 of 6

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Balance | Total Costs (Page 3) | Total Revenue (Page 4) | Ending Balance Before Interest ( $\mathrm{a}+\mathrm{b}-\mathrm{c}$ ) | Average Monthly <br> Balance ((a+d)/2) | Interest Rate | Number of Days / Month | Computed Interest | Ending Balance with Interest (d + h) |
| Mar-15 | \$8,154,522 | \$6,893,094 | \$8,421,278 | \$6,626,338 | \$7,390,430 | 3.25\% | 31 | \$20,400 | \$6,646,738 |
| Apr-15 | \$6,646,738 | \$3,419,779 | \$6,191,236 | \$3,875,282 | \$5,261,010 | 3.25\% | 30 | \$14,053 | \$3,889,335 |
| May-15 | \$3,889,335 | \$3,026,411 | \$5,507,250 | \$1,408,496 | \$2,648,916 | 3.25\% | 31 | \$7,424 (1) | \$1,415,921 |
| Jun-15 | \$1,415,921 | \$3,066,711 | \$3,360,531 | \$1,122,100 | \$1,269,010 | 3.25\% | 30 | \$3,390 | \$1,125,490 |
| Jul-15 | \$1,125,490 | \$4,452,703 | \$3,919,140 | \$1,659,053 | \$1,392,272 | 3.25\% | 31 | \$3,843 | \$1,662,896 |
| Aug-15 | \$1,662,896 | \$3,349,889 | \$4,031,863 | \$980,923 | \$1,321,910 | 3.25\% | 31 | \$3,649 | \$984,572 |
| Sep-15 | \$984,572 | \$3,291,751 | \$3,375,166 | \$901,156 | \$942,864 | 3.25\% | 30 | \$2,519 | \$903,675 |
| Oct-15 | \$903,675 | \$2,511,543 | \$2,735,174 | \$680,044 | \$791,859 | 3.25\% | 31 | \$2,186 | \$682,229 |
| Nov-15 | \$682,229 | \$3,797,877 | \$2,824,160 | \$1,655,946 | \$1,169,088 | 3.25\% | 30 | \$3,123 | \$1,659,069 |
| Dec-15 | \$1,659,069 | \$4,553,355 | \$4,048,215 | \$2,164,210 | \$1,911,639 | 3.25\% | 31 | \$5,277 | \$2,169,486 |
| Jan-16 | \$2,169,486 | \$6,107,139 | \$5,083,158 | \$3,193,467 | \$2,681,477 | 3.25\% | 31 | \$7,381 | \$3,200,849 |
| Feb-16 | \$3,200,849 | \$5,342,374 | \$4,152,379 | \$4,390,844 | \$3,795,847 | 3.25\% | 29 | \$9,775 | \$4,400,619 |
| Total |  | \$49,812,627 | \$53,649,549 |  |  |  |  | \$83,019 |  |

(1) Includes \$113 to adjust interest due to change in method of recording NHPUC Annual Assessment, effective July 2014.

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Unitil Energy Systems, Inc
Itemized Costs for Non-G1 Class Default Service Charge
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|c|c|c|}
\hline \multirow[t]{3}{*}{} & \multicolumn{6}{|c|}{Calculation of Working Capital \(r\) Charges and GIS Support Payments} & \multirow[b]{2}{*}{(g)} & \multirow[b]{2}{*}{(h)} & \multirow[b]{2}{*}{(i)} & \multirow[b]{2}{*}{()} & \multirow[b]{2}{*}{(k)} & \multirow[b]{2}{*}{(I)} & \multirow[b]{2}{*}{(m)} \\
\hline & (a) & (b) & (c) & (d) & (e) & (f) & & & & & & & \\
\hline & Total Non-G1 Class DS Supplier Charges & GIS Support Payments & Number of Days of Lag / 365 (1) & Working Capital Requirement \(((a+b) * c)\) & Prime Rate & \[
\begin{aligned}
& \text { Supply Related } \\
& \text { Working } \\
& \text { Capital ( } \left.\mathrm{d}^{*} \mathrm{e}\right) \\
& \hline
\end{aligned}
\] & Provision for Uncollected Accounts & Internal Company Administrative Costs & Legal Charges & Consulting Outside Service Charges & Default Service Portion of the annual PUC Assessment & DSC Adjustment per DE 11-105 (2) & \[
\begin{gathered}
\text { Total Costs } \\
\text { (sum a }+\mathrm{b}+\mathrm{f}+ \\
\mathrm{g}+\mathrm{h}+\mathrm{i}+\mathrm{j}+\mathrm{k}+ \\
\mathrm{l}) \\
\hline
\end{gathered}
\] \\
\hline Mar-15 & \$6,824,896 & \$598 & 2.05\% & \$139,876 & 3.25\% & \$4,546 & \$19,457 & \$2,303 & (\$21) & \$0 & \$0 & \$41,314 & \$6,893,094 \\
\hline Apr-15 & \$3,343,595 & \$504 & 2.05\% & \$68,531 & 3.25\% & \$2,227 & \$29,836 & \$2,303 & \$0 & \$0 & \$0 & \$41,314 & \$3,419,779 \\
\hline May-15 & \$2,919,774 & \$514 & 2.05\% & \$59,846 & 3.25\% & \$1,945 & \$52,176 & \$2,303 & \$0 & \$0 & \$8,384 (3) & \$41,314 & \$3,026,411 \\
\hline Jun-15 & \$2,942,298 & \$386 & 6.50\% & \$191,154 & 3.25\% & \$6,212 & \$73,291 & \$2,303 & \$131 & \$0 & \$774 & \$41,314 & \$3,066,711 \\
\hline Jul-15 & \$4,282,948 & \$416 & 6.50\% & \$278,243 & 3.25\% & \$9,043 & \$115,900 & \$2,303 & \$0 & \$0 & \$777 & \$41,314 & \$4,452,703 \\
\hline Aug-15 & \$3,252,607 & \$939 & 6.50\% & \$211,347 & 3.25\% & \$6,869 & \$44,413 & \$2,303 & \$663 & \$0 & \$780 & \$41,314 & \$3,349,889 \\
\hline Sep-15 & \$3,177,835 & \$514 & 6.50\% & \$206,462 & 3.25\% & \$6,710 & \$61,851 & \$2,303 & \$445 & \$0 & \$778 & \$41,314 & \$3,291,751 \\
\hline Oct-15 & \$2,397,039 & \$523 & 6.50\% & \$155,743 & 3.25\% & \$5,062 & \$64,400 & \$2,303 & \$133 & \$0 & \$769 & \$41,314 & \$2,511,543 \\
\hline Nov-15 & \$3,698,893 & \$501 & 6.50\% & \$240,309 & 3.25\% & \$7,810 & \$46,278 & \$2,303 & \$0 & \$0 & \$778 & \$41,314 & \$3,797,877 \\
\hline Dec-15 & \$4,487,228 & \$399 & 6.50\% & \$291,511 & 3.37\% & \$9,824 & \$52,194 & \$2,464 & \$464 & \$0 & \$782 & \$0 & \$4,553,355 \\
\hline Jan-16 & \$6,051,956 & \$400 & 6.50\% & \$393,154 & 3.50\% & \$13,760 & \$37,770 & \$2,464 & \$0 & \$0 & \$789 & \$0 & \$6,107,139 \\
\hline Feb-16 & \$5,301,515 & \$518 & 6.50\% & \$344,414 & 3.50\% & \$12,054 & \$25,032 & \$2,464 & \$0 & \$0 & \$791 & \$0 & \$5,342,374 \\
\hline Total & \$48,680,584 & \$6,210 & & & & \$86,063 & \$622,599 & \$28,123 & \$1,815 & \$0 & \$15,402 & \$371,830 & \$49,812,627 \\
\hline
\end{tabular}
 23, DE 14-061 filed April 4, 2014.
 22 of 23, DE 15-079 filed April 3, 2015.
(2) Details provided on Schedule LSM-2, Page 6.
(3) Represents July 2014-May 2015 Non-G1 portion of the annual NHPUC assessment allocated to Default Service (total for year for Non-G1 and G1 to Default Service equals \(\$ 10,000\) ).
```

Unitil Energy Systems, Inc.

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (1) | (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Residential Class Billed Default Service kWh (1) | $\begin{aligned} & \text { Unbilled Factor } \\ & \text { (2) } \end{aligned}$ | Residential Class Unbilled kWh (a*b) | Effective Fixed Power Supply Charge | Residential Class Unbilled Power Supply Charge Revenue (c *d) | Total G2/OL Class Billed Default Service kWh (1) | Unbilled Factor (2) | G2/OL Class Unbilled kWh $(f * g)$ | Effective Fixed Power Supply Charge | G2/OL Class <br> Unbilled Power <br> Supply Charge <br> Revenue (h *i) | Reversal of prior month unbilled | Total Billed NonG1 Class Power Supply Charge Revenue (1) | Total Revenue $(e+j+k+l)$ |
| Mar-15 | 41,665,612 | 39.53\% | 16,471,982 | \$0.15129 | \$2,492,046 | 18,395,534 | 39.53\% | 7,272,446 | \$0.14850 | \$1,079,958 | $(\$ 4,269,912)$ | \$9,119,186 | \$8,421,278 |
| Apr-15 | 30,586,838 | 47.30\% | 14,467,730 | \$0.15129 | \$2,188,823 | 14,243,979 | 47.30\% | 6,737,474 | \$0.14850 | \$1,000,515 | $(\$ 3,572,004)$ | \$6,573,902 | \$6,191,236 |
| May-15 | 25,791,523 | 50.92\% | 13,131,900 | \$0.15129 | \$1,986,725 | 13,040,556 | 50.92\% | 6,639,673 | \$0.14850 | \$985,991 | $(\$ 3,189,338)$ | \$5,723,871 | \$5,507,250 |
| Jun-15 | 32,194,244 | 40.83\% | 13,143,319 | \$0.06703 | \$880,997 | 15,200,336 | 40.83\% | 6,205,546 | \$0.06775 | \$420,426 | $(\$ 2,972,717)$ | \$5,031,825 | \$3,360,531 |
| Jul-15 | 35,304,328 | 51.73\% | 18,262,947 | \$0.06703 | \$1,224,165 | 15,842,687 | 51.73\% | 8,195,430 | \$0.06775 | \$555,240 | (\$1,301,422) | \$3,441,157 | \$3,919,140 |
| Aug-15 | 41,060,056 | 47.06\% | 19,322,137 | \$0.06703 | \$1,295,163 | 17,706,171 | 47.06\% | 8,332,211 | \$0.06775 | \$564,507 | $(\$ 1,779,406)$ | \$3,951,599 | \$4,031,863 |
| Sep-15 | 39,552,948 | 38.32\% | 15,155,326 | \$0.06703 | \$1,015,861 | 16,856,992 | 38.32\% | 6,459,018 | \$0.06775 | \$437,598 | (\$1,859,670) | \$3,781,376 | \$3,375,166 |
| Oct-15 | 28,104,638 | 51.29\% | 14,414,121 | \$0.06703 | \$966,179 | 13,168,980 | 51.29\% | 6,754,020 | \$0.06775 | \$457,585 | (\$1,453,460) | \$2,764,871 | \$2,735,174 |
| Nov-15 | 27,601,380 | 57.81\% | 15,956,451 | \$0.06703 | \$1,069,561 | 12,312,764 | 57.81\% | 7,118,051 | \$0.06775 | \$482,248 | $(\$ 1,423,763)$ | \$2,696,115 | \$2,824,160 |
| Dec-15 | 32,658,292 | 50.07\% | 16,353,247 | \$0.08905 | \$1,456,257 | 13,296,530 | 50.07\% | 6,658,078 | \$0.08627 | \$574,392 | $(\$ 1,551,809)$ | \$3,569,375 | \$4,048,215 |
| Jan-16 | 38,477,441 | 51.38\% | 19,770,281 | \$0.08905 | \$1,760,543 | 14,506,685 | 51.38\% | 7,453,750 | \$0.08627 | \$643,035 | (\$2,030,649) | \$4,710,229 | \$5,083,158 |
| Feb-16 | 36,845,695 | 42.10\% | 15,510,845 | \$0.08905 | \$1,381,241 | 14,943,086 | 42.10\% | 6,290,556 | \$0.08627 | \$542,686 | (\$2,403,579) | \$4,632,030 | \$4,152,379 |
| Total | 409,842,993 |  |  |  | \$17,717,561 | 179,514,302 |  |  |  | \$7,744,183 | (\$27,807,729) | \$55,995,534 | \$53,649,549 |

(1) Per billing system
(2) Detail of Unbilled Factors for the Residential, Regular General, and Outdoor Lighting Classes:
$\left.\begin{array}{ccccc} & \begin{array}{c}\text { Non-G1 Class } \\ \text { Billed } \\ \text { kWh }\end{array} & & \begin{array}{c}\text { Direct }\end{array} & \begin{array}{c}\text { Estimate of } \\ \text { Unbilled kWh }\end{array}\end{array} \begin{array}{c}\text { Unbilled kWh/ }\end{array} \begin{array}{cccc} & & & \\ & \text { Billed kWh }\end{array}\right]$

|  | Calculation of Working Capital Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | (i) | (k) | (1) | (m) | (n) | (0) | (p) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  |  |  |  |  |  |
|  | Non-G1 Class (Residential) DS Supplier Charges (1) | Non-G1 Class (G2 and OL) DS Supplier Charges (1) | GIS Support Payments | $\begin{gathered} \text { Number of } \\ \text { Days of Lag / } \\ 365(2) \\ \hline \end{gathered}$ | Working Capital Requirement $((a+b+c) * d)$ | Prime Rate | Supply Related Working Capital ( e * f) | Provision for Uncollected Accounts | Internal <br> Company Administrative Costs | Legal Charges | $\begin{aligned} & \text { Consulting } \\ & \text { Outside Service } \\ & \text { Charges } \\ & \hline \end{aligned}$ | Default Service Portion of the annual PUC Assessment | Non-G1 Class (Residential) DS Supplier Charges (col. a) | Non-G1 Class (G2 and OL) DS Supplier Charges (col. b) | Total Remaining Costs (sum col. c $+g+h+i+j+k$ <br> $+1)$ | Total All Costs (sum col. $\mathrm{m}+\mathrm{n}$ +0 ) |
| Jun-16 |  |  | \$516 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | \$778 |  |  |  | \$2,372,101 |
| Jul-16 |  |  | \$625 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | \$778 |  |  |  | \$3,339,657 |
| Aug-16 |  |  | \$632 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | \$778 |  |  |  | \$3,449,547 |
| Sep-16 |  |  | \$503 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | \$778 |  |  |  | \$2,626,960 |
| Oct-16 |  |  | \$461 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | \$778 |  |  |  | \$2,219,384 |
| Nov-16 |  |  | \$482 | 7.24\% |  | 3.50\% |  |  | \$2,464 | \$0 | \$0 | $\$ 778$ |  |  |  | \$2,591,635 |
| Total |  |  | \$3,220 |  |  |  |  |  | \$14,783 | \$0 | \$0 | \$4,666 |  |  |  | \$16,599,285 |

Total Costs Allocated to the Residential Class and the G2/OL Class

(1) Estimates based on monthly average wholesale rate times estimated monthly purchases.
(2) Number of days lag equals 26.41 . Calculated using revenue lag of 62.25 days less cost lead of 35.84 days. Revenue lag per Schedule DN-1, Page 4 of 23 and cost lead per Schedule DN-1, Page 22 of $23, \mathrm{DE} 16-250$ filed April 1,2016 . (3) Remaining Costs (column o) allocated between the Residential Class and the G2 and Outdoor Lighting Class based on estimated monthly kWh purchases, as shown below:

|  | Estimated kWh Purchases Residential Class | Estimated kWh <br> Purchases - G2 and OL Class | Total Non-G1 Class kWh Purchases | Residential <br> Class kWh Purchases / Total Non-G1 Class kWh Purchases | G2 and OL <br> Class kWh <br> Purchases / <br> Total Non-G1 <br> Class kWh <br> Purchases |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jun-16 | 33,312,001 | 15,457,982 | 48,769,983 | 68.3\% | 31.7\% |
| Jul-16 | 40,914,823 | 18,644,781 | 59,559,604 | 68.7\% | 31.3\% |
| Aug-16 | 48,447,343 | 18,665,591 | 67,112,934 | 72.2\% | 27.8\% |
| Sep-16 | 38,880,510 | 17,566,517 | 56,447,027 | 68.9\% | 31.1\% |
| Oct-16 | 31,400,422 | 15,336,523 | 46,736,945 | 67.2\% | 32.8\% |
| Nov-16 | 34,152,917 | 14,873,121 | 49,026,037 | 69.7\% | 30.3\% |
| Total | 227,108,015 | 100,544,514 | 327,652,529 |  |  |


|  |  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Beginning <br> Balance- <br> NonG1 DS <br> Customer Billing <br> Adjustment | Total Revenue | Ending Balance Before Interest $(a-b)$ | Average Monthly <br> Balance ( $(a+c) / 2)$ | Interest Rate | Number of Days / Month | Computed Interest | Ending Balance with Interest $(c+g)$ |
| Jun-12 | Actual | \$1,152,493 |  | \$1,152,493 | \$1,152,493 | 3.25\% | 30 | \$3,070 | \$1,155,563 |
| Jul-12 | Actual | \$1,155,563 |  | \$1,155,563 | \$1,155,563 | 3.25\% | 31 | \$3,181 | \$1,158,744 |
| Aug-12 | Actual | \$1,158,744 |  | \$1,158,744 | \$1,158,744 | 3.25\% | 31 | \$3,190 | \$1,161,934 |
| Sep-12 | Actual | \$1,161,934 |  | \$1,161,934 | \$1,161,934 | 3.25\% | 30 | \$3,095 | \$1,165,029 |
| Oct-12 | Actual | \$1,165,029 |  | \$1,165,029 | \$1,165,029 | 3.25\% | 31 | \$3,207 | \$1,168,236 |
| Nov-12 | Actual | \$1,168,236 |  | \$1,168,236 | \$1,168,236 | 3.25\% | 30 | \$3,112 | \$1,171,348 |
| Dec-12 | Actual | \$1,171,348 |  | \$1,171,348 | \$1,171,348 | 3.25\% | 31 | \$3,224 | \$1,174,573 |
| Jan-13 | Actual | \$1,174,573 |  | \$1,174,573 | \$1,174,573 | 3.25\% | 31 | \$3,242 | \$1,177,815 |
| Feb-13 | Actual | \$1,177,815 |  | \$1,177,815 | \$1,177,815 | 3.25\% | 28 | \$2,936 | \$1,180,751 |
| Mar-13 | Actual | \$1,180,751 |  | \$1,180,751 | \$1,180,751 | 3.25\% | 31 | \$3,259 | \$1,184,011 |
| Apr-13 | Actual | \$1,184,011 |  | \$1,184,011 | \$1,184,011 | 3.25\% | 30 | \$3,163 | \$1,187,173 |
| May-13 | Actual | \$1,187,173 |  | \$1,187,173 | \$1,187,173 | 3.25\% | 31 | \$3,277 | \$1,190,450 |
| Jun-13 | Actual | \$1,190,450 | \$41,314 | \$1,149,136 | \$1,169,793 | 3.25\% | 30 | \$3,125 | \$1,152,261 |
| Jul-13 | Actual | \$1,152,261 | \$41,314 | \$1,110,946 | \$1,131,604 | 3.25\% | 31 | \$3,124 | \$1,114,070 |
| Aug-13 | Actual | \$1,114,070 | \$41,314 | \$1,072,755 | \$1,093,413 | 3.25\% | 31 | \$3,018 | \$1,075,774 |
| Sep-13 | Actual | \$1,075,774 | \$41,314 | \$1,034,459 | \$1,055,116 | 3.25\% | 30 | \$2,818 | \$1,037,278 |
| Oct-13 | Actual | \$1,037,278 | \$41,314 | \$995,963 | \$1,016,620 | 3.25\% | 31 | \$2,806 | \$998,769 |
| Nov-13 | Actual | \$998,769 | \$41,314 | \$957,455 | \$978,112 | 3.25\% | 30 | \$2,613 | \$960,068 |
| Total Dec-12 to Nov-13 |  |  | \$247,886 |  |  |  |  | \$36,606 |  |
| Dec-13 | Actual | \$960,068 | \$41,314 | \$918,753 | \$939,411 | 3.25\% | 31 | \$2,593 | \$921,346 |
| Jan-14 | Actual | \$921,346 | \$41,314 | \$880,032 | \$900,689 | 3.25\% | 31 | \$2,486 | \$882,518 |
| Feb-14 | Actual | \$882,518 | \$41,314 | \$841,204 | \$861,861 | 3.25\% | 28 | \$2,149 | \$843,352 |
| Mar-14 | Actual | \$843,352 | \$41,314 | \$802,038 | \$822,695 | 3.25\% | 31 | \$2,271 | \$804,309 |
| Apr-14 | Actual | \$804,309 | \$41,314 | \$762,994 | \$783,652 | 3.25\% | 30 | \$2,093 | \$765,088 |
| May-14 | Actual | \$765,088 | \$41,314 | \$723,773 | \$744,431 | 3.25\% | 31 | \$2,055 | \$725,828 |
| Jun-14 | Actual | \$725,828 | \$41,314 | \$684,514 | \$705,171 | 3.25\% | 30 | \$1,884 | \$686,397 |
| Jul-14 | Actual | \$686,397 | \$41,314 | \$645,083 | \$665,740 | 3.25\% | 31 | \$1,838 | \$646,921 |
| Aug-14 | Actual | \$646,921 | \$41,314 | \$605,606 | \$626,264 | 3.25\% | 31 | \$1,729 | \$607,335 |
| Sep-14 | Actual | \$607,335 | \$41,314 | \$566,021 | \$586,678 | 3.25\% | 30 | \$1,567 | \$567,588 |
| Oct-14 | Actual | \$567,588 | \$41,314 | \$526,273 | \$546,930 | 3.25\% | 31 | \$1,510 | \$527,783 |
| Nov-14 | Actual | \$527,783 | \$41,314 | \$486,469 | \$507,126 | 3.25\% | 30 | \$1,355 | \$487,823 |
| Total Dec-13 to Nov-14 |  |  | \$495,773 |  |  |  |  | \$23,528 |  |
| Dec-14 | Actual | \$487,823 | \$41,314 | \$446,509 | \$467,166 | 3.25\% | 31 | \$1,290 | \$447,798 |
| Jan-15 | Actual | \$447,798 | \$41,314 | \$406,484 | \$427,141 | 3.25\% | 31 | \$1,179 | \$407,663 |
| Feb-15 | Actual | \$407,663 | \$41,314 | \$366,349 | \$387,006 | 3.25\% | 28 | \$965 | \$367,313 |
| Mar-15 | Actual | \$367,313 | \$41,314 | \$325,999 | \$346,656 | 3.25\% | 31 | \$957 | \$326,956 |
| Apr-15 | Actual | \$326,956 | \$41,314 | \$285,641 | \$306,299 | 3.25\% | 30 | \$818 | \$286,460 |
| May-15 | Actual | \$286,460 | \$41,314 | \$245,145 | \$265,802 | 3.25\% | 31 | \$734 | \$245,879 |
| Jun-15 | Actual | \$245,879 | \$41,314 | \$204,564 | \$225,222 | 3.25\% | 30 | \$602 | \$205,166 |
| Jul-15 | Actual | \$205,166 | \$41,314 | \$163,852 | \$184,509 | 3.25\% | 31 | \$509 | \$164,361 |
| Aug-15 | Actual | \$164,361 | \$41,314 | \$123,047 | \$143,704 | 3.25\% | 31 | \$397 | \$123,443 |
| Sep-15 | Actual | \$123,443 | \$41,314 | \$82,129 | \$102,786 | 3.25\% | 30 | \$275 | \$82,403 |
| Oct-15 | Actual | \$82,403 | \$41,314 | \$41,089 | \$61,746 | 3.25\% | 31 | \$170 | \$41,259 |
| Nov-15 | Actual | \$41,259 | \$41,314 | (\$55) | \$20,602 | 3.25\% | 30 | \$55 | \$0 |
| Total Dec-14 to Nov-15 |  |  | \$495,773 |  |  |  |  | \$7,950 |  |
| Total Jun-12 to Nov-15 |  |  | \$1,239,432 |  |  |  |  | \$86,939 |  |

Unitil Energy Systems, Inc.
Calculation of Non-G1 Class Default Service Renewable Portfolio Standard (RPS) Charge

| 1 | Reconciliation (1) |
| :--- | :--- |
| 2 | Total Costs (Page 5) |
| 3 | Reconciliation plus Total Costs (L.1 + L.2) |
| 4 | kWh Purchases |
| 5 | Total, Before Losses (L.3 / L.4) |
| 6 | Losses |
| 7 | Total Retail Rate - Variable RPS Charge (L.5 * (1+L.6)) |
| 8 | Total Retail Rate - Fixed RPS Charge (L.5 * (1+L.6)) |


(1) Balance as of February 29, 2016 modified, as detailed below, to reflect that current rates (through May 31, 2016) include a credit for the overcollection as of February 28 , 2015 and to reflect accruals for RPS. Figure is then allocated between rate periods (June-November 2016 and December 2016-May 2017) and then to each month, June through November 2016, on equal per kWh basis.
a February 29, 2016 actual balance - Schedule LSM-3, Page 2
(\$3,676,431)
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2016:
$\begin{array}{lr}\text { c } & \text { Estimated kWh Sales Mar-May } 2016 \\ d & \text { Amount of reconciliation in current RPS Charge }\end{array}$
e
Estimated amount of reconciliation - Mar-May 2016
139,253,094
(\$0.00169)
$(\$ 235,338)$
$f$ plus: Non-G1 Class RPS amounts included in rate filings, Mar 2015-Feb 2016
\$3,387,745
$g$ less: Non-G1 Class RPS amounts, CY 2015 requirement, purchased
h Net Non-G1 Class RPS amounts included in rate filings, Mar 2015-Feb 2016
i Total reconciliation for June 1, 2016-May 31, 2017 (line a - line e + line h)
\$1,109,744
\$2,278,001
(\$1,163,093)
j Rate period: June-November 2016
k Rate period: December 2016-May 2017
l Total

| Non-G1 total <br> kWh purchases | \% per period |
| :---: | :---: |
| $\frac{327,652,529}{}$ | $50.51 \%$ |
| $\frac{321,026,081}{648,678,611}$ | $49.49 \%$ |

Unitil Energy Systems, Inc.
Reconciliation of Non-G1 Class RPS Costs and Revenues

Schedule LSM-3
Page 2 of 5

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Balance | Total Costs (Page 3) | Total Revenue (Page 4) | Ending Balance Before Interest ( $\mathrm{a}+\mathrm{b}-\mathrm{c}$ ) | Average Monthly <br> Balance ((a+d)/2) | Interest Rate | Number of Days / Month | Computed Interest | Ending Balance with Interest ( $\mathrm{d}+\mathrm{h}$ ) |
| Mar-15 | (\$4,701,524) | \$945 | \$231,248 | (\$4,931,826) | (\$4,816,675) | 3.25\% | 31 | $(\$ 13,295)$ | (\$4,945,122) |
| Apr-15 | (\$4,945,122) | \$391,379 | \$176,386 | (\$4,730,129) | (\$4,837,626) | 3.25\% | 30 | $(\$ 12,922)$ | (\$4,743,052) |
| May-15 | $(\$ 4,743,052)$ | \$111,512 | \$155,860 | (\$4,787,399) | (\$4,765,226) | 3.25\% | 31 | $(\$ 13,153)$ | $(\$ 4,800,553)$ |
| Jun-15 | $(\$ 4,800,553)$ | \$1,594,540 | \$109,210 | (\$3,315,223) | (\$4,057,888) | 3.25\% | 30 | $(\$ 10,840)$ | (\$3,326,062) |
| Jul-15 | (\$3,326,062) | \$139,980 | \$126,983 | $(\$ 3,313,065)$ | (\$3,319,563) | 3.25\% | 31 | $(\$ 9,163)$ | (\$3,322,227) |
| Aug-15 | (\$3,322,227) | \$8,598 | \$130,718 | (\$3,444,347) | (\$3,383,287) | 3.25\% | 31 | $(\$ 9,339)$ | (\$3,453,686) |
| Sep-15 | (\$3,453,686) | \$0 | \$109,804 | (\$3,563,490) | (\$3,508,588) | 3.25\% | 30 | $(\$ 9,372)$ | (\$3,572,862) |
| Oct-15 | (\$3,572,862) | \$48,027 | \$88,967 | (\$3,613,803) | (\$3,593,333) | 3.25\% | 31 | $(\$ 9,919)$ | (\$3,623,721) |
| Nov-15 | (\$3,623,721) | \$850,997 | \$91,217 | (\$2,863,942) | (\$3,243,832) | 3.25\% | 30 | $(\$ 8,665)$ | (\$2,872,607) |
| Dec-15 | (\$2,872,607) | \$0 | \$225,266 | (\$3,097,873) | (\$2,985,240) | 3.25\% | 31 | $(\$ 8,240)$ | (\$3,106,113) |
| Jan-16 | (\$3,106,113) | $(\$ 42,850)$ | \$285,378 | (\$3,434,341) | (\$3,270,227) | 3.25\% | 31 | (\$10,154)(1) | (\$3,444,494) |
| Feb-16 | (\$3,444,494) | \$12,706 | \$235,486 | (\$3,667,274) | (\$3,555,884) | 3.25\% | 29 | $(\$ 9,157)$ | (\$3,676,431) |
| Total |  | \$3,115,833 | \$1,966,522 |  |  |  |  | $(\$ 124,219)$ |  |

(1) Includes adjustment of $(\$ 1,151)$ to correct interest due to RECs reclass.

|  | (a) | Calculation of Working Capital |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (b) | (c) | (d) | (e) | (f) |
|  |  |  | Working |  |  |  |
|  |  | Number of | Capital |  |  |  |
|  |  | Days of Lag / | Requirement |  | Supply Related Working |  |
|  | Renewable Energy Credits | 365 (1) | (a*b) | Prime Rate | Capital (c * d) | Total Costs (sum a + e) |
| Mar-15 | \$973 | (86.89\%) | (\$845) | 3.25\% | (\$27) | \$945 |
| Apr-15 | \$402,752 | (86.89\%) | $(\$ 349,953)$ | 3.25\% | $(\$ 11,373)$ | \$391,379 |
| May-15 | \$114,752 | (86.89\%) | $(\$ 99,709)$ | 3.25\% | $(\$ 3,241)$ | \$111,512 |
| Jun-15 | \$1,641,277 | (87.62\%) | $(\$ 1,438,074)$ | 3.25\% | $(\$ 46,737)$ | \$1,594,540 |
| Jul-15 | \$144,083 | (87.62\%) | (\$126,244) | 3.25\% | $(\$ 4,103)$ | \$139,980 |
| Aug-15 | \$8,850 | (87.62\%) | $(\$ 7,754)$ | 3.25\% | (\$252) | \$8,598 |
| Sep-15 | \$0 | (87.62\%) | \$0 | 3.25\% | \$0 | \$0 |
| Oct-15 | \$49,434 | (87.62\%) | $(\$ 43,314)$ | 3.25\% | $(\$ 1,408)$ | \$48,027 |
| Nov-15 | \$875,940 | (87.62\%) | $(\$ 767,492)$ | 3.25\% | $(\$ 24,943)$ | \$850,997 |
| Dec-15 | \$0 | (87.62\%) | \$0 | 3.37\% | \$0 | \$0 |
| Jan-16 | (\$44,062)(2) | (87.62\%) | \$38,607 | 3.50\% | \$1,212 (3) | $(\$ 42,850)$ |
| Feb-16 | \$13,108 | (87.62\%) | $(\$ 11,485)$ | 3.50\% | (\$402) | \$12,706 |
| Total | \$3,207,108 |  |  |  | $(\$ 91,275)$ | \$3,115,833 |

(1) For the months Mar 2015-May 2015, number of days lage equals (317.15). Calculated using revenue lag of 49.97 days less cost lead of 367.12 days. Revenue lag per Schedule KG-1, Page 4 of 23 and cost lead per Schedule KG-1, Page 22 of 23, DE 14-061 filed April 4, 2014.

For the months June 2015-February 2016, number of days lag equals (319.81). Calculated using revenue lag of 55.15 days less cost lead of 374.96 days. Revenue lag per Schedule BC-1, Page 4 of 23 and cost lead per Schedule BC-1, Page 22 of 23, DE 15-079 filed April 3, 2015.
(2) Includes $(\$ 62,390.61)$ to adjust Non-G1 renewable energy credits that should have been allocated to G1.
(3) Includes (\$139.57) to correct working capital for RECs reclass (see note 2).

Unitil Energy Systems, Inc.
Non-G1 Class Default Service Renewable Portfolio Standard Charge Revenue

Schedule LSM-3
Page 4 of 5

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

(1) Per billing system
(2) Detail of Unbilled Factors for the Residential, Regular General, and Outdoor Lighting Classes:

|  | Billed kWh | Direct Estimate of Unbilled kWh | Unbilled kWh / Billed kWh |
| :---: | :---: | :---: | :---: |
| Mar-15 | 81,790,280 | 32,334,771 | 39.53\% |
| Apr-15 | 63,937,600 | 30,242,810 | 47.30\% |
| May-15 | 58,185,501 | 29,625,477 | 50.92\% |
| Jun-15 | 70,393,511 | 28,738,193 | 40.83\% |
| Jul-15 | 75,029,140 | 38,812,613 | 51.73\% |
| Aug-15 | 84,596,197 | 39,809,475 | 47.06\% |
| Sep-15 | 80,986,606 | 31,031,275 | 38.32\% |
| Oct-15 | 60,950,005 | 31,259,635 | 51.29\% |
| Nov-15 | 58,634,204 | 33,896,631 | 57.81\% |
| Dec-15 | 66,220,512 | 33,159,126 | 50.07\% |
| Jan-16 | 75,595,953 | 38,842,323 | 51.38\% |
| Feb-16 | 74,359,798 | 31,303,069 | 42.10\% |

Unitil Energy Systems, Inc.
Itemized Costs for Non-G1 Class Default Service Renewable Portfolio Standard Charge

|  | (a) | Calculation of Working Capital |  |  |  | Total Costs (sum a + e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (b) | (c) | (d) | (e) |  |
|  |  | Number of Days of Lag / 365 (2) | Working Capital Requirement (a*b) | Prime Rate | Supply Related Working Capital (c *d) |  |
| Jun-16 | \$192,244 | (70.73\%) | $(\$ 135,982)$ | 3.50\% | $(\$ 4,759)$ | \$187,484 |
| Jul-16 | \$234,775 | (70.73\%) | $(\$ 166,066)$ | 3.50\% | $(\$ 5,812)$ | \$228,962 |
| Aug-16 | \$264,542 | (70.73\%) | $(\$ 187,122)$ | 3.50\% | $(\$ 6,549)$ | \$257,993 |
| Sep-16 | \$222,505 | (70.73\%) | (\$157,387) | 3.50\% | $(\$ 5,509)$ | \$216,996 |
| Oct-16 | \$184,231 | (70.73\%) | $(\$ 130,315)$ | 3.50\% | $(\$ 4,561)$ | \$179,670 |
| Nov-16 | \$193,251 | (70.73\%) | (\$136,695) | 3.50\% | $(\$ 4,784)$ | \$188,467 |
| Total | \$1,291,548 |  | $(\$ 913,567)$ |  | $(\$ 31,975)$ | \$1,259,573 |

(1) Schedule LSG-4.
(2) Number of days lag equals (258.18). Calculated using revenue lag of 62.25 days less cost lead of 320.43 days. Revenue lag per Schedule DN-1, Page 4 of 23 and cost lead per Schedule DN-1, Page 22 of 23, DE 16-250 filed April 1, 2016.

Unitil Energy Systems, Inc.
Calculation of G1 Large General Service Class Default Service Power Supply Charge

| 1 | Total <br> Jun16-Nov16 |  |
| :--- | :--- | :---: |
| 1 | Reconciliation (1) | $\underline{(\$ 101,257)}$ |
| 2 | Total Costs excl. wholesale supplier charge (Page 5) | $\underline{\$ 22,713}$ |
| 3 | Reconciliation plus Total Costs excl. wholesale supplier charge (L.1 + L.2) | $(\$ 78,544)$ |
| 4 | kWh Purchases | $\underline{23,093,855}$ |
| 5 | Total, Before Losses (L.3 / L.4) | $(\$ 0.00340)$ |
| 6 | Losses | $\underline{4.591 \%}$ |
| 7 | Power Supply Charge excl. wholesale supplier charge $(L .5 *(1+$ L.6)) (2) | $(\$ 0.00356)$ |

(1) Balance as of February 29, 2016 modified, as detailed below, to reflect that current rates (through May 31, 2016) include a credit for the overcollection as of February 28, 2015 and to incorporate the difference between the estimated supplier cost and revenue in March 2016. Figure is then allocated between rate periods (June-November 2016 and December 2016-May 2017) and then to each month, June through November 2016, on equal per kWh basis.
a February 29, 2016 actual balance - Schedule LSM-4, Page 2
(\$338,784)
less: Estimated remaining February 2015 reconciliation - Mar, Apr, May 2016:
Estimated kWh Sales March-May $2016 \quad 10,086,188$
Amount of reconciliation in current rate
$\frac{\$ 0.01081)}{(\$ 109,032)}$
Estimated amount of reconciliation to be credited March-May 2016
less: Estimated overcollection due to difference between the estimated supplier cost and revenue in March 2016
(\$193,525)
Total reconciliation for June 1, 2016-May 31, 2017 (line a - line e + line f)

| $23,093,855$ | $52.32 \%$ |
| :--- | :--- |
| $\underline{21,043,727}$ | $47.68 \%$ |

kWh purchases forecast December 2016-May 2017
21,043,727
52.32\% 44,137,582
Total
(line g * line h\%)
(line g * line i\%)
$(\$ 101,257)$
Reconciliation amount for June-November 2016
Reconciliation amount for December 2016-May 2017
(line $k$ + line I)
$(\$ 92,268)$
Total
(\$193,525)
(2) The total G1 Power Supply Charge will equal the sum of Line 7 plus a wholesale supplier charge which shall be determined at the end of each month. The wholesale supply charges will be determined as the sum of the average ISO-New England real time hourly locational marginal prices for the New Hampshire load zone, weighted by the wholesale hourly kWh volumes of the Company's G1 Default Service customers, and charges for capacity, ancillary services, and other supplier costs established through a competitive bidding process.

Unitil Energy Systems, Inc.
Reconciliation of G1 Class Power Supply Charge Costs and Revenues

Schedule LSM-4
Page 2 of 5

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Ending |  |  |  |  |  |
|  |  |  |  | Balance | Average |  |  |  |  |
|  |  |  |  | Before | Monthly |  |  |  | Ending Balance |
|  | Beginning | Total Costs (Page | Total Revenue | Interest | Balance |  | Number of | Computed | with Interest (d |
|  | Balance | 3) | (Page 4) | ( $\mathrm{a}+\mathrm{b}-\mathrm{c}$ ) | ((a+d) / 2) | Interest Rate | Days / Month | Interest | + h) |
| Mar-15 | (\$310,722) | \$276,095 | \$435,284 | (\$469,910) | (\$390,316) | 3.25\% | 31 | (\$1,077) | (\$470,988) |
| Apr-15 | (\$470,988) | \$151,101 | \$322,325 | $(\$ 642,212)$ | $(\$ 556,600)$ | 3.25\% | 30 | $(\$ 1,487)$ | $(\$ 643,699)$ |
| May-15 | $(\$ 643,699)$ | \$165,620 | \$163,230 | $(\$ 641,309)$ | $(\$ 642,504)$ | 3.25\% | 31 | (\$1,761)(1) | (\$643,070) |
| Jun-15 | $(\$ 643,070)$ | \$190,479 | \$146,434 | $(\$ 599,026)$ | (\$621,048) | 3.25\% | 30 | $(\$ 1,659)$ | $(\$ 600,685)$ |
| Jul-15 | (\$600,685) | \$23,641 | \$173,784 | (\$750,828) | $(\$ 675,756)$ | 3.25\% | 31 | $(\$ 1,865)$ | $(\$ 752,693)$ |
| Aug-15 | $(\$ 752,693)$ | \$696,950 | \$199,989 | (\$255,732) | (\$504,213) | 3.25\% | 31 | $(\$ 1,392)$ | (\$257,124) |
| Sep-15 | $(\$ 257,124)$ | \$14,603 | \$223,755 | $(\$ 466,276)$ | $(\$ 361,700)$ | 3.25\% | 30 | (\$966) | $(\$ 467,243)$ |
| Oct-15 | $(\$ 467,243)$ | \$194,551 | \$166,831 | $(\$ 439,523)$ | $(\$ 453,383)$ | 3.25\% | 31 | $(\$ 1,251)$ | (\$440,774) |
| Nov-15 | (\$440,774) | \$173,545 | \$139,021 | $(\$ 406,251)$ | $(\$ 423,513)$ | 3.25\% | 30 | $(\$ 1,131)$ | (\$407,383) |
| Dec-15 | $(\$ 407,383)$ | \$120,411 | \$117,418 | (\$404,390) | $(\$ 405,886)$ | 3.25\% | 31 | (\$1,120) | $(\$ 405,510)$ |
| Jan-16 | $(\$ 405,510)$ | \$86,714 | \$90,164 | $(\$ 408,960)$ | $(\$ 407,235)$ | 3.25\% | 31 | $(\$ 1,121)$ | (\$410,081) |
| Feb-16 | (\$410,081) | \$194,970 | \$122,711 | (\$337,821) | $(\$ 373,951)$ | 3.25\% | 29 | (\$963) | (\$338,784) |
| Total |  |  |  |  |  |  |  | $(\$ 15,795)$ |  |

(1) Includes \$12 to adjust interest due to change in method of recording NHPUC Annual Assessment, effective July 2014.

## Redacted

|  | Calculation of Working Capital Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | (j) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  | (1) |
|  | Total G1 Class DS Supplier Charges | $\begin{gathered} \text { GIS } \\ \text { Support } \\ \text { Payments } \end{gathered}$ | Number of Days of Lag / 365 (1) | Working Capital Requirement | Prime Rate | Supply Related Working Capital (d*e) | Provision for Uncollected Accounts | Internal Company Administrative Costs | $\begin{gathered} \text { Legal } \\ \text { Charges } \end{gathered}$ | Consulting Outside Service Charges | Default Service Portion of the annual PUC Assessment | $\begin{gathered} \text { Total Costs } \\ (\text { sum } a+b+f+ \\ g+h+i+j+k) \end{gathered}$ |
| Mar-15 |  | \$36 | (1.38\%) |  | 3.25\% |  |  | \$3,498 | (\$1) | \$0 | \$0 | \$276,095 |
| Apr-15 |  | \$33 | (1.38\%) |  | 3.25\% |  |  | \$3,498 | \$0 | \$0 | \$0 | \$151,101 |
| May-15 |  | \$42 | (1.38\%) |  | 3.25\% |  |  | \$3,498 | \$0 | \$0 | \$782 | \$165,620 |
| Jun-15 |  | \$30 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$10 | \$0 | \$59 | \$190,479 |
| Jul-15 |  | \$30 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$0 | \$0 | \$56 | \$23,641 |
| Aug-15 |  | \$64 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$45 | \$0 | \$53 | \$696,950 |
| Sep-15 |  | \$36 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$32 | \$0 | \$55 | \$14,603 |
| Oct-15 |  | \$44 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$11 | \$0 | \$65 | \$194,551 |
| Nov-15 |  | \$36 | (2.53\%) |  | 3.25\% |  |  | \$3,498 | \$0 | \$0 | \$56 | \$173,545 |
| Dec-15 |  | \$26 | (2.53\%) |  | 3.37\% |  |  | \$3,772 | \$30 | \$0 | \$51 | \$120,411 |
| Jan-16 |  | \$23 | (2.53\%) |  | 3.50\% |  |  | \$3,772 | \$0 | \$0 | \$45 | \$86,714 |
| Feb-16 |  | \$28 | (2.53\%) |  | 3.50\% |  |  | \$3,772 | \$0 | \$0 | \$42 | \$194,970 |
| Total |  | \$427 |  |  |  |  |  | \$42,796 | \$127 | \$0 | \$1,264 | \$2,288,680 |

(1) For the months Mar-May 2015, number of days lag equals (5.05). Calculated using revenue lag of 36.31 days less cost lead of 41.36 days. Revenue lag per Schedule KG-1, Page 4 of 23 and cost For the months June 2015-February 2016, number of days lag equals (9.24). Calculated using revenue lag of 40.41 days less cost lead of 49.65 days. Revenue lag per Schedule BC - 1 , Page 4 of 23
(2) Represents July 2014-May 2015 G1 portion of the annual NHPUC assessment allocated to Default Service (total for year for Non-G1 and G1 to Default Service equals $\$ 10,000$ ).

Unitil Energy Systems, Inc.
G1 Class Default Service Power Supply Charge Revenue

Schedule LSM-4
Page 4 of 5

|  | (a) <br> Total G1 Class Billed Default Service kWh (1) | (b) <br> Unbilled Factor <br> (2) | (c) <br> G1 Class Unbilled kWh ( a * b ) | (d) <br> Effective Variable Power Supply Charge | (e) <br> G1 Class Unbilled Power Supply Charge Revenue (c * d) | (f) <br> Reversal of prior month unbilled | (g) <br> Total Billed G1 Class Power Supply Charge Revenue (1) | (h) <br> Total Revenue $(e+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mar-15 | 3,621,671 | 41.17\% | 1,491,210 | \$0.13012 | \$194,036 | $(\$ 159,496)$ | \$400,744 | \$435,284 |
| Apr-15 | 2,939,781 | 52.33\% | 1,538,258 | \$0.10767 | \$165,624 | (\$194,036) | \$350,737 | \$322,325 |
| May-15 | 3,183,674 | 45.11\% | 1,436,285 | \$0.05490 | \$78,852 | $(\$ 165,624)$ | \$250,003 | \$163,230.45 |
| Jun-15 | 3,632,035 | 41.55\% | 1,509,077 | \$0.03825 | \$57,722 | $(\$ 78,852)$ | \$167,564 | \$146,434 |
| Jul-15 | 3,690,182 | 44.23\% | 1,632,289 | \$0.04580 | \$74,759 | $(\$ 57,722)$ | \$156,748 | \$173,784 |
| Aug-15 | 4,020,361 | 44.93\% | 1,806,535 | \$0.04776 | \$86,280 | $(\$ 74,759)$ | \$188,468 | \$199,989 |
| Sep-15 | 4,002,794 | 47.17\% | 1,888,111 | \$0.05373 | \$101,448 | $(\$ 86,280)$ | \$208,587 | \$223,755 |
| Oct-15 | 3,463,480 | 49.40\% | 1,711,089 | \$0.05226 | \$89,422 | $(\$ 101,448)$ | \$178,858 | \$166,831 |
| Nov-15 | 2,858,363 | 53.99\% | 1,543,177 | \$0.05173 | \$79,829 | $(\$ 89,422)$ | \$148,614 | \$139,021 |
| Dec-15 | 2,996,345 | 48.92\% | 1,465,766 | \$0.03985 | \$58,411 | $(\$ 79,829)$ | \$138,836 | \$117,418 |
| Jan-16 | 2,998,104 | 48.65\% | 1,458,588 | \$0.02966 | \$43,262 | $(\$ 58,411)$ | \$105,313 | \$90,164 |
| Feb-16 | 2,751,717 | 44.80\% | 1,232,848 | \$0.04835 | \$59,608 | (\$43,262) | \$106,365 | \$122,711 |
| Total | 40,158,507 |  |  |  | \$1,089,253 | (\$1,189,140) | \$2,400,836 | \$2,300,948 |

(1) Per billing system
(2) Detail of Unbilled Factors for the Large General Class:

|  | Billed kWh | Direct Estimate of Unbilled kWh | Unbilled kWh / Billed kWh |
| :---: | :---: | :---: | :---: |
| Mar-15 | 29,020,863 | 11,949,237 | 41.17\% |
| Apr-15 | 27,201,775 | 14,233,487 | 52.33\% |
| May-15 | 27,707,424 | 12,499,945 | 45.11\% |
| Jun-15 | 32,102,051 | 13,338,105 | 41.55\% |
| Jul-15 | 31,726,120 | 14,033,507 | 44.23\% |
| Aug-15 | 33,456,531 | 15,033,572 | 44.93\% |
| Sep-15 | 33,623,423 | 15,860,105 | 47.17\% |
| Oct-15 | 28,903,562 | 14,279,443 | 49.40\% |
| Nov-15 | 27,878,010 | 15,050,824 | 53.99\% |
| Dec-15 | 27,665,788 | 13,533,680 | 48.92\% |
| Jan-16 | 27,997,237 | 13,620,752 | 48.65\% |
| Feb-16 | 29,556,063 | 13,241,964 | 44.80\% |


|  | Calculation of Working Capital Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) |  | (i) | (j) | (k) Default Service | (I) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  | (h) |  |  |  |  |
|  | Total G1 Class | GIS | Number of | Working Capital |  | Supply Related |  | Internal Company |  |  |  | Total Costs |
|  | DS Supplier Charges (1) | Support Payments | Days of Lag / 365 (2) | Requirement <br> (3) | Prime Rate | Working Capital $\left(d^{*} e\right)$ | Uncollected Accounts | Administrative Costs | Legal Charges | Outside Service Charges | annual PUC <br> Assessment | $\begin{aligned} & (\operatorname{sum} a+b+f+ \\ & g+h+i+j+k) \end{aligned}$ |
| Jun-16 |  | \$32 | (1.33\%) | (\$1,930) | 3.50\% | (\$68) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,791 |
| Jul-16 |  | \$32 | (1.33\%) | $(\$ 2,460)$ | 3.50\% | (\$86) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,773 |
| Aug-16 |  | \$35 | (1.33\%) | $(\$ 2,311)$ | 3.50\% | (\$81) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,782 |
| Sep-16 |  | \$32 | (1.33\%) | $(\$ 1,981)$ | 3.50\% | (\$69) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,790 |
| Oct-16 |  | \$28 | (1.33\%) | $(\$ 1,860)$ | 3.50\% | (\$65) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,790 |
| Nov-16 |  | \$29 | (1.33\%) | $(\$ 2,007)$ | 3.50\% | (\$70) | \$0 | \$3,772 | \$0 | \$0 | \$56 | \$3,786 |
| Total |  | \$188 |  |  |  | (\$439) | \$0 | \$22,630 | \$0 | \$0 | \$335 | \$22,713 |

(1) DS Supplier Charges to be determined at the end of each month.
 filed April 1, 2016


 month.

Unitil Energy Systems, Inc
Calculation of G1 Class Default Service Renewable Portfolio Standard (RPS) Charge

|  |  | Jun-16 <br> Estimated | Jul-16 <br> Estimated | Aug-16 <br> Estimated | Sep-16 <br> Estimated | Oct-16 <br> Estimated | Nov-16 <br> Estimated | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Reconciliation (1) | \$1,893 | \$2,075 | \$2,110 | \$2,015 | \$1,865 | \$1,788 | \$11,744 |
| 2 | Total Costs (Page 5) | \$14,531 | \$15,934 | \$16,197 | \$15,467 | \$14,316 | \$13,725 | \$90,170 |
| 3 | Reconciliation plus Total Costs (L.1 + L. 2 ) | \$16,424 | \$18,009 | \$18,306 | \$17,482 | \$16,181 | \$15,512 | \$101,915 |
| 4 | kWh Purchases | 3,721,650 | 4,080,920 | 4,148,210 | 3,961,399 | 3,666,624 | 3,515,052 | 23,093,855 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 | \$0.00441 |  |
| 6 | Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 7 | Total Retail Rate - Variable RPS Charge (L. 5 * (1+L.6)) | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 | \$0.00462 |  |

(1) Balance as of February 29, 2016 modified, as detailed below, to reflect that current rates (through May 31, 2016) include a credit for the overcollection as of February 28,2015 and to reflect accruals for RPS. Figure is then allocated between rate periods (June-November 2016 and December 2016-May 2017) and then to each month, June through November 2016, on equal per kWh basis.
a February 29, 2016 actual balance - Schedule LSM-5, Page 2
(\$271,849)
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2016

| $c$ | Estimated kWh Sales Mar-May 2016 |
| :--- | ---: |
| $d$ | Amount of reconciliation in current rate |
| $e$ | Estimated amount of reconciliation - Mar-May 2016 |

$10,086,188$
$\frac{(\$ 0.00202)}{(\$ 20,374)}$
$f$ plus: G1 Class RPS amounts included in rate filings,Mar 2015-Feb 2016 \$362,334
$g$ less: G1 Class RPS amounts, CY 2015 requirement, purchased
$h$ Net G1 Class RPS amounts included in rate filings,Mar 2015-Feb 2016
\$88,411
$h$ Net G1 Class RPS amounts included in rate filings,Mar 2015-Feb 2016 \$273,922
i Total reconciliation for June 1, 2016-May 31, 2017 (line a - Line e + line h) \$22,447
j kWh purchases forecast June-November 2016

| $23,093,855$ | $52.32 \%$ |
| :--- | :--- |
| $\frac{21,043,727}{44,137,582}$ | $47.68 \%$ |

$m$ Reconciliation amount for June-November 2016
$n$ Reconciliation amount for December 2016-May 2017
o Total

| (line i * line j\%) | $\$ 11,744$ |
| :--- | :--- |
| (line i * line k\%) | $\underline{\$ 10,703}$ |
| (line $m+$ line $n$ ) | $\$ 22,447$ |

Unitil Energy Systems, Inc.
Reconciliation of G1 Class RPS Costs and Revenues

Schedule LSM-5
Page 2 of 5

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Beginning Balance | Total Costs (Page 3) | Total Revenue (Page 4) | Ending Balance Before Interest $(a+b-c)$ | Average Monthly <br> Balance ((a+d) / 2) | Interest Rate | Number of Days / Month | Computed Interest | Ending Balance with Interest (d + h) |
| Mar-15 | $(\$ 430,408)$ | \$75 | \$13,352 | (\$443,685) | $(\$ 437,046)$ | 3.25\% | 31 | (\$1,206) | (\$444,891) |
| Apr-15 | $(\$ 444,891)$ | \$31,104 | \$11,373 | $(\$ 425,160)$ | $(\$ 435,026)$ | 3.25\% | 30 | $(\$ 1,162)$ | $(\$ 426,322)$ |
| May-15 | $(\$ 426,322)$ | \$8,873 | \$13,083 | $(\$ 430,533)$ | $(\$ 428,427)$ | 3.25\% | 31 | $(\$ 1,183)$ | $(\$ 431,715)$ |
| Jun-15 | $(\$ 431,715)$ | \$111,442 | \$10,107 | $(\$ 330,380)$ | $(\$ 381,048)$ | 3.25\% | 30 | $(\$ 1,018)$ | $(\$ 331,398)$ |
| Jul-15 | (\$331,398) | \$11,146 | \$9,991 | $(\$ 330,242)$ | $(\$ 330,820)$ | 3.25\% | 31 | (\$913) | $(\$ 331,156)$ |
| Aug-15 | (\$331,156) | \$685 | \$10,990 | $(\$ 341,461)$ | $(\$ 336,308)$ | 3.25\% | 31 | (\$928) | $(\$ 342,389)$ |
| Sep-15 | $(\$ 342,389)$ | \$0 | \$10,562 | $(\$ 352,951)$ | $(\$ 347,670)$ | 3.25\% | 30 | (\$929) | $(\$ 353,880)$ |
| Oct-15 | $(\$ 353,880)$ | \$3,820 | \$8,749 | $(\$ 358,809)$ | $(\$ 356,345)$ | 3.25\% | 31 | (\$984) | $(\$ 359,793)$ |
| Nov-15 | $(\$ 359,793)$ | \$67,786 | \$7,049 | $(\$ 299,056)$ | $(\$ 329,424)$ | 3.25\% | 30 | (\$880) | $(\$ 299,936)$ |
| Dec-15 | (\$299,936) | \$0 | \$4,702 | $(\$ 304,638)$ | $(\$ 302,287)$ | 3.25\% | 31 | (\$834) | $(\$ 305,472)$ |
| Jan-16 | $(\$ 305,472)$ | \$61,995 | \$15,535 | $(\$ 259,012)$ | $(\$ 282,242)$ | 3.25\% | 31 | \$373 (1) | $(\$ 258,639)$ |
| Feb-16 | $(\$ 258,639)$ | \$1,012 | \$13,540 | $(\$ 271,167)$ | $(\$ 264,903)$ | 3.25\% | 29 | (\$682) | $(\$ 271,849)$ |
| Total |  |  |  |  |  |  |  | $(\$ 10,346)$ |  |

(1) Includes adjustment of $\$ 1,150$ to correct interest due to RECs reclass.

(1) For the months Mar-May 2015, number of days lag equals (332.80). Calculated using revenue lag of 36.31 days less cost lead of 369.11 days. Revenue lag per Schedule KG-1, Page 4 of 23 and cost lead per Schedule KG-1, Page 20 of 23, DE 14-061 filed April 4, 2014.

For the months June 2015-February 2016, number of days lag equals (323.36). Calculated using revenue lag of 40.41 days less cost lead of 363.77 days. Revenue lag per Schedule BC-1, Page 4 of 23 and cost lead per Schedule BC-1, Page 20 of 23, DE 15-079 filed April 3, 2015.
(2) Includes $\$ 62,390.61$ to adjust Non-G1 renewable energy credits that should have been allocated to G1.
(3) Includes $\$ 127.89$ to correct working capital for RECs reclass (see note 2).

Unitil Energy Systems, Inc.
G1 Class Default Service Renewable Portfolio Standard Charge Revenue

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total G1 Class Billed Default Service kWh (1) | Unbilled Factor (2) | G1 Class Unbilled kWh ( a * b$)$ | Effective Variable RPS Charge | G1 Class Unbilled RPS Charge Revenue (c * d) | Reversal of prior month unbilled | Total Billed G1 Class RPS Charge Revenue (1) | Total Revenue $(e+f+g)$ |
| Mar-15 | 3,621,671 | 41.17\% | 1,491,210 | \$0.00403 | \$6,010 | $(\$ 7,253)$ | \$14,595 | \$13,352 |
| Apr-15 | 2,939,781 | 52.33\% | 1,538,258 | \$0.00403 | \$6,199 | $(\$ 6,010)$ | \$11,184 | \$11,373 |
| May-15 | 3,183,674 | 45.11\% | 1,436,285 | \$0.00403 | \$5,788 | $(\$ 6,199)$ | \$13,494 | \$13,083 |
| Jun-15 | 3,632,035 | 41.55\% | 1,509,077 | \$0.00262 | \$3,954 | $(\$ 5,788)$ | \$11,941 | \$10,107 |
| Jul-15 | 3,690,182 | 44.23\% | 1,632,289 | \$0.00262 | \$4,277 | $(\$ 3,954)$ | \$9,668 | \$9,991 |
| Aug-15 | 4,020,361 | 44.93\% | 1,806,535 | \$0.00262 | \$4,733 | $(\$ 4,277)$ | \$10,533 | \$10,990 |
| Sep-15 | 4,002,794 | 47.17\% | 1,888,111 | \$0.00262 | \$4,947 | $(\$ 4,733)$ | \$10,348 | \$10,562 |
| Oct-15 | 3,463,480 | 49.40\% | 1,711,089 | \$0.00262 | \$4,483 | $(\$ 4,947)$ | \$9,213 | \$8,749 |
| Nov-15 | 2,858,363 | 53.99\% | 1,543,177 | \$0.00262 | \$4,043 | $(\$ 4,483)$ | \$7,489 | \$7,049 |
| Dec-15 | 2,996,345 | 48.92\% | 1,465,766 | \$0.00158 | \$2,316 | $(\$ 4,043)$ | \$6,429 | \$4,702 |
| Jan-16 | 2,998,104 | 48.65\% | 1,458,588 | \$0.00538 | \$7,847 | $(\$ 2,316)$ | \$10,004 | \$15,535 |
| Feb-16 | 2,751,717 | 44.80\% | 1,232,848 | \$0.00538 | \$6,633 | $(\$ 7,847)$ | \$14,755 | \$13,540 |
| Total | 40,158,507 |  |  |  | \$61,229 | $(\$ 61,850)$ |  | \$129,033 |

(1) Per billing system
(2) Detail of Unbilled Factors for the Large General Class:

|  | Billed kWh | Direct Estimate of Unbilled kWh | Unbilled kWh / Billed kWh |
| :---: | :---: | :---: | :---: |
| Mar-15 | 29,020,863 | 11,949,237 | 41.17\% |
| Apr-15 | 27,201,775 | 14,233,487 | 52.33\% |
| May-15 | 27,707,424 | 12,499,945 | 45.11\% |
| Jun-15 | 32,102,051 | 13,338,105 | 41.55\% |
| Jul-15 | 31,726,120 | 14,033,507 | 44.23\% |
| Aug-15 | 33,456,531 | 15,033,572 | 44.93\% |
| Sep-15 | 33,623,423 | 15,860,105 | 47.17\% |
| Oct-15 | 28,903,562 | 14,279,443 | 49.40\% |
| Nov-15 | 27,878,010 | 15,050,824 | 53.99\% |
| Dec-15 | 27,665,788 | 13,533,680 | 48.92\% |
| Jan-16 | 27,997,237 | 13,620,752 | 48.65\% |
| Feb-16 | 29,556,063 | 13,241,964 | 44.80\% |


(1) Schedule LSG-4.
(2) Number of days lag equals (278.64). Calculated using revenue lag of 42.88 days less cost lead of 321.52 days. Revenue lag per Schedule DN-1, Page 4 of 23 and cost lead per Schedule DN-1, Page 20 of 23, DE 16-250 filed April 1, 2016.

## Unitil Energy Systems, Inc

Typical Bill Impacts by Rate Component
Residential Rate D 634 kWh Bill

| Rate Components | 4/1/2016 | 6/1/2016 |  |  | As Revised Bill* | Difference | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill* |  |  | Difference <br> to Total Bill |
| Customer Charge | \$10.27 | \$10.27 | \$0.00 | \$10.27 | \$10.27 | \$0.00 | 0.0\% |
| Distribution Charge \$/kWh \$/kWh |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| First 250 kWh | \$0.03404 | \$0.03404 | \$0.00000 | \$8.51 | \$8.51 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.03904 | \$0.03904 | \$0.00000 | \$14.99 | \$14.99 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$13.51 | \$13.51 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.11 | \$0.11 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$1.40 | \$1.40 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$2.09 | \$2.09 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09409 | \$0.05978 | (\$0.03431) | \$59.65 | \$37.90 | (\$21.75) | (19.7\%) |
| First 250 kWh | \$0.15513 | \$0.12082 | (\$0.03431) |  |  |  |  |
| Excess 250 kWh | \$0.16013 | \$0.12582 | (\$0.03431) |  |  |  |  |
| Total Bill |  |  |  | \$110.54 | \$88.79 | (\$21.75) | (19.7\%) |


| Rate Components | Regular General G2 Demand, $11 \mathrm{~kW}, \mathbf{2 , 8 0 0} \mathrm{kWh}$ Typical Bill |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4/1/2016 | 6/1/2016 |  |  |  |  | \% |
|  | Current Rate | As Revised | Difference | Current Bill* | As Revised Bill* | Difference | Difference to Total Bill |
| Customer Charge | \$18.41 | \$18.41 | \$0.00 | \$18.41 | \$18.41 | \$0.00 | 0.0\% |
|  | All kW | All kW |  |  |  |  |  |
| Distribution Charge | \$10.31 | \$10.31 | \$0.00 | \$113.41 | \$113.41 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.04 | \$0.04 | \$0.00 | \$0.44 | \$0.44 | \$0.00 | 0.0\% |
| Total | \$10.35 | \$10.35 | \$0.00 | \$113.85 | \$113.85 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00000 | \$0.00000 | \$0.00000 | \$0.00 | \$0.00 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$59.67 | \$59.67 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00004 | \$0.00004 | \$0.00000 | \$0.11 | \$0.11 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$6.19 | \$6.19 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$9.24 | \$9.24 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09131 | \$0.05860 | (\$0.03271) | \$255.67 | \$164.08 | (\$91.59) | (19.8\%) |
| Total | \$0.11817 | \$0.08546 | (\$0.03271) | \$330.88 | \$239.29 | (\$91.59) | (19.8\%) |
| Total Bill |  |  |  | \$463.14 | \$371.55 | (\$91.59) | (19.8\%) |

* Comparison isolates the impact of changes to the Default Service Rate only. Impacts do not include the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Typical Bill Impacts by Rate Component

| Rate Components | 4/1/2016 <br> Current Rate | 6/1/2016 |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$6.25 | \$6.25 | \$0.00 | \$6.25 | \$6.25 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03073 | \$0.03073 | \$0.00000 | \$49.78 | \$49.78 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$34.52 | \$34.52 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.29 | \$0.29 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$3.58 | \$3.58 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$5.35 | \$5.35 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09131 | \$0.05860 | (\$0.03271) | \$147.92 | \$94.93 | (\$52.99) | (21.4\%) |
| Total | \$0.14904 | \$0.11633 | (\$0.03271) | \$241.44 | \$188.45 | (\$52.99) | (21.4\%) |
| Total Bill |  |  |  | \$247.69 | \$194.70 | (\$52.99) | (21.4\%) |


| Rate Components | Regular General G2 kWh Meter 125 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4/1/2016 <br> Current Rate | $6 / 1 / 2016$ <br> As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$13.94 | \$13.94 | \$0.00 | \$13.94 | \$13.94 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03211 | \$0.03211 | \$0.00000 | \$4.01 | \$4.01 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$2.66 | \$2.66 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.02 | \$0.02 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$0.28 | \$0.28 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$0.41 | \$0.41 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09131 | \$0.05860 | (\$0.03271) | \$11.41 | \$7.33 | (\$4.09) | (12.5\%) |
| Total | \$0.15042 | \$0.11771 | (\$0.03271) | \$18.80 | \$14.71 | (\$4.09) | (12.5\%) |
| Total Bill |  |  |  | \$32.74 | \$28.65 | (\$4.09) | (12.5\%) |

[^0]Unitil Energy Systems, Inc.
Typical Bill Impacts for Residential Rate Class based on Mean and Median Usage
Residential Rate D 634 kWh Bill - Mean Use*

| Rate Components | 4/1/2016 | 6/1/2016 |  |  | As Revised Bill** | Difference | $\%$ <br> Difference <br> to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | $\frac{\text { Current }}{\underline{\text { Bill** }}}$ |  |  |  |
| Customer Charge | \$10.27 | \$10.27 | \$0.00 | \$10.27 | \$10.27 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.03404 | \$0.03404 | \$0.00000 | \$8.51 | \$8.51 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.03904 | \$0.03904 | \$0.00000 | \$14.99 | \$14.99 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$13.51 | \$13.51 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.11 | \$0.11 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$1.40 | \$1.40 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$2.09 | \$2.09 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09409 | \$0.05978 | (\$0.03431) | \$59.65 | \$37.90 | (\$21.75) | (19.7\%) |
| First 250 kWh | \$0.15513 | \$0.12082 | (\$0.03431) |  |  |  |  |
| Excess 250 kWh | \$0.16013 | \$0.12582 | (\$0.03431) |  |  |  |  |
| Total Bill |  |  |  | \$110.54 | \$88.79 | (\$21.75) | (19.7\%) |

Residential Rate D 521 kWh Bill - Median Use*

| Rate Components | 4/1/2016 | 6/1/2016 |  | $\frac{\text { Current }}{\underline{\text { Bill** }}}$ | As Revised Bill** | Difference | $\%$Difference <br> to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference |  |  |  |  |
| Customer Charge | \$10.27 | \$10.27 | \$0.00 | \$10.27 | \$10.27 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.03404 | \$0.03404 | \$0.00000 | \$8.51 | \$8.51 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.03904 | \$0.03904 | \$0.00000 | \$10.58 | \$10.58 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02131 | \$0.00000 | \$11.10 | \$11.10 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.09 | \$0.09 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$1.15 | \$1.15 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$1.72 | \$1.72 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09409 | \$0.05978 | (\$0.03431) | \$49.02 | \$31.15 | (\$17.88) | (19.3\%) |
| First 250 kWh | \$0.15513 | \$0.12082 | (\$0.03431) |  |  |  |  |
| Excess 250 kWh | \$0.16013 | \$0.12582 | (\$0.03431) |  |  |  |  |
| Total Bill |  |  |  | \$92.45 | \$74.57 | (\$17.88) | (19.3\%) |

* Based on billing period January 2015 through December 2015.
** Comparison isolates the impact of changes to the Default Service Rate only. Impacts do not include the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Average Class Bill Impacts
Due to Proposed Default Service Rate Changes Effective June 1, 2016*

(B), (C), (D) Test year billing determinants in DE 10-055.
(E) Difference in proposed rate and current rate, times the billing determinants shown in Column (C).
(F) Based on current rates times billing determinants shown in Columns (B), (C) and (D).
(G) Sum of Columns (E) and (F)
(H) Column (G) minus Column (F)
(I) Column (H) divided by Column (F)

* Comparison isolates the impact of changes to the Default Service Rate only.



$\left.\begin{array}{|llll|}\hline & \begin{array}{c}\text { Unitil Energy Systems, Inc. } \\ \text { Typical Bill Impacts }- \text { April 1, 2016 versus June 1, 2016* }\end{array} \\ \text { Impacts do NOT include the Electricity Consumption Tax } \\ \text { Impact on G2 QRWH and SH Rate Customers }\end{array}\right]$

| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - April 1, 2016 versus June 1, 2016* Impacts do NOT include the Electricity Consumption Tax Impact on OL Rate Customers ** |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Nominal Watts | Lumens | Type | Average Monthly kWh | Total Bill Using Rates 4/1/2016 | Total Bill Using Rates 6/1/2016 | Total Difference | \% <br> Total Difference |
| Mercury Vapor: |  |  |  |  |  |  |  |  |
| 1 | 100 | 3,500 | ST | 40 | \$16.01 | \$14.70 | (\$1.31) | (8.2\%) |
| 2 | 175 | 7,000 | ST | 67 | \$21.58 | \$19.39 | (\$2.19) | (10.2\%) |
| 3 | 250 | 11,000 | ST | 95 | \$26.91 | \$23.80 | (\$3.11) | (11.5\%) |
| 4 | 400 | 20,000 | ST | 154 | \$37.16 | \$32.12 | (\$5.04) | (13.6\%) |
| 5 | 1,000 | 60,000 | ST | 388 | \$84.96 | \$72.27 | (\$12.69) | (14.9\%) |
| 6 | 250 | 11,000 | FL | 95 | \$28.03 | \$24.92 | (\$3.11) | (11.1\%) |
| 7 | 400 | 20,000 | FL | 154 | \$38.60 | \$33.56 | (\$5.04) | (13.1\%) |
|  | 1,000 | 60,000 | FL | 388 | \$80.64 | \$67.95 | (\$12.69) | (15.7\%) |
| - | 100 | 3,500 | PB | 40 | \$16.13 | \$14.82 | (\$1.31) | (8.1\%) |
| 10 | 175 | 7,000 | PB | 67 | \$20.74 | \$18.55 | (\$2.19) | (10.6\%) |
| High Pressure Sodium: |  |  |  |  |  |  |  |  |
| 11 | 50 | 4,000 | ST | 21 | \$13.99 | \$13.31 | (\$0.69) | (4.9\%) |
| 12 | 100 | 9,500 | ST | 43 | \$18.23 | \$16.82 | (\$1.41) | (7.7\%) |
| 13 | 150 | 16,000 | ST | 60 | \$20.30 | \$18.34 | (\$1.96) | (9.7\%) |
| 14 | 250 | 30,000 | ST | 101 | \$28.86 | \$25.56 | (\$3.30) | (11.4\%) |
| 15 | 400 | 50,000 | ST | 161 | \$40.75 | \$35.48 | (\$5.27) | (12.9\%) |
| 16 | 1,000 | 140,000 | ST | 398 | \$85.64 | \$72.62 | (\$13.02) | (15.2\%) |
| 17 | 150 | 16,000 | FL | 60 | \$22.54 | \$20.58 | (\$1.96) | (8.7\%) |
| 18 | 250 | 30,000 | FL | 101 | \$30.42 | \$27.12 | (\$3.30) | (10.9\%) |
| 19 | 400 | 50,000 | FL | 161 | \$40.23 | \$34.96 | (\$5.27) | (13.1\%) |
| 20 | 1,000 | 140,000 | FL | 398 | \$85.99 | \$72.97 | (\$13.02) | (15.1\%) |
| 21 | 50 | 4,000 | PB | 21 | \$13.02 | \$12.34 | (\$0.69) | (5.3\%) |
| 22 | 100 | 95,000 | PB | 43 | \$17.10 | \$15.69 | (\$1.41) | (8.2\%) |
| Metal Halide: |  |  |  |  |  |  |  |  |
| 23 | 175 | 8,800 | ST | 66 | \$25.46 | \$23.30 | (\$2.16) | (8.5\%) |
| 24 | 250 | 13,500 | ST | 92 | \$30.20 | \$27.20 | (\$3.01) | (10.0\%) |
| 25 | 400 | 23,500 | ST | 148 | \$37.60 | \$32.76 | (\$4.84) | (12.9\%) |
| 26 | 175 | 8,800 | FL | 66 | \$28.43 | \$26.27 | (\$2.16) | (7.6\%) |
| 27 | 250 | 13,500 | FL | 92 | \$33.26 | \$30.26 | (\$3.01) | (9.0\%) |
| 28 | 400 | 23,500 | FL | 148 | \$39.93 | \$35.09 | (\$4.84) | (12.1\%) |
| 29 | 175 | 8,800 | PB | 66 | \$24.23 | \$22.07 | (\$2.16) | (8.9\%) |
| 30 | 250 | 13,500 | PB | 92 | \$28.43 | \$25.43 | (\$3.01) | (10.6\%) |
| 31 | 400 | 23,500 | PB | 148 | \$36.37 | \$31.53 | (\$4.84) | (13.3\%) |
| Luminaire Charges For Year Round Service: |  |  |  |  |  |  |  |  |
| Rates - Effective April 1, 2016 |  |  |  |  |  |  |  |  |
|  |  | Mercury Vapor Rate/Mo. |  | Sodium Vapor Rate/Mo. |  | Metal Halide Rate/Mo. |  |  |
| Customer Charge | \$0.00 |  | \$11.28 | 11 | \$11.51 | 23 | \$17.65 |  |
|  |  |  | \$13.65 | 12 | \$13.14 | 24 | \$19.32 |  |
|  | All kWh |  | \$15.67 | 13 | \$13.20 | 25 | \$20.09 |  |
| Distribution Charge | \$0.00000 |  | \$18.94 | 14 | \$16.91 | 26 | \$20.62 |  |
| External Delivery Charge | \$0.02131 |  | \$39.06 | 15 | \$21.70 | 27 | \$22.38 |  |
| Stranded Cost Charge | \$0.00018 |  | \$16.79 | 16 | \$38.55 | 28 | \$22.42 |  |
| Storm Recovery Adj. Factor | \$0.00221 |  | \$20.38 | 17 | \$15.44 | 29 | \$16.42 |  |
| System Benefits Charge | \$0.00330 |  | \$34.74 | 18 | \$18.47 | 30 | \$17.55 |  |
| Default Service Charge | \$0.09131 |  | \$11.40 | 19 | \$21.18 | 31 | \$18.86 |  |
|  |  |  | \$12.81 | 20 | \$38.90 |  |  |  |
| total | \$0.11831 |  |  | 21 | \$10.54 |  |  |  |
|  |  |  |  | 22 | \$12.01 |  |  |  |
| Rates - Proposed June 1, 2016 |  |  |  |  |  |  |  |  |
|  |  | Mercury Vap | e/Mo. | Sodium Vapo | Rate/Mo. | Metal Halide | ate/Mo. |  |
| Customer Charge | \$0.00 |  | \$11.28 | 11 | \$11.51 | 23 | \$17.65 |  |
|  |  |  | \$13.65 | 12 | \$13.14 | 24 | \$19.32 |  |
|  | All kWh |  | \$15.67 | 13 | \$13.20 | 25 | \$20.09 |  |
| Distribution Charge | \$0.00000 |  | \$18.94 | 14 | \$16.91 | 26 | \$20.62 |  |
| External Delivery Charge | \$0.02131 |  | \$39.06 | 15 | \$21.70 | 27 | \$22.38 |  |
| Stranded Cost Charge | \$0.00018 |  | \$16.79 | 16 | \$38.55 | 28 | \$22.42 |  |
| Storm Recovery Adj. Factor | \$0.00221 |  | \$20.38 | 17 | \$15.44 | 29 | \$16.42 |  |
| System Benefits Charge | \$0.00330 |  | \$34.74 | 18 | \$18.47 | 30 | \$17.55 |  |
| Default Service Charge | \$0.05860 |  | \$11.40 | 19 | \$21.18 | 31 | \$18.86 |  |
|  |  |  | \$12.81 | 20 | \$38.90 |  |  |  |
| TOTAL | \$0.08560 |  |  | 21 | \$10.54 |  |  |  |
|  |  |  |  | 22 | \$12.01 |  |  |  |
|  | Difference | Mercury V | ifference | Sodium V | por-Difference | Metal Ha | de-Difference |  |
| Customer Charge | \$0.00 |  | \$0.00 | 11 | \$0.00 | 23 | \$0.00 |  |
|  |  |  | \$0.00 | 12 | \$0.00 | 24 | \$0.00 |  |
|  | All kWh |  | \$0.00 | 13 | \$0.00 | 25 | \$0.00 |  |
| Distribution Charge | \$0.00000 |  | \$0.00 | 14 | \$0.00 | 26 | \$0.00 |  |
| External Delivery Charge | \$0.00000 |  | \$0.00 | 15 | \$0.00 | 27 | \$0.00 |  |
| Stranded Cost Charge | \$0.00000 |  | \$0.00 | 16 | \$0.00 | 28 | \$0.00 |  |
|  | \$0.00000 |  | \$0.00 | 17 | \$0.00 | 29 | \$0.00 |  |
| Storm Recovery Adj. Factor System Benefits Charge | \$0.00000 |  | \$0.00 | 18 | \$0.00 | 30 | \$0.00 |  |
| Default Service Charge | (\$0.03271) |  | \$0.00 | 19 | \$0.00 | 31 | \$0.00 |  |
|  |  |  | \$0.00 | 20 | \$0.00 |  |  |  |
| TOTAL | (\$0.03271) |  |  | 21 | \$0.00 |  |  |  |
|  |  |  |  | 22 | \$0.00 |  |  |  |
| * Comparison isolates the impact of changes to the Default Service Rate only. <br> * Luminaire charges based on All-Night Service option. |  |  |  |  |  |  |  |  |

## Unitil Energy Systems, Inc

Typical Bill Impacts by Rate Component
Residential Rate D 634 kWh Bill - Mean Use*

| Rate Components | Rates proposed for effect 6/1/2015 | Rates proposed for effect 6/1/2016 | Difference | $\begin{gathered} \text { Bill under } \\ 6 / 1 / 2015 \text { rates } \\ \hline \end{gathered}$ | Bill under proposed 6/1/2016 rates | \$ Difference | \% Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Charge | \$10.27 | \$10.27 | \$0.00 | \$10.27 | \$10.27 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.03404 | \$0.03404 | \$0.00000 | \$8.51 | \$8.51 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.03904 | \$0.03904 | \$0.00000 | \$14.99 | \$14.99 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01852 | \$0.02131 | \$0.00279 | \$11.74 | \$13.51 | \$1.77 | 1.9\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.11 | \$0.11 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$1.40 | \$1.40 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$2.09 | \$2.09 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.06921 | \$0.05978 | (\$0.00943) | \$43.88 | \$37.90 | (\$5.98) | (6.4\%) |
| First 250 kWh | \$0.12746 | \$0.12082 | (\$0.00664) |  |  |  |  |
| Excess 250 kWh | \$0.13246 | \$0.12582 | (\$0.00664) |  |  |  |  |
| Total Bill |  |  |  | \$93.00 | \$88.79 | (\$4.21) | (4.5\%) |


| Regular General G2 Demand, 11 kW, 2,800 kWh Typical Bill |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Components | Rates proposed for effect 6/1/2015 | Rates proposed for effect 6/1/2016 | Difference | $\begin{aligned} & \text { Bill under } \\ & 6 / 1 / 2015 \text { rates } \end{aligned}$ | Bill under proposed 6/1/2016 rates | \$ Difference | \% Difference <br> to Total Bill |
| Customer Charge | \$18.41 | \$18.41 | \$0.00 | \$18.41 | \$18.41 | \$0.00 | 0.0\% |
|  | All kW | All kW |  |  |  |  |  |
| Distribution Charge | \$10.31 | \$10.31 | \$0.00 | \$113.41 | \$113.41 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.04 | \$0.04 | \$0.00 | \$0.44 | \$0.44 | \$0.00 | 0.0\% |
| Total | \$10.35 | \$10.35 | \$0.00 | \$113.85 | \$113.85 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00000 | \$0.00000 | \$0.00000 | \$0.00 | \$0.00 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01852 | \$0.02131 | \$0.00279 | \$51.86 | \$59.67 | \$7.81 | 2.0\% |
| Stranded Cost Charge | \$0.00004 | \$0.00004 | \$0.00000 | \$0.11 | \$0.11 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$6.19 | \$6.19 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$9.24 | \$9.24 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.06993 | \$0.05860 | (\$0.01133) | \$195.80 | \$164.08 | (\$31.72) | (8.0\%) |
| Total | \$0.09400 | \$0.08546 | (\$0.00854) | \$263.20 | \$239.29 | (\$23.91) | (6.0\%) |
| Total Bill |  |  |  | \$395.46 | \$371.55 | (\$23.91) | (6.0\%) |

## Typical Bill Impacts by Rate Component

| Rate Components | Rates proposed for effect 6/1/2015 | Rates <br> proposed for <br> effect <br> $6 / 1 / 2016$ | Difference | $\begin{gathered} \text { Bill under } \\ 6 / 1 / 2015 \text { rates } \end{gathered}$ | $\begin{gathered} \text { Bill under } \\ \text { proposed 6/1/2016 } \\ \text { rates } \\ \hline \end{gathered}$ | \$ Difference | \% Difference <br> to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer Charge | \$6.25 | \$6.25 | \$0.00 | \$6.25 | \$6.25 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03073 | \$0.03073 | \$0.00000 | \$49.78 | \$49.78 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01852 | \$0.02131 | \$0.00279 | \$30.00 | \$34.52 | \$4.52 | 2.2\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.29 | \$0.29 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$3.58 | \$3.58 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$5.35 | \$5.35 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.06993 | \$0.05860 | (\$0.01133) | \$113.29 | \$94.93 | (\$18.35) | (8.8\%) |
| Total | \$0.12487 | \$0.11633 | (\$0.00854) | \$202.29 | \$188.45 | (\$13.83) | (6.6\%) |
| Total Bill |  |  |  | \$208.54 | \$194.70 | (\$13.83) | (6.6\%) |


| Regular General G2 kWh Meter 125 kWh Typical Bill |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Components | Rates proposed for effect 6/1/2015 | Rates <br> proposed for <br> effect <br> $6 / 1 / 2016$ | Difference | $\begin{gathered} \text { Bill under } \\ 6 / 1 / 2015 \text { rates } \\ \hline \end{gathered}$ | Bill under proposed 6/1/2016 rates | \$ Difference | \% Difference <br> to Total Bill |
| Customer Charge | \$13.94 | \$13.94 | \$0.00 | \$13.94 | \$13.94 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03211 | \$0.03211 | \$0.00000 | \$4.01 | \$4.01 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01852 | \$0.02131 | \$0.00279 | \$2.32 | \$2.66 | \$0.35 | 1.2\% |
| Stranded Cost Charge | \$0.00018 | \$0.00018 | \$0.00000 | \$0.02 | \$0.02 | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$0.28 | \$0.28 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$0.41 | \$0.41 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.06993 | \$0.05860 | (\$0.01133) | \$8.74 | \$7.33 | (\$1.42) | (4.8\%) |
| Total | \$0.12625 | \$0.11771 | (\$0.00854) | \$15.78 | \$14.71 | (\$1.07) | (3.6\%) |
| Total Bill |  |  |  | \$29.72 | \$28.65 | (\$1.07) | (3.6\%) |


[^0]:    * Comparison isolates the impact of changes to the Default Service Rate only. Impacts do not include the Electricity Consumption Tax.

