## UNITIL ENERGY SYSTEMS. INC.

## CALCULATION OF THE EXTERNAL DELIVERY CHARGE

 Effective August 1, 20161. (Over)/under Recovery - Beginning Balance August 1, 2016
2. Estimated Total Costs (August 2016 - July 2017)
3. Estimated Interest (August 2016-July 2017)
4. Costs to be Recovered (L. $1+\mathrm{L} .2+\mathrm{L} .3)$
5. Estimated Calendar Month Deliveries in kWh (August 2016 - July 2017) (1)
6. External Delivery Charge (\$/kWh)
(L. $4 /$ L. 5)

$$
\begin{array}{rc}
\text { August } 2016 \text { - July } 2017 \text { Billed kWh } & 1,187,343,700 \\
\text { - July } 2016 \text { Unbilled kWh } & (61,878,283) \\
\text { + July } 2017 \text { Unbilled kWh } & \underline{60,081,342} \\
\text { Calendar Month Deliveries } & 1,185,546,760
\end{array}
$$

(1) Schedule LSM-2, page 5.

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L. $1+\mathrm{L} .2+\mathrm{L} .3$

Unitil Energy Systems, Inc
Reconciliation of External Delivery Costs and Revenues

|  |  | (a) <br> Beginning Balance | (b) Total Costs | (c) Total Revenue | (d) <br> Ending <br> Balance <br> Before Interest $(a+b-c)$ | (e) <br> Average Monthly Balance ((a+d)/2) | (f) <br> Interest Rate | (g) <br> Number of Days / Month | (h) <br> Computed Interest | (i) <br> Ending Balance with Interest (d + h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-14 | Actual | (\$1,869,146) | \$2,470,325 | \$1,958,696 | (\$1,357,517) | (\$1,613,331) | 3.25\% | 31 | (\$4,453) | (\$1,361,970) |
| Sep-14 | Actual | (\$1,361,970) | \$2,362,314 | \$1,798,565 | (\$798,221) | $(\$ 1,080,096)$ | 3.25\% | 30 | $(\$ 2,885)$ | $(\$ 801,107)$ |
| Oct-14 | Actual | $(\$ 801,107)$ | \$1,679,575 | \$1,758,347 | $(\$ 879,878)$ | $(\$ 840,492)$ | 3.25\% | 31 | $(\$ 2,320)$ | $(\$ 882,198)$ |
| Nov-14 | Actual | $(\$ 882,198)$ | \$1,890,090 | \$1,707,422 | $(\$ 699,530)$ | $(\$ 790,864)$ | 3.25\% | 30 | $(\$ 2,111)(1)$ | $(\$ 701,641)$ |
| Dec-14 | Actual | $(\$ 701,641)$ | \$1,646,960 | \$1,894,338 | $(\$ 949,020)$ | $(\$ 825,331)$ | 3.25\% | 31 | $(\$ 2,278)$ | $(\$ 951,298)$ |
| Jan-15 | Actual | $(\$ 951,298)$ | \$1,954,407 | \$1,979,849 | (\$976,740) | (\$964,019) | 3.25\% | 31 | $(\$ 2,661)$ | (\$979,401) |
| Feb-15 | Actual | $(\$ 979,401)$ | \$1,868,148 | \$1,920,046 | (\$1,031,299) | $(\$ 1,005,350)$ | 3.25\% | 28 | $(\$ 2,506)$ | (\$1,033,806) |
| Mar-15 | Actual | (\$1,033,806) | \$1,756,193 | \$1,921,989 | (\$1,199,601) | (\$1,116,703) | 3.25\% | 31 | $(\$ 3,082)$ | $(\$ 1,202,684)$ |
| Apr-15 | Actual | (\$1,202,684) | \$1,372,026 | \$1,691,599 | $(\$ 1,522,256)$ | (\$1,362,470) | 3.25\% | 30 | $(\$ 3,639)$ | (\$1,525,896) |
| May-15 | Actual | (\$1,525,896) | \$2,192,956 | \$1,547,190 | $(\$ 880,129)$ | (\$1,203,013) | 3.25\% | 31 | $(\$ 3,349)(2)$ | $(\$ 883,479)$ |
| Jun-15 | Actual | $(\$ 883,479)$ | \$2,689,589 | \$1,897,303 | $(\$ 91,192)$ | $(\$ 487,336)$ | 3.25\% | 30 | $(\$ 1,302)$ | $(\$ 92,494)$ |
| Jul-15 | Actual | $(\$ 92,494)$ | \$2,002,828 | \$2,176,576 | $(\$ 266,243)$ | $(\$ 179,368)$ | 3.25\% | 31 | (\$495) | $(\$ 266,738)$ |
| Total Aug-14 to Jul-15 |  |  | \$23,885,410 | \$22,251,919 |  |  |  |  | (\$31,084) |  |


|  |  | (a) <br> Beginning Balance | (b) Total Costs | (c) Total Revenue | (d) <br> Ending <br> Balance <br> Before Interest $(a+b-c)$ | (e) <br> Average Monthly Balance $((a+d) / 2)$ | (f) <br> Interest Rate | (g) <br> Number of Days / Month | (h) <br> Computed Interest | (i) $\begin{aligned} & \text { Ending Balance } \\ & \text { with Interest } \\ & (\mathrm{d}+\mathrm{h}) \\ & \hline \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-15 | Actual | (\$718,790)(3) | \$2,639,857 | \$2,555,386 | $(\$ 634,319)$ | $(\$ 676,555)$ | 3.25\% | 31 | (\$5,591)(4) | (\$639,910) |
| Sep-15 | Actual | (\$639,910) | \$2,705,130 | \$2,273,032 | $(\$ 207,813)$ | $(\$ 423,862)$ | 3.25\% | 30 | (\$1,345)(5) | $(\$ 209,158)$ |
| Oct-15 | Actual | $(\$ 209,158)$ | \$1,885,345 | \$1,886,048 | (\$209,861) | (\$209,510) | 3.25\% | 31 | (\$578) | $(\$ 210,439)$ |
| Nov-15 | Actual | $(\$ 210,439)$ | \$1,372,374 | \$1,916,313 | $(\$ 754,378)$ | $(\$ 482,409)$ | 3.25\% | 30 | $(\$ 1,289)$ | $(\$ 755,667)$ |
| Dec-15 | Actual | $(\$ 755,667)$ | \$2,299,640 | \$1,952,798 | $(\$ 408,825)$ | $(\$ 582,246)$ | 3.25\% | 31 | $(\$ 1,607)$ | $(\$ 410,433)$ |
| Jan-16 | Actual | $(\$ 410,433)$ | \$1,749,832 | \$2,330,663 | $(\$ 991,263)$ | $(\$ 700,848)$ | 3.25\% | 31 | $(\$ 1,929)$ | $(\$ 993,193)$ |
| Feb-16 | Actual | $(\$ 993,193)$ | \$2,132,259 | \$2,045,815 | $(\$ 906,748)$ | $(\$ 949,970)$ | 3.25\% | 29 | $(\$ 2,446)$ | $(\$ 909,195)$ |
| Mar-16 | Actual | $(\$ 909,195)$ | \$1,583,764 | \$2,044,859 | (\$1,370,290) | (\$1,139,742) | 3.25\% | 31 | $(\$ 3,137)$ | $(\$ 1,373,428)$ |
| Apr-16 | Actual | (\$1,373,428) | \$1,879,251 | \$1,853,193 | (\$1,347,370) | (\$1,360,399) | 3.50\% | 30 | $(\$ 3,903)$ | (\$1,351,272) |
| May-16 | Actual | (\$1,351,272) | \$2,125,817 | \$1,850,344 | (\$1,075,799) | (\$1,213,536) | 3.50\% | 31 | $(\$ 3,598)$ | $(\$ 1,079,397)$ |
| Jun-16 | Estimate | (\$1,541,615)(6) | \$3,202,940 | \$2,237,007 | $(\$ 575,681)$ | (\$1,058,648) | 3.50\% | 30 | $(\$ 3,037)$ | $(\$ 578,718)$ |
| Jul-16 | Estimate | (\$578,718) | \$2,367,944 | \$2,532,562 | $(\$ 743,336)$ | $(\$ 661,027)$ | 3.50\% | 31 | (\$1,960) | $(\$ 745,296)$ |
| Total Aug-15 to Jul-16 |  |  | \$25,944,152 | \$25,478,020 |  |  |  |  | $(\$ 30,420)$ |  |

(1) Includes $\$ 1.19$ for trueup to working capital.
(2) Includes (\$28.83) to adjust interest due to change in method of recording NHPUC Annual Assessment, effective July 2014.
(3) Includes VMP/REP reconcilation of (\$452,052), as filed in DE 15-082 on February 27, 2015, and as included in DE 15-244, UES's Annual EDC filing. The NHPUC approved UES's EDC filing on July 23, 2015 by Order No. 25,799
(4) Includes $(\$ 3,723.48)$ to adjust interest for VMP/REP balance, moved in August instead of May 2015
(5) Includes (\$212.67) to adjust interest for trueup made to EDC Portion of the annual PUC Assessment
(6) Estimate includes VMP/REP reconcilation of (\$462,218), as filed in DE 16-276 on March 1, 2016.

Unitil Energy Systems, Inc
Reconciliation of External Delivery Costs and Revenues

|  |  | (a) <br> Beginning Balance | (b) Total Costs | (c) Total Revenue | (d) <br> Ending Balance Before Interest $(a+b-c)$ | (e) <br> Average <br> Monthly <br> Balance <br> $((a+d) / 2)$ | (f) <br> Interest Rate | (g) <br> Number of Days / Month | (h) <br> Computed Interest | $\begin{gathered} \text { (i) } \\ \text { Ending Balance } \\ \text { with Interest } \\ (\mathrm{d}+\mathrm{h}) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-16 | Estimate | $(\$ 745,296)$ | \$2,813,042 | \$2,311,219 | $(\$ 243,472)$ | (\$494,384) | 3.50\% | 31 | (\$1,466) | (\$244,938) |
| Sep-16 | Estimate | $(\$ 244,938)$ | \$2,479,933 | \$1,994,995 | \$240,000 | $(\$ 2,469)$ | 3.50\% | 30 | (\$7) | \$239,993 |
| Oct-16 | Estimate | \$239,993 | \$1,455,371 | \$2,007,194 | $(\$ 311,829)$ | $(\$ 35,918)$ | 3.50\% | 31 | (\$106) | (\$311,936) |
| Nov-16 | Estimate | $(\$ 311,936)$ | \$2,126,644 | \$1,911,799 | $(\$ 97,091)$ | (\$204,513) | 3.50\% | 30 | (\$587) | $(\$ 97,678)$ |
| Dec-16 | Estimate | $(\$ 97,678)$ | \$2,349,957 | \$2,179,296 | \$72,984 | $(\$ 12,347)$ | 3.50\% | 31 | (\$37) | \$72,948 |
| Jan-17 | Estimate | \$72,948 | \$1,805,533 | \$2,272,346 | $(\$ 393,866)$ | $(\$ 160,459)$ | 3.50\% | 31 | (\$477) | (\$394,343) |
| Feb-17 | Estimate | $(\$ 394,343)$ | \$2,273,455 | \$2,113,258 | $(\$ 234,145)$ | $(\$ 314,244)$ | 3.50\% | 28 | (\$844) | (\$234,989) |
| Mar-17 | Estimate | $(\$ 234,989)$ | \$2,144,576 | \$2,105,357 | $(\$ 195,769)$ | $(\$ 215,379)$ | 3.50\% | 31 | (\$640) | $(\$ 196,410)$ |
| Apr-17 | Estimate | $(\$ 196,410)$ | \$1,407,859 | \$1,878,530 | $(\$ 667,081)$ | $(\$ 431,745)$ | 3.50\% | 30 | $(\$ 1,242)$ | $(\$ 668,323)$ |
| May-17 | Estimate | $(\$ 668,323)$ | \$2,227,793 | \$1,922,692 | $(\$ 363,222)$ | $(\$ 515,772)$ | 3.50\% | 31 | $(\$ 1,533)$ | (\$364,755) |
| Jun-17 | Estimate | $(\$ 364,755)$ | \$2,719,777 | \$2,150,967 | \$204,055 | $(\$ 80,350)$ | 3.50\% | 30 | (\$231) | \$203,824 |
| Jul-17 | Estimate | \$203,824 | \$2,360,842 | \$2,570,472 | $(\$ 5,806)$ | \$99,009 | 3.50\% | 31 | \$294 | $(\$ 5,511)$ |
| Total Aug-16 to Jul-17 |  |  | \$26,164,782 | \$25,418,123 |  |  |  |  | $(\$ 6,875)$ |  |


|  |  | (a) <br> Total Billed kWh | (b) <br> Unbilled Factor (2) | (c) <br> Unbilled kWh $(a * b)$ | (d) EDC $(\$ / k W h)$ | (e) <br> Unbilled EDC <br> Revenue (c * d) | (f) <br> Reversal of prior month unbilled | (g) <br> Total Billed EDC Revenue (1) | (h) <br> Total Revenue (e $+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-14 | Actual | 115,494,679 | 51.36\% | 59,317,967 | \$0.01852 | \$1,098,569 | (\$1,380,481) | \$2,240,608 | \$1,958,696 |
| Sep-14 | Actual | 107,178,851 | 45.95\% | 49,252,935 | \$0.01852 | \$912,164 | (\$1,098,569) | \$1,984,970 | \$1,798,565 |
| Oct-14 | Actual | 90,768,730 | 58.86\% | 53,424,758 | \$0.01852 | \$989,427 | $(\$ 912,164)$ | \$1,681,084 | \$1,758,347 |
| Nov-14 | Actual | 90,497,288 | 60.91\% | 55,122,493 | \$0.01852 | \$1,020,869 | $(\$ 989,427)$ | \$1,675,980 | \$1,707,422 |
| Dec-14 | Actual | 102,483,600 | 53.60\% | 54,929,780 | \$0.01852 | \$1,017,300 | (\$1,020,869) | \$1,897,907 | \$1,894,338 |
| Jan-15 | Actual | 107,718,250 | 50.24\% | 54,115,420 | \$0.01852 | \$1,002,218 | (\$1,017,300) | \$1,994,930 | \$1,979,849 |
| Feb-15 | Actual | 106,475,729 | 48.19\% | 51,314,001 | \$0.01852 | \$950,335 | (\$1,002,218) | \$1,971,928 | \$1,920,046 |
| Mar-15 | Actual | 110,811,143 | 39.96\% | 44,284,008 | \$0.01852 | \$820,140 | $(\$ 950,335)$ | \$2,052,184 | \$1,921,989 |
| Apr-15 | Actual | 91,139,375 | 48.80\% | 44,476,297 | \$0.01852 | \$823,701 | $(\$ 820,140)$ | \$1,688,038 | \$1,691,599 |
| May-15 | Actual | 85,892,926 | 49.04\% | 42,125,422 | \$0.01852 | \$780,163 | $(\$ 823,701)$ | \$1,590,728 | \$1,547,190 |
| Jun-15 | Actual | 102,495,562 | 41.05\% | 42,076,298 | \$0.01852 | \$779,253 | $(\$ 780,163)$ | \$1,898,212 | \$1,897,303 |
| Jul-15 | Actual | 106,755,260 | 49.50\% | 52,846,120 | \$0.01852 | \$978,710 | (\$779,253) | \$1,977,119 | \$2,176,576 |
| Tot | 4 to Jul-15 | 1,217,711,394 |  | 603,285,498 |  | \$11,172,847 | (\$11,574,619) | \$22,653,690 | \$22,251,919 |
|  |  | (a) | (b) | (c) | (d) | Unbilled EDC Revenue (c * d) | (f) | (g) | (h) |
|  |  | Total Billed kWh (1) | Unbilled Factor (2) | Unbilled kWh $(a * b)$ | EDC (\$/kWh) |  | Reversal of prior month unbilled | Total Billed EDC Revenue (1) | Total Revenue (e $+f+g)$ |
| Aug-15 | Actual | 118,052,728 | 46.46\% | 54,843,047 | \$0.02131 | \$1,168,705 | $(\$ 978,710)$ | \$2,365,391 | \$2,555,386 |
| Sep-15 | Actual | 114,610,029 | 40.91\% | 46,891,380 | \$0.02131 | \$999,255 | (\$1,168,705) | \$2,442,483 | \$2,273,032 |
| Oct-15 | Actual | 89,853,566 | 50.68\% | 45,539,078 | \$0.02131 | \$970,438 | $(\$ 999,255)$ | \$1,914,866 | \$1,886,048 |
| Nov-15 | Actual | 86,512,214 | 56.58\% | 48,947,455 | \$0.02131 | \$1,043,070 | $(\$ 970,438)$ | \$1,843,681 | \$1,916,313 |
| Dec-15 | Actual | 93,886,299 | 49.73\% | 46,692,806 | \$0.02131 | \$995,024 | (\$1,043,070) | \$2,000,845 | \$1,952,798 |
| Jan-16 | Actual | 103,593,190 | 50.64\% | 52,463,076 | \$0.02131 | \$1,117,988 | $(\$ 995,024)$ | \$2,207,698 | \$2,330,663 |
| Feb-16 | Actual | 103,915,861 | 42.87\% | 44,545,033 | \$0.02131 | \$949,255 | (\$1,117,988) | \$2,214,548 | \$2,045,815 |
| Mar-16 | Actual | 97,308,704 | 44.38\% | 43,187,736 | \$0.02131 | \$920,331 | $(\$ 949,255)$ | \$2,073,783 | \$2,044,859 |
| Apr-16 | Actual | 92,179,772 | 41.19\% | 37,966,341 | \$0.02131 | \$809,063 | $(\$ 920,331)$ | \$1,964,461 | \$1,853,193 |
| May-16 | Actual | 83,961,211 | 48.63\% | 40,829,623 | \$0.02131 | \$870,079 | $(\$ 809,063)$ | \$1,789,327 | \$1,850,344 |
| Jun-16 | Estimate | 93,097,842 | 56.61\% | 52,706,280 | \$0.02131 | \$1,123,171 | $(\$ 870,079)$ | \$1,983,915 | \$2,237,007 |
| Jul-16 | Estimate | 109,671,830 | 56.42\% | 61,878,283 | \$0.02131 | \$1,318,626 | (\$1,123,171) | \$2,337,107 | \$2,532,562 |
| Total Aug-15 to Jul-16 |  | 1,186,643,247 |  | 576,490,137 |  | \$12,285,005 | (\$11,945,089) | \$25,138,104 | \$25,478,020 |

[^0]Unitil Energy Systems, Inc. External Delivery Revenues

|  |  | (a) Total Billed kWh | (b) Unbilled Factor | (c) <br> Unbilled kWh $(a * b)$ | (d) EDC $(\$ / k W h)$ | (e) <br> Unbilled EDC <br> Revenue (c * d) | (f) <br> Reversal of prior month unbilled | (g) <br> Total Billed EDC <br> Revenue | (h) <br> Total Revenue (e $+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-16 | Estimate | 114,762,171 | 47.85\% | 54,915,499 | \$0.02144 | \$1,177,388 | (\$1,318,626) | \$2,452,457 | \$2,311,219 |
| Sep-16 | Estimate | 100,702,388 | 46.93\% | 47,263,237 | \$0.02144 | \$1,013,324 | (\$1,177,388) | \$2,159,059 | \$1,994,995 |
| Oct-16 | Estimate | 91,164,298 | 54.54\% | 49,718,070 | \$0.02144 | \$1,065,955 | (\$1,013,324) | \$1,954,563 | \$2,007,194 |
| Nov-16 | Estimate | 90,328,239 | 53.76\% | 48,559,540 | \$0.02144 | \$1,041,117 | (\$1,065,955) | \$1,936,637 | \$1,911,799 |
| Dec-16 | Estimate | 96,923,448 | 54.97\% | 53,282,340 | \$0.02144 | \$1,142,373 | (\$1,041,117) | \$2,078,039 | \$2,179,296 |
| Jan-17 | Estimate | 105,530,756 | 50.92\% | 53,737,856 | \$0.02144 | \$1,152,140 | (\$1,142,373) | \$2,262,579 | \$2,272,346 |
| Feb-17 | Estimate | 104,018,437 | 46.42\% | 48,285,547 | \$0.02144 | \$1,035,242 | (\$1,152,140) | \$2,230,155 | \$2,113,258 |
| Mar-17 | Estimate | 97,595,002 | 50.09\% | 48,888,172 | \$0.02144 | \$1,048,162 | $(\$ 1,035,242)$ | \$2,092,437 | \$2,105,357 |
| Apr-17 | Estimate | 92,926,777 | 46.90\% | 43,579,404 | \$0.02144 | \$934,342 | (\$1,048,162) | \$1,992,350 | \$1,878,530 |
| May-17 | Estimate | 88,447,968 | 50.66\% | 44,809,218 | \$0.02144 | \$960,710 | $(\$ 934,342)$ | \$1,896,324 | \$1,922,692 |
| Jun-17 | Estimate | 94,045,997 | 54.32\% | 51,088,160 | \$0.02144 | \$1,095,330 | $(\$ 960,710)$ | \$2,016,346 | \$2,150,967 |
| Jul-17 | Estimate | 110,898,219 | 54.18\% | 60,081,342 | \$0.02144 | \$1,288,144 | (\$1,095,330) | \$2,377,658 | \$2,570,472 |
| $\stackrel{\sim}{\omega}$ Tota | 6 to Jul-17 | 1,187,343,700 |  | 604,208,387 |  | \$12,954,228 | (\$12,984,710) | \$25,448,605 | \$25,418,123 |


|  | Billed kWh | Direct <br> Estimate of Unbilled kWh | Unbilled kWh Billed kWh |
| :---: | :---: | :---: | :---: |
| Aug-14 | 115,494,679 | 59,317,967 | 51.36\% |
| Sep-14 | 107,178,851 | 49,252,935 | 45.95\% |
| Oct-14 | 90,768,730 | 53,424,758 | 58.86\% |
| Nov-14 | 90,497,288 | 55,122,493 | 60.91\% |
| Dec-14 | 102,483,600 | 54,929,780 | 53.60\% |
| Jan-15 | 107,718,250 | 54,115,420 | 50.24\% |
| Feb-15 | 106,475,729 | 51,314,001 | 48.19\% |
| Mar-15 | 110,811,143 | 44,284,008 | 39.96\% |
| Apr-15 | 91,139,375 | 44,476,297 | 48.80\% |
| May-15 | 85,892,926 | 42,125,422 | 49.04\% |
| Jun-15 | 102,495,562 | 42,076,298 | 41.05\% |
| Jul-15 | 106,755,260 | 52,846,120 | 49.50\% |
| Aug-15 | 118,052,728 | 54,843,047 | 46.46\% |
| Sep-15 | 114,610,029 | 46,891,380 | 40.91\% |
| Oct-15 | 89,853,566 | 45,539,078 | 50.68\% |
| Nov-15 | 86,512,214 | 48,947,455 | 56.58\% |
| Dec-15 | 93,886,299 | 46,692,806 | 49.73\% |
| Jan-16 | 103,593,190 | 52,463,076 | 50.64\% |
| Feb-16 | 103,915,861 | 44,545,033 | 42.87\% |
| Mar-16 | 97,308,704 | 43,187,736 | 44.38\% |
| Apr-16 | 92,179,772 | 37,966,341 | 41.19\% |



Total Aug-12 to Jul-13
\$4,571

| $\$ 140,206$ | $3.25 \%$ | 31 | $\$ 387$ | $\$ 137,510$ |
| :--- | :--- | :--- | :--- | :--- |
| $\$ 134,427$ | $3.25 \%$ | 30 | $\$ 359$ | $\$ 131,703$ |
| $\$ 128,619$ | $3.25 \%$ | 31 | $\$ 355$ | $\$ 125,891$ |
| $\$ 122,808$ | $3.25 \%$ | 30 | $\$ 328$ | $\$ 120,053$ |
| $\$ 116,970$ | $3.25 \%$ | 31 | $\$ 323$ | $\$ 114,210$ |
| $\$ 111,126$ | $3.25 \%$ | 31 | $\$ 307$ | $\$ 108,350$ |
| $\$ 105,267$ | $3.25 \%$ | 28 | $\$ 262$ | $\$ 102,446$ |
| $\$ 99,363$ | $3.25 \%$ | 31 | $\$ 274$ | $\$ 96,554$ |
| $\$ 93,471$ | $3.25 \%$ | 30 | $\$ 250$ | $\$ 90,637$ |
| $\$ 87,554$ | $3.25 \%$ | 31 | $\$ 242$ | $\$ 84,713$ |
| $\$ 81,630$ | $3.25 \%$ | 30 | $\$ 218$ | $\$ 78,765$ |
| $\$ 75,681$ | $3.25 \%$ | 31 | $\$ 209$ | $\$ 72,807$ |

Total Aug-13 to Jul-14
\$73,996

| $\$ 6,166$ | $\$ 137,123$ | $\$ 140,206$ | $3.25 \%$ |
| :--- | :---: | :---: | :---: |
| $\$ 6,166$ | $\$ 131,343$ | $\$ 134,427$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 125,536$ | $\$ 128,619$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 119,725$ | $\$ 122,808$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 113,887$ | $\$ 116,970$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 108,043$ | $\$ 111,126$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 102,184$ | $\$ 105,267$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 96,280$ | $\$ 99,363$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 90,388$ | $\$ 93,471$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 84,471$ | $\$ 87,554$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 78,546$ | $\$ 81,630$ | $3.25 \%$ |
| $\$ 6,166$ | $\$ 72,598$ | $\$ 75,681$ | $3.25 \%$ |


| Aug-13 | Actual | $\$ 143,289$ |
| :---: | :---: | :---: |
| Sep-13 | Actual | $\$ 137,510$ |
| Oct-13 | Actual | $\$ 131,703$ |
| Nov-13 | Actual | $\$ 125,891$ |
| Dec-13 | Actual | $\$ 120,053$ |
| Jan-14 | Actual | $\$ 114,210$ |
| Feb-14 | Actual | $\$ 108,350$ |
| Mar-14 | Actual | $\$ 102,446$ |
| Apr-14 | Actual | $\$ 96,554$ |
| May-14 | Actual | $\$ 90,637$ |
| Jun-14 | Actual | $\$ 84,713$ |
| Jul-14 | Actual | $\$ 78,765$ |

$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
$\$ 6,166$
\$73,996

| $\$ 66,641$ | $\$ 69,724$ | $3.25 \%$ | 31 | $\$ 192$ | $\$ 66,833$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 60,667$ | $\$ 63,750$ | $3.25 \%$ | 30 | $\$ 170$ | $\$ 60,837$ |
| $\$ 54,671$ | $\$ 57,754$ | $3.25 \%$ | 31 | $\$ 159$ | $\$ 54,830$ |
| $\$ 48,664$ | $\$ 51,747$ | $3.25 \%$ | 30 | $\$ 138$ | $\$ 48,802$ |
| $\$ 42,636$ | $\$ 45,719$ | $3.25 \%$ | 31 | $\$ 126$ | $\$ 42,762$ |
| $\$ 36,596$ | $\$ 39,679$ | $3.25 \%$ | 31 | $\$ 110$ | $\$ 36,705$ |
| $\$ 30,539$ | $\$ 33,622$ | $3.25 \%$ | 28 | $\$ 84$ | $\$ 30,623$ |
| $\$ 24,457$ | $\$ 27,540$ | $3.25 \%$ | 31 | $\$ 76$ | $\$ 24,533$ |
| $\$ 18,366$ | $\$ 21,449$ | $3.25 \%$ | 30 | $\$ 57$ | $\$ 18,424$ |
| $\$ 12,257$ | $\$ 15,340$ | $3.25 \%$ | 31 | $\$ 42$ | $\$ 12,300$ |
| $\$ 6,133$ | $\$ 9,216$ | $3.25 \%$ | 30 | $\$ 25$ | $\$ 6,158$ |
| $(\$ 8)$ | $\$ 3,075$ | $3.25 \%$ | 31 | $\$ 8$ | $\$ 0$ |

\$1,189
\$10,022

NHPUC No. 3 - Electricity Delivery
Unitil Energy Systems, Inc.

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Superseding FourteenthIssued in Lieu of Thirteenth Revised Page 65

## CALCULATION OF THE STRANDED COST CHARGE

|  |  | As shown on Schedule LSM-1, Page 1 |
| :---: | :---: | :---: |
| Uniform per kWh Charge |  |  |
| 1. (Over)/under Recovery - Beginning Balance August 1, 20165 | \$17,795 | $(\$ 189,288)$ |
| 2. Estimated Total Costs (August 20165 - July 20176) | \$201,684 | $(\$ 16,116)$ |
| 3. Estimated Interest (August 20165 - July 20176) | \$118 | $(\$ 3,028)$ |
| 4. Costs to be Recovered (L. $1+\mathrm{L} .2+\mathrm{L} .3$ ) | \$219,597 | $(\$ 208,432)$ |
| 5. Estimated Calendar Month Deliveries in kWh (August 20165 - July 20176) (1) | 1,215,932,720 | 1,185,546,760 |
| 6. Stranded Cost Charge (\$/kWh) (L. 4 / L.5) | \$0.00018 | (\$0.00018) |
| Class D, D - Controlled Off Peak Water Heating, G2 - kWh meter, G2 - Quick Recovery Water Heating, G2 - Space Heating, G2 Controlled Off Peak Water Heating, OL |  |  |
| 7. Stranded Cost Charge (\$/kWh) (L.6) | \$0.00018 | (\$0.00018) |
| Class G2 (1) |  |  |
| 8. Estimated G2 Demand Revenue (August 20165 - July 20176) | \$49,518 | $(\$ 48,568)$ |
| 9. Estimated G2 Deliveries in kW (August 20165 - July 20176) | 1,355,293 | 1,349,005 |
| 10. Stranded Cost Charge (\$/kW) (L. $8 / \mathrm{L} .9)$ | \$0.04 | (\$0.04) |
| 11. G2 Energy Revenue (August 20165- July 20176) | \$12,614 | $(\$ 12,143)$ |
| 12. Estimated G2 Calendar Month Deliveries in kWh (August 20165 - July 20176) (1) | 345,162,788 | 337,283,415 |
| 13. Stranded Cost Charge (\$/kWh) (L. $11 / \mathrm{L} .12$ ) | \$0.00004 | (\$0.00004) |
| Class G1 (1) |  |  |
| 14. Estimated G1 Demand Revenue (August 20165 - July 20176) | \$47,647 | $(\$ 47,697)$ |
| 15. Estimated G1 Deliveries in kVA (August 20165 - July 20176) | 1,027,084 | 1,048,547 |
| 16. Stranded Cost Charge (\$/kVA) (L. $14 / \mathrm{L} .15$ ) | \$0.05 | (\$0.05) |
| 17. G1 Energy Revenue (August 20165 - July 20176) | \$16,544 | $(\$ 16,130)$ |
| 18. Estimated G1 Calendar Month Deliveries in kWh (August 20165 - July 20176) (1) | 356,618,649 | 354,590,940 |
| 19. Stranded Cost Charge (\$/kWh) (L. 17 / L.18) | \$0.00005 | (\$0.00005) |

(1) Demand and energy calculated based on ratio of demand and energy revenue under current rates.

Authorized by NHPUC Order No. 25,799 in Case No. DE 15-244, dated July 23, 2015

Issued: June 16, 2016July 23, 2015
Issued By: Mark H. Collin
Effective: August 1, 20165
Treasurer

NHPUC No. 3 - Electricity Delivery Unitil Energy Systems, Inc.

SixteenthFifteenth Revised Page 67
SupersedingIssued in Lieu of Fourteenth Fifteenth Revised Page 67

## CALCULATION OF THE EXTERNAL DELIVERY CHARGE

As shown on Schedule LSM-2
REVISED, Page 1

1. (Over)/under Recovery - Beginning Balance August 1, 20165
(\$40,829)
$(\$ 745,296)$
2. Estimated Total Costs (August 20165 - July 20176)
3. Estimated Interest (August 20165 - July 20176)
4. Costs to be Recovered (L. $1+$ L. $2+$ L.3)
$\$ 25,907,606$
\$25,412,611
5. Estimated Calendar Month Deliveries in kWh (August 20165 - July 20176)

1,215,932,720
1,185,546,760
6. External Delivery Charge (\$/kWh) (L. $4 / \mathrm{L} .5$ )
$\$ 0.02131$
\$0.02144

Authorized by NHPUC Order No. 25,799 in Case No. DE 15-244, dated July 23, 2015

Issued: July 12, 2016July 23, 2015
Effective: August 1, 20165

Issued By: Mark H. Collin
Sr. Vice President

## SUMMARY OF DELIVERY SERVICE RATES (Includes Electricity Consumption Tax)

The effective rates listed below include an Electricity Consumption Tax, assessed in accordance with NH Statute RSA Chapter 83-E
This tax, collected on behalf of the State of NH by each electric utility, is based on kWh consumed
Each bill rendered for electric delivery service shall be calculated through the application of the effective rates as listed below.

(1) Includes low-income portion of $\$ 0.00150$ per kWh and energy efficiency portion of $\$ 0.00180$ per kWl
*Authorized by NHPUC Order No. 25,915 in Case No. DE 16-384, dated June 28, 2016 ${ }_{* *}^{* * \text { Authorized by NHPUC Order No. 25,799 in Case No. DE 15-244, dated July 23, } 2015}{ }_{*}^{* * *}$ Authorized by NHPUC Order No 25,498 in Case No DE 13-084, dated Spril 25 , 2013 ${ }^{* * * * A u t h o r i z e d ~ b y ~ N H P U C ~ O r d e r ~ N o . ~ 24,903 ~ i n ~ C a s e ~ N o . ~ D E ~ 08-097, ~ d a t e d ~ S e p t e m b e r ~ 30, ~} 2008$

## SUMMARY OF DELIVERY SERVICE RATES (Includes Electricity Consumption Tax) (continued)

| Class | Distribution Charge* | External <br> Delivery <br> Charge** | Stranded <br> Cost <br> Charge** | Storm Recovery Adjustment Factor*** | System Total <br> Benefits Delivery <br> Charge ${ }^{* * * *}$ Charges | Electricity Consumption Tax | Effective Delivery Rates <br> (Incl. Electricity <br> Consumption Tax) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | (1) |  |  |
| OL |  |  |  |  |  |  |  |
| All kWh | \$0.00199 | \$0.02131 | \$0.00018 | \$0.00221 | \$0.00330 \$0.02899 | \$0.00055 | \$0.02954 |
|  |  | \$0.02144 | (\$0.00018) |  | \$0.02876 |  | \$0.02931 |
| Luminaire Charges |  |  |  |  |  |  |  |
| Lamp Size |  |  | All-Night Service | Midnight Service |  |  |  |
|  | Nominal | Lumens | Monthly | Monthly | Description | Price Per Luminaire |  |
|  | Watts | (Approx.) | kWh | kWh |  | Per Mo. | Per Year |
|  | 100 | 3,500 | 40 | 19 | Mercury Vapor Street | \$11.28 | \$135.36 |
|  | 175 | 7,000 | 67 | 31 | Mercury Vapor Street | \$13.65 | \$163.80 |
|  | 250 | 11,000 | 95 | 44 | Mercury Vapor Street | \$15.67 | \$188.04 |
|  | 400 | 20,000 | 154 | 71 | Mercury Vapor Street | \$18.94 | \$227.28 |
|  | 1,000 | 60,000 | 388 | 180 | Mercury Vapor Street | \$39.06 | \$468.72 |
|  | 250 | 11,000 | 95 | 44 | Mercury Vapor Flood | \$16.79 | \$201.48 |
|  | 400 | 20,000 | 154 | 71 | Mercury Vapor Flood | \$20.38 | \$244.56 |
|  | 1,000 | 60,000 | 388 | 180 | Mercury Vapor Flood | \$34.74 | \$416.88 |
|  | 100 | 3,500 | 40 | 19 | Mercury Vapor Power Bracket | \$11.40 | \$136.80 |
|  | 175 | 7,000 | 67 | 31 | Mercury Vapor Power Bracket | \$12.81 | \$153.72 |
|  | 50 | 4,000 | 21 | 10 | Sodium Vapor Street | \$11.51 | \$138.12 |
|  | 100 | 9,500 | 43 | 20 | Sodium Vapor Street | \$13.14 | \$157.68 |
|  | 150 | 16,000 | 60 | 28 | Sodium Vapor Street | \$13.20 | \$158.40 |
|  | 250 | 30,000 | 101 | 47 | Sodium Vapor Street | \$16.91 | \$202.92 |
|  | 400 | 50,000 | 161 | 75 | Sodium Vapor Street | \$21.70 | \$260.40 |
|  | 1,000 | 140,000 | 398 | 185 | Sodium Vapor Street | \$38.55 | \$462.60 |
|  | 150 | 16,000 | 60 | 28 | Sodium Vapor Flood | \$15.44 | \$185.28 |
|  | 250 | 30,000 | 101 | 47 | Sodium Vapor Flood | \$18.47 | \$221.64 |
|  | 400 | 50,000 | 161 | 75 | Sodium Vapor Flood | \$21.18 | \$254.16 |
|  | 1,000 | 140,000 | 398 | 185 | Sodium Vapor Flood | \$38.90 | \$466.80 |
|  | 50 | 4,000 | 21 | 10 | Sodium Vapor Power Bracket | \$10.54 | \$126.48 |
|  | 100 | 9,500 | 43 | 20 | Sodium Vapor Power Bracket | \$12.01 | \$144.12 |
|  | 175 | 8,800 | 66 | 31 | Metal Halide Street | \$17.65 | \$211.80 |
|  | 250 | 13,500 | 92 | 43 | Metal Halide Street | \$19.32 | \$231.84 |
|  | 400 | 23,500 | 148 | 69 | Metal Halide Street | \$20.09 | \$241.08 |
|  | 175 | 8,800 | 66 | 31 | Metal Halide Flood | \$20.62 | \$247.44 |
|  | 250 | 13,500 | 92 | 43 | Metal Halide Flood | \$22.38 | \$268.56 |
|  | 400 | 23,500 | 148 | 69 | Metal Halide Flood | \$22.42 | \$269.04 |
|  | 175 | 8,800 | 66 | 31 | Metal Halide Power Bracket | \$16.42 | \$197.04 |
|  | 250 | 13,500 | 92 | 43 | Metal Halide Power Bracket | \$17.55 | \$210.60 |
|  | 400 | 23,500 | 148 | 69 | Metal Halide Power Bracket | \$18.86 | \$226.32 |

(1) Includes low-income portion of $\$ 0.00150$ per kWh and energy efficiency portion of $\$ 0.00180$ per kWh.

> * Authorized by NHPUC Order No. 25,915 in Case No. DE 16-384, dated June 28, 2016.
> ** Authorized by NHPUC Order No. 25,799 in Case No. DE 15-244, dated July 23, 2015
> *** Authorized by NHPUC Order No. 25,498 in Case No. DE 13-084, dated April 25, 2013
> **** Authorized by NHPUC Order No. 24,903 in Case No. DE 08-097, dated September 30, 2008

NHPUC No. 3 - Electricity Delivery Unitil Energy Systems, Inc.

Thirty-EighthSeventh Revised Page 6 Superseding Thirty-SeventhSixth Revised Page 6

## SUMMARY OF LOW-INCOME

## ELECTRIC ASSISTANCE PROGRAM DISCOUNTS

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

|  |  |  |  | L-EAP discoumt Delivery Only; Excludes Supply | 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) | Percentage of Federal Poverty Guidelines <br> N/A | Discount (5) <br> N/A | Blocks | Jul 2016-Nov 2016 (1) | Aug 2016 - Nov 2016 (1) | $\frac{\text { Jul 2016-Nov 2016 (2) }}{\text { Aug } 2016 \text { - Nov } 2016 \text { (2) }}$ | Jul-16 (3) | Aug-16 (3) | Sep-16 (3) | Oct-16 (3) | Nov-16 (3) |
| 2 | 151-200 | 8\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $(\$ 0.82)$ $(\$ 0.00504)$ $(\$ 0.00544)$ $\$ 0.00000$ | $(\$ 0.82)$ $(\$ 0.00502)$ $(\$ 0.00542)$ $\$ 0.00000$ | (\$0.00478) (\$0.00478) $\$ 0.00000$ | (\$0.00525) <br> (\$0.00525) <br> $\$ 0.00000$ | $\begin{aligned} & (\$ 0.00482) \\ & (\$ 0.00482) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.00442) \\ & (\$ 0.00442) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.00454) \\ & (\$ 0.00454) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.00496) \\ & (\$ 0.00496) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ |
| 3 | 126-150 | 22\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{aligned} & (\$ 2.26) \\ & (\$ 0.01387) \\ & (\$ 0.01497) \\ & \$ 0.00000 \end{aligned}$ | $\begin{gathered} (\$ 2.26) \\ (\$ 0.01382) \\ (\$ 0.01492) \\ \$ 0.00000 \\ \hline \end{gathered}$ | $\begin{aligned} & (\$ 0.01315) \\ & (\$ 0.01315) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | (\$0.01443) <br> (\$0.01443) <br> $\$ 0.00000$ | $\begin{aligned} & (\$ 0.01325) \\ & (\$ 0.01325) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.01217) \\ & (\$ 0.01217) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.01249) \\ & (\$ 0.01249) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.01363) \\ & (\$ 0.01363) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ |
| 4 | 101-125 | 36\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 3.70) \\ (\$ 0.02269) \\ (\$ 0.02449) \\ \$ 0.00000 \end{gathered}$ | $\begin{gathered} (\$ 3.70) \\ (\$ 0.02261) \\ (\$ 0.02441) \\ \$ 0.00000 \\ \hline \end{gathered}$ | (\$0.02152) (\$0.02152) $\$ 0.00000$ | (\$0.02362) (\$0.02362) $\$ 0.00000$ | $\begin{aligned} & (\$ 0.02168) \\ & (\$ 0.02168) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.01991) \\ & (\$ 0.01991) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.02044) \\ & (\$ 0.02044) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ | $\begin{aligned} & (\$ 0.02230) \\ & (\$ 0.02230) \\ & \$ 0.00000 \\ & \hline \end{aligned}$ |
| 5 | 76-100 | 52\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 5.34) \\ \\ (\$ 0.03278) \\ (\$ 0.03538) \\ \$ 0.00000 \\ \hline \end{gathered}$ | $\begin{gathered} (\$ 5.34) \\ (\$ 0.03266) \\ (\$ 0.03526) \\ \$ 0.00000 \\ \hline \end{gathered}$ | (\$0.03109) <br> (\$0.03109) <br> $\$ 0.00000$ | $\begin{aligned} & (\$ 0.03411) \\ & (\$ 0.03411) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.03131) \\ & (\$ 0.03131) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.02876) \\ & (\$ 0.02876) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.02952) \\ & (\$ 0.02952) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.03221) \\ & (\$ 0.03221) \\ & \$ 0.00000 \end{aligned}$ |
| 6 | 0-75 | 76\% | Customer Charge <br> First 250 kWh <br> Next 500 kWh <br> Excess 750 kWh | $\begin{gathered} (\$ 7.81) \\ (\$ 0.04790) \\ (\$ 0.05170) \\ \$ 0.00000 \end{gathered}$ | $\begin{gathered} (\$ 7.81) \\ (\$ 0.04773) \\ (\$ 0.05153) \\ \$ 0.00000 \end{gathered}$ | (\$0.04543) <br> (\$0.04543) <br> $\$ 0.00000$ | (\$0.04986) (\$0.04986) $\$ 0.00000$ | $\begin{aligned} & (\$ 0.04577) \\ & (\$ 0.04577) \\ & \$ 0.00000 \end{aligned}$ | $(\$ 0.04203)$ $(\$ 0.04203)$ $\$ 0.00000$ | $\begin{aligned} & (\$ 0.04315) \\ & (\$ 0.04315) \\ & \$ 0.00000 \end{aligned}$ | $\begin{aligned} & (\$ 0.04708) \\ & (\$ 0.04708) \\ & \$ 0.00000 \end{aligned}$ |

(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 July 1, 2016 in accordance with Order No. 25-901 in DE 14-078.

Authorized by NHPUC Order No. 25,901 in Case No. DE 14-078, dated May 13, 2016
Authorized by NHPUC Order No. 25,915 in Case No. DE 16-384, dated June 28, 2016.
Issued: July 12June 30, 2016

Unitil Energy Systems, Inc.
Typical Bill Impacts by Rate Component
Residential Rate D 634 kWh Bill

| Rate Components | 7/1/2016 | 8/1/2016 |  |  | 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\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.03603 | \$0.03603 | \$0.00000 | \$9.01 | \$9.01 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.04103 | \$0.04103 | \$0.00000 | \$15.76 | \$15.76 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$13.51 | \$13.59 | \$0.08 | 0.1\% |
| Stranded Cost Charge | \$0.00018 | (\$0.00018) | (\$0.00036) | \$0.11 | (\$0.11) | (\$0.23) | (0.3\%) |
| 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 | \$0.05978 | \$0.05978 | \$0.00000 | \$37.90 | \$37.90 | \$0.00 | 0.0\% |
| First 250 kWh | \$0.12281 | \$0.12258 | (\$0.00023) |  |  |  |  |
| Excess 250 kWh | \$0.12781 | \$0.12758 | (\$0.00023) |  |  |  |  |
| Total Bill |  |  |  | \$90.05 | \$89.91 | (\$0.15) | (0.2\%) |


| Rate Components | Regular General G2 Demand, 11 kW, 2,800 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7/1/2016 | 8/1/2016 |  |  |  |  |  |
|  | Current Rate | As Revised | Difference | Current 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) | (\$0.08) | \$0.44 | (\$0.44) | (\$0.88) | (0.2\%) |
| Total | \$10.35 | \$10.27 | (\$0.08) | \$113.85 | \$112.97 | (\$0.88) | (0.2\%) |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00199 | \$0.00199 | \$0.00000 | \$5.57 | \$5.57 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$59.67 | \$60.03 | \$0.36 | 0.1\% |
| Stranded Cost Charge | \$0.00004 | (\$0.00004) | (\$0.00008) | \$0.11 | (\$0.11) | (\$0.22) | (0.1\%) |
| 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 | \$0.05860 | \$0.05860 | \$0.00000 | \$164.08 | \$164.08 | \$0.00 | 0.0\% |
| Total | \$0.08745 | \$0.08750 | \$0.00005 | \$244.86 | \$245.00 | \$0.14 | 0.0\% |
| Total Bill |  |  |  | \$377.12 | \$376.38 | (\$0.74) | (0.2\%) |

* Impacts do not include the Electricity Consumption Tax.

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

| Rate Components | 7/1/2016 <br> Current Rate | 8/1/2016 |  |  |  |  | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill* | As Revised Bill* | Difference |  |
| Customer Charge | \$6.25 | \$6.25 | \$0.00 | \$6.25 | \$6.25 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03272 | \$0.03272 | \$0.00000 | \$53.01 | \$53.01 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$34.52 | \$34.73 | \$0.21 | 0.1\% |
| Stranded Cost Charge | \$0.00018 | (\$0.00018) | (\$0.00036) | \$0.29 | (\$0.29) | (\$0.58) | (0.3\%) |
| 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 | \$0.05860 | \$0.05860 | \$0.00000 | \$94.93 | \$94.93 | \$0.00 | 0.0\% |
| Total | \$0.11832 | \$0.11809 | (\$0.00023) | \$191.68 | \$191.31 | (\$0.37) | (0.2\%) |
| Total Bill |  |  |  | \$197.93 | \$197.56 | (\$0.37) | (0.2\%) |


| Rate Components | Regular General G2 kWh Meter 125 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7/1/2016 <br> Current Rate | 8/1/2016 <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 | \$0.03410 | \$0.03410 | \$0.00000 | \$4.26 | \$4.26 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$2.66 | \$2.68 | \$0.02 | 0.1\% |
| Stranded Cost Charge | \$0.00018 | (\$0.00018) | (\$0.00036) | \$0.02 | (\$0.02) | (\$0.05) | (0.2\%) |
| 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 | \$0.05860 | \$0.05860 | \$0.00000 | \$7.33 | \$7.33 | \$0.00 | 0.0\% |
| Total | \$0.11970 | \$0.11947 | (\$0.00023) | \$14.96 | \$14.93 | (\$0.03) | (0.1\%) |
| Total Bill |  |  |  | \$28.90 | \$28.87 | (\$0.03) | (0.1\%) |

[^1]
## Unitil Energy Systems, Inc.

Typical Bill Impacts by Rate Component

| Rate Components | Large General - G1 $550 \mathrm{kVa}, 200,000 \mathrm{kWh}$ Typical Bill |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7/1/2016 | 8/1/2016 |  |  |  |  | \% |
|  | Current Rate | As Revised | Difference | Current Bill* | As Revised Bill* | Difference | Difference to Total Bill |
| Customer Charge | \$97.16 | \$97.16 | \$0.00 | \$97.16 | \$97.16 | \$0.00 | 0.0\% |
|  | All kVa | All kVa |  |  |  |  |  |
| Distribution Charge | \$6.95 | \$6.95 | \$0.00 | \$3,822.50 | \$3,822.50 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.05 | (\$0.05) | (\$0.10) | \$27.50 | (\$27.50) | (\$55.00) | (0.3\%) |
| Total | \$7.00 | \$6.90 | (\$0.10) | \$3,850.00 | \$3,795.00 | (\$55.00) | (0.3\%) |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00199 | \$0.00199 | \$0.00000 | \$398.00 | \$398.00 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$4,262.00 | \$4,288.00 | \$26.00 | 0.2\% |
| Stranded Cost Charge | \$0.00005 | (\$0.00005) | (\$0.00010) | \$10.00 | (\$10.00) | (\$20.00) | (0.1\%) |
| Storm Recovery Adj. | \$0.00221 | \$0.00221 | \$0.00000 | \$442.00 | \$442.00 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$660.00 | \$660.00 | \$0.00 | 0.0\% |
| Default Service Charge ** | \$0.03674 | \$0.03674 | \$0.00000 | \$7,348.00 | \$7,348.00 | \$0.00 | 0.0\% |
| Total | \$0.06560 | \$0.06563 | \$0.00003 | \$13,120.00 | \$13,126.00 | \$6.00 | 0.0\% |
|  |  |  |  | \$17,067.16 | \$17,018.16 | (\$49.00) | (0.3\%) |

* Impacts do not include the Electricity Consumption Tax.
** Default Service Charge for the G1 class is determined monthly. For purposes of this comparison, the rate is unchanged.


## 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*

| Residential Rate D 634 kWh Bill - Mean Use* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7/1/2016 | 8/1/2016 |  |  |  |  | \% |
| Rate Components | Current Rate | As Revised | Difference | $\frac{\text { Current }}{\underline{\underline{B i l l}{ }^{* *}}}$ | As Revised Bill** | 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 | \$0.03603 | \$0.03603 | \$0.00000 | \$9.01 | \$9.01 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.04103 | \$0.04103 | \$0.00000 | \$15.76 | \$15.76 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 | \$13.51 | \$13.59 | \$0.08 | 0.1\% |
| Stranded Cost Charge | \$0.00018 | (\$0.00018) | (\$0.00036) | \$0.11 | (\$0.11) | (\$0.23) | (0.3\%) |
| 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 | \$0.05978 | \$0.05978 | \$0.00000 | \$37.90 | \$37.90 | \$0.00 | 0.0\% |
| First 250 kWh | \$0.12281 | \$0.12258 | (\$0.00023) |  |  |  |  |
| Excess 250 kWh | \$0.12781 | \$0.12758 | (\$0.00023) |  |  |  |  |
| Total Bill |  |  |  | \$90.05 | \$89.91 | (\$0.15) | (0.2\%) |

Residential Rate D 521 kWh Bill - Median Use*


* Based on billing period January 2015 through December 2015.
** Impacts do not include the Electricity Consumption Tax.

| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (1) | (J) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Annual Number | Annual | Annual | Proposed | Proposed | Estimated Annual | Estimated Annual | Proposed | \% Change |
|  | of Customers (luminaires | kWh | kW / kVA | SCC | EDC | Revenue \$ Under | Revenue \$ Under | Net Change |  |
| Class of Service | for Outdoor Lighting) | Sales | Sales | Change \$ | Change \$ | Present Rates | Proposed Rates | Revenue \$ | EDC Revenue |
| Residential | 763,694 | 480,638,599 | n/a | $(\$ 173,030)$ | \$62,483 | \$68,409,512 | \$68,298,965 | (\$110,547) | (0.2\%) |
| General Service | 129,249 | 340,275,469 | 1,301,458 | $(\$ 122,499)$ | \$44,236 | \$45,726,908 | \$45,648,645 | $(\$ 78,263)$ | (0.2\%) |
| Large General Service | 1,814 | 347,650,754 | 989,158 | $(\$ 125,154)$ | \$45,195 | \$29,728,179 | \$29,648,220 | $(\$ 79,960)$ | (0.3\%) |
| Q్రutdoor Lighting | 115,819 | 8,988,739 | n/a | $(\$ 3,236)$ | \$1,169 | \$2,525,780 | \$2,523,713 | $(\$ 2,067)$ | (0.1\%) |
| Total | 1,010,576 | 1,177,553,561 |  | $(\$ 423,919)$ | \$153,082 | \$146,390,380 | \$146,119,542 | (\$270,837) | (0.2\%) |

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


| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - July 1, 2016 versus August 1, 2016 Impacts do NOT include the Electricity Consumption Tax Impact on G2 Rate Customers |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Average | Average | Total Bill | Total Bill |  | \% |
| Load Monthly | Monthly | Using Rates | Using Rates | Total | Total |
| Factor kW | kWh | 7/1/2016 | 8/1/2016 | Difference | Difference |
| 20\% 5 | 730 | \$134.00 | \$133.64 | (\$0.36) | (0.3\%) |
| 20\% 10 | 1,460 | \$249.59 | \$248.86 | (\$0.73) | (0.3\%) |
| 20\% 15 | 2,190 | \$365.18 | \$364.09 | (\$1.09) | (0.3\%) |
| 20\% 25 | 3,650 | \$596.35 | \$594.54 | (\$1.82) | (0.3\%) |
| 20\% 50 | 7,300 | \$1,174.30 | \$1,170.66 | (\$3.63) | (0.3\%) |
| 20\% 75 | 10,950 | \$1,752.24 | \$1,746.79 | (\$5.45) | (0.3\%) |
| 20\% 100 | 14,600 | \$2,330.18 | \$2,322.91 | (\$7.27) | (0.3\%) |
| 20\% 150 | 21,900 | \$3,486.07 | \$3,475.16 | (\$10.91) | (0.3\%) |
| 36\% 5 | 1,314 | \$185.07 | \$184.74 | (\$0.33) | (0.2\%) |
| 36\% $\quad 10$ | 2,628 | \$351.73 | \$351.06 | (\$0.67) | (0.2\%) |
| 36\% $\quad 15$ | 3,942 | \$518.39 | \$517.39 | (\$1.00) | (0.2\%) |
| 36\% 25 | 6,570 | \$851.71 | \$850.04 | (\$1.67) | (0.2\%) |
| 36\% $\quad 50$ | 13,140 | \$1,685.00 | \$1,681.66 | (\$3.34) | (0.2\%) |
| 36\% 75 | 19,710 | \$2,518.30 | \$2,513.29 | (\$5.01) | (0.2\%) |
| 36\% 100 | 26,280 | \$3,351.60 | \$3,344.91 | (\$6.69) | (0.2\%) |
| 36\% 150 | 39,420 | \$5,018.19 | \$5,008.16 | (\$10.03) | (0.2\%) |
| 50\% 5 | 1,825 | \$229.76 | \$229.45 | (\$0.31) | (0.1\%) |
| 50\% 10 | 3,650 | \$441.10 | \$440.49 | (\$0.62) | (0.1\%) |
| 50\% 15 | 5,475 | \$652.45 | \$651.52 | (\$0.93) | (0.1\%) |
| 50\% 25 | 9,125 | \$1,075.14 | \$1,073.60 | (\$1.54) | (0.1\%) |
| 50\% 50 | 18,250 | \$2,131.87 | \$2,128.79 | (\$3.09) | (0.1\%) |
| 50\% 75 | 27,375 | \$3,188.60 | \$3,183.97 | (\$4.63) | (0.1\%) |
| 50\% 100 | 36,500 | \$4,245.34 | \$4,239.16 | $(\$ 6.18)$ | (0.1\%) |
| 50\% 150 | 54,750 | \$6,358.80 | \$6,349.54 | (\$9.26) | (0.1\%) |
|  | Rates - Effective July 1, 2016 | Rates - Proposed August 1, 2016 | Difference |  |  |
| Customer Charge | \$18.41 | \$18.41 | \$0.00 |  |  |
|  | All kW | All kW | All kW |  |  |
| Distribution Charge | \$10.31 | \$10.31 | \$0.00 |  |  |
| Stranded Cost Charge | \$0.04 | (\$0.04) | (\$0.08) |  |  |
| TOTAL | \$10.35 | \$10.27 | (\$0.08) |  |  |
|  | kWh | kWh | kWh |  |  |
| Distribution Charge | \$0.00199 | \$0.00199 | \$0.00000 |  |  |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 |  |  |
| Stranded Cost Charge | \$0.00004 | (\$0.00004) | (\$0.00008) |  |  |
| Storm Recovery Adj. Factor | \$0.00221 | \$0.00221 | \$0.00000 |  |  |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 |  |  |
| Default Service Charge | \$0.05860 | \$0.05860 | \$0.00000 |  |  |
| TOTAL | \$0.08745 | \$0.08750 | \$0.00005 |  |  |



| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - July 1, 2016 versus August 1, 2016 Impacts do NOT include the Electricity Consumption Tax Impact on G2 QRWH and SH Rate Customers |  |  |  |
| :---: | :---: | :---: | :---: |
| Total Bill | Total Bill |  | \% |
| Average Using Rates | Using Rates | Total | Total |
| kWh 7/1/2016 | 8/1/2016 | Difference | Difference |
| 100 \$18.08 | \$18.06 | (\$0.02) | (0.1\%) |
| 200 \$29.91 | \$29.87 | (\$0.05) | (0.2\%) |
| 300 \$41.75 | \$41.68 | (\$0.07) | (0.2\%) |
| 400 \$53.58 | \$53.49 | (\$0.09) | (0.2\%) |
| 500 \$65.41 | \$65.30 | (\$0.11) | (0.2\%) |
| 750 \$94.99 | \$94.82 | (\$0.17) | (0.2\%) |
| 1,000 \$124.57 | \$124.34 | (\$0.23) | (0.2\%) |
| 1,500 \$183.73 | \$183.39 | (\$0.34) | (0.2\%) |
| 2,000 \$242.89 | \$242.43 | (\$0.46) | (0.2\%) |
| 2,500 \$302.05 | \$301.48 | (\$0.57) | (0.2\%) |
|  |  |  |  |
|  | Rates - Effective July 1, 2016 | Rates - Proposed August 1, 2016 | Difference |
| Customer Charge | \$6.25 | \$6.25 | \$0.00 |
|  | All kWh | All kWh | All kWh |
| Distribution Charge | \$0.03272 | \$0.03272 | \$0.00000 |
| External Delivery Charge | \$0.02131 | \$0.02144 | \$0.00013 |
| Stranded Cost Charge | \$0.00018 | (\$0.00018) | (\$0.00036) |
| Storm Recovery Adjustment Factor | \$0.00221 | \$0.00221 | \$0.00000 |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 |
| Default Service Charge | \$0.05860 | \$0.05860 | \$0.00000 |
| TOTAL | \$0.11832 | \$0.11809 | (\$0.00023) |





[^0]:    (1) Actual per billing system
    (2) Detail of Unbilled Factors used in actuals for all classes shown on page 6.

[^1]:    * Impacts do not include the Electricity Consumption Tax.

