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

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CALCULATION OF THE DEFAULT SERVICE CHARGE

| Non-G1 Class Default Service: |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Jun-18 | Jul-18 | Aug-18 | Sep-18 | Oct-18 | Nov-18 | Total |
| Power Supply Charge | As shown on Schedule LSM-2, Page 1 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Residential Class |  |  |  |  |  |  |  |
| 1 Reconciliation | $(\$ 27,118)$ | $(\$ 34,706)$ | $(\$ 35,325)$ | $(\$ 29,033)$ | $(\$ 26,244)$ | $(\$ 27,777)$ | $(\$ 180,203)$ |
| 2 Total Costs | \$2,385,668 | \$3,028,540 | \$3,076,592 | \$2,669,742 | \$2,533,258 | \$2,719,343 | \$16,413,144 |
| 3 Reconciliation plus Total Costs (L. $1+$ L. 2 ) | \$2,358,550 | \$2,993,834 | \$3,041,267 | \$2,640,709 | \$2,507,015 | \$2,691,566 | \$16,232,941 |
| 4 kWh Purchases | 32,218,085 | 41,233,060 | 41,968,751 | 34,492,761 | 31,179,154 | 33,000,228 | $\underline{\text { 214,092,039 }}$ |
| 5 Total, Before Losses (L.3 L L.4) | \$0.07321 | \$0.07261 | \$0.07247 | \$0.07656 | \$0.08041 | \$0.08156 | \$0.07582 |
| 6 Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% |
| Total Retail Rate - Residential Variable Power Supply |  |  |  |  |  |  |  |
| 7 Charge (L. 5 * (1+L.6)) | \$0.07789 | \$0.07725 | \$0.07710 | \$0.08146 | \$0.08555 | \$0.08678 |  |
| Total Retail Rate - Residential Fixed Power Supply |  |  |  |  |  |  |  |
| 8 Charge (L. 5 * (1+L.6)) |  |  |  |  |  |  | \$0.08067 |
|  | As shown on Schedule LSM-3, Page 1 |  |  |  |  |  |  |
| G2 and OL Class |  |  |  |  |  |  |  |
| 9 Reconciliation | $(\$ 12,445)$ | $(\$ 14,062)$ | $(\$ 14,063)$ | $(\$ 12,906)$ | $(\$ 11,808)$ | $(\$ 11,651)$ | $(\$ 76,936)$ |
| 10 Total Costs | \$943,237 | \$1,126,629 | \$1,102,469 | \$1,062,722 | \$983,081 | \$1,048,928 | \$6,267,065 |
| 11 Reconciliation plus Total Costs (L. $9+$ L.10) | \$930,792 | \$1,112,567 | \$1,088,406 | \$1,049,815 | \$971,272 | \$1,037,277 | \$6,190,130 |
| 12 kWh Purchases | 14,784,855 | 16,705,826 | $\underline{16,707,435}$ | 15,332,861 | 14,028,284 | 13,841,066 | 91,400,327 |
| 13 Total, Before Losses (L. 11 / L.12) | \$0.06296 | \$0.06660 | \$0.06514 | \$0.06847 | \$0.06924 | \$0.07494 | \$0.06773 |
| 14 Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | $\underline{6.40 \%}$ | 6.40\% | 6.40\% |
| Total Retail Rate - G2 and OL Variable Power Supply 15 Charge (L. 13 * (1+L.14)) | \$0.06698 | \$0.07086 | \$0.06931 | \$0.07285 | \$0.07367 | \$0.07974 |  |
| Total Retail Rate - G2 and OL Fixed Power Supply 16 Charge (L. 13 * (1+L.14)) |  |  |  |  |  |  | \$0.07206 |


| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 Reconciliation | (\$123,377) | (\$152,082) | (\$154,017) | (\$130,786) | (\$118,664) | (\$122,952) | (\$801,878) |
| 18 Total Costs | \$199,003 | \$245,299 | \$248,420 | \$210,952 | \$191,400 | \$198,316 | \$1,293,390 |
| 19 Reconciliation plus Total Costs (L. 17 + L.18) | \$75,626 | \$93,217 | \$94,403 | \$80,167 | \$72,737 | \$75,363 | \$491,513 |
| 20 kWh Purchases | $\underline{47,002,940}$ | 57,938,886 | 58,676,186 | 49,825,623 | 45,207,438 | 46,841,294 | 305,492,367 |
| 21 Total, Before Losses (L. 19 / L.20) | \$0.00161 | \$0.00161 | \$0.00161 | \$0.00161 | \$0.00161 | \$0.00161 | \$0.00161 |
| 22 Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | $\underline{6.40 \%}$ |
| 23 (1+L.22)) | \$0.00171 | \$0.00171 | \$0.00171 | \$0.00171 | \$0.00171 | \$0.00171 |  |
| 24 (1+L.22)) |  |  |  |  |  |  | \$0.00171 |


| TOTAL DEFAULT SERVICE CHARGE |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Retail Rate - Residential Variable 25 Default Service Charge (L. 7 + L.23) | \$0.07960 | \$0.07896 | \$0.07881 | \$0.08317 | \$0.08726 | \$0.08849 |  |
| Total Retail Rate - Residential Fixed 26 Default Service Charge (L.8+L.24) |  |  |  |  |  |  | \$0.08238 |
| Total Retail Rate - G2 and OL Variable 27 Default Service Charge (L. 15 + L.23) | \$0.06869 | \$0.07257 | \$0.07102 | \$0.07456 | \$0.07538 | \$0.08145 |  |
| Total Retail Rate - G2 and OL Fixed 28 Default Service Charge (L.16+L.24) |  |  |  |  |  |  | \$0.07377 |

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Unitil Energy Systems, Ime.

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## GALCULATION OF THE DEFAULT SERVICE CHARGE



| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 | Reconciliation | (\$94,088) | (\$105,326) | $(\$ 98,697)$ | $(\$ 91,618)$ | $(\$ 86,268)$ | (\$76,790) | (\$552,786) |
| 18 | Total Costs | \$296,835 | \$343,888 | \$322,243 | \$299,133 | \$281,669 | \$250,728 | \$1,794,496 |
| 19 | Reconciliation plus Total Costs ( $\mathrm{L} .17+\mathrm{L} .18$ ) | \$202,747 | \$238,562 | \$223,547 | \$207,515 | \$195,401 | \$173,938 | \$1,241,710 |
| 20 | kWh Purchases | 53,278,878 | 59,642,792 | 55,888,638 | 51,880,059 | 48,850,578 | 43,483,815 | 313,024,759 |
| 21 | Total, Before Losses (L.19 / L.20) | \$0.00381 | \$0.00400 | \$0.00400 | \$0.00400 | \$0.00400 | \$0.00400 | \$0.00397 |
| 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 * ( $1+\mathrm{L} .22)$ ) | \$0.00405 | \$0.00426 | \$0.00426 | \$0.00426 | \$0.00426 | \$0.00426 |  |
| 24 | Total Retail Rate - Fixed RPS Charge (L.21* (1+L.22)) |  |  |  |  |  |  | \$0.00422 |


| TOTAL DEFAULT SERVICE CHARGE |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25 | Total Retail Rate - Residential Variable Default ServiceCharge (L. $7+\mathrm{L} .23$ ) | \$0.09458 | \$0.12001 | \$0.12188 | \$0.09385 | \$0.08150 | \$0.07910 |  |
| 26 | Total Retail Rate - Residential Fixed Default ServiceCharge (L.8+L.24) |  |  |  |  |  |  | \$0.10034 |
| 27 | Total Retail Rate - G2 and OL Variable Default ServiceGharge(L. $15+\mathrm{L} .23$ ) | \$0.09825 | \$0.13320 | \$0.10029 | \$0.10111 | \$0.06394 | \$0.06114 |  |
| 28 | Total Retail Rate - G2 and OL Fixed Default ServiceGharge (L.16+L.24) |  |  |  |  |  |  | \$0.09381 |

## CALCULATION OF THE DEFAULT SERVICE CHARGE

| G1 Class Default Service: | Jun-18 | Jul-18 | Aug-18 | Sep-18 | $\underline{\text { Oct-18 }}$ | Nov-18 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Power Supply Charge | As shown on Schedule LSM-4, Page 1 |  |  |  |  |  |  |
| 1 Reconciliation |  |  |  |  |  |  | \$20,731 |
| 2 Total Costs excl. wholesale supplier charge |  |  |  |  |  |  | \$27,840 |
| 3 Reconciliation plus Total Costs excl. wholesale supplier charge (L. 1 + L.2) |  |  |  |  |  |  | \$48,571 |
| 4 kWh Purchases |  |  |  |  |  |  | $\underline{18,484,947}$ |
| 5 Total, Before Losses (L. 3 / L.4) |  |  |  |  |  |  | \$0.00263 |
| 6 Losses |  |  |  |  |  |  | 4.591\% |
| 7 Power Supply Charge excl. wholesale supplier charge (L. 5 * (1+L.6)) (2) | \$0.04591 | \$0.04591 | \$0.04591 | \$0.04591 | \$0.04591 | \$0.04591 | \$0.00275 |
| 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+L.8b)) | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| 9 Total Retail Rate - Power Supply Charge (L. 7 + L. 8) | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |


| Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  | As shown on Schedule LSM-5, Page 1 |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| 10 | Reconciliation | $(\$ 7,803)$ | $(\$ 8,221)$ | $(\$ 9,060)$ | $(\$ 8,022)$ | $(\$ 7,134)$ | $(\$ 6,755)$ | $(\$ 46,996)$ |  |  |  |  |  |  |
| 11 | Total Costs | $\underline{\$ 13,211}$ | $\underline{\$ 13,919}$ | $\underline{\$ 15,339}$ | $\underline{\$ 13,581}$ | $\underline{\$ 12,079}$ | $\underline{\$ 11,436}$ | $\underline{\$ 79,564}$ |  |  |  |  |  |  |
| 12 | Reconciliation plus Total Costs (L.10+ L.11) | $\$ 5,407$ | $\$ 5,697$ | $\$ 6,279$ | $\$ 5,559$ | $\$ 4,944$ | $\$ 4,681$ | $\$ 32,568$ |  |  |  |  |  |  |
| 13 | kWh Purchases | $\underline{3,069,181}$ | $\underline{3,233,715}$ | $\underline{3,563,580}$ | $\underline{3,155,278}$ | $\underline{2,806,208}$ | $\underline{2,656,985}$ | $18,484,947$ |  |  |  |  |  |  |
| 14 | Total, Before Losses (L.12 / L.13) | $\$ 0.00176$ | $\$ 0.00176$ | $\$ 0.00176$ | $\$ 0.00176$ | $\$ 0.00176$ | $\$ 0.00176$ |  |  |  |  |  |  |  |
| 15 | Losses | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ |  |  |  |  |  |  |  |
| 16 | Total Retail Rate - RPS Charge (L.14 * (1+L.15)) | $\$ 0.00184$ | $\$ 0.00184$ | $\$ 0.00184$ | $\$ 0.00184$ | $\$ 0.00184$ | $\$ 0.00184$ |  |  |  |  |  |  |  |

TOTAL DEFAULT SERVICE CHARGE
17 Total Retail Rate - Default Service Charge (L. 9 + L.16)

## MARKET MARKET MARKET MARKET MARKET MARKET

## GALGULATION OF THE DEFAULT SERVIGE GHARGE

|  | G1 Class Default Service: | Dec 17 | Jan-18 | Feb-18 | Mar 18 | Apr 18 | May 18 | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Power Supply Charge |  |  |  |  |  |  |  |
| 4 | Reconciliation |  |  |  |  |  |  | \$107,283 |
| $z$ | Total Costs excl. wholesale supplier charge |  |  |  |  |  |  | \$26,300 |
| 3 | Reconciliation plus Total Costs excl. wholesale supplier charge ( $\mathrm{L} .1+\mathrm{L} .2$ ) |  |  |  |  |  |  | \$133,583 |
| 4 | kWh Purchases |  |  |  |  |  |  | 16,276,613 |
| 5 | Total, Before Losses (L.3 / L. 4 ) |  |  |  |  |  |  | \$0.00821 |
| 6 | Losses |  |  |  |  |  |  | 4.591\% |
| 7 | Power Supply Charge excl. wholesule supplier eharge $(\mathrm{L} .5 *(1+\mathrm{L} .6))(2)$ | \$0.00858 | \$0.00858 | \$0.00858 | \$0.00858 | \$0.00858 | \$0.00858 | \$0.00858 |
| 8 a | Wholesale Supplier Charge | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |
| 8 b | 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. $7+\mathrm{L}$. <br> 8) | MARKET | MARKET | MARKET | MARKET | MARKET | MARKET |  |

## Renewable Portfolio Standard (RPS) Charge

| 10 Reconciliation | (\$10,587) | $(\$ 10,818)$ | $(\$ 10,641)$ | (\$10,509) | (\$10,532) | (\$10,670) | (\$63,757) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 Total Costs | \$15,301 | \$16,180 | \$15,916 | \$15,718 | \$15,753 | \$15,959 | \$94,826 |
| 12 Reconciliation plus Total Costs (L. $10+\mathrm{L} .11$ ) | \$4,714 | \$5,362 | \$5,275 | \$5,209 | \$5,221 | \$5,289 | \$31,069 |
| 13 kWh Purchases | 2,702,868 | 2,761,660 | 2,716,568 | 2,682,767 | 2,688,739 | 2,724,014 | 16,276,613 |
| 14 Total, Before Losses (L. $12 /$ L. 13 ) | \$0.00174 | \$0.00194 | \$0.00194 | \$0.00194 | \$0.00194 | \$0.00194 |  |
| 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$)$ ) | \$0.00182 | \$0.00203 | \$0.00203 | \$0.00203 | \$0.00203 | \$0.00203 |  |

TOTAL DEFAULT SERVIGE GHARGE
17 Total Retail Rate - Default Service Charge (L.9 $9+$ Ł.16)

MARKET MARKET MARKET MARKET MARKET MARKET

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

Schedule LSM-2 Page 1 of 5
$\frac{\text { Residential Class }}{\text { Reconciliation (1) }}$
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 - 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)
Total Costs (Page 5)
11 Reconciliation plus Total Costs (L. $9+$ 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)) 6 Total Retail Rate - G2 and OL Fixed Power Supply Charge (L. $13 *$ ( $1+\mathrm{L} .14$ ))

| Jun-18 <br> Estimated |
| :---: |


| Estimated | timate | Atimat | tima | ima | Estimated |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $(\$ 27,118)$ | $(\$ 34,706)$ | $(\$ 35,325)$ | $(\$ 29,033)$ | $(\$ 26,244)$ | $(\$ 27,777)$ | $(\$ 180,203)$ |
| \$2,385,668 | \$3,028,540 | \$3,076,592 | \$2,669,742 | \$2,533,258 | \$2,719,343 | \$16,413,144 |
| \$2,358,550 | \$2,993,834 | \$3,041,267 | \$2,640,709 | \$2,507,015 | \$2,691,566 | \$16,232,941 |
| 32,218,085 | 41,233,060 | 41,968,751 | 34,492,761 | 31,179,154 | 33,000,228 | 214,092,039 |
| \$0.07321 | \$0.07261 | \$0.07247 | \$0.07656 | \$0.08041 | \$0.08156 | \$0.07582 |
| 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% |
| \$0.07789 | \$0.07725 | \$0.07710 | \$0.08146 | \$0.08555 | \$0.08678 |  |


| $(\$ 12,445)$ | $(\$ 14,062)$ | $(\$ 14,063)$ | $(\$ 12,906)$ | $(\$ 11,808)$ | $(\$ 11,651)$ | $(\$ 76,936)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underline{\$ 943,237}$ | $\underline{\$ 1,126,629}$ | $\underline{\$ 1,102,469}$ | $\underline{\$ 1,062,722}$ | $\underline{\$ 983,081}$ | $\underline{\$ 1,048,928}$ | $\underline{\$ 6,267,065}$ |
| $\$ 930,792$ | $\$ 1,112,567$ | $\$ 1,088,406$ | $\$ 1,049,815$ | $\$ 971,272$ | $\$ 1,037,277$ | $\$ 6,190,130$ |
| $\underline{14,784,855}$ | $\underline{16,705,826}$ | $\underline{16,707,435}$ | $\underline{15,332,861}$ | $\underline{14,028,284}$ | $\underline{13,841,066}$ | $\underline{91,400,327}$ |
| $\$ 0.06296$ | $\$ 0.06660$ | $\$ 0.06514$ | $\$ 0.06847$ | $\$ 0.06924$ | $\$ 0.07494$ | $\$ 0.06773$ |
| $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ |
| $\$ 0.06698$ | $\$ 0.07086$ | $\$ 0.06931$ | $\$ 0.07285$ | $\$ 0.07367$ | $\$ 0.07974$ |  |
|  |  |  |  |  |  | $\$ 0.07206$ |

(1) Balance as of February 28, 2018 modified, as detailed below, to include the reconciliation of estimated costs and revenues for March, April and May 2018. Figure is then allocated between rate periods (June-November 2018 and December 2018-May 2019) and rate classes (Residential and G2/OL), and then to each month, June through November 2018, on equal per kWh basis.
a February 28, 2018 balance - Schedule LSM-2, Page 2
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2018:
c Estimated costs - Mar, Apr, May 2018 as filed in DE 17-038
d Estimated revenue-Mar, Apr, May 2018
e line c-line d
$f$ Reconciliation for June 1, 2018-May 31, 2019 (line $\mathrm{a}+$ line e)
$g$ Rate period: June-November 2018
h Rate period: December 2018-May 2019
$i$ Total
\$1,490,731
\$10,573,504

| $\$ 12,584,653$ |
| :--- |

$\frac{(\$ 2,011,150)}{(\$ 12,53,053}$
$(\$ 520,418)$

| Non-G1 total |  | Reconciliation |
| :---: | :---: | :---: |
| kWh purchases | \% per period | per period |
| 305,492,367 | 49.41\% | (\$257,139) |
| 312,800,000 | 50.59\% | (\$263,280) |
| 618,292,367 |  | (\$520,418) |
|  |  | Jun-Nov 2018 |
| Jun-Nov 2018 |  | Reconciliation |
| kWh purchases | \% by class | by class |
| 214,092,039 | 70.08\% | $(\$ 180,203)$ |
| 91,400,327 | 29.92\% | $(\$ 76,936)$ |
| 305,492,367 |  | (\$257,139) |

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

Schedule LSM-2
Page 2 of 5

|  |  | (a) <br> Beginning Balance | (b) <br> Total Costs (Page 3) | (c) <br> Total Revenue <br> (Page 4) | (d) <br> Ending Balance Before Interest $(a+b-c)$ | (e) <br> Average Monthly <br> Balance ((a+d) / 2) | (f) <br> Interest <br> Rate | (g) <br> Number of Days / Month | (h) <br> Computed Interest | (i) <br> Ending Balance with Interest (d + h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mar-17 | \$2,384,997 | \$3,233,166 | \$3,702,831 | \$1,915,332 | \$2,150,165 | 3.50\% | 31 | \$6,392 | \$1,921,724 |
|  | Apr-17 | \$1,921,724 | \$2,086,956 | \$2,999,124 | \$1,009,555 | \$1,465,640 | 3.75\% | 30 | \$4,517 | \$1,014,073 |
|  | May-17 | \$1,014,073 | \$2,082,413 | \$2,757,310 | \$339,176 | \$676,624 | 3.75\% | 31 | \$2,155 | \$341,331 |
|  | Jun-17 | \$341,331 | \$4,277,695 | \$3,764,222 | \$854,804 | \$598,068 | 3.75\% | 30 | \$1,843 | \$856,648 |
|  | Jul-17 | \$856,648 | \$3,387,657 | \$4,401,473 | $(\$ 157,168)$ | \$349,740 | 4.00\% | 31 | \$1,188 | $(\$ 155,980)$ |
|  | Aug-17 | (\$155,980) | \$3,884,621 | \$3,823,527 | $(\$ 94,886)$ | $(\$ 125,433)$ | 4.00\% | 31 | (\$426) | $(\$ 95,312)$ |
|  | Sep-17 | $(\$ 95,312)$ | \$4,226,803 | \$4,233,969 | $(\$ 102,478)$ | $(\$ 98,895)$ | 4.00\% | 30 | (\$325) | $(\$ 102,803)$ |
|  | Oct-17 | $(\$ 102,803)$ | \$3,163,253 | \$3,017,803 | \$42,647 | $(\$ 30,078)$ | 4.25\% | 31 | (\$109) | \$42,539 |
| $\stackrel{\rightharpoonup}{\nabla}$ | Nov-17 | \$42,539 | \$3,913,369 | \$3,044,425 | \$911,482 | \$477,011 | 4.25\% | 30 | \$1,666 | \$913,149 |
|  | Dec-17 | \$913,149 | \$4,691,843 | \$5,503,962 | \$101,030 | \$507,089 | 4.25\% | 31 | \$1,830 | \$102,860 |
|  | Jan-18 | \$102,860 | \$7,146,222 | \$6,314,163 | \$934,919 | \$518,889 | 4.25\% | 31 | \$1,873 | \$936,792 |
|  | Feb-18 | \$936,792 | \$5,014,867 | \$4,464,878 | \$1,486,780 | \$1,211,786 | 4.25\% | 28 | \$3,951 | \$1,490,731 |
|  | Total |  | \$47,108,865 | \$48,027,686 |  |  |  |  | \$24,556 |  |


|  | Calculation of Working Capital Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | (j) | (k) | (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  |  |
|  | 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 | Supply Related Working Capital (d *e) | Provision for Uncollected Accounts | Internal <br> Company Administrative Costs | Legal Charges | 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-17 | \$3,203,026 | \$488 | 7.24\% | \$231,794 | 3.88\% | \$8,994 | \$17,188 | \$2,661 | \$0 | \$0 | \$810 | \$3,233,166 |
| Apr-17 | \$2,055,619 | \$428 | 7.24\% | \$148,768 | 4.00\% | \$5,951 | \$21,506 | \$2,661 | \$0 | \$0 | \$792 | \$2,086,956 |
| May-17 | \$2,044,770 | \$501 | 7.24\% | \$147,988 | 4.00\% | \$5,920 | \$27,188 | \$2,661 | \$597 | \$0 | \$777 | \$2,082,413 |
| - Jun-17 | \$4,239,950 | \$374 | 7.27\% | \$308,440 | 4.13\% | \$12,739 | \$21,187 | \$2,661 | \$0 | \$0 | \$786 | \$4,277,695 |
| O Jul-17 | \$3,374,671 | \$397 | 7.27\% | \$245,502 | 4.25\% | \$10,434 | $(\$ 1,292)$ | \$2,661 | \$0 | \$0 | \$787 | \$3,387,657 |
| ${ }^{7}$ Aug-17 | \$3,871,407 | \$820 | 7.27\% | \$281,665 | 4.25\% | \$11,971 | $(\$ 3,024)$ | \$2,661 | \$0 | \$0 | \$786 | \$3,884,621 |
| Sep-17 | \$4,117,385 | \$518 | 7.27\% | \$299,535 | 4.25\% | \$12,730 | \$92,726 | \$2,661 | \$0 | \$0 | \$783 | \$4,226,803 |
| Oct-17 | \$3,154,014 | \$476 | 7.27\% | \$229,457 | 4.25\% | \$9,752 | $(\$ 4,428)$ | \$2,661 | \$0 | \$0 | \$778 | \$3,163,253 |
| Nov-17 | \$3,859,573 | \$511 | 7.27\% | \$280,781 | 4.25\% | \$11,933 | \$37,533 | \$2,661 | \$380 | \$0 | \$778 | \$3,913,369 |
| Dec-17 | \$4,647,913 | \$388 | 7.27\% | \$338,116 | 4.40\% | \$14,877 | \$25,087 | \$2,790 | \$0 | \$0 | \$788 | \$4,691,843 |
| Jan-18 | \$7,121,576 | \$426 | 7.27\% | \$518,052 | 4.50\% | \$23,312 | $(\$ 3,667)$ | \$2,790 | \$994 | \$0 | \$791 | \$7,146,222 |
| Feb-18 | \$4,903,963 | \$584 | 7.27\% | \$356,755 | 4.50\% | \$16,054 | \$90,694 | \$2,790 | \$0 | \$0 | \$783 | \$5,014,867 |
| Total | \$46,593,866 | \$5,910 |  |  |  | \$144,666 | \$320,697 | \$32,317 | \$1,971 | \$0 | \$9,438 | \$47,108,865 |

 Page 22 of 23, DE 16-250 filed April 1, 2016
 Schedule DN-1, Page 22 of 23, DE 17-038 filed April 3, 2017.

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

|  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) | (k) | (1) | (m) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total Residential Class Billed Default Service kWh (1) | Unbilled Factor (2) | Residential Class Unbilled kWh (a*b) | Effective Fixed Power Supply Charge | Residential Class <br> Unbilled Power Supply Charge Revenue (c * d) | Total G2/OL Class Billed Default Service kWh (1) | Unbilled <br> Factor (2) | G2/OL Class Unbilled kWh ( $\mathrm{f} * \mathrm{~g}$ ) | Effective Fixed Power Supply Charge | G2/OL Class Unbilled Power Supply Charge Revenue (h *i) | Reversal of prior month unbilled | Total Billed NonG1 Class Power Supply Charge Revenue (1) | Total Revenue $(e+j+k+l)$ |
| Mar-17 | 33,922,161 | 54\% | 18,397,613 | \$0.07326 | \$1,347,809 | 13,597,304 | 54\% | 7,374,469 | \$0.06960 | \$513,263 | (\$1,613,669) | \$3,455,428 | \$3,702,831 |
| Apr-17 | 31,715,089 | 51\% | 16,228,113 | \$0.07326 | \$1,188,872 | 13,135,488 | 51\% | 6,721,223 | \$0.06960 | \$467,797 | (\$1,861,072) | \$3,203,527 | \$2,999,124 |
| May-17 | 27,323,958 | 57\% | 15,492,966 | \$0.07326 | \$1,135,015 | 12,249,137 | 57\% | 6,945,387 | \$0.06960 | \$483,399 | $(\$ 1,656,669)$ | \$2,795,565 | \$2,757,310 |
| Jun-17 | 31,263,609 | 65\% | 20,213,704 | \$0.07526 | \$1,521,283 | 13,607,423 | 65\% | 8,797,974 | \$0.07196 | \$633,102 | (\$1,618,414) | \$3,228,250 | \$3,764,222 |
| Jul-17 | 42,239,401 | 50\% | 20,942,594 | \$0.07526 | \$1,576,140 | 16,785,860 | 50\% | 8,322,548 | \$0.07196 | \$598,891 | (\$2,154,386) | \$4,380,828 | \$4,401,473 |
| Aug-17 | 39,939,314 | 42\% | 16,870,495 | \$0.07526 | \$1,269,673 | 16,853,489 | 42\% | 7,086,829 | \$0.07196 | \$509,968 | (\$2,175,030) | \$4,218,916 | \$3,823,527 |
| Sep-17 | 34,775,086 | 62\% | 21,650,104 | \$0.07526 | \$1,629,387 | 15,131,051 | 62\% | 9,420,216 | \$0.07196 | \$677,879 | (\$1,779,642) | \$3,706,345 | \$4,233,969 |
| Oct-17 | 32,327,643 | 54\% | 17,341,425 | \$0.07526 | \$1,305,116 | 14,367,550 | 54\% | 7,707,144 | \$0.07196 | \$554,606 | (\$2,307,266) | \$3,465,347 | \$3,017,803 |
| Nov-17 | 28,897,547 | 59\% | 17,088,489 | \$0.07526 | \$1,286,080 | 12,567,411 | 59\% | 7,431,706 | \$0.07196 | \$534,786 | (\$1,859,722) | \$3,083,281 | \$3,044,425 |
| ODec-17 | 37,911,216 | 59\% | 22,262,377 | \$0.09612 | \$2,139,860 | 14,549,405 | 59\% | 8,543,760 | \$0.08959 | \$765,435 | (\$1,820,865) | \$4,419,532 | \$5,503,962 |
| 可 Jan-18 | 48,807,825 | 45\% | 22,075,615 | \$0.09612 | \$2,121,908 | 17,814,631 | 45\% | 8,057,498 | \$0.08959 | \$721,871 | $(\$ 2,905,295)$ | \$6,375,679 | \$6,314,163 |
| $\infty$ Feb-18 | 38,456,520 | 45\% | 17,138,364 | \$0.09612 | \$1,647,340 | 14,490,645 | 45\% | 6,457,837 | \$0.08959 | \$578,558 | (\$2,843,779) | \$5,082,760 | \$4,464,878 |
| Total | 427,579,369 |  |  |  | \$18,168,481 | 175,149,394 |  |  |  | \$7,039,555 | (\$24,595,808) | \$47,415,458 | \$48,027,686 |

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

|  | Non-G1 Class <br> Billed <br> kWh |  | Direct <br> Estimate of <br> Unbilled kWh | Unbilled kWh / <br> Billed kWh |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mar-17 | $67,685,716$ |  | $36,709,207$ |  |  |
| Apr-17 | $64,605,790$ |  | $33,057,768$ |  | $54 \%$ |
| May-17 | $57,736,230$ |  | $32,737,038$ |  | $57 \%$ |
| Jun-17 | $64,946,476$ |  | $41,991,595$ |  | $65 \%$ |
| Jul-17 | $83,167,658$ |  | $41,235,113$ |  | $50 \%$ |
| Aug-17 | $79,908,120$ |  | $33,666,586$ |  | $42 \%$ |
| Sep-17 | $70,477,849$ |  | $43,877,758$ |  | $62 \%$ |
| Oct-17 | $66,970,911$ |  | $35,925,015$ |  | $54 \%$ |
| Nov-17 | $59,055,097$ |  | $34,922,078$ |  | $59 \%$ |
| Dec-17 | $71,999,101$ |  | $42,279,603$ |  | $59 \%$ |
| Jan-18 | $89,225,053$ |  | $40,356,191$ |  | $45 \%$ |
| Feb-18 | $73,642,517$ |  | $32,819,202$ |  | $45 \%$ |


|  | Calculation of Working Capital <br> Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | () | (k) | (1) | (m) | (n) | (0) | (p) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  |  |  |  |  |  |
|  | Non-G1 Class (Residential) DS Supplier Charges (1) | Non-G1 Class ( G 2 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 ( $\mathrm{e}^{*}$ ) | Provision for Uncollected Accounts | Internal Company Administrative Costs | Legal Charges | Consulting Outside Service Charges | 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 $+g+h+i+j+k$ + I) | $\begin{aligned} & \text { Total All Costs } \\ & \text { (sum col. } \mathrm{m}+\mathrm{n} \\ & +\mathrm{o}) \end{aligned}$ |
| Jun-18 |  |  | \$423 | 7.18\% |  | 4.75\% |  |  | \$2,790 | \$0 | \$0 | \$785 |  |  |  | \$3,328,905 |
| Jul-18 |  |  | \$457 | 7.18\% |  | 4.75\% |  |  | \$2,790 | \$0 | \$0 | \$785 |  |  |  | \$4,155,169 |
| Aug-18 |  |  | \$563 | 7.18\% |  | 4.75\% |  |  | \$2,790 | \$0 | \$0 | \$785 |  |  |  | \$4,179,061 |
| Sep-18 |  |  | \$570 | 7.18\% |  | 4.75\% |  |  | \$2,790 | \$0 | \$0 | \$785 |  |  |  | \$3,732,464 |
| Oct-18 |  |  | \$484 | 7.18\% |  | 4.75\% |  |  | \$2,790 | \$0 | \$0 | \$785 |  |  |  | \$3,516,339 |
| Nov-18 |  |  | \$439 | 7.18\% |  | 4.75\% |  |  | $\frac{\$ 2,790}{\$ 16,739}$ | \$0 | \$0 | \$7855 |  |  |  | $\stackrel{\$ 3,768,271}{\$ 22,680,209}$ |
| Total |  |  | \$2,937 |  |  |  |  |  | \$16,739 |  | \$0 | \$4,710 |  |  |  | \$22,680,209 |

$\stackrel{\stackrel{+}{\circ}}{\stackrel{\circ}{8}}$
fotal 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 26.21 . Calculated using revenue lag of 64.11 days less cost lead of 37.90 days. Revenue lag per Schedule DTN-1, Page 4 of 23 and cost lead per Schedule DTN-1, Page 22 of 23 , DE 18 -035 filed April 6 , 2018 . (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 Purchases-G2 and OL Class | Total Non-G1 Class kWh Purchases | Residential <br> Class kWh <br> Purchases / <br> Total Non-G1 <br> Class kWh <br> Purchases | G2 and OL Class kWh Purchases / Total Non-G1 Class kWh Purchases |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Jun-18 | 32,218,085 | 14,784,855 | 47,002,940 | 68.5\% | 31.5\% |
| Jul-18 | 41,233,060 | 16,705,826 | 57,938,886 | 71.2\% | 28.8\% |
| Aug-18 | 41,968,751 | 16,707,435 | 58,676,186 | 71.5\% | 28.5\% |
| Sep-18 | 34,492,761 | 15,332,861 | 49,825,623 | 69.2\% | 30.8\% |
| Oct-18 | 31,179,154 | 14,028,284 | 45,207,438 | 69.0\% | 31.0\% |
| Nov-18 | 33,000,228 | 13,841,066 | 46,841,294 | 70.5\% | 29.5\% |
| Total | 214,092,039 | 91,400,327 | 305,492,367 |  |  |

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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)
8 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))
```

| Jun-18 <br> Estimated <br> $(\$ 123,377)$ | Jul-18 <br> Estimated <br> $(\$ 152,082)$ | Aug-18 <br> Estimated <br> $(\$ 154,017)$ | Sep-18 <br> Estimated <br> $(\$ 130,786)$ | Oct-18 <br> Estimated | Nov-18 <br> Estimated | $\underline{\text { Total }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underline{\$ 199,003}$ | $\underline{\$ 245,299}$ | $\underline{\$ 248,420}$ | $\underline{\$ 210,952}$ | $\underline{\$ 191,400}$ | $\underline{\$ 198,316}$ | $\underline{(\$ 122,952)}$ |
| $(\$ 801,878)$ |  |  |  |  |  |  |

(1) Balance as of February 28, 2018 modified, as detailed below, to reflect that current rates include a reconciliation through May 31, 2018. Figure is then allocated between rate periods (June-November 2018 and December 2018-May 2019) and then to each month, June through November 2018, on equal per kWh basis.
a February 28, 2018 actual balance - Schedule LSM-3, Page 2
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2018:
c
d Amount of reconciliation in current RPS Charge
e

Estimated kWh Sales Mar-May 2018
Estimated amount of reconciliation - Mar-May 2018
(\$1,877,721)

135,539,898
(\$0.00188)
(\$254,815)
(\$1,622,906)

| Non-G1 total <br> kWh purchases | $\frac{1}{\text { R p per period }}$ | Reconciliation <br> per period |
| :---: | :---: | :---: |
| $305,492,367$ | $49.41 \%$ | $(\$ 801,878)$ |
| $\underline{312,800,000}$ | $50.59 \%$ | $(\$ 821,028)$ |
| $618,292,367$ |  | $(\$ 1,622,906)$ |

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 $(a+b-c)$ | Average Monthly <br> Balance ((a+d) / 2) | Interest <br> Rate | Number of Days / Month | Computed Interest | Ending Balance with Interest (d + h) |
| $\stackrel{\text { O}}{\stackrel{\text { N }}{2}}$ | Mar-17 | (\$1,688,216) | \$420,565 | \$187,177 | (\$1,454,828) | (\$1,571,522) | 3.50\% | 31 | $(\$ 4,672)$ | (\$1,459,500) |
|  | Apr-17 | (\$1,459,500) | \$271,844 | \$154,668 | (\$1,342,324) | (\$1,400,912) | 3.75\% | 30 | $(\$ 4,318)$ | (\$1,346,641) |
|  | May-17 | (\$1,346,641) | \$271,844 | \$143,777 | (\$1,218,574) | (\$1,282,608) | 3.75\% | 31 | $(\$ 4,085)$ | (\$1,222,659) |
|  | Jun-17 | (\$1,222,659) | $(\$ 802,312)$ | \$186,410 | (\$2,211,381) | (\$1,717,020) | 3.75\% | 30 | $(\$ 5,292)$ | (\$2,216,674) |
|  | Jul-17 | (\$2,216,674) | \$236,536 | \$213,403 | (\$2,193,540) | (\$2,205,107) | 4.00\% | 31 | $(\$ 7,491)$ | (\$2,201,032) |
|  | Aug-17 | (\$2,201,032) | \$236,536 | \$185,345 | (\$2,149,841) | (\$2,175,436) | 4.00\% | 31 | $(\$ 7,391)$ | (\$2,157,232) |
|  | Sep-17 | (\$2,157,232) | \$189,150 | \$205,260 | (\$2,173,342) | (\$2,165,287) | 4.00\% | 30 | $(\$ 7,119)$ | (\$2,180,460) |
|  | Oct-17 | (\$2,180,460) | \$231,271 | \$146,423 | (\$2,095,612) | (\$2,138,036) | 4.25\% | 31 | $(\$ 7,717)$ | (\$2,103,329) |
|  | Nov-17 | (\$2,103,329) | \$231,271 | \$147,322 | (\$2,019,380) | (\$2,061,355) | 4.25\% | 30 | $(\$ 7,201)$ | (\$2,026,580) |
|  | Dec-17 | (\$2,026,580) | \$323,387 | \$246,090 | (\$1,949,284) | (\$1,987,932) | 4.25\% | 31 | $(\$ 7,176)$ | (\$1,956,459) |
|  | Jan-18 | (\$1,956,459) | \$282,909 | \$277,973 | (\$1,951,523) | (\$1,953,991) | 4.25\% | 31 | $(\$ 7,053)$ | (\$1,958,576) |
|  | Feb-18 | (\$1,958,576) | \$285,069 | \$196,196 | (\$1,869,704) | (\$1,914,140) | 4.25\% | 28 | (\$8,017)(1) | (\$1,877,721) |
|  | Total |  | \$2,178,071 | \$2,290,044 |  |  |  |  | $(\$ 77,532)$ |  |

(1) Includes (\$1,776.72) to correct for prior year's trueups, between working capital and interest on reconciliation.

(1) For the months March-May 2017, 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.

For the months June 2017-February 2018, number of days lag equals (288.59). Calculated using revenue lag of 61.15 days less cost lead of 349.74 days. Revenue lag per Schedule DN-1, Page 4 of 23 and cost lead per Schedule DN-1, Page 22 of 23, DE 17-038 filed April 3, 2017.
(2) Includes $\$ 1,773.74$ to correct for prior year's trueups, between working capital and interest on reconciliation.

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

|  |  | (a) <br> Total Non-G1 Class Billed Default Service kWh (1) | (b) <br> Unbilled Factor <br> (2) | $\begin{gathered} \text { (c) } \\ \text { Non-G1 Class } \\ \text { Unbilled kWh } \\ (\mathrm{a} * \mathrm{~b}) \\ \hline \end{gathered}$ | (d) <br> Effective Fixed RPS Charge | (e) <br> Non-G1 Class Unbilled RPS Charge Revenue (c * d) | (f) <br> Reversal of prior month unbilled | (g) Total Billed NonG1 Class RPS Charge Revenue (1) | (h) <br> Total Revenue $(e+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mar-17 | 47,519,465 | 54\% | 25,772,083 | \$0.00364 | \$93,810 | $(\$ 81,308)$ | \$174,674 | \$187,177 |
|  | Apr-17 | 44,850,578 | 51\% | 22,949,336 | \$0.00364 | \$83,536 | $(\$ 93,810)$ | \$164,942 | \$154,668 |
|  | May-17 | 39,573,095 | 57\% | 22,438,353 | \$0.00364 | \$81,676 | $(\$ 83,536)$ | \$145,637 | \$143,777 |
|  | Jun-17 | 44,871,032 | 65\% | 29,011,678 | \$0.00360 | \$104,442 | $(\$ 81,676)$ | \$163,644 | \$186,410 |
|  | Jul-17 | 59,025,261 | 50\% | 29,265,142 | \$0.00360 | \$105,355 | (\$104,442) | \$212,491 | \$213,403 |
|  | Aug-17 | 56,792,803 | 42\% | 23,957,324 | \$0.00360 | \$86,246 | $(\$ 105,355)$ | \$204,453 | \$185,345 |
|  | Sep-17 | 49,906,137 | 62\% | 31,070,321 | \$0.00360 | \$111,853 | $(\$ 86,246)$ | \$179,653 | \$205,260 |
|  | Oct-17 | 46,695,193 | 54\% | 25,048,569 | \$0.00360 | \$90,175 | $(\$ 111,853)$ | \$168,101 | \$146,423 |
| $\stackrel{\square}{1}$ | Nov-17 | 41,464,958 | 59\% | 24,520,195 | \$0.00360 | \$88,273 | $(\$ 90,175)$ | \$149,224 | \$147,322 |
| $\pm$ | Dec-17 | 52,460,621 | 59\% | 30,806,138 | \$0.00422 | \$130,002 | $(\$ 88,273)$ | \$204,361 | \$246,090 |
|  | Jan-18 | 66,622,456 | 45\% | 30,133,113 | \$0.00422 | \$127,162 | $(\$ 130,002)$ | \$280,813 | \$277,973 |
|  | Feb-18 | 52,947,165 | 45\% | 23,596,202 | \$0.00422 | \$99,576 | (\$127,162) | \$223,782 | \$196,196 |
|  | Total | 602,728,763 |  |  |  | \$1,202,105 | (\$1,183,836) | \$2,271,776 | \$2,290,044 |

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

|  | $\begin{aligned} & \text { Billed } \\ & \text { kWh } \\ & \hline \end{aligned}$ | Direct Estimate of Unbilled kWh | Unbilled kWh / Billed kWh |
| :---: | :---: | :---: | :---: |
| Mar-17 | 67,685,716 | 36,709,207 | 54\% |
| Apr-17 | 64,605,790 | 33,057,768 | 51\% |
| May-17 | 57,736,230 | 32,737,038 | 57\% |
| Jun-17 | 64,946,476 | 41,991,595 | 65\% |
| Jul-17 | 83,167,658 | 41,235,113 | 50\% |
| Aug-17 | 79,908,120 | 33,708,228 | 42\% |
| Sep-17 | 70,477,849 | 43,877,758 | 62\% |
| Oct-17 | 66,970,911 | 35,925,015 | 54\% |
| Nov-17 | 59,055,097 | 34,922,078 | 59\% |
| Dec-17 | 71,999,101 | 42,279,603 | 59\% |
| Jan-18 | 89,225,053 | 40,356,191 | 45\% |
| Feb-18 | 73,642,517 | 32,819,202 | 45\% |

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

|  |  | (a) | Calculation of Working Capital |  |  |  | (f) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (b) | (c) | (d) | (e) |  |
|  |  |  | Working |  |  |  |
|  |  | Number of | Capital |  |  |  |
|  |  | Renewable Energy Credits | Days of Lag / | Requirement |  | Supply Related Working |  |
|  |  | (1) | 365 (2) | (a*b) | Prime Rate | Capital (c * ) |  |
| $\underset{\text { O }}{\substack{\text { N }}}$ | Jun-18 |  | \$205,338 | (64.96\%) | $(\$ 133,380)$ | 4.75\% | $(\$ 6,336)$ | \$199,003 |
|  | Jul-18 |  | \$253,109 | (64.96\%) | (\$164,410) | 4.75\% | $(\$ 7,809)$ | \$245,299 |
|  | Aug-18 |  | \$256,329 | (64.96\%) | $(\$ 166,501)$ | 4.75\% | $(\$ 7,909)$ | \$248,420 |
|  | Sep-18 | \$217,668 | (64.96\%) | $(\$ 141,389)$ | 4.75\% | $(\$ 6,716)$ | \$210,952 |
|  | Oct-18 | \$197,494 | (64.96\%) | $(\$ 128,284)$ | 4.75\% | $(\$ 6,094)$ | \$191,400 |
|  | Nov-18 | \$204,629 | (64.96\%) | $(\$ 132,919)$ | 4.75\% | (\$6,314) | \$198,316 |
|  | Total | \$1,334,567 |  |  |  | (\$41,177) | \$1,293,390 |

(1) Schedule LSG-4.
(2) Number of days lag equals (237.09). Calculated using revenue lag of 64.11 days less cost lead of 301.20 days. Revenue lag per Schedule DTN-1, Page 4 of 23 and cost lead per Schedule DTN-1, Page 22 of 23, DE 18-035 filed April 6, 2018.

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

|  |  | Total <br> Jun18-Nov18 |
| :--- | :--- | :---: |
| 1 | Reconciliation (1) | $\$ 20,731$ |
| 2 | Total Costs excl. wholesale supplier charge (Page 5) | $\underline{\$ 27,840}$ |
| 3 | Reconciliation plus Total Costs excl. wholesale supplier charge (L.1 + L.2) | $\$ 48,571$ |
| 4 | kWh Purchases | $\underline{18,484,947}$ |
| 5 | Total, Before Losses (L.3 / L.4) | $\$ 0.00263$ |
| 6 | Losses | $\underline{4.591 \%}$ |
| 7 | Power Supply Charge excl. wholesale supplier charge (L.5 * (1+L.6)) (2) | $\$ 0.00275$ |

(1) Balance as of February 28, 2018 modified, as detailed below, to reflect that current rates include a reconciliation through May 31, 2018, and to incorporate the difference between the estimated supplier cost and revenue in March 2018. Figure is then allocated between rate periods (JuneNovember 2018 and December 2018-May 2019) and then to each month, June through November 2018, on equal per kWh basis.
a February 28, 2018 actual balance - Schedule LSM-4, Page 2
$(\$ 116,661)$
less: Estimated remaining reconciliation - Mar, Apr, May 2018:
d
e

> Estimated kWh Sales March-May 2018 Amount of reconciliation in current rate

Estimated amount of reconciliation to be credited March-May 2018
less: Estimated overcollection due to difference between the estimated supplier cost and revenue in March 2018
Total reconciliation for June 1, 2018-May 31, 2019 (line a - line e - line f)
\$38,815
kWh purchases forecast June-November 2018

| $18,484,947$ | $53.41 \%$ |
| :--- | :--- |
| $16,125,000$ | $46.59 \%$ |

kWh purchases forecast December 2018-May 2019
16,125,000 46.59\%

Total
34,609,947

Reconciliation amount for June-November 2018
Reconciliation amount for December 2018-May 2019
$m$ Total
(line $\mathrm{g} *$ line $\mathrm{h} \%$ )
\$20,731 (line g * line i\%) (line k + line I)
$\$ 20,731$
$\$ 18,084$
$\$ 38,815$
(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


## Redacted

|  |  | Calculation of Working Capital Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | (j) |  | (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  | (k) |  |
|  |  | Total G1 Class DS Supplier Charges | GIS <br> Support <br> Payments | 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 | Legal Charges | 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-17 |  | \$14 | (1.33\%) |  | 3.88\% |  |  | \$4,062 | \$0 | \$0 | \$24 | \$188,168 |
|  | Apr-17 |  | \$22 | (1.33\%) |  | 4.00\% |  |  | \$4,062 | \$0 | \$0 | \$42 | \$151,931 |
|  | May-17 |  | \$37 | (1.33\%) |  | 4.00\% |  |  | \$4,062 | \$44 | \$0 | \$57 | \$143,851 |
|  | Jun-17 |  | \$23 | 0.35\% |  | 4.13\% |  |  | \$4,062 | \$0 | \$0 | \$48 | $(\$ 6,279)$ |
| $\bigcirc$ | Jul-17 |  | \$24 | 0.35\% |  | 4.25\% |  |  | \$4,062 | \$0 | \$0 | \$47 | \$373,821 |
| $\bigcirc$ | Aug-17 |  | \$50 | 0.35\% |  | 4.25\% |  |  | \$4,062 | \$0 | \$0 | \$48 | \$247,516 |
|  | Sep-17 |  | \$33 | 0.35\% |  | 4.25\% |  |  | \$4,062 | \$0 | \$0 | \$50 | \$216,343 |
|  | Oct-17 |  | \$34 | 0.35\% |  | 4.25\% |  |  | \$4,062 | \$0 | \$0 | \$55 | \$143,146 |
|  | Nov-17 |  | \$36 | 0.35\% |  | 4.25\% |  |  | \$4,062 | \$27 | \$0 | \$55 | $(\$ 167,403)$ |
|  | Dec-17 |  | \$22 | 0.35\% |  | 4.40\% |  |  | \$4,290 | \$0 | \$0 | \$46 | \$538,363 |
|  | Jan-18 |  | \$23 | 0.35\% |  | 4.50\% |  |  | \$4,290 | \$53 | \$0 | \$42 | \$253,066 |
|  | Feb-18 |  | \$37 | 0.35\% |  | 4.50\% |  |  | \$4,290 | \$0 | \$0 | \$50 | \$369,068 |
|  | Total |  | \$355 |  |  |  |  |  | \$49,423 | \$123 | \$0 | \$562 | \$2,451,591 |

 lead per Schedule DN-1, Page 20 of 23, DE 16-250 filed April 1, 2016.
 cost lead per Schedule DN-1, Page 20 of 23, DE 17-038 filed April 3, 2017.

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

|  | (a) <br> Total G1 Class Billed Default Service kWh (1) | (b) <br> Unbilled <br> Factor (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 * <br> d) | (f) <br> Reversal of prior month unbilled | (g) Total Billed G1 Class Power Supply Charge Revenue (1) | (h) <br> Total Revenue $(e+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mar-17 | 1,394,561 | 55\% | 772,643 | \$0.04483 | \$34,638 | $(\$ 77,834)$ | \$68,765 | \$25,569 |
| Apr-17 | 2,351,966 | 58\% | 1,360,159 | \$0.04257 | \$57,902 | $(\$ 34,638)$ | \$102,991 | \$126,256 |
| May-17 | 2,886,905 | 57\% | 1,636,905 | \$0.04351 | \$71,222 | $(\$ 57,902)$ | \$124,194 | \$137,514 |
| Jun-17 | 2,718,303 | 54\% | 1,457,355 | \$0.06525 | \$95,092 | $(\$ 71,222)$ | \$144,479 | \$168,350 |
| Jul-17 | 3,487,876 | 49\% | 1,695,267 | \$0.06040 | \$102,394 | $(\$ 95,092)$ | \$219,036 | \$226,338 |
| Aug-17 | 3,450,688 | 52\% | 1,791,310 | \$0.06507 | \$116,561 | $(\$ 102,394)$ | \$216,964 | \$231,130 |
| Sep-17 | 3,206,952 | 51\% | 1,649,186 | \$0.06723 | \$110,875 | $(\$ 116,561)$ | \$212,345 | \$206,659 |
| Oct-17 | 3,290,505 | 54\% | 1,765,116 | \$0.06328 | \$111,697 | $(\$ 110,875)$ | \$214,070 | \$214,891 |
| Nov-17 | 2,939,698 | 54\% | 1,574,101 | \$0.08549 | \$134,570 | $(\$ 111,697)$ | \$220,822 | \$243,696 |
| Dec-17 | 3,039,195 | 51\% | 1,555,144 | \$0.07964 | \$123,852 | $(\$ 134,570)$ | \$250,413 | \$239,695 |
| Jan-18 | 3,525,981 | 48\% | 1,694,649 | \$0.10173 | \$172,397 | $(\$ 123,852)$ | \$324,622 | \$373,167 |
| Feb-18 | 3,395,595 | 49\% | 1,665,080 | \$0.17024 | \$283,463 | (\$172,397) | \$473,698 | \$584,764 |
| Total | 35,688,224 |  |  |  | \$1,414,661 | (\$1,209,031) | \$2,572,399 | \$2,778,028 |

(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-17 | 27,034,182 | 14,978,024 | 55\% |
| Apr-17 | 26,958,211 | 15,590,124 | 58\% |
| May-17 | 27,287,795 | 15,472,461 | 57\% |
| Jun-17 | 30,547,604 | 16,377,386 | 54\% |
| Jul-17 | 34,164,950 | 16,605,730 | 49\% |
| Aug-17 | 30,804,577 | 15,991,170 | 52\% |
| Sep-17 | 30,878,419 | 15,879,329 | 51\% |
| Oct-17 | 31,045,206 | 16,653,491 | 54\% |
| Nov-17 | 27,021,133 | 14,468,830 | 54\% |
| Dec-17 | 28,973,555 | 14,825,649 | 51\% |
| Jan-18 | 29,063,623 | 13,968,492 | 48\% |
| Feb-18 | 27,816,557 | 13,640,259 | 49\% |


(1) $\overrightarrow{D S}$ Supplier Charges to be determined at the end of each month.
 35 filed April 6, 2018


 month.

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

| 1 | Reconciliation (1) | $\begin{gathered} \begin{array}{c} \text { Jun-18 } \\ \text { Estimated } \end{array} \\ (\$ 7,803) \end{gathered}$ | $\begin{gathered} \begin{array}{c} \text { Jul-18 } \\ \text { Estimated } \end{array} \\ (\$ 8,221) \end{gathered}$ | $\begin{gathered} \begin{array}{c} \text { Aug-18 } \\ \text { Estimated } \end{array} \\ (\$ 9,060) \end{gathered}$ | $\begin{gathered} \begin{array}{c} \text { Sep-18 } \\ \text { Estimated } \end{array} \\ (\$ 8,022) \end{gathered}$ | $\begin{aligned} & \begin{array}{c} \text { Oct-18 } \\ \text { Estimated } \end{array} \\ & (\$ 7,134) \end{aligned}$ | $\begin{gathered} \begin{array}{c} \text { Nov-18 } \\ \text { Estimated } \end{array} \\ (\$ 6,755) \end{gathered}$ | $\stackrel{\text { Total }}{(\$ 46,996)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | Total Costs (Page 5) | \$13,211 | \$13,919 | \$15,339 | \$13,581 | \$12,079 | \$11,436 | \$79,564 |
| 3 | Reconciliation plus Total Costs (L.1 + L.2) | \$5,407 | \$5,697 | \$6,279 | \$5,559 | \$4,944 | \$4,681 | \$32,568 |
| 4 | kWh Purchases | 3,069,181 | 3,233,715 | 3,563,580 | 3,155,278 | 2,806,208 | 2,656,985 | 18,484,947 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.00176 | \$0.00176 | \$0.00176 | \$0.00176 | \$0.00176 | \$0.00176 |  |
| \% | Losses | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% | 4.591\% |  |
| 7 | Total Retail Rate - Variable RPS Charge (L. ${ }^{\text {* ( }}$ (1+L.6)) | \$0.00184 | \$0.00184 | \$0.00184 | \$0.00184 | \$0.00184 | \$0.00184 |  |

(1) Balance as of February 28, 2018 modified, as detailed below, to reflect that current rates include a reconciliation through May 31, 2018. Figure is then allocated between rate periods (June-November 2018 and December 2018-May 2019) and then to each month, June through November 2018, on equal per kWh basis.
a February 28, 2018 actual balance - Schedule LSM-5, Page 2
b less: Estimated remaining prior period reconciliation - Mar, Apr, May 2018:
c Estimated kWh Sales Mar-May 2018
Amount of reconciliation in current rate
Estimated amount of reconciliation - Mar-May 2018
$f$ Total reconciliation for June 1, 2018-May 31, 2019 (line a - Line e)
$g$ kWh purchases forecast June-November 2018
h kWh purchases forecast December 2018-May 2019
i Total
j Reconciliation amount for June-November 2018
k Reconciliation amount for December 2018-May 2019
I Total
(\$119,702)

7,734,317
(\$0.00410)
(31,7)
(\$87,991)

| $18,484,947$ | $53.41 \%$ |
| :--- | :--- |
| $16,125,000$ | $46.59 \%$ |

(\$46,996)
(line f* line g\%)
(line f * line h\%)
(line j + line k)
(\$40,995)
(\$87,991)

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 ( $\mathrm{a}+\mathrm{b}-\mathrm{c}$ ) | Average Monthly Balance ((a+d)/2) | Interest Rate | Number of Days / Month | Computed <br> Interest | Ending Balance with Interest (d + h) |
| $\begin{aligned} & \mathrm{O} \\ & \stackrel{\circ}{\circ} \end{aligned}$ | Mar-17 | (\$144,391) | \$28,953 | \$6,550 | (\$121,988) | $(\$ 133,189)$ | 3.50\% | 31 | (\$396) | (\$122,384) |
|  | Apr-17 | $(\$ 122,384)$ | \$18,731 | \$20,077 | $(\$ 123,730)$ | $(\$ 123,057)$ | 3.75\% | 30 | (\$379) | $(\$ 124,109)$ |
|  | May-17 | $(\$ 124,109)$ | \$18,731 | \$21,608 | $(\$ 126,986)$ | $(\$ 125,547)$ | 3.75\% | 31 | (\$400) | $(\$ 127,386)$ |
|  | Jun-17 | $(\$ 127,386)$ | $(\$ 55,322)$ | \$2,938 | $(\$ 185,645)$ | $(\$ 156,516)$ | 3.75\% | 30 | (\$482) | $(\$ 186,128)$ |
|  | Jul-17 | $(\$ 186,128)$ | \$16,309 | \$6,036 | (\$175,854) | $(\$ 180,991)$ | 4.00\% | 31 | (\$615) | $(\$ 176,469)$ |
|  | Aug-17 | $(\$ 176,469)$ | \$16,309 | \$5,746 | $(\$ 165,906)$ | $(\$ 171,187)$ | 4.00\% | 31 | (\$582) | $(\$ 166,487)$ |
|  | Sep-17 | $(\$ 166,487)$ | \$4,524 | \$4,965 | $(\$ 166,928)$ | $(\$ 166,707)$ | 4.00\% | 30 | (\$548) | $(\$ 167,476)$ |
|  | Oct-17 | $(\$ 167,476)$ | \$15,000 | \$5,518 | $(\$ 157,995)$ | $(\$ 162,735)$ | 4.25\% | 31 | (\$587) | $(\$ 158,582)$ |
|  | Nov-17 | $(\$ 158,582)$ | \$15,000 | \$4,453 | $(\$ 148,035)$ | $(\$ 153,309)$ | 4.25\% | 30 | (\$536) | $(\$ 148,571)$ |
|  | Dec-17 | $(\$ 148,571)$ | \$13,391 | \$5,525 | $(\$ 140,705)$ | (\$144,638) | 4.25\% | 31 | (\$522) | $(\$ 141,228)$ |
|  | Jan-18 | $(\$ 141,228)$ | \$18,347 | \$7,444 | $(\$ 130,324)$ | $(\$ 135,776)$ | 4.25\% | 31 | (\$490) | $(\$ 130,814)$ |
| Feb-18Total |  | $(\$ 130,814)$ | \$16,540 | \$6,827 | $(\$ 121,101)$ | (\$125,957) | 4.25\% | 28 | \$1,399 (1) | $(\$ 119,702)$ |
|  |  |  | \$126,513 | \$97,685 |  |  |  |  | $(\$ 4,138)$ |  |

(1) Includes $\$ 1,809.61$ to correct for prior year's trueups, between working capital and interest on reconciliation.

(1) For the months March-May 2017, 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.

For the months June 2017-February 2018, number of days lag equals (302.01). Calculated using revenue lag of 42.90 days less cost lead of 344.91 days. Revenue lag per Schedule DN-1, Page 4 of 23 and cost lead per Schedule DN-1, Page 20 of 23, DE 17-038 filed April 3, 2017.
(2) Includes $(\$ 1,806.67)$ to correct for prior year's trueups, between working capital and interest on reconciliation.

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 $(e+f+g)$ |
| $\stackrel{\stackrel{\mathrm{O}}{\stackrel{\rightharpoonup}{\circ}}}{\stackrel{\circ}{\circ}}$ | Mar-17 | 1,394,561 | 55\% | 772,643 | \$0.00683 | \$5,277 | $(\$ 10,103)$ | \$11,375 | \$6,550 |
|  | Apr-17 | 2,351,966 | 58\% | 1,360,159 | \$0.00683 | \$9,290 | $(\$ 5,277)$ | \$16,064 | \$20,077 |
|  | May-17 | 2,886,905 | 57\% | 1,636,905 | \$0.00683 | \$11,180 | $(\$ 9,290)$ | \$19,718 | \$21,608 |
|  | Jun-17 | 2,718,303 | 54\% | 1,457,355 | \$0.00162 | \$2,361 | $(\$ 11,180)$ | \$11,757 | \$2,938 |
|  | Jul-17 | 3,487,876 | 49\% | 1,695,267 | \$0.00162 | \$2,746 | $(\$ 2,361)$ | \$5,650 | \$6,036 |
|  | Aug-17 | 3,450,688 | 52\% | 1,791,310 | \$0.00162 | \$2,902 | $(\$ 2,746)$ | \$5,590 | \$5,746 |
|  | Sep-17 | 3,206,952 | 51\% | 1,649,186 | \$0.00162 | \$2,672 | $(\$ 2,902)$ | \$5,195 | \$4,965 |
|  | Oct-17 | 3,290,505 | 54\% | 1,765,116 | \$0.00162 | \$2,859 | $(\$ 2,672)$ | \$5,331 | \$5,518 |
|  | Nov-17 | 2,939,698 | 54\% | 1,574,101 | \$0.00162 | \$2,550 | $(\$ 2,859)$ | \$4,762 | \$4,453 |
|  | Dec-17 | 3,039,195 | 51\% | 1,555,144 | \$0.00182 | \$2,830 | $(\$ 2,550)$ | \$5,245 | \$5,525 |
|  | Jan-18 | 3,525,981 | 48\% | 1,694,649 | \$0.00203 | \$3,440 | $(\$ 2,830)$ | \$6,834 | \$7,444 |
|  | Feb-18 | 3,395,595 | 49\% | 1,665,080 | \$0.00203 | \$3,380 | $(\$ 3,440)$ | \$6,887 | \$6,827 |
|  | Total | 35,688,224 |  |  |  | \$51,488 | $(\$ 58,211)$ | \$104,408 | \$97,685 |

(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-17 | 27,034,182 | 14,978,024 | 55\% |
| Apr-17 | 26,958,211 | 15,590,124 | 58\% |
| May-17 | 27,287,795 | 15,472,461 | 57\% |
| Jun-17 | 30,547,604 | 16,377,386 | 54\% |
| Jul-17 | 34,164,950 | 16,605,730 | 49\% |
| Aug-17 | 30,804,577 | 15,991,170 | 52\% |
| Sep-17 | 30,878,419 | 15,879,329 | 51\% |
| Oct-17 | 31,045,206 | 16,653,491 | 54\% |
| Nov-17 | 27,021,133 | 14,468,830 | 54\% |
| Dec-17 | 28,973,555 | 14,825,649 | 51\% |
| Jan-18 | 29,063,623 | 13,968,492 | 48\% |
| Feb-18 | 27,816,557 | 13,640,259 | 49\% |

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

Schedule LSM-5
Page 5 of 5


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Unitil Energy Systems, Inc.
Typical Bill Impacts by Rate Component
Residential Rate D 650 kWh Bill


| Rate Components | Regular General G2 Demand, $11 \mathrm{kW}, \mathrm{2,800} \mathrm{kWh} \mathrm{Typical} \mathrm{Bill}$ |  |  |  | As Revised Bill* | Difference | $\begin{gathered} \% \\ \text { Difference to } \\ \text { Total Bill } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4/1/2018 <br> Current Rate | $6 / 1 / 2018$ <br> As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$27.43 | \$27.43 | \$0.00 | \$27.43 | \$27.43 | \$0.00 | 0.0\% |
|  | All kW | All kW |  |  |  |  |  |
| Distribution Charge | \$10.35 | \$10.35 | \$0.00 | \$113.85 | \$113.85 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.11) | (\$0.11) | \$0.00 | (\$1.21) | (\$1.21) | \$0.00 | 0.0\% |
| Total kW Charges | \$10.24 | \$10.24 | \$0.00 | \$112.64 | \$112.64 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00116 | \$0.00116 | \$0.00000 | \$3.25 | \$3.25 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 | \$73.84 | \$73.84 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.00011) | (\$0.00011) | \$0.00000 | (\$0.31) | (\$0.31) | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$3.89 | \$3.89 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 | \$12.77 | \$12.77 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09381 | \$0.07377 | (\$0.02004) | \$262.67 | \$206.56 | (\$56.11) | (11.3\%) |
| Total kWh Charges | \$0.12718 | \$0.10714 | (\$0.02004) | \$356.10 | \$299.99 | (\$56.11) | (11.3\%) |
| Total Bill |  |  |  | \$496.17 | \$440.06 | (\$56.11) | (11.3\%) |

* Impacts do not include the Electricity Consumption Tax.

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

| Rate Components | 4/1/2018 <br> Current Rate | 6/1/2018 |  |  | As Revised Bill* | Difference | $\%$ <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$9.14 | \$9.14 | \$0.00 | \$9.14 | \$9.14 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03265 | \$0.03265 | \$0.00000 | \$54.20 | \$54.20 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 | \$43.77 | \$43.77 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.00057) | (\$0.00057) | \$0.00000 | (\$0.95) | (\$0.95) | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$2.31 | \$2.31 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 | \$7.57 | \$7.57 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09381 | \$0.07377 | (\$0.02004) | \$155.72 | \$122.46 | (\$33.27) | (12.2\%) |
| Total kWh Charges | \$0.15821 | \$0.13817 | (\$0.02004) | \$262.63 | \$229.36 | (\$33.27) | (12.2\%) |
| Total Bill |  |  |  | \$271.77 | \$238.50 | (\$33.27) | (12.2\%) |


| Rate Components | Regular General G2 kWh Meter 115 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4/1/2018 | 6/1/2018 |  |  |  |  |  |
|  | Current Rate | As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$17.27 | \$17.27 | \$0.00 | \$17.27 | \$17.27 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.01556 | \$0.01556 | \$0.00000 | \$1.79 | \$1.79 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 | \$3.03 | \$3.03 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.00057) | (\$0.00057) | \$0.00000 | (\$0.07) | (\$0.07) | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$0.16 | \$0.16 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 | \$0.52 | \$0.52 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.09381 | \$0.07377 | (\$0.02004) | \$10.79 | \$8.48 | (\$2.30) | (6.9\%) |
| Total kWh Charges | \$0.14112 | \$0.12108 | (\$0.02004) | \$16.23 | \$13.92 | (\$2.30) | (6.9\%) |
| Total Bill |  |  |  | \$33.50 | \$31.19 | (\$2.30) | (6.9\%) |

* Impacts do not include the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Typical Bill Impacts for Residential Rate Class based on Mean and Median Usage
Residential Rate D 655 kWh Bill - Mean Use*

| Residential Rate D 655 kWh Bill - Mean Use* |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Components | 4/1/2018 | 6/1/2018 |  | $\frac{\text { Current }}{\text { Bill** }}$ | As Revised Bill** | Difference | $\%$Difference <br> to Total Bill |
|  |  | As Revised | Difference |  |  |  |  |
| Customer Charge | \$15.24 | \$15.24 | \$0.00 | \$15.24 | \$15.24 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03682 | \$0.03682 | \$0.00000 | \$24.12 | \$24.12 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 | \$17.27 | \$17.27 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.00057) | (\$0.00057) | \$0.00000 | (\$0.37) | (\$0.37) | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$0.91 | \$0.91 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 | \$2.99 | \$2.99 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.10034 | \$0.08238 | (\$0.01796) | \$65.72 | \$53.96 | (\$11.76) | (9.3\%) |
| Total kWh Charges | \$0.16891 | \$0.15095 | (\$0.01796) |  |  |  |  |
| Total Bill |  |  |  | \$125.88 | \$114.11 | (\$11.76) | (9.3\%) |

Residential Rate D 533 kWh Bill - Median Use*

| Rate Components | 4/1/2018 | 6/1/2018 |  |  | As Revised Bill** | Difference | $\%$ <br> Difference <br> to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | $\frac{\text { Current }}{\underline{B i l l}{ }^{* *}}$ |  |  |  |
| Customer Charge | \$15.24 | \$15.24 | \$0.00 | \$15.24 | \$15.24 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03682 | \$0.03682 | \$0.00000 | \$19.63 | \$19.63 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 | \$14.06 | \$14.06 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.00057) | (\$0.00057) | \$0.00000 | (\$0.30) | (\$0.30) | \$0.00 | 0.0\% |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$0.74 | \$0.74 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 | \$2.43 | \$2.43 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.10034 | \$0.08238 | (\$0.01796) | \$53.48 | \$43.91 | (\$9.57) | (9.1\%) |
| Total kWh Charges | \$0.16891 | \$0.15095 | (\$0.01796) |  |  |  |  |
| Total Bill |  |  |  | \$105.27 | \$95.70 | (\$9.57) | (9.1\%) |

* Based on billing period July 2017 through March 2018.
** 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, 2018

| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (1) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Annual Number | Annual | Annual | Proposed | Estimated Annual | Estimated Annual | Proposed | \% Change |
|  | of Customers (luminaires | kWh | kW / kVA | DSC | Revenue \$ Under | Revenue \$ Under | Net Change | DSC |
| Class of Service | for Outdoor Lighting) | Sales | Sales | Change \$ | Present Rates | Proposed Rates | Revenue \$ | Revenue |
| Residential | 785,306 | 497,875,828 | n/a | (\$8,941,850) | \$96,064,273 | \$87,122,423 | (\$8,941,850) | (9.3\%) |
| General Service | 131,872 | 354,161,409 | 1,348,556 | (\$7,097,395) | \$62,513,837 | \$55,416,442 | $(\$ 7,097,395)$ | (11.4\%) |
| \%otiondoor Lighting N | 110,850 | 8,241,454 | n/a | $(\$ 165,159)$ | \$2,874,165 | \$2,709,006 | $(\$ 165,159)$ | (5.7\%) |
| Total | 1,028,028 | 860,278,690 |  | $(\$ 16,204,403)$ | \$161,452,274 | \$145,247,871 | $(\$ 16,204,403)$ | (10.0\%) |

(B), (C), (D) Test year billing determinants in DE 16-384.
(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)


| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - April 1, 2018 vs. June 1, 2018 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 | 4/1/2018 | 6/1/2018 | Difference | Difference |
| 20\% 5 | 730 | \$171.47 | \$156.84 | (\$14.63) | (8.5\%) |
| 20\% 10 | 1,460 | \$315.51 | \$286.25 | (\$29.26) | (9.3\%) |
| 20\% 15 | 2,190 | \$459.55 | \$415.67 | (\$43.89) | (9.6\%) |
| 20\% 25 | 3,650 | \$747.64 | \$674.49 | (\$73.15) | (9.8\%) |
| 20\% 50 | 7,300 | \$1,467.84 | \$1,321.55 | (\$146.29) | (10.0\%) |
| 20\% 75 | 10,950 | \$2,188.05 | \$1,968.61 | (\$219.44) | (10.0\%) |
| 20\% 100 | 14,600 | \$2,908.26 | \$2,615.67 | (\$292.58) | (10.1\%) |
| 20\% 150 | 21,900 | \$4,348.67 | \$3,909.80 | (\$438.88) | (10.1\%) |
| 36\% 5 | 1,314 | \$245.74 | \$219.41 | (\$26.33) | (10.7\%) |
| 36\% 10 | 2,628 | \$464.06 | \$411.39 | (\$52.67) | (11.3\%) |
| 36\% 15 | 3,942 | \$682.37 | \$603.38 | (\$79.00) | (11.6\%) |
| 36\% 25 | 6,570 | \$1,119.00 | \$987.34 | (\$131.66) | (11.8\%) |
| 36\% 50 | 13,140 | \$2,210.58 | \$1,947.25 | (\$263.33) | (11.9\%) |
| 36\% 75 | 19,710 | \$3,302.15 | \$2,907.16 | (\$394.99) | (12.0\%) |
| 36\% 100 | 26,280 | \$4,393.72 | \$3,867.07 | (\$526.65) | (12.0\%) |
| 36\% 150 | 39,420 | \$6,576.87 | \$5,786.89 | (\$789.98) | (12.0\%) |
| 50\% 5 | 1,825 | \$310.73 | \$274.16 | (\$36.57) | (11.8\%) |
| 50\% 10 | 3,650 | \$594.04 | \$520.89 | (\$73.15) | (12.3\%) |
| 50\% 15 | 5,475 | \$877.34 | \$767.62 | (\$109.72) | (12.5\%) |
| 50\% 25 | 9,125 | \$1,443.95 | \$1,261.08 | (\$182.87) | (12.7\%) |
| 50\% 50 | 18,250 | \$2,860.47 | \$2,494.74 | (\$365.73) | (12.8\%) |
| 50\% 75 | 27,375 | \$4,276.98 | \$3,728.39 | (\$548.60) | (12.8\%) |
| 50\% 100 | 36,500 | \$5,693.50 | \$4,962.04 | (\$731.46) | (12.8\%) |
| 50\% 150 | 54,750 | \$8,526.54 | \$7,429.35 | (\$1,097.19) | (12.9\%) |
|  | Rates - Effective <br> April 1, 2018 | Rates - Proposed June 1, 2018 | Difference |  |  |
| Customer Charge | \$27.43 | \$27.43 | \$0.00 |  |  |
|  | All kW | All kW | All kW |  |  |
| Distribution Charge | \$10.35 | \$10.35 | \$0.00 |  |  |
| Stranded Cost Charge | (\$0.11) | (\$0.11) | \$0.00 |  |  |
| TOTAL | \$10.24 | \$10.24 | \$0.00 |  |  |
|  | kWh | kWh | kWh |  |  |
| Distribution Charge | \$0.00116 | \$0.00116 | \$0.00000 |  |  |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 |  |  |
| Stranded Cost Charge | (\$0.00011) | (\$0.00011) | \$0.00000 |  |  |
| Storm Recovery Adj. Factor | \$0.00139 | \$0.00139 | \$0.00000 |  |  |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 |  |  |
| Default Service Charge | \$0.09381 | \$0.07377 | (\$0.02004) |  |  |
| TOTAL | \$0.12718 | \$0.10714 | (\$0.02004) |  |  |



| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - April 1, 2018 vs. June 1, 2018 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 4/1/2018 | 6/1/2018 | Difference | Difference |
| 100 \$24.96 | \$22.96 | (\$2.00) | (8.0\%) |
| 200 \$40.78 | \$36.77 | (\$4.01) | (9.8\%) |
| 300 \$56.60 | \$50.59 | (\$6.01) | (10.6\%) |
| 400 \$72.42 | \$64.41 | (\$8.02) | (11.1\%) |
| 500 \$88.25 | \$78.23 | (\$10.02) | (11.4\%) |
| 750 \$127.80 | \$112.77 | (\$15.03) | (11.8\%) |
| 1,000 \$167.35 | \$147.31 | (\$20.04) | (12.0\%) |
| 1,500 \$246.46 | \$216.40 | (\$30.06) | (12.2\%) |
| 2,000 \$325.56 | \$285.48 | (\$40.08) | (12.3\%) |
| 2,500 \$404.67 | \$354.57 | (\$50.10) | (12.4\%) |
|  |  |  |  |
|  | Rates - Effective <br> April 1, 2018 | Rates - Proposed June 1, 2018 | Difference |
| Customer Charge | \$9.14 | \$9.14 | \$0.00 |
|  | All kWh | All kWh | All kWh |
| Distribution Charge | \$0.03265 | \$0.03265 | \$0.00000 |
| External Delivery Charge | \$0.02637 | \$0.02637 | \$0.00000 |
| Stranded Cost Charge | (\$0.00057) | (\$0.00057) | \$0.00000 |
| Storm Recovery Adjustment Factor | \$0.00139 | \$0.00139 | \$0.00000 |
| System Benefits Charge | \$0.00456 | \$0.00456 | \$0.00000 |
| Default Service Charge | \$0.09381 | \$0.07377 | (\$0.02004) |
| TOTAL | \$0.15821 | \$0.13817 | (\$0.02004) |


| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - April 1, 2018 vs. June 1, 2018 Impacts do NOT include the Electricity Consumption Tax Impact on OL Rate Customers * |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Nominal Watts | Lumens | Type | Average Monthly kWh | Total Bill Using Rates 4/1/2018 | Total Bill Using Rates 6/1/2018 | Total Difference | $\%$ Total Difference |
| Mercury Vapor: |  |  |  |  |  |  |  |  |
| 1 | 100 | 3,500 | ST | 40 | \$18.03 | \$17.23 | (\$0.80) | (4.4\%) |
| 2 | 175 | 7,000 | ST | 67 | \$23.86 | \$22.52 | (\$1.34) | (5.6\%) |
| 3 | 250 | 11,000 | ST | 95 | \$29.46 | \$27.55 | (\$1.90) | (6.5\%) |
| 4 | 400 | 20,000 | ST | 154 | \$40.26 | \$37.18 | (\$3.09) | (7.7\%) |
|  | 1,000 | 60,000 | ST | 388 | \$90.36 | \$82.58 | (\$7.78) | (8.6\%) |
| 6 | 250 | 11,000 | FL | 95 | \$30.60 | \$28.69 | (\$1.90) | (6.2\%) |
| 7 | 400 | 20,000 | FL | 154 | \$41.72 | \$38.64 | (\$3.09) | (7.4\%) |
| 8 | 1,000 | 60,000 | FL | 388 | \$85.97 | \$78.19 | (\$7.78) | (9.0\%) |
| 9 | 100 | 3,500 | PB | 40 | \$18.16 | \$17.36 | (\$0.80) | (4.4\%) |
| 10 | 175 | 7,000 | PB | 67 | \$23.01 | \$21.67 | (\$1.34) | (5.8\%) |
| High Pressure Sodium: |  |  |  |  |  |  |  |  |
| 11 | 50 | 4,000 | ST | 21 | \$15.86 | \$15.44 | (\$0.42) | (2.7\%) |
| 12 | 100 | 9,500 | ST | 43 | \$20.30 | \$19.44 | (\$0.86) | (4.2\%) |
| 13 | 150 | 16,000 | ST | 60 | \$22.52 | \$21.32 | (\$1.20) | (5.3\%) |
| 14 | 250 | 30,000 | ST | 101 | \$31.48 | \$29.45 | (\$2.02) | (6.4\%) |
| 15 | 400 | 50,000 | ST | 161 | \$43.95 | \$40.73 | (\$3.23) | (7.3\%) |
| 16 | 1,000 | 140,000 | ST | 398 | \$91.10 | \$83.13 | (\$7.98) | (8.8\%) |
| 17 | 150 | 16,000 | FL | 60 | \$24.79 | \$23.59 | (\$1.20) | (4.8\%) |
| 18 | 250 | 30,000 | FL | 101 | \$33.07 | \$31.04 | (\$2.02) | (6.1\%) |
| 19 | 400 | 50,000 | FL | 161 | \$43.42 | \$40.20 | (\$3.23) | (7.4\%) |
| 20 | 1,000 | 140,000 | FL | 398 | \$91.46 | \$83.49 | (\$7.98) | (8.7\%) |
| 21 | 50 | 4,000 | PB | 21 | \$14.87 | \$14.45 | (\$0.42) | (2.8\%) |
| 22 | 100 | 95,000 | PB | 43 | \$19.16 | \$18.30 | (\$0.86) | (4.5\%) |
| Metal Halide: |  |  |  |  |  |  |  |  |
| 23 | 175 | 8,800 | ST | 66 | \$27.80 | \$26.48 | (\$1.32) | (4.8\%) |
| 24 | 250 | 13,500 | ST | 92 | \$32.79 | \$30.94 | (\$1.84) | (5.6\%) |
| 25 | 400 | 23,500 | ST | 148 | \$40.67 | \$37.71 | (\$2.97) | (7.3\%) |
| 26 | 175 | 8,800 | FL | 66 | \$30.81 | \$29.49 | (\$1.32) | (4.3\%) |
| 27 | 250 | 13,500 | FL | 92 | \$35.90 | \$34.05 | (\$1.84) | (5.1\%) |
| 28 | 400 | 23,500 | FL | 148 | \$43.03 | \$40.07 | (\$2.97) | (6.9\%) |
| 29 | 175 | 8,800 | PB | 66 | \$26.55 | \$25.23 | (\$1.32) | (5.0\%) |
| 30 | 250 | 13,500 | PB | 92 | \$31.00 | \$29.15 | (\$1.84) | (5.9\%) |
| 31 | 400 | 23,500 | PB | 148 | \$39.42 | \$36.46 | (\$2.97) | (7.5\%) |
| Luminaire Charges For Year Round Service: |  |  |  |  |  |  |  |  |
| Rates - Effective April 1, 2018 |  |  |  |  |  |  |  |  |
|  |  | Mercury Vapor Rate/Mo. |  | Sodium Vapor Rate/Mo. |  | Metal Halide Rate/Mo. |  |  |
| Customer Charge | \$0.00 |  | \$12.96 | 11 | \$13.20 | 23 | \$19.44 |  |
|  |  |  | \$15.37 | 12 | \$14.85 | 24 | \$21.13 |  |
|  | All kWh |  | \$17.42 | 13 | \$14.92 | 25 | \$21.92 |  |
| Distribution Charge | \$0.00116 |  | \$20.75 | 14 | \$18.68 | 26 | \$22.45 |  |
| External Delivery Charge | \$0.02637 |  | \$41.19 | 15 | \$23.55 | 27 | \$24.24 |  |
| Stranded Cost Charge | (\$0.00057) |  | \$18.56 | 16 | \$40.67 | 28 | \$24.28 |  |
| Storm Recovery Adj. Factor | \$0.00139 |  | \$22.21 | 17 | \$17.19 | 29 | \$18.19 |  |
| System Benefits Charge | \$0.00456 |  | \$36.80 | 18 | \$20.27 | 30 | \$19.34 |  |
| Default Service Charge | \$0.09381 |  | \$13.09 | 19 | \$23.02 | 31 | \$20.67 |  |
|  |  |  | \$14.52 | 20 | \$41.03 |  |  |  |
| TOTAL | \$0.12672 |  |  | 21 | \$12.21 |  |  |  |
|  |  |  |  | 22 | \$13.71 |  |  |  |
| Rates - Proposed June 1, 2018 |  |  |  |  |  |  |  |  |
|  |  | Mercury Vap | ate/Mo. | Sodium Vapo | Rate/Mo. | Metal Halide | ate/Mo. |  |
| Customer Charge | \$0.00 |  | \$12.96 | 11 | \$13.20 | 23 | \$19.44 |  |
|  |  |  | \$15.37 | 12 | \$14.85 | 24 | \$21.13 |  |
|  | All kWh |  | \$17.42 | 13 | \$14.92 | 25 | \$21.92 |  |
| Distribution Charge | \$0.00116 |  | \$20.75 | 14 | \$18.68 | 26 | \$22.45 |  |
| External Delivery Charge | \$0.02637 |  | \$41.19 | 15 | \$23.55 | 27 | \$24.24 |  |
| Stranded Cost Charge | (\$0.00057) |  | \$18.56 | 16 | \$40.67 | 28 | \$24.28 |  |
| Storm Recovery Adj. Factor | \$0.00139 |  | \$22.21 | 17 | \$17.19 | 29 | \$18.19 |  |
| System Benefits Charge | \$0.00456 |  | \$36.80 | 18 | \$20.27 | 30 | \$19.34 |  |
| Default Service Charge | \$0.07377 |  | \$13.09 | 19 | \$23.02 | 31 | \$20.67 |  |
|  |  |  | \$14.52 | 20 | \$41.03 |  |  |  |
| TOTAL | \$0.10668 |  |  | 21 | \$12.21 |  |  |  |
|  |  |  |  | 22 | \$13.71 |  |  |  |
|  | Difference | Mercury V | Difference | 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 |  |
| Storm Recovery Adj. Factor | \$0.00000 |  | \$0.00 | 17 | \$0.00 | 29 | \$0.00 |  |
| System Benefits Charge | \$0.00000 |  | \$0.00 | 18 | \$0.00 | 30 | \$0.00 |  |
| Default Service Charge | (\$0.02004) |  | \$0.00 | 19 | \$0.00 | 31 | \$0.00 |  |
|  |  |  | \$0.00 | 20 | \$0.00 |  |  |  |
| total | (\$0.02004) |  |  | 21 | \$0.00 |  |  |  |
|  |  |  |  | 22 | \$0.00 |  |  |  |
| ^ Luminaire charges based on All-Night Service option. |  |  |  | 00197 |  |  |  |  |

Unitil Energy Systems, Inc.
Typical Bill Impacts by Rate Component
Residential Rate D 650 kWh Bill


| Regular General G2 Demand, $11 \mathrm{kW}, \mathrm{2,800} \mathrm{kWh} \mathrm{Typical} \mathrm{Bill}$ |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Rate Components | 6/1/2017 <br> Current Rate | $6 / 1 / 2018$ <br> As Revised | Difference | Current Bill* | As Revised Bill* | Difference | $\qquad$ |
| Customer Charge | \$27.43 | \$27.43 | \$0.00 | \$27.43 | \$27.43 | \$0.00 | 0.0\% |
|  | All kW | All kW |  |  |  |  |  |
| Distribution Charge | \$10.35 | \$10.35 | \$0.00 | \$113.85 | \$113.85 | \$0.00 | 0.0\% |
| Stranded Cost Charge | (\$0.04) | (\$0.11) | (\$0.07) | (\$0.44) | (\$1.21) | (\$0.77) | (0.2\%) |
| Total kW Charges | \$10.31 | \$10.24 | (\$0.07) | \$113.41 | \$112.64 | (\$0.77) | (0.2\%) |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00116 | \$0.00116 | \$0.00000 | \$3.25 | \$3.25 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02144 | \$0.02637 | \$0.00493 | \$60.03 | \$73.84 | \$13.80 | 3.2\% |
| Stranded Cost Charge | (\$0.00004) | (\$0.00011) | (\$0.00007) | (\$0.11) | (\$0.31) | (\$0.20) | (0.0\%) |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$3.89 | \$3.89 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00357 | \$0.00456 | \$0.00099 | \$10.00 | \$12.77 | \$2.77 | 0.6\% |
| Default Service Charge | \$0.07556 | \$0.07377 | (\$0.00179) | \$211.57 | \$206.56 | (\$5.01) | (1.2\%) |
| Total kWh Charges | \$0.10308 | \$0.10714 | \$0.00406 | \$288.62 | \$299.99 | \$11.37 | 2.6\% |
| Total Bill |  |  |  | \$429.46 | \$440.06 | \$10.60 | 2.5\% |

* Impacts do not include the Electricity Consumption Tax.


## Unitil Energy Systems, Inc.

Typical Bill Impacts by Rate Component

| Rate Components | $6 / 1 / 2017$ <br> Current Rate | 6/1/2018 |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$9.14 | \$9.14 | \$0.00 | \$9.14 | \$9.14 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.03265 | \$0.03265 | \$0.00000 | \$54.20 | \$54.20 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02144 | \$0.02637 | \$0.00493 | \$35.59 | \$43.77 | \$8.18 | 3.5\% |
| Stranded Cost Charge | (\$0.00018) | (\$0.00057) | (\$0.00039) | (\$0.30) | (\$0.95) | (\$0.65) | (0.3\%) |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$2.31 | \$2.31 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00357 | \$0.00456 | \$0.00099 | \$5.93 | \$7.57 | \$1.64 | 0.7\% |
| Default Service Charge | \$0.07556 | \$0.07377 | (\$0.00179) | \$125.43 | \$122.46 | (\$2.97) | (1.3\%) |
| Total kWh Charges | \$0.13443 | \$0.13817 | \$0.00374 | \$223.15 | \$229.36 | \$6.21 | 2.7\% |
| Total Bill |  |  |  | \$232.29 | \$238.50 | \$6.21 | 2.7\% |


| Rate Components | Regular General G2 kWh Meter 115 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6/1/2017 <br> Current Rate | $6 / 1 / 2018$ <br> As Revised | Difference | Current Bill* |  |  |  |
| Customer Charge | \$17.27 | \$17.27 | \$0.00 | \$17.27 | \$17.27 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.01556 | \$0.01556 | \$0.00000 | \$1.79 | \$1.79 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.02144 | \$0.02637 | \$0.00493 | \$2.47 | \$3.03 | \$0.57 | 1.8\% |
| Stranded Cost Charge | (\$0.00018) | (\$0.00057) | (\$0.00039) | (\$0.02) | (\$0.07) | (\$0.04) | (0.1\%) |
| Storm Recovery Adj. | \$0.00139 | \$0.00139 | \$0.00000 | \$0.16 | \$0.16 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00357 | \$0.00456 | \$0.00099 | \$0.41 | \$0.52 | \$0.11 | 0.4\% |
| Default Service Charge | \$0.07556 | \$0.07377 | (\$0.00179) | \$8.69 | \$8.48 | (\$0.21) | (0.7\%) |
| Total kWh Charges | \$0.11734 | \$0.12108 | \$0.00374 | \$13.49 | \$13.92 | \$0.43 | 1.4\% |
| Total Bill |  |  |  | \$30.76 | \$31.19 | \$0.43 | 1.4\% |

* Impacts do not include the Electricity Consumption Tax.

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