UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF LINDA S. MCNAMARA

New Hampshire Public Utilities Commission
Docket No.: DE 10-

June 17, 2010

## TABLE OF CONTENTS

I. INTRODUCTION Page 1
II. PURPOSE OF TESTIMONY ..... Page 1
III. SUMMARY OF TESTIMONY ..... Page 2
IV. STRANDED COST CHARGE ..... Page 3
V. EXTERNAL DELIVERY CHARGE ..... Page 6
VI. TARIFF CHANGES AND BILL IMPACTSVII. CONCLUSIONPage 7
Page 9

## LIST OF SCHEDULES

Schedule LSM-1: Stranded Cost Charge
Schedule LSM-2: External Delivery Charge
Schedule LSM-3: Redline Tariffs
Schedule LSM-4: Bill Impacts

## I. INTRODUCTION

Q. Please state your name and business address.
A. My name is Linda S. McNamara. My business address is 6 Liberty Lane West, Hampton, New Hampshire 03842.
Q. For whom do you work and in what capacity?
A. I am a Senior Regulatory Analyst I at Unitil Service Corp. ("USC"), which provides centralized management and administrative services to all Unitil Corporation's affiliates including Unitil Energy Systems, Inc. ("UES").
Q. Please describe your business and educational background.
A. In 1994 I graduated cum laude from the University of New Hampshire with a Bachelor of Science Degree in Mathematics. Since joining USC in June 1994, I have been responsible for the preparation of various regulatory filings, price analysis, and tariff changes.
Q. Have you previously testified before the New Hampshire Public Utilities Commission ("Commission")?
A. Yes.

## II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?
A. The purpose of my testimony is to present and explain the proposed changes to UES' Stranded Cost Charge ("SCC") and External Delivery Charge ("EDC"), effective August 1, 2010.

My testimony will focus on the reconciliation and rate development for the SCC and EDC. Mr. Francis X. Wells is sponsoring testimony which addresses the costs associated with each of these charges.

## III. SUMMARY OF TESTIMONY

Q. Please summarize your testimony.
A. My testimony will provide support for the revisions to the SCC and EDC for effect August 1, 2010. I will explain the rate development for these mechanisms, review the actual and estimated data included in each rate, describe the proposed tariff revisions, and provide bill impacts for each class.
Q. Is UES proposing any other rate changes for effect August 1, 2010?
A. Yes. On June 11th, UES submitted to the Commission its G1 class Default Service tariff filing in DE 10-028. In that filing, UES proposed Default Service rates for its G1 class based on the winning bids, and proposed changes to its Default Service tariff for effect August 1, 2010. While that proposal is being considered in a separate proceeding before the Commission, the proposed rates have been included in the G1 class typical bill comparisons in
order to fully reflect all proposed changes to UES' rates effective August 1, 2010.
Q. Do the bill comparisons contained in this filing include the proposed temporary rates filed in DE 10-055?
A. No, the bill impacts isolate the impact of changes to the SCC and EDC, except for the G1 class which, as stated above, includes the proposed default service charge. The temporary rates filed in DE 10-055 are proposed for effect July 1, 2010.

## IV. STRANDED COST CHARGE

Q. What is the SCC ?
A. The SCC is the mechanism by which UES recovers UPC's stranded costs from retail customers. UPC's stranded costs are billed to UES in the form of Contract Release Payments through the Amended System Agreement.
Q. What is UES' proposed SCC?
A. As shown on Schedule LSM-1, Page 1, UES is proposing a SCC of $\$ 0.00138 / \mathrm{kWh}$ for its Residential, Regular General Service kWh meter, General Service Quick Recovery Water Heating, Space Heating, and Controlled Off Peak Water Heating, and Outdoor Lighting classes, $\$ 0.00046 / \mathrm{kWh}$ and $\$ 0.24 / \mathrm{kW}$ for its Regular General Service G2 class, and
$\$ 0.00041 / \mathrm{kWh}$ and $\$ 0.34 / \mathrm{kVa}$ for its Large General Service G1 class. The charges are proposed to become effective August 1, 2010.
Q. How is the SCC calculated?
A. Schedule LSM-1, Page 1 provides the calculation for the SCC for all classes. The rate is calculated in accordance with UES' tariff, Schedule SCC. The class SCC obligations are calculated first based on a uniform per kWh charge, and then applied to each class based on an appropriate rate design. In addition to the energy based SCC, the Regular General Service G2 class and Large General Service G1 class also pay a demand based SCC. For these classes, UES used the ratio of demand and energy revenue under current rates to develop the demand and energy components of the SCC for effect August 1, 2010, similar to the method used in last year's filing.
Q. How was the uniform per kWh rate for determining class SCC obligations calculated?
A. The uniform SCC is calculated by dividing the prior period (over)/under recovery as of July 31, 2010, plus the forecast of costs for the period August 2010 through July 2011, plus interest for the same period, by calendar month kWh sales for August 2010 through July 2011. This uniform rate is applied equally to all customer classes other than G2 and G1. This calculation is provided on Schedule LSM-1, Page 1.
Q. How does the proposed SCC compare to the rate currently in effect?
A. The uniform rate is decreasing by $\$ 0.00357$ per kWh . The decrease is primarily due to the expiration of Portfolio Sales Charge.
Q. Have you provided a reconciliation of costs and revenues in the SCC?
A. Schedule LSM-1, Page 2, provides the reconciliation of costs and revenues for the two prior periods, August 2008 through July 2009 and August 2009 through August 2010, while Page 3 provides the reconciliation for the forecast rate period, August 2010 through July 2011. Actual data is provided for August 2008 through April 2010 and estimated data is provided for the remaining months. This schedule summarizes the costs and revenues associated with stranded costs and provides the computation of interest, which is calculated based on average monthly balances using the prime rate, as described in the tariff.
Q. Have you provided detail on the monthly revenues shown on Pages 2 and 3 of Schedule LSM-1?
A. Yes, revenue detail is shown on Schedule LSM-1, Page 4 for the period August 2008 through July 2009, August 2009 through July 2010, and August 2010 through July 2011. Actual data is included for August 2008 through April 2010 and the remaining months are forecast.

## V. EXTERNAL DELIVERY CHARGE

Q. What is the EDC?
A. The EDC is the mechanism by which UES recovers the costs it incurs associated with providing transmission services outside UES' system and other costs for energy and transmission related services. External administrative costs associated with UES' Renewable Source Option program are also included in the EDC. For costs incurred after May 1, 2006, the costs included in the EDC exclude Default Service related external administrative charges, which have been moved for collection through the DSC, per the Settlement Agreement in DE 05-064 dated August 11, 2005, and approved by the Commission in Order No. 24,511 on September 9, 2005.
Q. What is UES' proposed EDC?
A. Schedule LSM-2, Page 1, provides the proposed EDC of $\$ 0.01630 / \mathrm{kWh}$ applicable to all classes. This charge is proposed to become effective August 1, 2010.
Q. How is the EDC calculated?
A. The EDC is calculated by summing the prior period (over)/under recovery as of July 31, 2010, plus the estimated EDC costs and associated interest for the
period August 2010 through July 2011. The total is divided by estimated calendar month kWh sales for the period August 2010 through July 2011.
Q. How does the proposed EDC compare to the rate currently in effect?
A. The rate has increased by $\$ 0.00205$ per kWh . This increase is primarily due to increased costs. Mr. Wells' testimony provides further explanation regarding the cost increases.
Q. Have you provided a reconciliation of costs and revenues in the EDC?
A. Schedule LSM-2, Page 2, provides the reconciliation of EDC costs and revenues for the two prior periods, August 2008 through July 2009 and August 2009 through July 2010, while Page 3 provides the reconciliation for the forecast rate period, August 2010 through July 2011. Interest is computed on average monthly balances using the prime rate, as described in the tariff. These pages reflect actual data for the period August 2008 through April 2010 and estimated data for the remainder of the period. Detail on monthly revenue is shown on Schedule LSM-2, Pages 4 and 5.

## VI. TARIFF CHANGES AND BILL IMPACTS

Q. Has UES included tariff changes to reflect the proposed rate changes for effect August 1, 2010?
A. Schedule LSM-3, Page 1 and 2 are redline tariffs of the SCC and EDC. Please note that these pages are essentially the same as provided in Page 1 of Schedules LSM-1 and 2. UES has not included revised tariff Pages 4 and 5, Summary of Delivery Service Rates and Page 6, Summary of Low-Income Electric Assistance Program Discounts at this time. UES intends to update its rate summary pages in a compliance filing with all approved rate changes effective August 1, 2010.
Q. Have you included any bill impacts as a result of proposed rate changes effective August 1, 2010?
A. Yes, rate changes and bill impacts as a result of changes to the SCC EDC, and the G1 Class DSC have been provided in Schedule LSM-4. Pages 1 through 3 provide a table comparing the existing rates to the proposed rates for all the rate classes. These pages also show the impact on a typical bill for each class in order to identify the effect of each rate component on a typical bill.

Page 4 shows bill impacts to the residential class based on the mean and median use. Page 4 is provided in a format similar to Pages 1 through 3.

Page 5 provides the overall average class bill impact as well as the impact associated with both filings. As shown, for customers on Default Service, the
residential class average bill will decrease about $1.1 \%$. General Service (G2) average bills will also decrease about $1.1 \%$. Large General Service (G1) average bills will decrease about $4.8 \%$, with $1.4 \%$ of this amount due to changes in the SCC and EDC. Outdoor lighting average bills will decrease about $0.6 \%$.

Pages 6 through 11 of Schedule LSM-4 provide typical bill impacts for all classes for a range of usage levels.

## VII. CONCLUSION

Q. Does that conclude your testimony?
A. Yes, it does.

## SCHEDULE LSM-1

## STRANDED COST CHARGE

0012

## UNITIL ENERGY SYSTEMS. INC. CALCULATION OF THE STRANDED COST CHARGE Effective August 1, 2010

## Uniform per kWh Charge

1. (Over)/under Recovery - Beginning Balance August 1, 2010
2. Estimated Total Costs (August 2010-July 2011)
3. Estimated Interest (August 2010-July 2011)
4. Costs to be Recovered (L. $1+\mathrm{L} .2+\mathrm{L} .3$ )
5. Estimated Calendar Month Deliveries in kWh (August 2010 - July 2011) (1)
6. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $4 /$ L. 5 )

| $\$ 317,111$ | Page 3 of 5 |
| :--- | :--- |
| $\$ 1,310,796$ | Page 3 of 5 |
| $\$ 19,777$ | Page 3 of 5 |

S1,647,684
1,195,829,394
$\$ 0.00138$

## Development of Class Stranded Cost Charge

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 ( $\$ / \mathrm{kWh}$ ) (L.6)
$\$ 0.00138$
Class G2 (2)
8. Estimated G2 Demand Revenue (August 2010-July 2011) \$312,576
9. Estimated G2 Deliveries in kW (August 2010 - July 2011) $\quad 1,306,463$
10. Stranded Cost Charge ( $\$ / \mathrm{kW}$ ) (L. $8 /$ L. 9 )
11. G2 Energy Revenue (August 2010 - July 2011)
\$155,909
12. Estimated G2 Calendar Month Deliveries in kWh (August 2010 - July 2011) (1)

339,481,700
13. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $11 /$ L. 12 )
$\$ 0.00046$

## Class G1 (2)

14. Estimated Gl Demand Revenue (August 2010-July 2011)
\$337,323
15. Estimated G1 Deliveries in kVA (August 2010 - July 2011)

986,371
16. Stranded Cost Charge (\$/kVA) (L. $14 / \mathrm{L}, 15$ )
$\$ 0.34$
17. G1 Energy Revenue (August 2010 - July 2011)
\$140,323
18. Estimated G1 Calendar Month Deliveries in kWh (August 2010 - July 2011) (1)

346,119,813
19. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $17 /$ L.18)
$\$ 0.00041$
(1) Schedule LSM-2, page 5.

Total Company
$\begin{array}{cc}\text { Aug 2010-Jul } 2011 \text { Billed } \mathrm{kWh} & 1,195,723,130 \\ \text { - July } 2010 \text { Unbilled } \mathrm{kWh} & (59,928,408) \\ \text { + July } 2011 \text { Unbilled } \mathrm{kWh} & \underline{60,034,672} \\ \text { Calendar Month Deliveries } & 1,195,829,394\end{array}$
$\left|\begin{array}{rr}\text { Schedule LSM-1, page } 4 . \\ \begin{array}{rl}\text { G2 Demand }\end{array} & \\ \hline \text { Aug 2010-Jul 2011 Billed } \mathrm{kWh} & 339,402,307 \\ \text { - July 2010 Unbilled } \mathrm{kWh} & (17,414,228) \\ \text { + July 2011 Unbilled } \mathrm{kWh} & \underline{17,493,620} \\ \text { Calendar Month Deliveries } & 339,481,700\end{array}\right|$

Schedule LSM-I, page 4.
G1 Demand
Aug 2010-Jul 2011 Billed kWh 346,164,585

- July 2010 Unbilled kWh $(16,155,244)$
+ July 2011 Unbilled kWh 16,110,471
Calendar Month Deliveries 346,119,813
(2) Demand and energy calculated based on ratio of demand and energy revenue under current rates.

Calculation of Class G2 and G1 Demand and Energy Components

|  | Units | Current |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (Aug 10-Jul 11) | Rates | Revenue under current rates | \% of Total | Revenue at Proposed Rates |
| G2 kW | 1,306,463 | \$0.87 | \$1,136,623 | 67\% | \$312,576 |
| G2 kWh | 339,481,700 | \$0.00167 | \$566,934 | 33\% | \$155,909 |
| Total |  |  | \$1,703,557 | 100\% | \$468,485 |
| Gl kVA | 986,371 | \$1.24 | \$1,223,100 | 71\% | \$337,323 |
| Gl kWh | 346,119,813 | \$0.00147 | \$508.796 | 29\% | \$140,323 |
| Total |  |  | \$1,731,896 | 100\% | \$477,645 |

Unitil Energy Systems, Inc.
Reconciliation of Stranded Costs and Revenues
Schedule LSM-1
Page 2 of 5

|  |  | (a) | (b) Total Costs | (c) Total Revenue | (d) Ending Balance Before Interest $(a+b-c)$ | (e) Average Monthly Balance ((a+d)/ 2) | (f) | (g) <br> Number of Days / Month | (h) <br> Computed Interest | (i) <br> Ending <br> Balance with Interest (d+h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-08 | Actual | \$118,501 | \$869,127 | \$910,998 | \$76,630 | \$97,565 | 5.00\% | 31 | \$413 | \$77,043 |
| Sep-08 | Actual | \$77,043 | \$954,778 | \$954,069 | \$77,752 | \$77,398 | 5.00\% | 30 | \$317 | \$78,069 |
| Oct-08 | Actual | \$78,069 | \$904,341 | \$862,245 | \$120,165 | \$99,117 | 5.00\% | 31 | \$420 | \$120,584 |
| Nov-08 | Actual | \$120,584 | \$915,834 | \$805,358 | \$231,061 | \$175,823 | 5.00\% | 30 | \$721 | \$231,781 |
| Dec-08 | Actual | \$231,781 | \$915,193 | \$888,706 | \$258,269 | \$245,025 | 5.00\% | 31 | \$1,038 | \$259,306 |
| Jan-09 | Actual | \$259,306 | \$952,979 | \$991,821 | \$220,464 | \$239,885 | 4.00\% | 31 | \$815 | \$221,279 |
| Feb-09 | Actual | \$221,279 | \$934,247 | \$870,419 | \$285,107 | \$253,193 | 4.00\% | 28 | \$777 | \$285,884 |
| Mar-09 | Actual | \$285,884 | \$983,429 | \$854,208 | \$415,105 | \$350,495 | 4.00\% | 31 | \$1,191 | \$416,296 |
| Apr-09 | Actual | \$416,296 | \$908,228 | \$791,005 | \$533,519 | \$474,907 | 3.25\% | 30 | \$1,269 | \$534,787 |
| May-09 | Actual | \$534,787 | \$895,416 | \$820,385 | \$609,819 | \$572,303 | 3.25\% | 31 | \$1,580 | \$611,398 |
| $S_{\text {Jun-09 }}$ | Actual | \$611,398 | \$906,964 | \$826,090 | \$692,273 | \$651,836 | 3.25\% | 30 | \$1,741 | \$694,014 |
| $\underbrace{\text { Jul-09 }}$ | Actual | \$694,014 | \$907,292 | \$962.070 | \$639,236 | \$666,625 | 3.25\% | 31 | \$1.840 | \$641,076 |
| TotatAug-08to Jul-09 |  |  | \$11,047,829 | \$10,537,374 |  |  |  |  | \$12,121 |  |
|  |  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) |
|  |  | Beginning Balance | Total Costs | Total Revenue | Ending Balance Before Interest $(a+b-c)$ | Average Monthly Balance ( $(\mathrm{a}+\mathrm{d})$ / 2) | Interest Rate | Number of Days / Month | Computed Interest | Balance with Interest $(\mathrm{d}+\mathrm{h})$ |
| Aug-09 | Actual | \$641,076 | \$926,002 | \$631,078 | \$936,000 |  | 3.25\% | 31 | \$2,177 | \$938,177 |
| Sep-09 | Actual | \$938,177 | \$636,619 | \$518,041 | \$1,056,755 | \$997,466 | $3.25 \%$ | 30 | \$2,664 | \$1,059,419 |
| Oct-09 | Actual | \$1,059,419 | \$409,182 | \$444,002 | \$1,024,598 | \$1,042,009 | 3.25\% | 31 | \$2,876 | \$1,027,475 |
| Nov-09 | Actual | \$1,027,475 | \$401,767 | \$456,066 | \$973,176 | \$1,000,325 | 3.25\% | 30 | \$2,672 | \$975,848 |
| Dec-09 | Actual | \$975,848 | \$418,251 | \$522,536 | \$871,563 | \$923,705 | 3.25\% | 31 | \$2,550 | \$874,113 |
| Jan-10 | Actual | \$874,113 | \$401,812 | \$532,907 | \$743,017 | \$808,565 | 3.25\% | 31 | \$2,232 | \$745,249 |
| Feb-10 | Actual | $\$ 745,249$ $\$ 687,627$ | \$415,291 | \$474,697 | \$685,843 | \$715,546 | 3.25\% | 28 | \$2,232 | \$74,249 $\$ 687,627$ |
| Mar-10 | Actual | \$687,627 | \$437,494 | \$468,783 | \$656,338 | \$671,983 | 3.25\% | 31 | \$1,855 | \$658,193 |
| Apr-10 | Actual | \$658,193 | \$404,338 | \$455,569 | \$606,962 | \$632,578 | $3.25 \%$ | 30 | \$1,690 | \$608,651 |
| May-10 | Estimate | \$608,651 | \$409,263 | \$451,834 | \$566,081 | \$587,366 | 3.25\% | 31 | \$1,621 | \$ $\$ 567,702$ |
| Jun-10 | Estimate | \$567,702 | \$409,233 | \$497,564 | \$479,371 | \$523,536 | 3.25\% | 30 | \$1,398 | \$480,769 |
| Jul-10 | Estimate | \$480,769 | \$409,233 | \$573.992 | \$316,011 | \$398,390 | 3.25\% | 31 | $\begin{array}{r}\$ 1,398 \\ \$ 1.100 \\ \hline\end{array}$ | \$480,769 $\$ 317,111$ |
| Total Aug-09 to Jul-10 |  |  | \$5,678,485 | \$6,027,070 |  |  |  |  | \$24,619 |  |

Unitil Energy Systems, Inc.
Reconciliation of Stranded Costs and Revenues

Schedule LSM-1
Page 3 of 5

|  |  | (a) ${ }_{\text {Beginning Balance }}$ | (b) Total Costs | (c) | (d) <br> Ending Balance Before Interest $(a+b-c)$ | (e) <br> Average Monthly <br> Balance ( $(a+d)$ / <br> 2) | (f) | (g) <br> Number of Days / Month | (h) <br> Computed Interest | (i) <br> Ending <br> Balance with Interest (d+h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-10 | Estimate | \$317,111 | \$409,233 | \$151,046 | \$575,297 | \$446,204 | 3.25\% | 31 | \$1,232 | \$576,529 |
| Sep-10 | Estimate | \$576,529 | \$409,233 | \$134,832 | \$850,930 | \$713,730 | 3.25\% | 30 | \$1,907 | \$852,837 |
| Oct-10 | Estimate | \$852,83.7 | \$409,233 | \$130,069 | \$1,132,001 | \$992,419 | 3.25\% | 31 | \$2,739 | \$1,134,740 |
| Nov-10 | Estimate | \$1,134,740 | \$9,233 | \$128,688 | \$1,015,286 | \$1,075,013 | 3.25\% | 30 | \$2,872 | \$1,018,157 |
| Dec-10 | Estimate | \$1,018,157 | \$9,233 | \$142,890 | \$884,500 | \$951,329 | 3.25\% | 31 | \$2,626 | \$887,126 |
| Jan-11 | Estimate | \$887,126 | \$9,233 | \$149,009 | \$747,350 | \$817,238 | 3.25\% | 31 | \$2,256 | \$749,606 |
| Feb-11 | Estimate | \$749,606 | \$9,233 | \$133,828 | \$625,011 | \$687,309 | 3.25\% | 28 | \$1,714 | \$626,725 |
| Mar-11 | Estimate | \$626,725 | \$9,233 | \$132,599 | \$503,359 | \$565,042 | 3.25\% | 31 | \$1,560 | \$504,918 |
| $\bigcirc$ Apr-11 | Estimate | \$504,918 | \$9,233 | \$123,559 | \$390,593 | \$447,755 | 3.25\% | 30 | \$1,196 | \$391,789 |
| $\bigcirc$ May-11 | Estimate | \$391,789 | \$9,233 | \$127,372 | \$273,649 | \$332,719 | 3.25\% | 31 | \$918 | \$274,568 |
| $\mapsto$ Jun-11 | Estimate | \$274,568 | \$9,233 | \$137,986 | \$145,814 | \$210,191 | 3.25\% | 30 | \$561 | \$146,376 |
| Jul-11 | Estimate | \$146,376 | \$9,233 | \$159,225 | $(\$ 3,616)$ | \$71,380 | 3.25\% | 31 | \$197 | $(\$ 3,419)$ |
| Total Aug-10 to Jul-11 |  |  | \$1,310,796 | \$1,651,102 |  |  |  |  | \$19,777 |  |


(1) Actual Per billing system
(2) Detail of Unbilled Factors shown on page 5 .

Unitil Energy Systems, Inc.
Detail of Class Unbilled Factors

Detail of Unbilled Factors for Residential and Outdoor Lighting Classes for use in all classes except G2 demand and G1 (column b, Page 4)

|  | $\begin{aligned} & \begin{array}{l} \text { Billed } \\ \mathrm{kWh} \end{array} \\ & \hline \end{aligned}$ | Direct Estimate of Unbilled kWh | Unbilled kWh / Billed kWh |
| :---: | :---: | :---: | :---: |
| Aug-08 | 46,157,009 | 22,240,617 | 48.18\% |
| Sep-08 | 41,953,419 | 22,600,427 | 53.87\% |
| Dct-08 | 36,882,396 | 23,708,368 | 64.28\% |
| Dov-08 | 36,970,406 | 21,868,217 | 59.15\% |
| F-tec-08 | 42,800,257 | 23,645,374 | 55.25\% |
| - ${ }^{\text {an }}$-09 | 51,299,574 | 25,705,410 | 50.11\% |
| Feb-09 | 45,344,176 | 21,621,174 | 47.68\% |
| Mar-09 | 40,533,050 | 21,157,818 | 52.20\% |
| Apr-09 | 38,553,483 | 17,207,334 | 44.63\% |
| May-09 | 33,390,206 | 17,984,251 | 53.86\% |
| Jun-09 | 34,954,410 | 17,976,697 | 51.43\% |
| Jul-09 | 40,273,229 | 24,161,592 | 59.99\% |
| Aug-09 | 46,449,068 | 24,235,694 | 52.18\% |
| Sep-09 | 43,939,853 | 21,521,289 | 48.98\% |
| Oct-09 | 35,933,519 | 19,303,046 | 53.72\% |
| Nov-09 | 36,582,062 | 19,758,388 | 54.01\% |
| Dec-09 | 42,374,707 | 26,181,004 | 61.78\% |
| Jan-10 | 52,815,888 | 24,325,829 | 46.06\% |
| Feb-10 | 42,414,181 | 21,822,476 | 51.45\% |
| Mar-10 | 37,736,287 | 22,955,849 | 60.83\% |
| Apr-10 | 39,503,200 | 18,888,271 | 47.81\% |

Detail of Unbilled Factors for Regular General Class for use in G2 demand class (column g, Page 4)

Detail of Unbilled Factors for Large General Class for use in G1 class (column I, Page 4)

|  | Billed <br> kWh |  | Direct <br> Estimate of <br> Unbilled kWh | Unbilled <br> $\mathrm{kWh} /$ <br> Billed kWh |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-08 | $33,381,894$ |  | $18,085,549$ |  | $54.18 \%$ |
| Sep-08 | $32,950,781$ |  | $19,179,279$ |  | $58.21 \%$ |
| Oct-08 | $30,881,864$ |  | $18,238,667$ |  | $59.06 \%$ |
| Nov-08 | $28,828,771$ |  | $15,085,159$ |  | $52.33 \%$ |
| Dec-08 | $27,413,069$ |  | $14,606,297$ |  | $53.28 \%$ |
| Jan-09 | $28,641,717$ |  | $13,626,354$ |  | $47.58 \%$ |
| Feb-09 | $28,080,876$ |  | $14,142,356$ |  | $50.36 \%$ |
| Mar-09 | $26,951,031$ |  | $15,159,955$ |  | $56.25 \%$ |
| Apr-09 | $27,926,042$ |  | $13,582,705$ |  | $48.64 \%$ |
| May-09 | $27,738,173$ |  | $14,822,066$ |  | $53.44 \%$ |
| Jun-09 | $28,584,069$ |  | $14,481,333$ |  | $50.66 \%$ |
| Jul-09 | $31,048,428$ |  | $14,936,395$ |  | $48.11 \%$ |
|  |  |  |  |  |  |
| Aug-09 | $32,371,261$ |  | $15,999,826$ |  | $49.43 \%$ |
| Sep-09 | $31,169,381$ |  | $17,801,850$ |  | $57.11 \%$ |
| Oct-09 | $28,729,567$ |  | $14,671,421$ |  | $51.07 \%$ |
| Nov-09 | $28,037,649$ |  | $14,872,308$ | $53.04 \%$ |  |
| Dec-09 | $28,372,560$ |  | $15,586,273$ | $54.93 \%$ |  |
| Jan-10 | $28,962,938$ |  | $13,753,846$ |  | $47.49 \%$ |
| Feb-10 | $27,583,716$ |  | $15,238,969$ |  | $55.25 \%$ |
| Mar-10 | $26,369,617$ |  | $17,017,321$ |  | $64.53 \%$ |
| Apr-10 | $29,469,447$ |  | $13,728,003$ | $46.58 \%$ |  |

## SCHEDULE LSM-2

## EXTERNAL DELIVERY CHARGE

## UNITIL ENERGY SYSTEMS. INC. CALCULATION OF THE EXTERNAL DELIVERY CHARGE Effective August 1, 2010

1. (Over)/under Recovery - Beginning Balance August 1, 2010
2. Estimated Total Costs (August 2010 - July 2011)
3. Estimated Interest (August 2010-July 2011)
4. Costs to be Recovered (L. $1+\mathrm{L} .2+\mathrm{L} .3$ )
5. Estimated Calendar Month Deliveries in kWh (August 2010 - July 2011) (1) 1,195,829,394
6. External Delivery Charge ( $\$ / \mathrm{kWh}$ ) (L.5/L.6)
$\$ 0.01630$
L. 5 / L. 6
(1) Schedule LSM-2, page 5.

August 2010 - July 2011 Billed kWh 1,195,723,130

- July 2010 Unbilled kWh $(59,928,408)$
+ July 2011 Unbilled kWh 60,034,672
Calendar Month Deliveries 1,195,829,394


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

|  |  | (a) <br> Beginning Balance | (b) Total Costs | (c) <br> Total <br> Revenue | (d) <br> Ending <br> Balance 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-10 | Estimate | \$1,034,328 | \$1,936,598 | \$1,798,260 | \$1,172,667 | \$1,103,498 | 3.25\% | 31 | \$3,046 | \$1,175,713 |
| Sep-10 | Estimate | \$1,175,713 | \$1,419,010 | \$1,529,676 | \$1,065,047 | \$1,120,380 | 3.25\% | 30 | \$2,993 | \$1,068,039 |
| Oct-10 | Estimate | \$1,068,039 | \$1,311,904 | \$1,507,984 | \$871,959 | \$969,999 | 3.25\% | 31 | \$2,677 | \$874,636 |
| Nov-10 | Estimate | \$874,636 | \$1,414,747 | \$1,494,523 | \$794,861 | \$834,748 | 3.25\% | 30 | \$2,230 | \$797,090 |
| Dec-10 | Estimate | \$797,090 | \$1,611,597 | \$1,714,320 | \$694,367 | \$745,729 | 3.25\% | 31 | \$2,058 | \$696,425 |
| Jan-11 | Estimate | \$696,425 | \$1,546,843 | \$1,806,683 | \$436,586 | \$566,506 | 3.25\% | 31 | \$1,564 | \$438,150 |
| Feb-11 | Estimate | \$438,150 | \$1,501,102 | \$1,569,659 | \$369,593 | \$403,871 | 3.25\% | 28 | \$1,007 | \$370,599 |
| Mar-11 | Estimate | \$370,599 | \$1,417,487 | \$1,559,385 | \$228,701 | \$299,650 | 3.25\% | 31 | \$827 | \$229,528 |
| Apr-11 | Estimate | \$229,528 | \$1,268,921 | \$1,450,049 | \$48,400 | \$138,964 | 3.25\% | 30 | \$371 | \$48,771 |
| May-11 | Estimate | \$48,771 | \$1,402,267 | \$1,456,257 | $(\$ 5,218)$ | \$21,776 | 3.25\% | 31 | \$60 | $(\$ 5,158)$ |
| Jun-11 | Estimate | $(\$ 5,158)$ | \$1,752,954 | \$1,630,920 | \$116,876 | \$55,859 | 3.25\% | 30 | \$149 | \$117,025 |
| Jul-11 | Estimate | \$117,025 | \$1,859,752 | \$1,974,302 | \$2,475 | \$59,750 | 3.25\% | 31 | \$165 | \$2,640 |
| Total Aug-10 to Jul-11 |  |  | \$18,443,183 | \$19,492,019 |  |  |  |  | \$17,148 |  |

Unitil Energy Systems, Inc.
External Delivery Revenues
(a) (b) (c)

Total Billed kWh Unbilled Factor Unbilled kWh Total Billed kWh Unbilled Factor Unbilled $\mathrm{kWh} \quad$ Unbilled EDC
(f)

Reversal of prior month prior month Total Billed EDC Total Revenue unbilled Revenue (1) $\quad(e+f+g)$

| $(\$ 786,485)$ | $\$ 1,275,108$ | $\$ 1,132,659$ |
| :--- | :--- | :--- |
| $(\$ 644,036)$ | $\$ 1,406,115$ | $\$ 1,666,312$ |
| $(\$ 904,233)$ | $\$ 1,462,459$ | $\$ 1,456,697$ |
| $(\$ 898,471)$ | $\$ 1,430,981$ | $\$ 1,327,541$ |
| $(\$ 795,031)$ | $\$ 1,462,365$ | $\$ 1,461,911$ |
| $(\$ 794,576)$ | $\$ 1,687,637$ | $\$ 1,720,153$ |
| $(\$ 827,093)$ | $\$ 1,557,627$ | $\$ 1,492,404$ |
| $(\$ 761,870)$ | $\$ 1,443,487$ | $\$ 1,462,995$ |
| $(\$ 781,378)$ | $\$ 1,428,389$ | $\$ 1,315,734$ |
| $(\$ 668,723)$ | $\$ 1,324,602$ | $\$ 1,368,465$ |
| $(\$ 712,586)$ | $\$ 1,378,281$ | $\$ 1,373,527$ |
| $(\$ 707,833)$ | $\$ 1,548,082$ | $\$ 1,694,815$ |
| $(\$ 9,282,315)$ | $\$ 17,405,133$ | $\$ 17,473,214$ |

(1) Actual per billing system

[^0]|  |  | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total Billed kWh | Unbilled Factor <br> (2) | Unbilled kWh $(a * b)$ | $\begin{gathered} \text { Proposed } \\ \text { EDC } \\ \hline \end{gathered}$ | Unbilled EDC Revenue (c*d) | Reversal of prior month unbilled | Total Billed EDC Revenue (1) | Total Revenue $(e+f+g)$ |
| Aug-09 | Actual | 111,232,486 | 51.09\% | 56,826,485 | \$0.01425 | \$809,777 | $(\$ 854,566)$ | \$1,640,352 | \$1,595,564 |
| Sep-09 | Actual | 106,362,335 | 51.82\% | 55,116,717 | \$0.01425 | \$785,413 | (\$809,777) | \$1,515,592 | \$1,491,228 |
| Oct-09 | Actual | 91,526,196 | 52.28\% | 47,850,126 | \$0.01425 | \$681,864 | $(\$ 785,413)$ | \$1,304,140 | \$1,200,591 |
| Nov-09 | Actual | 90,101,775 | 53.52\% | 48,225,808 | \$0.01425 | \$687,218 | $(\$ 681,864)$ | \$1,283,775 | \$1,289,128 |
| Dec-09 | Actual | 97,961,623 | 58.55\% | 57,360,928 | \$0.01425 | \$817,393 | $(\$ 687,218)$ | \$1,395,851 | \$1,526,026 |
| Jan-10 | Actual | 113,196,093 | 46.68\% | 52,839,635 | \$0.01425 | \$752,965 | $(\$ 817,393)$ | \$1,612,926 | \$1,548,497 |
| Feb-10 | Actual | 97,332,957 | 53.24\% | 51,823,470 | \$0.01425 | \$738,484 | $(\$ 752,965)$ | \$1,386,908 | \$1,372,428 |
| Mar-10 | Actual | 89,719,429 | 62.65\% | 56,207,801 | \$0.01425 | \$800,961 | $(\$ 738,484)$ | \$1,278,393 | \$1,340,869 |
| Apr-10 | Actual | 96,874,237 | 47.19\% | 45,716,411 | \$0.01425 | \$651,459 | $(\$ 800,961)$ | \$1,380,349 | \$1,230,846 |
| May-10 | Estimate | 88,506,259 | 50.45\% | 44,653,333 | \$0.01425 | \$636,310 | $(\$ 651,459)$ | \$1,261,214 | \$1,246,065 |
| Jun-10 | Estimate | 94,454,137 | 52.99\% | 50,048,601 | \$0.01425 | \$713,193 | (\$636,310) | \$1,345,971 | $\$ 1,422,854$ |
| Jul-10 | Estimate | 111,056,801 | 53.96\% | 59,928,408 | \$0.01425 | \$853,980 | (\$713,193) | \$1,582,559 | \$1,723,347 |
| Total Aug-09 to Jul-10 |  | 1,188,324,329 |  | 626,597,723 |  | \$8,929,018 | (\$8,929,603) | \$16,988,029 | \$16,987,443 |
| (1) Actual per billing system |  |  |  |  |  |  |  |  |  |

Unitil Energy Systems, Inc.
External Delivery Revenues

Schedule LSM-2
Page 5 of 6

|  |  | (a) Total Billed kWh | (b) Unbilled Factor | (c) <br> Unbilled kWh $\left(a^{*} b\right)$ | (d) <br> Proposed EDC | (e) <br> Unbilled EDC <br> Revenue $\left(c^{*} d\right)$ | (f) Reversal of prior month unbilled | (g) <br> Total Billed EDC <br> Revenue | (h) <br> Total Revenue $(e+f+g)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aug-10 | Estimate | 116,518,420 | 46.12\% | 53,732,663 | \$0.01630 | \$875,842 | (\$853,980) | \$1,776,397 | \$1,798,260 |
| Sep-10 | Estimate | 100,890,427 | 46.28\% | 46,687,399 | \$0.01630 | \$761,005 | $(\$ 875,842)$ | \$1,644,514 | \$1,529,676 |
| Oct-10 | Estimate | 91,563,095 | 52.03\% | 47,638,678 | \$0.01630 | \$776,510 | $(\$ 761,005)$ | \$1,492,478 | \$1,507,984 |
| Nov-10 | Estimate | 92,269,023 | 51.00\% | 47,058,192 | \$0.01630 | \$767,049 | $(\$ 776,510)$ | \$1,503,985 | \$1,494,523 |
| Dec-10 | Estimate | 99,846,737 | 52.46\% | 52,384,479 | \$0.01630 | \$853,867 | $(\$ 767,049)$ | \$1,627,502 | \$1,714,320 |
| Jan-11 | Estimate | 108,243,211 | 50.79\% | 54,980,699 | \$0.01630 | \$896,185 | $(\$ 853,867)$ | \$1,764,364 | \$1,806,683 |
| Feb-11 | Estimate | 102,974,585 | 46.91\% | 48,304,234 | \$0.01630 | \$787,359 | $(\$ 896,185)$ | \$1,678,486 | \$1,569,659 |
| Mar-11 | Estimate | 95,527,012 | 50.71\% | 48,445,023 | \$0.01630 | \$789,654 | $(\$ 787,359)$ | \$1,557,090 | \$1,559,385 |
| Apr-11 | Estimate | 93,316,996 | 47.25\% | 44,088,105 | \$0.01630 | \$718,636 | $(\$ 789,654)$ | \$1,521,067 | \$1,450,049 |
| May-11 | Estimate | 88,685,366 | 50.45\% | 44,743,657 | \$0.01630 | \$729,322 | $(\$ 718,636)$ | \$1,445,571 | \$1,456,257 |
| Jun-11 | Estimate | 94,645,280 | 52.99\% | 50,154,828 | \$0.01630 | \$817,524 | $(\$ 729,322)$ | \$1,542,718 | \$1,630,920 |
| Jul-11 | Estimate | 111,242,978 | 53.97\% | 60,034,672 | \$0.01630 | \$978,565 | (\$817,524) | \$1,813,261 | \$1,974,302 |
| Tota | 0 to Jul-11 | 1,195,723,130 |  | 598,252,629 |  | \$9,751,518 | (\$9,626,933) | \$19,367,434 | \$19,492,019 |

Unitil Energy Systems, Inc.
Schedule LSM-2
Detail of Unbilled Factor
Page 6 of 6

|  | Billed kWh | Direct Estimate of Unbilled kWh | Unbilled kWh/ Billed kWh |
| :---: | :---: | :---: | :---: |
| Aug-08 | 112,729,498 | 56,943,918 | 50.51\% |
| Sep-08 | 107,149,789 | 59,332,876 | 55.37\% |
| Oct-08 | 95,959,417 | 58,954,786 | 61.44\% |
| Nov-08 | 93,895,159 | 52,167,382 | 55.56\% |
| Dec-08 | 95,953,585 | 52,137,556 | 54.34\% |
| Jan-09 | 110,736,812 | 54,271,173 | 49.01\% |
| Feb-09 | 102,210,409 | 49,991,480 | 48.91\% |
| Mar-09 | 94,714,894 | 51,271,550 | 54.13\% |
| Apr-09 | 93,751,566 | 43,879,479 | 46.80\% |
| May-09 | 86,937,595 | 46,757,637 | 53.78\% |
| Jun-09 | 90,437,216 | 46,445,716 | 51.36\% |
| Jul-09 | 101,580,653 | 56,073,863 | 55.20\% |
| Aug-09 | 111,232,486 | 56,826,485 | 51.09\% |
| Sep-09 | 106,362,335 | 55,116,717 | 51.82\% |
| Oct-09 | 91,526,196 | 47,850,126 | 52.28\% |
| Nov-09 | 90,101,775 | 48,225,808 | 53.52\% |
| Dec-09 | 97,961,623 | 57,360,928 | 58.55\% |
| Jan-10 | 113,196,093 | 52,839,635 | 46.68\% |
| Feb-10 | 97,332,957 | 51,823,470 | 53.24\% |
| Mar-10 | 89,719,429 | 56,207,801 | 62.65\% |
| Apr-10 | 96,874,237 | 45,716,411 | 47.19\% |

## SCHEDULE LSM-3

## REDLINE TARIFFS

0025
(R)

## CALCULATION OF THE STRANDED COST CHARGE

## Uniform per kWh Charge

1. (Over)/under Recovery - Beginning Balance August 1, 201009
2. Estimated Total Costs (August 201009 - July 201110)
3. Estimated Interest (August 201009 - July 201110)
4. Costs to be Recovered (L.1 + L. $2+\mathrm{L} .3$ )
5. Estimated Calendar Month Deliveries in kWh (August 201009 - July 201110)
6. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $4 / \mathrm{L} .5$ )

| $\$ 500,816$ | $\$ 317,111$ |
| :---: | :---: |
| $\$ 5,551,907$ | $\$ 1,310,796$ |
| $\$ 19,348$ | $\$ 19,777$ |
| $\$ 6,072,071$ | $\$ 1,647,684$ |
| $\frac{1,226,188,039}{\$ 0.00495}$ | $\frac{1,195,829,394}{\$ 0.00138}$ |

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 ( $\$ / \mathrm{kWh}$ ) (L.6)

## Class G2 (1)

8. Estimated G2 Demand Revenue (August 2010 - July 2011)
9. Estimated G2 Deliveries in kW (August 2010 - July 2011)
10. Stranded Cost Charge (\$/kW) (L. $8 / \mathrm{L} .9$ )
11. G2 Energy Revenue (August 2010 - July 2011)
12. Estimated G2 Calendar Month Deliveries in kWh (August 2010 - July 2011)
13. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $11 / \mathrm{L} .12$ )

Class G1 (1)
14. Estimated G1 Demand Revenue (August 2010 - July 2011)
15. Estimated G1 Deliveries in kVA (August 2010 - July 2011)
16. Stranded Cost Charge ( $\$ / \mathrm{kVA}$ ) (L. $14 / \mathrm{L} .15$ )
17. G1 Energy Revenue (August 2010 - July 2011)
18. Estimated G1 Calendar Month Deliveries in kWh (August 2010 - July 2011)
19. Stranded Cost Charge ( $\$ / \mathrm{kWh}$ ) (L. $17 / \mathrm{L} .18$ )
$\$ 1,259,482$
\$337,323
$\$ 0.00495$
$\$ 0.00138$

| $\$ 1,154,808$ | $\$ 312,576$ |
| ---: | ---: |
| $1,331,020$ | $1,306,463$ |
| $\$ 0.87$ | $\$ 0.24$ |
|  |  |
| $\$ 586,932$ | $\$ 155,909$ |
| $\frac{351,866,806}{\$ 0.00167}$ | $\frac{339,481,700}{\$ 0.00046}$ |

$1,013,341$
986,371
$\$ 1.24$
$\$ 0.34$
\$140,323
346,119,813
$\$ 0.00041$
(1) Demand and energy calculated based on ratio of demand and energy revenue under current rates.

Authorized by NHPUC Order No. 24,993 in Case No. DE 89-115, dated fuly 24, 2009
(I)

## CALCULATION OF THE EXTERNAL DELIVERY CHARGE

1. (Over)/under Recovery - Beginning Balance August 1, 20102009
$\$ 228,732 \quad \$ 1,034,328$
2. Estimated Total Costs (August 201009-July 201110)
$\$ 17,249,589 \quad \$ 18,443,183$
3. Estimated Interest (August 201009-July 20114 $\theta$ )
(\$1,809)
$\$ 17,148$
4. Costs to be Recovered (L. $1+\mathrm{L} .2+\mathrm{L} .3)$
$\$ 17,476,512 \quad \$ 19,494,659$
5. Estimated Calendar Month Deliveries in kWh (August 201009 - July 201110)
$1,226,188,039 \quad 1,195,829,394$
6. External Delivery Charge (\$/kWh) (L.5/L.6)
$\$ 0.01425 \quad \$ 0.01630$

Authorized by NHPUC Order No. 24,993 in Case No. DE 10- 09-115, dated July 24, 2009

## SCHEDULE LSM-4

## BILL IMPACTS

## Unitil Energy Systems, Inc. Typical Bill Impacts by Rate Component (1)

## Residential Rate D 500 kWh Bill

| Rate Components | 5/1/2010 | 8/1/2010 |  |  | As Revised Bill | Difference | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill |  |  | Difference to Total Bill |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 | \$8.40 | \$8.40 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| 3 First 250 kWh | \$0.01810 | \$0.01810 | \$0.00000 | \$4.53 | \$4.53 | \$0.00 | 0.0\% |
| ¢ Excess 250 kWh | \$0.02310 | \$0.02310 | \$0.00000 | \$5.78 | \$5.78 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$7.13 | \$8.15 | \$1.03 | 1.4\% |
| Stranded Cost Charge | \$0.00495 | \$0.00138 | (\$0.00357) | \$2.48 | \$0.69 | (\$1.79) | (2.5\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$1.65 | \$1.65 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0.00000 | \$42.45 | \$42.45 | \$0.00 | 0.0\% |
| First 250 kWh | \$0.12549 | \$0.12397 | (\$0.00152) |  |  |  |  |
| Excess 250 kWh | \$0.13049 | \$0.12897 | (\$0.00152) |  |  |  |  |
| Total Bill |  |  |  | \$72.40 | \$71.64 | (\$0.76) | (1.0\%) |

(1) Impacts do not include the proposed temporary rates filed in DE 10-055 for effect July 1 or the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Typical Bill Impacts by Rate Component (1)

| Rate Components | $5 / 1 / 2010$ <br> Current Rate | 8/1/2010 |  |  | As Revised Bill | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill |  |  |  |
| Customer Charge | \$3.75 | \$3.75 | \$0.00 | \$3.75 | \$3.75 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.02088 | \$0.02088 | \$0.00000 | \$41.76 | \$41.76 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$28.50 | \$32.60 | \$4.10 | 1.6\% |
| Stranded Cost Charge | \$0.00495 | \$0.00138 | (\$0.00357) | \$9.90 | \$2.76 | (\$7.14) | (2.7\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$6.60 | \$6.60 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0.00000 | \$169.78 | \$169.78 | \$0.00 | 0.0\% |
| Total | \$0.12827 | \$0.12675 | (\$0.00152) | \$256.54 | \$253.50 | (\$3.04) | (1.2\%) |
| Total Bill |  |  |  | \$260.29 | \$257.25 | (\$3.04) | (1.2\%) |


| Rate Components | Regular General G2 kWh Meter 125 kWh Typical Bill |  |  |  | As Revised Bill | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5/1/2010 <br> Current Rate | $8 / 1 / 2010$ <br> As Revised | Difference | Current Bill |  |  |  |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 | \$8.40 | \$8.40 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.02975 | \$0.02975 | \$0.00000 | \$3.72 | \$3.72 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$1.78 | \$2.04 | \$0.26 | 1.0\% |
| Stranded Cost Charge | \$0.00495 | \$0.00138 | (\$0.00357) | \$0.62 | \$0.17 | (\$0.45) | (1.7\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$0.41 | \$0.41 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0.00000 | \$10.61 | \$10.61 | \$0.00 | 0.0\% |
| Total | \$0.13714 | \$0.13562 | (\$0.00152) | \$17.14 | \$16.95 | (\$0.19) | (0.7\%) |
| Total Bill |  |  |  | \$25.54 | \$25.35 | (\$0.19) | (0.7\%) |

(1) Impacts do not include the proposed temporary rates filed in DE $10-055$ for effect July 1 or the Electricity Consumption Tax.

Unitil Energy Systems, Inc
Typical Bill Impacts by Rate Component (1)

| Rate Components | Reqular General G2 Demand, $10 \mathrm{~kW}, 3,000 \mathrm{kWh}$ Typical Bill |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5/1/2010 <br> Current Rate | $\begin{array}{r}8 / 1 / 2010 \\ \text { As revised } \\ \hline\end{array}$ | Difference | Current Bill | As Revised Bill | Difference | \% Difference to Total Bill |
| Customer Charge | \$11.00 | \$11.00 | \$0.00 | \$11.00 | \$11.00 | \$0.00 | 0.0\% |
|  | All kW | All kW |  |  |  |  |  |
| Distribution Charge | $\$ 7.03$ | \$7.03 | \$0.00 | \$70.30 | \$70.30 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.87 | \$0.24 | (\$0.63) | \$8.70 | \$2.40 | (\$6.30) | (1.6\%) |
| Total | \$7.90 | \$7.27 | (\$0.63) | \$79.00 | \$72.70 | (\$6.30) | (1.6\%) |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00000 | \$0.00000 | \$0.00000 | \$0.00 | \$0.00 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$42.75 | \$48.90 | \$6.15 | 1.5\% |
| Stranded Cost Charge | \$0.00167 | \$0.00046 | (\$0.00121) | \$5.01 | \$1.38 | (\$3.63) | (0.9\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$9.90 | \$9.90 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0.00000 | \$254.67 | \$254.67 | \$0.00 | 0.0\% |
| Total | \$0.10411 | \$0.10495 | \$0.00084 | \$312.33 | \$314.85 | \$2.52 | 0.6\% |
| Total Bill |  |  |  | \$402.33 | \$398.55 | (\$3.78) | (0.9\%) |


| Rate Components | Large General - G1 $550 \mathrm{kVa}, 200,000 \mathrm{kWh}$ Typical Bill |  |  |  | As Revised Bill | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5/1/2010 | 8/1/2010 |  |  |  |  |  |
|  | Current Rate | As Revised | Difference | Current Bill |  |  |  |
| Customer Charge | \$108.86 | \$108.86 | \$0.00 | \$108.86 | \$108.86 | \$0.00 | 0.0\% |
|  | All kVa | All kVa |  |  |  |  |  |
| Distribution Charge | \$5.69 | \$5.69 | \$0.00 | \$3,129.50 | \$3,129.50 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$1.24 | \$0.34 | (\$0.90) | \$682.00 | \$187.00 | (\$495.00) | (2.3\%) |
| Total | \$6.93 | \$6.03 | (\$0.90) | \$3,811.50 | \$3,316.50 | (\$495.00) | (2.3\%) |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge | \$0.00000 | \$0.00000 | \$0.00000 | \$0.00 | \$0.00 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$2,850.00 | \$3,260.00 | \$410.00 | 1.9\% |
| Stranded Cost Charge | \$0.00147 | \$0.00041 | (\$0.00106) | \$294.00 | \$82.00 | (\$212.00) | (1.0\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$660.00 | \$660.00 | \$0.00 | 0.0\% |
| Default Service Charge (2) | \$0.07066 | \$0.06697 | (\$0.00369) | \$14,132.00 | \$13,394.00 | (\$738.00) | (3.4\%) |
| Total | \$0.08968 | \$0.08698 | (\$0.00270) | \$17,936.00 | \$17,396.00 | (\$540.00) | (2.5\%) |
| Total Bill |  |  |  | \$21,856.36 | \$20,821.36 | (\$1,035.00) | (4.7\%) |

(1) Impacts do not include the proposed temporary rates filed in DE $10-055$ for effect July 1 or the Electricity Consumption Tax.
(2) The G1 class proposed bill includes Default Service rates filed in DE 10-028. Default Service Charges shown are based on the average of the DSC for each 3-month period

Unitil Energy Systems, Inc.
Typical Bill Impacts for Residential Rate Class based on Mean and Median Usage
Residential Rate D 645 kWh Bill - Mean Use*

| Rate Components | 5/1/2010 | 8/1/2010 |  | Current Bill** | As Revised Bill** | Difference | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Rate | As Revised | Difference |  |  |  | Difference to Total Bill |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 | \$8.40 | \$8.40 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.01810 | \$0.01810 | \$0.00000 | \$4.53 | \$4.53 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.02310 | \$0.02310 | \$0.00000 | \$9.12 | \$9.12 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$9.19 | \$10.51 | \$1.32 | 1.4\% |
| Stranded Cost Charge | \$0.00495 | \$0.00138 | (\$0.00357) | \$3.19 | \$0.89 | (\$2.30) | (2.5\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$2.13 | \$2.13 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0.00000 | \$54.75 | \$54.75 | \$0.00 | 0.0\% |
| First 250 kWh | \$0.12549 | \$0.12397 | (\$0.00152) |  |  |  |  |
| Excess 250 kWh | \$0.13049 | \$0.12897 | (\$0.00152) |  |  |  |  |
| Total Bill |  |  |  | \$91.32 | \$90.34 | (\$0.98) | (1.1\%) |

Residential Rate D 540 kWh Bill - Median Use*

| Rate Components | 5/1/2010 | 8/1/2010 |  |  | As Revised Bill** | Difference | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference | Current Bill** |  |  | Difference <br> to Total Bill |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 | \$8.40 | \$8.40 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge S |  |  |  |  |  |  |  |
| First 250 kWh | \$0.01810 | \$0.01810 | \$0.00000 | \$4.53 | \$4.53 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.02310 | \$0.02310 | \$0.00000 | \$6.70 | \$6.70 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01425 | \$0.01630 | \$0.00205 | \$7.70 | \$8.80 | \$1.11 | 1.4\% |
| Stranded Cost Charge | \$0.00495 | \$0.00138 | (\$0.00357) | \$2.67 | \$0.75 | (\$1.93) | (2.5\%) |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$1.78 | \$1.78 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.08489 | \$0,00000 | \$45.84 | \$45.84 | \$0.00 | 0.0\% |
| First 250 kWh | \$0.12549 | \$0.12397 | (\$0.00152) |  |  |  |  |
| Excess 250 kWh | \$0.13049 | \$0.12897 | (\$0.00152) |  |  |  |  |
| Total Bill |  |  |  | \$77.61 | \$76.79 | (\$0.82) | (1.1\%) |

* Based on billing period January through December 2009.
** Impacts do not include the proposed temporary rates filed in DE 10-055 for effect July 1 or the Electricity Consumption Tax

Unitil Energy Systems, Inc.
Average Class Bill Impacts
Due to Proposed Rate Changes Effective August 1, 2010*

(D). (C), (D) Test year billing determinants in DE 05-178
 Conth period.
C(V) Based on current rates times biling determinants shown in Columns (B), (C) and (D).
(i) Sum of Columns ( E ) through ( H )
(J) Column (I) minus Column (H)
(K) Column (E) divided by Column (H)
(L) Column (F) + Column (G) divided by Column (H)
(M) Column (J) divided by Column (H)

* Analysis does not include the proposed temporary rates filed in DE $10-055$ for effect July 1 or the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Typical Bill Impacts - May 1, 2010 versus August 1, 2010
Impacts do NOT include the proposed temporary rates filed in DE 10-055 for effect July 1 or the Electricity Consumption Tax Impact on D Rate Customers








[^0]:    (2) Detail of Unbilled Factors for all classes shown on page 6.

