# UNITIL ENERGY SYSTEMS, INC. 

DIRECT TESTIMONY OF

LINDA S. MCNAMARA

New Hampshire Public Utilities Commission

Docket No. DE 10-028

September 17, 2010

## TABLE OF CONTENTS

I. INTRODUCTION ..... Page 1
II. PURPOSE OF TESTIMONY ..... Page 1
III. RETAIL RATE CALCULATIONS ..... Page 2
IV. BILL IMPACTS ..... Page 12
V. CONCLUSION ..... Page 13

## LIST OF SCHEDULES

Schedule LSM-1: Redline Tariffs
Schedule LSM-2: Non-G1 Class Retail Rate Calculations - Power Supply Charge
Schedule LSM-3: Non-G1 Class Retail Rate Calculations - Renewable Portfolio Standard Charge
Schedule LSM-4: G1 Class Retail Rate Calculations - Power Supply Charge
Schedule LSM-5: G1 Class Retail Rate Calculations - Renewable Portfolio Standard Charge
Schedule LSM-6: Annual Update to Internal Administrative Costs
Schedule LSM-7: Class Bill Impacts

NHPUC Docket No. DE 10-028

## 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, including changes to the default service charges, 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' Default Service Charge ("DSC") effective November 1, 2010, as reflected in the redline tariffs provided as Schedule LSM-1.

## III. RETAIL RATE CALCULATIONS

## Q. What is the proposed Non-G1 Class DSC?

A. As shown on Schedule LSM-1, Page 1, the proposed Non-G1 Fixed DSC is $\$ 0.07899$ per kWh for the Non-G1 Class for the period November 1, 2010 through April 30, 2011. The proposed Non-G1 Variable DSC for this same period is also shown on this page. The proposed Non-G1 class Fixed DSC has also been incorporated into the Summary of Low-Income Electric Assistance Program Discounts, shown on Page 3 of Schedule LSM-1.

The proposed DSC are comprised of two components, as shown on Schedule LSM-1, Page 1: A Power Supply Charge and a Renewable Portfolio Standard ("RPS") Charge.
Q. What is the proposed Power Supply Charge and RPS Charge?
A. For the period November 1, 2010 through April 30, 2011, the proposed Non-G1

Fixed Power Supply Charge is $\$ 0.07686$ per kWh and the proposed Non-G1 Fixed RPS Charge is $\$ 0.00213$. Both of these figures, as well as the variable amounts for the same period, are shown on Schedule LSM-1, Page 1.

## Q. How does this rate compare to the current rate?

A. The Non-G1 Fixed DSC of $\$ 0.07899$ per kWh is a decrease of $\$ 0.00590$ per kWh from the current DSC of $\$ 0.08489$ per kWh . This decrease reflects lower contract costs for the period November 1, 2010 through April 30, 2011 compared to the contract costs for the current period May 1, 2010 through October 31, 2010.

## Q. Please describe the calculation of the Non-G1 class DSC.

A. The rate calculations for the Non-G1 class Power Supply Charges, Fixed and Variable, are provided on Schedule LSM-2, Page 1. The rate calculations for the Non-G1 class RPS Charges, Fixed and Variable, are provided on Schedule LSM3, Page 1. Both charges are calculated in the same manner.

The Variable Charge is calculated by dividing the total costs for the month, including a partial reconciliation of costs and revenues through January 31, 2010 ${ }^{1}$,

[^0]NHPUC Docket No. DE 10-028
by the estimated monthly Non-G1 kWh purchases. An estimated loss factor of $6.4 \%$ is then added to arrive at the proposed retail Variable Charges. The Fixed Charge is calculated in a similar manner, except that the calculation is based on totals for the entire six month period.

## Q. Have you provided support for the total forecast costs shown on Page 1, line 2 of Schedule LSM-2? <br> A. The details of forecasted costs for the period November 2010 through April 2011 are provided on Schedule LSM-2, Page 2. Line items for the various costs included in default service are shown and include: Total Non-G1 Class DS Supplier Charges, GIS Support Payments, Supply Related Working Capital, Provision for Uncollected Accounts, Internal Company Administrative Costs, Legal Charges, and Consulting Outside Service Charges.

Q. Have you provided support for the total forecast costs shown on Page 1, line 2 of Schedule LSM-3?
balance based on kWh over the twelve month period May 2010 through April 2011 as follows: $\$ 10,921$ in May-October 2010 and $\$ 10,726$ in November 2010-April 2011. As shown on Schedule LSM-2, Page 1, the reconciliation amount used in this filing is $\$ 10,726$.
A. The details of forecasted costs for the period November 2010 through April 2011 are provided on Schedule LSM-3, Page 2. Costs include Renewable Energy Credits ("RECs") and the associated working capital.

## Q. How is working capital calculated?

A. Working capital included in the Power Supply Charge equals the sum of working capital for Total Non-G1 Class DS Supplier Charges plus GIS Support Payments, as shown on Schedule LSM-2, Page 2. It is calculated by multiplying the product of Total Non-G1 Class DS Supplier Charges plus GIS Support Payments and the number of days lag divided by 365 days (i.e. the working capital requirement) by the prime rate.

The calculation of working capital for RECs is included in the RPS Charge and is shown on Schedule LSM-3, Page 2. It is calculated by multiplying the product of RECs and the number of days lead divided by 365 days (i.e. the working capital requirement) by the prime rate.

The calculation of working capital included in the Power Supply Charge and the RPS Charge both rely on the results of the 2009 Default Service and Renewable Energy Credits Lead Lag Study. The Non-G1 class Power Supply Charge working capital calculation uses 15.90 days and the Non-G1 class RPS Charge working capital calculation uses (301.67) days.


#### Abstract

Q. How is the Provision for Uncollected Accounts shown on Schedule LSM2 determined? A. As ordered as part of UES' last default service filing, UES, Staff, and with notice to the OCA, were required to meet prior to the next default service filing to discuss the allocation of uncollected costs to the Non-G1 and G1 customer classes and present further information, including proposed revised tariffs if appropriate, at or before the next default service hearing.

As directed, UES and Staff ${ }^{2}$ met and discussed this matter. Currently, UES allocates net uncollected accounts to the Non-G1 and G1 classes based on each class's default service kWh billed each month. Beginning November 1, 2010, UES and Staff recommend that UES charge the monthly write-offs of uncollected accounts to Non-G1 and G1 default service costs based on the actual gross default service uncollected accounts by class. Any recoveries would be allocated between Non-G1 and G1 default service, with the allocation also based on the monthly gross write-off amounts. A letter communicating this proposal was filed with the Commission on September 3, 2010.


[^1]
## Q. Has UES presented a tariff reflecting this change?

A. Yes. A redline Schedule DS, reflecting this revision, is provided as Schedule LSM-1, Page 4.
Q. Has UES included its annual update to internal company administrative costs associated with providing default service?
A. Yes. The updated internal company administrative costs associated with providing default service proposed for effect November 1, 2010 are provided on Schedule LSM-6. Pages 1 and 2 of Schedule LSM-6 are formatted identically to those submitted as part of the update last year.

The Settlement Agreement in DE 05-064 allows UES to update these costs annually based on changes to labor costs and associated overheads. The labor hours allocated to DS reflect test year values and are not adjusted. UES has used an overhead rate of $95 \%$ based on the average for calendar year 2009. The updated labor costs by department are detailed on Schedule LSM-6, Page 2 of 2.

As shown on Page 1 of 2, the revised internal administrative costs associated with providing DS are $\$ 60,373$. $\$ 23,991$ of that amount is attributable to the Non-G1 class and $\$ 36,382$ is attributable to the G1 class. The current internal
administrative costs associated with providing DS are $\$ 63,536$, with $\$ 25,417$ attributable to the Non-G1 class and $\$ 38,119$ attributable to the G1 class.

## Q. What is the proposed G1 Class DSC?

A. Schedule LSM-1, Page 2, shows the proposed G1 Variable DSC of $\$ 0.06652$ per kWh in November 2010, $\$ 0.07273$ per kWh in December 2010, and $\$ 0.07963$ per kWh in January 2011. There is no fixed option DSC for the G1 class.

The proposed DSC are comprised of two componets, as shown on Schedule LSM1, Page 2: A Power Supply Charge and a Renewable Portfolio Standard ("RPS") Charge.
Q. What is the proposed Power Supply Charge and RPS Charge?
A. Schedule LSM-1, Page 2, shows the proposed G1 Variable Power Supply Charges of $\$ 0.06397$ per kWh in November 2010, $\$ 0.07018$ per kWh in December 2010, and $\$ 0.07663$ per kWh in January 2011.

Also shown on Schedule LSM-1, Page 2, is the proposed G1 Variable RPS Charge of $\$ 0.00255$ per kWh in November and December 2010, and $\$ 0.00300$ per kWh in January 2011.
Q. How do the G1 DSC compare to the current rate?

NHPUC Docket No. DE 10-028
A. The current DSC, based on a simple three-month average, is $\$ 0.06697$ per kWh . The proposed rate, based on a simple three-month average, is $\$ 0.07296$ per kWh . This is an increase of $\$ 0.00599$ per kWh , on average, from the current rate. The increase reflects current market prices.

## Q. Please describe the calculation of the G1 class DSC.

A. The rate calculations for the Variable Power Supply Charges are provided on Schedule LSM-4, Page 1. The rate calculations for the Variable RPS Charges are provided on Schedule LSM-5, Page 1. Both charges are calculated in the same manner.

The Variable Charge is calculated by dividing the costs for each month, including a partial reconciliation of costs and revenues through January 31, 2010 ${ }^{3}$, by the

[^2]NHPUC Docket No. DE 10-028
estimated G1 kWh purchases for the corresponding month. An estimated loss factor of $4.591 \%$ is then added to arrive at the proposed retail Variable Charges.
Q. Have you provided support for the total forecast costs shown on Page 1, line 2 of Schedule LSM-4?
A. The details of forecasted costs included in the Power Supply Charge for the period November 2010 through January 2011 are provided on Schedule LSM4, Page 2. Line items for the various costs included in default service are shown and include: Total G1 Class DS Supplier Charges, GIS Support Payments, Supply Related Working Capital, Provision for Uncollected Accounts, Internal Company Administrative Costs, Legal Charges, and Consulting Outside Service Charges.
Q. Have you provided support for the total forecast costs shown on Page 1, line 2 of Schedule LSM-5?
A. The details of forecasted costs included in the RPS Charge for the period November 2010 through January 2011 are provided on Schedule LSM-5, Page
\$12,967 in August-October 2010, \$11,608 in November 2010-January 2011, and \$11,563 in February-April 2011. As shown on Schedule LSM-5, Page 1, the reconciliation amount used in this filing is $\$ 11,608$.

# 2. Costs include Renewable Energy Credits ("RECs") and the associated Working Capital. 

## Q. How is working capital calculated?

A. Working capital included in the Power Supply Charge equals the sum of working capital for Total G1 Class DS Supplier Charges plus GIS Support Payments, as shown on Schedule LSM-4, Page 2. It is calculated by multiplying the product of Total G1 Class DS Supplier Charges plus GIS Support Payments and the number of days lag divided by 365 days (i.e. the working capital requirement) by the prime rate.

The calculation of working capital for RECs is included in the RPS Charge and is shown on Schedule LSM-5, Page 2. It is calculated by multiplying the product of RECs and the number of days lead divided by 365 days (i.e. the working capital requirement) by the prime rate.

The calculation of working capital included in the Power Supply Charge and the RPS Charge both rely on the results of the 2009 Default Service and Renewable Energy Credits Lead Lag Study. The G1 class Power Supply Charge working capital calculation uses 13.72 days and the G1 class RPS Charge working capital calculation uses (297.66) days.

## IV. BILL IMPACTS

## Q. Have you included any bill impacts associated with the proposed DSC rate changes?

A. Typical bill impacts as a result of changes to the DSC have been provided in Schedule LSM-7.

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 impacts as a result of changes to the DSC. As shown, for customers on Default Service, the residential class will decrease about $4.1 \%$, general service will decrease about $4.2 \%$, large general service will increase about $5.5 \%$ and outdoor lighting will decrease about $2.4 \%$.

Pages 6 through 11 of Schedule LSM-7 provide typical bill impacts for all classes for a range of usage levels.

## 1 V. CONCLUSION

2 Q. Does that conclude your testimony?
3 A. Yes, it does.
(R)

|  | Non-G1 Class Default Service: | May-10 | Jun-19 | (tw-10 | Aug-10 | Sep-10 | $\underline{\text { Oct-10 }}$ | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Power Supply Charge |  |  |  |  |  |  |  |
| 4 | Reconciliation | (\$16,099) | (\$18,428) | (\$21,804) | (\$21,688) | (\$17,803) | (\$17,524) | (\$113,347) |
| $z$ | Total Costs | \$4,721,482 | \$5.530,518 | \$6,830,374 | \$6,988,403 | \$5,299,468 | \$5,285,776 | \$34,656,022 |
| 3 | Reconciliation plus Total Costs (L. $1+\mathrm{L} .2$ ) | \$4,705,383 | \$5,512,090 | \$6,808,569 | \$6,966,715 | \$5,281,665 | \$5,268,252 | \$34,542,674 |
| 4 | kWh Purchases | 63,001,518 | 72,116,000 | 85,328,322 | 84,873,727 | 69,670,112 | 68,579,124 | $\underline{443,568,800}$ |
| 5 | Total, Before Losses (L. 3/L.4) | \$0.07469 | \$0.07643 | \$0.07979 | \$0.08208 | \$0.07581 | \$0.07682 | \$0.07787 |
| 6 | Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | $6.40 \%$ | $6.40 \%$ | 6.40\% |
| 7 | Total Retail Rate - Variable Power Supply Charge (L.5* $(1+\mathrm{L} .6))$ | \$0.07947 | \$0.08133 | \$0.08490 | \$0.08734 | \$0.08066 | \$0.08174 |  |
| 8 | Total Retail Rate Fixed Power Supply Charge (L.5* ( $1+\mathrm{L} .6$ ) $)$ |  |  |  |  |  |  | \$0.08286 |
|  | Renewable Portfolio Standard (RPS) Charge |  |  |  |  |  |  |  |
| 9 | Reconciliation | \$1,551 | \$1,775 | \$2,101 | \$2,090 | \$1,715 | \$1,688 | \$10,921 |
| 10 | Total Costs | \$118,486 | \$135,627 | \$160,474 | \$159,619 | \$131,029 | \$128,975 | \$834,210 |
| 4 | Reconciliation plus Total Costs (L.9 + L. 10 ) | \$120,037 | \$137,402 | \$162,575 | \$161,709 | \$132,744 | \$130,663 | \$845,134 |
| 12 | kWh Purehases | 63,001,518 | 72,116,000 | 85,328,322 | 84,873,727 | 69,670,112 | 68,579,124 | 443,568,800 |
| 43 | Total, Before Losses (L.11/L.12) | \$0.00194 | \$0.00194 | \$0.00191 | \$0.00191 | \$0.00191 | \$0.00194 | \$0.00191 |
| 14 | Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | $\underline{6.40 \%}$ | 6.40\% |
| 45 | Total Retail Rate - Variable RPS Charge (L.13* ( $1+$ L. 14)) | \$0.00203 | \$0.00203 | \$0.00203 | \$0.00203 | \$0.00203 | \$0.00203 |  |
| 16 | Total Retail Rate -Fixed RPS Charge (L.13* ( $1+$ L. 14 )) |  |  |  |  |  |  | \$0.00203 |
| 17 | Total Retail Rate - Variable Default Service Charge (L.7+ L.15) | \$0.08150 | \$0.08336 | \$0.08693 | \$0.08937 | \$0.08269 | \$0.08377 |  |
| 48 |  |  |  |  |  |  |  |  |
|  | Total Retail Rate-Fixed Default Service Charge (L.8+L.16) |  |  |  |  |  |  | \$0.08489 |
|  |  | As shown on Schedule LSM-2, Page 1 |  |  |  |  |  |  |
|  | Non-G1 Class Default Service: | Nov-10 | Dec-10 | Jan-11 | Feb-11 | Mar-11 | Apr-11 | Total |
|  | Power Supply Charge |  |  |  |  |  |  |  |
| 1 | Reconciliation | $(\$ 16,806)$ | (\$19,941) | (\$21,368) | $(\$ 18,607)$ | $(\$ 18,308)$ | $(\$ 16,294)$ | (\$111,325) |
| 2 | Total Costs | \$4,135,671 | \$5,219,851 | \$6,188,946 | \$5,438,446 | \$4,801,961 | \$4,202,547 | \$29,987,423 |
| 3 | Reconciliation plus Total Costs (L. $1+$ L. 2) | \$4,118,865 | \$5,199,910 | \$6,167,578 | \$5,419,839 | \$4,783,653 | \$4,186,253 | \$29,876,098 |
| 4 | kWh Purchases | 62,435,714 | 74,085,957 | 79,386,877 | $\underline{69,129,750}$ | 68,017,584 | 60,536,337 | 413,592,219 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.06597 | \$0.07019 | \$0.07769 | \$0.07840 | \$0.07033 | \$0.06915 | \$0.07224 |
| 6 | Losses | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% | 6.40\% |
| 7 | Total Retail Rate - Variable Power Supply Charge (L. 5 * (1+L.6)) | \$0.07019 | \$0.07468 | \$0.08266 | \$0.08342 | \$0.07483 | \$0.07358 |  |
| 8 | Total Retail Rate - Fixed Power Supply Charge (L. 5 * (1+L.6)) |  |  |  |  |  |  | \$0.07686 |
|  | Renewable Portfolio Standard (RPS) Charge | As shown on Schedule LSM-3, Page 1 |  |  |  |  |  |  |
| 9 | Reconciliation | \$1,619 | \$1,921 | \$2,059 | \$1,793 | \$1,764 | \$1,570 | \$10,726 |
| 10 | Total Costs | \$105.316 | \$124.965 | \$168.018 | \$146.312 | \$143.959 | \$128.126 | \$816.696 |

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

| CALCULATION OF THE DEFAULT SERVICE CHARGE |  |  |  |  |  | As shown on Schedule LSM-4, Page 1 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | G1 Class Default Service: | Aug-10 | Sep-10 | Oct-10 | Total | Nov-10 | Dec-10 | Jan-11 | Total |
| 1 | Power Supply Charge <br> Reconciliation | $(\$ 2,944)$ | $(\$ 2,837)$ | $(\$ 2,723)$ | $(\$ 8,504)$ | $(\$ 2,407)$ | $(\$ 2,572)$ | $(\$ 2,634)$ | $(\$ 7,612)$ |
| 2 | Total Costs | \$817,627 | \$668,912 | \$638,455 | \$2,124,994 | \$315,885 | \$370,011 | \$413,522 | \$1,099,418 |
| 3 | Reconciliation plus Total Costs (L.1 + L.2) | \$814,683 | \$666,075 | \$635,732 | \$2,116,490 | \$313,478 | \$367,440 | \$410,888 | \$1,091,806 |
| 4 | kWh Purchases | 41,801,216 | 41,375,729 | 10,917,662 | 34,094,607 | 5,125,497 | 5,475,852 | 5,608,358 | 16,209,708 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.06903 | \$0.05855 | \$0.05823 |  | \$0.06116 | \$0.06710 | \$0.07326 |  |
| 6 | Losses | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | 4.591\% |  | 4.591\% | 4.591\% | 4.591\% |  |
| 7 | Total Retail Rate - Variable Power Supply Charge (L. 5 * (1+L.6)) | \$0.07220 | \$0.06124 | \$0.06090 |  | \$0.06397 | \$0.07018 | \$0.07663 |  |
|  | Renewable Portfolio Standard (RPS) Charge |  |  |  |  | As | shown on Sche | dule LSM-5, P | ge 1 |
| 8 | Reconciliation | \$4,488 | \$4,327 | \$4,152 | \$12,967 | \$3,670 | \$3,921 | \$4,016 | \$11,608 |
| 9 | Total Costs | \$20,265 | \$19,534 | \$18,748 | \$58,547 | \$8,802 | \$9,403 | \$12,084 | \$30,290 |
| 10 | Reconciliation plus Total Costs (L. $8+$ L.9) | \$24,754 | \$23,861 | \$22,900 | \$71,514 | \$12,472 | \$13,325 | \$16,101 | \$41,897 |
| 11 | kWh Purchases | 41,801,216 | 41,375,729 | 10,917,662 | 34,094,607 | 5,125,497 | 5,475,852 | $\underline{5,608,358}$ | 16,209,708 |
|  | Total, Before Losses (L. 10 / L. 11 ) | \$0.00210 | \$0.00210 | \$0.00210 |  | \$0.00243 | \$0.00243 | \$0.00287 |  |
| 13 | Losses | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ | $\underline{4.591 \%}$ |  | 4.591\% | 4.591\% | 4.591\% |  |
| 14 | Total Retail Rate - Variable RPS Charge (L. 12 * ( $1+\mathrm{L} .13$ )) | \$0.00219 | \$0.00219 | \$0.00219 |  | \$0.00255 | \$0.00255 | \$0.00300 |  |
| 15 | Total Retail Rate - Variable Default Service Charge (L. 7 + L. 14) | \$0.07439 | \$0.06343 | \$0.06309 |  | \$0.06652 | \$0.07273 | \$0.07963 |  |

## SUMMARY OF LOW-INCOME ELECTRIC ASSISTANCE PROGRAM DISCOUNTS

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

## Rate D

| Tier | Percentage of Federal Poverty Guidelines | Discount | Blocks | LI-EAP <br> Discount(1) | LI-EAP <br> Discount(1) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 176-185 | 5\% | Customer Charge | (\$0.42) | (\$0.42) |
|  |  |  | First 250 kWh <br> Excess 250 kWh | $\begin{array}{r} (\$ 0.00645) \\ (\$ 0.00670) \\ \hline \end{array}$ | $\begin{array}{r} (\$ 0.00615) \\ (\$ 0.00640) \\ \hline \end{array}$ |
| 2 | 151-175 | 7\% | Customer Charge | (\$0.59) | (\$0.59) |
|  |  |  | First 250 kWh <br> Excess 250 kWh | $\begin{aligned} & (\$ 0.00903) \\ & (\$ 0.00938) \\ & \hline \end{aligned}$ | $\begin{array}{r} (\$ 0.00861) \\ (\$ 0.00896) \\ \hline \end{array}$ |
| 3 | 126-150 | 18\% | Customer Charge | (\$1.51) | (\$1.51) |
|  |  |  | First 250 kWh Excess 250 kWh | $\begin{aligned} & (\$ 0.02321) \\ & (\$ 0.02441) \\ & \hline \end{aligned}$ | $\begin{array}{r} (\$ 0.02215) \\ (\$ 0.02305) \\ \hline \end{array}$ |
| 4 | 101-125 | 33\% | Customer Charge | (\$2.77) | (\$2.77) |
|  |  |  | First 250 kWh <br> Excess 250 kWh | $\begin{aligned} & (\$ 0.04255) \\ & (\$ 0.04420) \\ & \hline \end{aligned}$ | $\begin{array}{r} (\$ 0.04060) \\ (\$ 0.04225) \\ \hline \end{array}$ |
| 5 | 76-100 | 48\% | Customer Charge | (\$4.03) | (\$4.03) |
|  |  |  | First 250 kWh <br> Excess 250 kWh | $\begin{array}{r} (\$ 0.06189) \\ (\$ 0.06429) \\ \hline \end{array}$ | $\begin{aligned} & (\$ 0.05905) \\ & (\$ 0.06145) \\ & \hline \end{aligned}$ |
| 6 | 0-75 | 70\% | Customer Charge | (\$5.88) | (\$5.88) |
|  |  |  | First 250 kWh <br> Excess 250 kWh | $\begin{array}{r} (\$ 0.09025) \\ (\$ 0.09375) \\ \hline \end{array}$ | $\begin{aligned} & (\$ 0.08612) \\ & (\$ 0.08962) \\ & \hline \end{aligned}$ |

(1) Total utility charges from Supplement No. 2, Page 2 (excluding the Electricity Consumption Tax) plus Non-G1 class Fixed Default Service Rate multiplied by the appropriate discount.

Authorized by NHPUC Order No. 25,133 in Case No. PE 10-172, datedJuly 30, 2010

## AVAILABILITY

This Schedule is for energy supply service only. Customers taking service hereunder must also take service under one of the Company's Delivery Service Schedules.

Default Service shall be available under this Schedule to all Customers, including Customers that return to utility-provided energy supply service after receiving energy supply service from a Competitive Supplier or self-supply (available to Market Participant End Users as described in NHPUC Order No. 24,172), or those Customers whose energy to be provided by a Competitive Supplier or self-supply does not reach the Company's distribution system for any reason.

## CHARACTER OF SERVICE

Electricity will be supplied with the same characteristics as specified in the applicable Delivery Service Schedules.

## DEFAULT SERVICE CHARGE

The Default Service Charges ("DSC") for each class are specified on Page 74 for the Non-G1 class and Page 75 for the G1 class, Calculation of the Default Service Charge.

## DEFAULT SERVICE CHARGE RECONCILIATION

The DSC shall be calculated separately for the Non-G1 (all classes except G1) and the G1 classes. The DSC for the Non-G1 class will be calculated on a six month basis and shall be offered as a fixed charge or as a variable charge, as provided below. The DSC for the G1 class will be calculated on a three month basis and shall be offered as a variable charge only, as provided below. The DSC shall consist of two separate components, a Power Supply Charge and a Renewable Portfolio Standard (RPS) charge. The Power Supply Charge shall be based on a forecast of all Default Service costs, excluding the costs associated with complying with RPS, and shall include an annual reconciliation with interest for any over- or under-recoveries occurring in the prior period. The RPS Charge shall be based on a forecast of the costs to comply with RPS and shall include an annual reconciliation with interest for any over- or underrecoveries occurring in the prior period.

Separate reconciliation of costs and revenues for the Power Supply Charge and the RPS Charge, for both the Non-G1 and G1 classes, shall be performed on an annual basis effective May 1. Default Service costs included in the Power Supply Charge shall include wholesale supplier charges and GIS support payments, internal company administrative costs, supplyrelated working capital, external company administrative costs, and a provision for uncollectible accounts attributed to Default Service. External company administrative costs will be directly assigned to the Non-G1 or G1 class, as applicable. Costs that are common to both classes will be allocated to those classes based on kWh sales. Costs of uncollectible accounts willshall be directly assignedallocated to the Non-G1 orand G1 classes based on kWh . Default Service costs included in the RPS Charge shall include costs of compliance with the Renewable Portfolio Standard and associated working capital.

Authorized by NHPUC Order No. 24,980-in Case No DE $09-009$ dated June 19, 2009

Issued: Jtne 12, 2009-September 17, 2010
Effective: August 1, 2009November 1, 2010

Issued by: Mark H. Collin
Treasurer

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

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

| Nov-10 <br> Estimated <br> $(\$ 16,806)$ | Dec-10 <br> Estimated | Jan-11 <br> Estimated | Feb-11 <br> Estimated | Mar-11 <br> Estimated | Apr-11 <br> Estimated | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underline{\$ 4,135,671}$ | $\underline{\$ 5,219,851}$ | $\underline{\$ 6,188,946}$ | $\underline{\$ 5,438,446}$ | $\underline{\$ 4,801,961}$ | $\underline{\$ 4,202,547}$ | $\underline{\$ 29,987,423}$ |
| $\$ 4,118,865$ | $\$ 5,199,910$ | $\$ 6,167,578$ | $\$ 5,419,839$ | $\$ 4,783,653$ | $\$ 4,186,253$ | $\$ 29,876,098$ |
| $\underline{(\$ 18,308)}$ | $(\$ 16,294)$ | $(\$ 111,325)$ |  |  |  |  |
| $\underline{62,435,714}$ | $\underline{74,085,957}$ | $\underline{79,386,877}$ | $\underline{69,129,750}$ | $\underline{68,017,584}$ | $\underline{60,536,337}$ | $\underline{413,592,219}$ |
| $\$ 0.06597$ | $\$ 0.07019$ | $\$ 0.07769$ | $\$ 0.07840$ | $\$ 0.07033$ | $\$ 0.06915$ | $\$ 0.07224$ |
| $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ | $\underline{6.40 \%}$ |
| $\$ 0.07019$ | $\$ 0.07468$ | $\$ 0.08266$ | $\$ 0.08342$ | $\$ 0.07483$ | $\$ 0.07358$ |  |
|  |  |  |  |  |  | $\$ 0.07686$ |

(1) As filed in UES' March 12, 2010 Default Service filing. Power Supply Charge balance as of January 31, 2010, as adjusted, allocated between rate periods (May-October 2010 and November 2010-April 2011) and then to each month on equal per kWh basis

Total Power Supply Charge reconciliation for May 1, 2010-April 30, 2011
(\$224,673)
Reconciliation amount for May-October 2010
(\$113,347)
Reconciliation amount for November 2010-April 2011
(\$111,325)
Total
(\$224,673)

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

Calculation of Working Capital

|  | Supplier Charges and GIS Support Payments |  |  |  |  |  | (g) <br> Provision for Uncollected Accounts | (h) <br> Internal <br> Company <br> Administrative Costs | (i) | (j) | (k) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) Total Non-G1 | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  |
|  |  |  |  | Working |  | Supply |  |  |  |  |  |
|  | Class DS | GIS | Number of | Capital |  | Related |  |  |  | Consulting | Total Costs |
|  | Supplier | Support | Days of Lag / | Requirement |  | Working |  |  |  | Outside Service | (sum $a+b+f+$ |
|  | Charges (1) | Payments | 365 | $((a+b) *$ c) | Prime Rate | Capital ( $\mathrm{d}^{*} \mathrm{e}$ ) |  |  | Legal Charges | Charges | $\mathrm{g}+\mathrm{h}+\mathrm{i}+\mathrm{j})$ |
| Nov-10 | \$4,099,373 | \$539 | 4.36\% | \$178,599 | 3.25\% | \$5,804 | \$27,955 | \$1,999 | \$0 | \$0 | \$4,135,671 |
| Dec-10 | \$5,186,573 | \$640 | 4.36\% | \$225,963 | 3.25\% | \$7,344 | \$23,296 | \$1,999 | \$0 | \$0 | \$5,219,851 |
| Jan-11 | \$6,136,804 | \$685 | 4.36\% | \$267,359 | 3.25\% | \$8,689 | \$40,768 | \$1,999 | \$0 | \$0 | \$6,188,946 |
| Feb-11 | \$5,387,454 | \$597 | 4.36\% | \$234,712 | 3.25\% | \$7,628 | \$40,768 | \$1,999 | \$0 | \$0 | \$5,438,446 |
| Mar-11 | \$4,751,878 | \$587 | 4.36\% | \$207,025 | 3.25\% | \$6,728 | \$40,768 | \$1,999 | \$0 | \$0 | \$4,801,961 |
| Apr-11 | \$4,141,745 | \$523 | 4.36\% | \$180,444 | 3.25\% | \$5,864 | \$52,416 | \$1,999 | \$0 | \$0 | \$4,202,547 |
| Total | \$29,703,827 | \$3,571 |  | \$1,294,103 |  | \$42,058 | \$225,971 | \$11,996 | \$0 | \$0 | \$29,987,423 |

(1) Estimates based on monthly average wholesale rate times estimated monthly purchases.

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

```
1 Reconciliation
Total Costs (Page 2)
3 Reconciliation plus Total Costs (L.1 + L.2)
4 kWh Purchases
5 ~ T o t a l , ~ B e f o r e ~ L o s s e s ~ ( L . 3 ~ / ~ L . 4 ) ~
6 Losses
7 Total Retail Rate - Variable RPS Charge (L.5 * (1+L.6))
8 Total Retail Rate - Fixed RPS Charge (L.5 * (1+L.6))
```

| Nov-10 <br> Estimated | Dec-10 <br> Estimated | Jan-11 <br> Estimated | Feb-11 <br> Estimated | Mar-11 <br> Estimated | Apr-11 <br> Estimated | Total <br> $\$ 1,921$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 1059,316$ | $\underline{\$ 124,965}$ | $\underline{\$ 168,018}$ | $\underline{\$ 146,312}$ | $\underline{\$ 143,959}$ | $\underline{\$ 128,126}$ | $\underline{\$ 10,726}$ |

(1) As filed in UES' March 12, 2010 Default Service filing. RPS Charge balance as of January 31, 2010, as adjusted, allocated between rate periods (May-October 2010 and November 2010-April 2011) and then to each month on equal per kWh basis.

| Total reconciliation for May 1, 2010-April 30, 2011 | $\$ 21,646$ |
| :--- | :--- |
|  |  |
| Reconciliation amount for May-October 2010 | $\$ 10,921$ |
| Reconciliation amount for November 2010-April 2011 | $\underline{\$ 10,726}$ |
| Total | $\$ 21,646$ |

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

|  | (a) | Calculation of Working Capital |  |  |  | (f)(sum a + e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (b) | (c) <br> Working | (d) | (e) |  |
|  |  |  |  |  |  |  |
|  |  | Number of | Capital |  |  |  |
|  | Renewable Energy Credits <br> (1) | Days of Lag / 365 | Requirement (a*b) | Prime Rate | Supply Related Working Capital (c * d) |  |
| Nov-10 | \$108,223 | (82.65\%) | (\$89,445) | 3.25\% | $(\$ 2,907)$ | \$105,316 |
| Dec-10 | \$128,414 | (82.65\%) | $(\$ 106,134)$ | 3.25\% | $(\$ 3,449)$ | \$124,965 |
| Jan-11 | \$172,656 | (82.65\%) | $(\$ 142,699)$ | 3.25\% | $(\$ 4,638)$ | \$168,018 |
| Feb-11 | \$150,351 | (82.65\%) | (\$124,264) | 3.25\% | $(\$ 4,039)$ | \$146,312 |
| Mar-11 | \$147,933 | (82.65\%) | $(\$ 122,265)$ | 3.25\% | $(\$ 3,974)$ | \$143,959 |
| Apr-11 | \$131,663 | (82.65\%) | (\$108,818) | 3.25\% | $(\$ 3,537)$ | \$128,126 |
| Total | \$839,239 |  | $(\$ 693,625)$ |  | $(\$ 22,543)$ | \$816,696 |

(1) Schedule RSF-4.

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

## Schedule LSM-4

Page 1 of 2

| 1 | Reconciliation (1) | $\begin{gathered} \begin{array}{c} \text { Nov-10 } \\ \text { Estimated } \end{array} \\ (\$ 2,407) \end{gathered}$ | Dec-10 <br> Estimated <br> $(\$ 2,572)$ | $\begin{gathered} \begin{array}{c} \text { Jan-11 } \\ \text { Estimated } \end{array} \\ (\$ 2,634) \end{gathered}$ | $\frac{\text { Total }}{(\$ 7,612)}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | Total Costs (Page 2) | \$315,885 | \$370,011 | \$413,522 | \$1,099,418 |
| 3 | Reconciliation plus Total Costs (L.1 + L.2) | \$313,478 | \$367,440 | \$410,888 | \$1,091,806 |
| 4 | kWh Purchases | 5,125,497 | 5,475,852 | 5,608,358 | 16,209,708 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.06116 | \$0.06710 | \$0.07326 |  |
| 6 | Losses | 4.591\% | 4.591\% | 4.591\% |  |
| 7 | Total Retail Rate - Variable Power Supply Charge (L.5 * (1+L.6)) | \$0.06397 | \$0.07018 | \$0.07663 |  |

(1) As filed in UES' March 12, 2010 Default Service filing. Power Supply Charge balance as of January 31, 2010, as adjusted, allocated between rate periods (May-July 2010, August-October 2010, November 2010-January 2011, and February-April 2011) and then to each month on equal per kWh basis.

Total Power Supply Charge reconciliation for May 1, 2010-April 30, $2011 \quad(\$ 32,250)$
Reconciliation amount for May-July 2010
$(\$ 8,550)$
Reconciliation amount for August-October 2010
$(\$ 8,504)$
Reconciliation amount for November 2010-January 2011
$(\$ 7,612)$
Reconciliation amount for February-April 2011
$(\$ 7,583)$
Total
$(\$ 32,250)$

## Redacted

Unitil Energy Systems, Inc.
Itemized Costs for G1 Class Default Service Power Supply Charge

|  | Calculation of Working Capital <br> Charges and GIS Support Payments |  |  |  |  |  | (g) | (h) | (i) | (j) | (k) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) |  |  |  |  |  |
|  |  |  |  | Working |  |  |  | Internal |  |  |  |
|  | Total G1 Class | GIS | Number of | Capital |  | Supply Related | Provision for | Company |  | Consulting | Total Costs |
|  | DS Supplier | Support | Days of | Requirement |  | Working Capital | Uncollected | Administrative | Legal | Outside Service | (sum a $+\mathrm{b}+\mathrm{f}$ |
|  | Charges (1) | Payments | Lag / 365 | $((a+b) *$ c) | Prime Rate | (d * e) | Accounts | Costs | Charges | Charges | + $\mathrm{g}+\mathrm{h}+\mathrm{i}+\mathrm{j})$ |
| Nov-10 | Redacted | \$44 | 3.76\% | Redacted | 3.25\% | Redacted | Redacted | \$3,032 | \$0 | \$0 | \$315,885 |
| Dec-10 | Redacted | \$47 | 3.76\% | Redacted | 3.25\% | Redacted | Redacted | \$3,032 | \$0 | \$0 | \$370,011 |
| Jan-11 | Redacted | \$48 | 3.76\% | Redacted | 3.25\% | Redacted | Redacted | \$3,032 | \$0 | \$0 | \$413,522 |
| Total | Redacted | \$140 |  | Redacted |  | Redacted | Redacted | \$9,096 | \$0 | \$0 | \$1,099,418 |

(1) Estimates based on monthly average wholesale rate times estimated monthly purchases.

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

|  |  | Nov-10 <br> Estimated | Dec-10 <br> Estimated | Jan-11 <br> Estimated | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Reconciliation (1) | \$3,670 | \$3,921 | \$4,016 | \$11,608 |
| 2 | Total Costs (Page 2) | \$8,802 | \$9,403 | \$12,084 | \$30,290 |
| 3 | Reconciliation plus Total Costs (L.1 + L.2) | \$12,472 | \$13,325 | \$16,101 | \$41,897 |
| 4 | kWh Purchases | 5,125,497 | 5,475,852 | 5,608,358 | 16,209,708 |
| 5 | Total, Before Losses (L. 3 / L.4) | \$0.00243 | \$0.00243 | \$0.00287 |  |
| 6 | Losses | 4.591\% | 4.591\% | 4.591\% |  |
| 7 | Total Retail Rate - Variable RPS Charge (L.5 * (1+L.6)) | \$0.00255 | \$0.00255 | \$0.00300 |  |

(1) As filed in UES' March 12, 2010 Default Service filing. RPS Charge balance as of January 31, 2010, as adjusted, allocated between rate periods (May-July 2010, August-October 2010, November 2010-January 2011, and February-April 2011) and then to each month on equal per kWh basis.

| Total RPS Charge reconciliation for May 1, 2010-April 30, 2011 | $\$ 49,175$ |
| :--- | ---: |
| Reconciliation amount for May-July 2010 | $\$ 13,038$ |
| Reconciliation amount for August-October 2010 | $\$ 12,967$ |
| Reconciliation amount for November 2010-January 2011 | $\$ 11,608$ |
| Reconciliation amount for February-April 2011 | $\underline{\$ 11,563}$ |
| Total | $\$ 49,175$ |

Unitil Energy Systems, Inc.
Itemized Costs for G1 Class Default Service Renewable Portfolio Standard Charge
Page 2 of 2

|  | (a) | Calculation of Working Capital |  |  |  | (f)Total Costs (sum a + e) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | (b) | (c) | (d) | (e) |  |
|  |  |  | Working |  |  |  |
|  |  | Number of | Capital |  |  |  |
|  | Renewable Energy Credits (1) | $\begin{gathered} \text { Days of Lag / } \\ 365 \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Requirement } \\ & (\mathrm{a} * \mathrm{~b}) \end{aligned}$ | Prime Rate | Supply Related Working Capital (c *d) |  |
| Nov-10 | \$9,041 | (81.55\%) | $(\$ 7,373)$ | 3.25\% | (\$240) | \$8,802 |
| Dec-10 | \$9,659 | (81.55\%) | $(\$ 7,877)$ | 3.25\% | (\$256) | \$9,403 |
| Jan-11 | \$12,413 | (81.55\%) | $(\$ 10,123)$ | 3.25\% | (\$329) | \$12,084 |
| Total | \$31,114 |  | $(\$ 25,374)$ |  | (\$825) | \$30,290 |

(1) Schedule RSF-4.

|  |  | G1 Class | Non-G1 Class | Total | Notes: |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Energy Contracts Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$36.66 | \$36.66 | \$36.66 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 249.4 | 150.6 | 400.0 |  |
| 3 | Cost of Labor | \$9,143 | \$5,521 | \$14,664 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$8,686 | \$5,245 | \$13,931 | 2 |
| 5 | Total Labor and Overhead Cost | \$17,829 | \$10,766 | \$28,595 |  |
| Regulatory Services Department: |  |  |  |  |  |
|  | Average Cost of Labor per Hour | \$43.79 | \$43.79 | \$43.79 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 88.0 | 35.0 | 123.0 |  |
| 3 | Cost of Labor | \$3,854 | \$1,533 | \$5,386 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$3,661 | \$1,456 | \$5,117 | 2 |
| 5 | Total Labor and Overhead Cost | \$7,514 | \$2,989 | \$10,503 |  |
| Accounts Payable Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$22.24 | \$22.24 | \$22.24 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 6.0 | 6.0 | 12.0 |  |
| 3 | Cost of Labor | \$133 | \$133 | \$267 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$127 | \$127 | \$254 | 2 |
| 5 | Total Labor and Overhead Cost | \$260 | \$260 | $\underline{\$ 520}$ |  |
| General Accounting Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$38.46 | \$38.46 | \$38.46 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 6.0 | 6.0 | 12.0 |  |
| 3 | Cost of Labor | \$231 | \$231 | \$462 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$219 | \$219 | \$438 | 2 |
| 5 | Total Labor and Overhead Cost | \$450 | \$450 | \$900 |  |
| Finance Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$38.58 | \$38.58 | \$38.58 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 26.0 | 26.0 | 52.0 |  |
| 3 | Cost of Labor | \$1,003 | \$1,003 | \$2,006 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$953 | \$953 | \$1,906 | 2 |
| 5 | Total Labor and Overhead Cost | \$1,956 | \$1,956 | \$3,912 |  |
| Communications Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$45.95 | \$45.95 | \$45.95 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 60.0 | 60.0 | 120.0 |  |
| 3 | Cost of Labor | \$2,757 | \$2,757 | \$5,514 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$2,619 | \$2,619 | \$5,238 | 2 |
| 5 | Total Labor and Overhead Cost | \$5,376 | \$5,376 | \$10,752 |  |
| Business Development Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$40.48 | \$40.48 | \$40.48 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 8.0 | $\underline{0.0}$ | 8.0 |  |
| 3 | Cost of Labor | \$324 | \$0 | \$324 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$308 | \$0 | \$308 | 2 |
| 5 | Total Labor and Overhead Cost | \$631 | \$0 | \$631 |  |
| Information Systems Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$39.79 | \$39.79 | \$39.79 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 3.6 | 1.4 | 5.0 |  |
| 3 | Cost of Labor | \$143 | \$56 | \$199 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$136 | \$53 | \$189 | 2 |
| 5 | Total Labor and Overhead Cost | \$279 | \$109 | \$388 |  |
| Customer Service Department: |  |  |  |  |  |
| 1 | Average Cost of Labor per Hour | \$22.28 | \$22.28 | \$22.28 | 1 |
| 2 | Estimated Annual Hours Required to Accomplish Tasks | 48.0 | 48.0 | 96.0 |  |
| 3 | Cost of Labor | \$1,069 | \$1,069 | \$2,139 |  |
| 4 | Overhead (Line 3 * Overhead rate) | \$1,016 | \$1,016 | \$2,032 | 2 |
| 5 | Total Labor and Overhead Cost | \$2,085 | \$2,085 | \$4,171 |  |
|  | TOTAL ANNUAL COST | \$36,382 | \$23,991 | \$60,373 |  |

## Notes:

1) See Schedule LSM-6, Page 2 of 2.
2) Based on Unitil Service Corp. overhead rate of $95 \%$ (2009 average rate).

## Unitil Service Corp. <br> Average Cost of Labor per Hour by Department

| $\frac{\text { Department }}{(a)}$ | Full Time Equivalent (1) <br> (b) | Annualized Base Labor <br> (c) | Open <br> Positions (d) | $\begin{gathered} \begin{array}{c} \text { Open } \\ \text { Positions (2) } \end{array} \\ (\mathrm{e}) \end{gathered}$ | Total Positions $(\mathrm{b})+(\mathrm{d})=(\mathrm{f})$ | Total Salaries (c) $+(\mathrm{e})=(\mathrm{g})$ | Avg Hrly Labor Cost (3) $(\mathrm{g}) \div(\mathrm{f}) \div 2080=(\mathrm{h})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Energy Contracts | 7.00 | \$533,790 | 0.00 | \$0 | 7.00 | \$533,790 | \$36.66 |
| Regulatory / Legal | 9.00 | \$819,675 | 0.00 | \$0 | 9.00 | \$819,675 | \$43.79 |
| Accounts Payable | 4.00 | \$191,515 | 1.00 | \$39,831 | 5.00 | \$231,346 | \$22.24 |
| General Accounting | 18.30 (4) | \$1,463,875 | 0.00 | \$0 | 18.30 | \$1,463,875 | \$38.46 |
| Finance | 6.00 | \$498,194 | 1.00 | \$63,585 | 7.00 | \$561,779 | \$38.58 |
| Communications | 4.00 | \$382,279 | 0.00 | \$0 | 4.00 | \$382,279 | \$45.95 |
| Business Development | 16.00 | \$1,347,150 | 0.00 | \$0 | 16.00 | \$1,347,150 | \$40.48 |
| Information Systems | 16.00 | \$1,242,527 | 1.00 | \$164,441 | 17.00 | \$1,406,968 | \$39.79 |
| Customer Service | 48.00 | \$2,250,792 | 4.00 | \$159,324 | 52.00 | \$2,410,116 | \$22.28 |

(1) Annualized salaries of active employees as of January 1, 2010.
(2) Salary range midpoint of open positions as of January 1, 2010.
(3) Total Salaries $\div$ Total positions $\div(40$ hours/wk * 52 weeks/yr).
(4) Includes two part-time employees.

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

Residential Rate D 500 kWh Bill


* Impacts do not include the Electricity Consumption Tax.


## Unitil Energy Systems, Inc.

Typical Bill Impacts by Rate Component


Regular General G2 kWh Meter 125 kWh Typical Bill

| Rate Components | Regular General G2 kWh Meter 125 kWh Typical Bill |  |  |  | As Revised Bill* | Difference | \% <br> Difference to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $8 / 1 / 2010$ <br> Current Rate | $11 / 1 / 2010$ <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 | \$0.03413 | \$0.03413 | \$0.00000 | \$4.27 | \$4.27 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01688 | \$0.01688 | \$0.00000 | \$2.11 | \$2.11 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00138 | \$0.00138 | \$0.00000 | \$0.17 | \$0.17 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$0.41 | \$0.41 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.07899 | (\$0.00590) | \$10.61 | \$9.87 | (\$0.74) | -2.8\% |
| Total | \$0.14058 | \$0.13468 | (\$0.00590) | \$17.57 | \$16.84 | (\$0.74) | -2.8\% |
| Total Bill |  |  |  | \$25.97 | \$25.24 | (\$0.74) | -2.8\% |

* Impacts do not include the Electricity Consumption Tax.

Unitil Energy Systems, Inc.
Page 3 of 11
Typical Bill Impacts by Rate Component


* 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 645 kWh Bill - Mean Use*

| Rate Components | 8/1/2010 | 11/1/2010 |  | $\frac{\text { Current }}{\underline{\underline{B i l l *}}}$ | As Revised Bill** | Difference | $\%$ <br> Difference <br> to Total Bill |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | As Revised | Difference |  |  |  |  |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 | \$8.40 | \$8.40 | \$0.00 | 0.0\% |
|  | \$/kWh | \$/kWh |  |  |  |  |  |
| Distribution Charge |  |  |  |  |  |  |  |
| First 250 kWh | \$0.02248 | \$0.02248 | \$0.00000 | \$5.62 | \$5.62 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.02748 | \$0.02748 | \$0.00000 | \$10.85 | \$10.85 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01688 | \$0.01688 | \$0.00000 | \$10.89 | \$10.89 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00138 | \$0.00138 | \$0.00000 | \$0.89 | \$0.89 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$2.13 | \$2.13 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.07899 | (\$0.00590) | \$54.75 | \$50.95 | (\$3.81) | -4.1\% |
| First 250 kWh | \$0.12893 | \$0.12303 | (\$0.00590) |  |  |  |  |
| Excess 250 kWh | \$0.13393 | \$0.12803 | (\$0.00590) |  |  |  |  |
| Total Bill |  |  |  | \$93.53 | \$89.73 | (\$3.81) | -4.1\% |

Residential Rate D 540 kWh Bill - Median Use*

| Rate Components | 8/1/2010 | 11/1/2010 |  |  |  |  | \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Rate | As Revised | Difference | $\frac{\text { Current }}{\underline{\underline{B i l l} l^{* *}}}$ | As Revised Bill** | Difference | 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 |  |  |  |  |  |  |  |
| First 250 kWh | \$0.02248 | \$0.02248 | \$0.00000 | \$5.62 | \$5.62 | \$0.00 | 0.0\% |
| Excess 250 kWh | \$0.02748 | \$0.02748 | \$0.00000 | \$7.97 | \$7.97 | \$0.00 | 0.0\% |
| External Delivery Charge | \$0.01688 | \$0.01688 | \$0.00000 | \$9.12 | \$9.12 | \$0.00 | 0.0\% |
| Stranded Cost Charge | \$0.00138 | \$0.00138 | \$0.00000 | \$0.75 | \$0.75 | \$0.00 | 0.0\% |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 | \$1.78 | \$1.78 | \$0.00 | 0.0\% |
| Default Service Charge | \$0.08489 | \$0.07899 | (\$0.00590) | \$45.84 | \$42.65 | (\$3.19) | -4.0\% |
| First 250 kWh | \$0.12893 | \$0.12303 | (\$0.00590) |  |  |  |  |
| Excess 250 kWh | \$0.13393 | \$0.12803 | (\$0.00590) |  |  |  |  |
| Total Bill |  |  |  | \$79.47 | \$76.29 | (\$3.19) | -4.0\% |

* Based on billing period January through December 2009.
** Impacts do not include the Electricity Consumption Tax.

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

| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Annual | Annual | Proposed | Estimated Annual | Estimated Annual | Proposed | \% Change |
|  | Number of | kWh | kW / kVA | DSC | Revenue \$ Under | Revenue \$ Under | Net Change | DSC |
| Class of Service | Customers | Sales | Sales | Change \$ | Present Rates | Proposed Rates | Revenue \$ | Revenue |
| Residential | 738,543 | 486,378,217 | n/a | (\$2,869,631) | \$70,499,859 | \$67,630,227 | (\$2,869,631) | (4.1\%) |
| General Service | 125,046 | 354,008,286 | 1,298,686 | (\$2,088,649) | \$49,845,066 | \$47,756,417 | (\$2,088,649) | (4.2\%) |
| Large General Service | 1,822 | 364,679,187 | 996,528 | \$2,184,428 | \$39,566,881 | \$41,751,309 | \$2,184,428 | 5.5\% |
| Outdoor Lighting | 117,884 | 9,206,974 | n/a | $(\$ 54,321)$ | \$2,257,205 | \$2,202,884 | $(\$ 54,321)$ | (2.4\%) |
| Total | 983,295 | 1,214,272,664 |  | (\$2,828,173) | \$162,169,011 | \$159,340,838 | $(\$ 2,828,173)$ | (1.7\%) |

(B), (C), (D) Test year billing determinants in DE 05-178
(E) Difference in proposed rate and current rate, times the billing determinants shown in Column (C). The proposed and current DSC for the G1 class used in this analysis are based on the average of the DSC for each 3-month period.
(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 - August 1, 2010 versus November 1, 2010 Impacts do NOT include the Electricity Consumption Tax Impact on D Rate Customers |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Average kWh | Total Bill Using Rates 8/1/2010 | Total Bill Using Rates 11/1/2010 | Total Difference | \% <br> Total Difference |
| 125 | \$24.52 | \$23.78 | (\$0.74) | (3.0\%) |
| 250 | \$40.63 | \$39.16 | (\$1.47) | (3.6\%) |
| 500 | \$74.12 | \$71.17 | (\$2.95) | (4.0\%) |
| 600 | \$87.51 | \$83.97 | (\$3.54) | (4.0\%) |
| 750 | \$107.60 | \$103.17 | (\$4.42) | (4.1\%) |
| 1,000 | \$141.08 | \$135.18 | (\$5.90) | (4.2\%) |
| 1,250 | \$174.56 | \$167.19 | (\$7.38) | (4.2\%) |
| 1,500 | \$208.05 | \$199.20 | (\$8.85) | (4.3\%) |
| 2,000 | \$275.01 | \$263.21 | (\$11.80) | (4.3\%) |
| 3,500 | \$475.91 | \$455.26 | (\$20.65) | (4.3\%) |
| 5,000 | \$676.80 | \$647.30 | (\$29.50) | (4.4\%) |
|  | Rates - Effective August 1, 2010 | Rates - Proposed November 1, 2010 | Difference |  |
| Customer Charge | \$8.40 | \$8.40 | \$0.00 |  |
|  | kWh | kWh | kWh |  |
| Distribution Charge: First 250 kWh | \$0.02248 | \$0.02248 | \$0.00000 |  |
| Excess 250 kWh | \$0.02748 | \$0.02748 | \$0.00000 |  |
| External Delivery Charge | \$0.01688 | \$0.01688 | \$0.00000 |  |
| Stranded Cost Charge | \$0.00138 | \$0.00138 | \$0.00000 |  |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 |  |
| Default Service Charge | \$0.08489 | \$0.07899 | (\$0.00590) |  |
| TOTAL First 250 kWh | \$0.12893 | \$0.12303 | (\$0.00590) |  |
| Excess 250 kWh | \$0.13393 | \$0.12803 | (\$0.00590) |  |


| Unitil Energy Systems, Inc. <br> Typical Bill Impacts - August 1, 2010 versus November 1, 2010 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 | 8/1/2010 | 11/1/2010 | Difference | Difference |
| 20\% 5 | 730 | \$127.58 | \$123.28 | (\$4.31) | (3.4\%) |
| 20\% 10 | 1,460 | \$244.17 | \$235.55 | (\$8.61) | (3.5\%) |
| 20\% 15 | 2,190 | \$360.75 | \$347.83 | (\$12.92) | (3.6\%) |
| 20\% 25 | 3,650 | \$593.92 | \$572.39 | (\$21.53) | (3.6\%) |
| 20\% 50 | 7,300 | \$1,176.84 | \$1,133.77 | (\$43.07) | (3.7\%) |
| 20\% 75 | 10,950 | \$1,759.76 | \$1,695.16 | (\$64.61) | (3.7\%) |
| 20\% 100 | 14,600 | \$2,342.69 | \$2,256.55 | (\$86.14) | (3.7\%) |
| 20\% 150 | 21,900 | \$3,508.53 | \$3,379.32 | (\$129.21) | (3.7\%) |
| 36\% 5 | 1,314 | \$191.77 | \$184.02 | (\$7.75) | (4.0\%) |
| 36\% 10 | 2,628 | \$372.54 | \$357.04 | (\$15.51) | (4.2\%) |
| 36\% 15 | 3,942 | \$553.32 | \$530.06 | (\$23.26) | (4.2\%) |
| 36\% 25 | 6,570 | \$914.86 | \$876.10 | (\$38.76) | (4.2\%) |
| 36\% 50 | 13,140 | \$1,818.72 | \$1,741.19 | (\$77.53) | (4.3\%) |
| 36\% 75 | 19,710 | \$2,722.58 | \$2,606.29 | (\$116.29) | (4.3\%) |
| 36\% 100 | 26,280 | \$3,626.43 | \$3,471.38 | (\$155.05) | (4.3\%) |
| 36\% 150 | 39,420 | \$5,434.15 | \$5,201.57 | (\$232.58) | (4.3\%) |
| 50\% 5 | 1,825 | \$247.94 | \$237.17 | (\$10.77) | (4.3\%) |
| 50\% 10 | 3,650 | \$484.87 | \$463.34 | (\$21.54) | (4.4\%) |
| 50\% 15 | 5,475 | \$721.81 | \$689.50 | (\$32.30) | (4.5\%) |
| 50\% 25 | 9,125 | \$1,195.68 | \$1,141.84 | (\$53.84) | (4.5\%) |
| 50\% 50 | 18,250 | \$2,380.36 | \$2,272.68 | (\$107.68) | (4.5\%) |
| 50\% 75 | 27,375 | \$3,565.04 | \$3,403.52 | (\$161.51) | (4.5\%) |
| 50\% 100 | 36,500 | \$4,749.72 | \$4,534.37 | (\$215.35) | (4.5\%) |
| 50\% 150 | 54,750 | \$7,119.07 | \$6,796.05 | (\$323.02) | (4.5\%) |
|  | Rates - Effective August 1, 2010 | Rates - Proposed November 1, 2010 | Difference |  |  |
| Customer Charge | \$11.00 | \$11.00 | \$0.00 |  |  |
|  | All kW | All kW | All kW |  |  |
| Distribution Charge | \$7.03 | \$7.03 | \$0.00 |  |  |
| Stranded Cost Charge | \$0.24 | \$0.24 | \$0.00 |  |  |
| TOTAL | \$7.27 | \$7.27 | \$0.00 |  |  |
|  | kWh | kWh | kWh |  |  |
| Distribution Charge | \$0.00438 | \$0.00438 | \$0.00000 |  |  |
| External Delivery Charge | \$0.01688 | \$0.01688 | \$0.00000 |  |  |
| Stranded Cost Charge | \$0.00046 | \$0.00046 | \$0.00000 |  |  |
| System Benefits Charge | \$0.00330 | \$0.00330 | \$0.00000 |  |  |
| Default Service Charge | \$0.08489 | \$0.07899 | (\$0.00590) |  |  |
| TOTAL | \$0.10991 | \$0.10401 | (\$0.00590) |  |  |







[^0]:    ${ }^{1}$ In its March 12, 2010 filing, UES provided the Non-G1 Class Power Supply Charge reconciliation balance as of January 31, 2010, as adjusted, in the amount of $(\$ 224,673)$. UES apportioned this balance based on kWh over the twelve month period May 2010 through April 2011 as follows: $(\$ 113,347)$ in May-October 2010 and $(\$ 111,325)$ in November 2010-April 2011. As shown on Schedule LSM-2, Page 1, the reconciliation amount used in this filing is $(\$ 111,325)$. Also in its March 12, 2010 filing, UES provided the Non-G1 Class RPS Charge reconciliation balance as of January 31, 2010, as adjusted, in the amount of $\$ 21,646$. UES apportioned this

[^1]:    ${ }^{2}$ Notice of the meeting was provided to the OCA , which chose not to participate.

[^2]:    ${ }^{3}$ In its March 12, 2010 filing, UES provided the G1 Class Power Supply Charge reconciliation balance as of January 31, 2010, as adjusted, in the amount of $(\$ 32,250)$. UES apportioned this balance based on kWh over the twelve month period May 2010 through April 2011 as follows: $(\$ 8,550)$ in May-July 2010, $(\$ 8,504)$ in August-October 2010, $(\$ 7,612)$ in November 2010-January 2011, and $(\$ 7,583)$ in February-April 2011. As shown on Schedule LSM-4, Page 1, the reconciliation amount used in this filing is (\$7,612). Also in its March 12, 2010 filing, UES provided the G1 Class RPS Charge reconciliation balance as of January 31, 2010, as adjusted, in the amount of $\$ 49,175$. UES apportioned this balance based on kWh over the twelve month period May 2010 through April 2011 as follows: $\$ 13,038$ in May-July 2010,

