

UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF  
KRISTINA M. GUAY

New Hampshire Public Utilities Commission  
Docket No. DE 11-028

TABLE OF CONTENTS

I.	INTRODUCTION	Page 1
II.	PURPOSE OF TESTIMONY	Page 2
III.	SUMMARY OF TESTIMONY	Page 2
IV.	LEAD LAG STUDY METHODOLOGY	Page 3
V.	2010 STUDY RESULTS	Page 4
VI.	CONCLUSION	Page 11

LIST OF SCHEDULES

Schedule KG-1: Unitil Energy Systems, Inc. 2010 Default Service and  
Renewable Energy Credits Lead Lag Study

Schedule KG-2: Confidential/Redacted Workpapers for the Unitil Energy Systems, Inc.  
2010 Default Service and Renewable Energy Credits Lead Lag Study

1   **I.       INTRODUCTION**

2   **Q.       Please state your name and business address.**

3   A.       My name is Kristina M. Guay. My business address is 6 Liberty Lane West,  
4           Hampton, New Hampshire 03842.

6   **Q.       What is your position and what are your responsibilities?**

7   A.       I am a Senior Financial Analyst for Unitil Service Corp., a subsidiary of Unitil  
8           Corporation that provides managerial, financial, regulatory and engineering  
9           services to Unitil Corporation's principal subsidiaries: Fitchburg Gas and  
10          Electric Light Company, Granite State Gas Transmission, Inc., Northern  
11          Utilities, Inc., and Unitil Energy Systems, Inc. ("UES" or the "Company"). In  
12          this capacity I perform complex financial planning, forecasting and analysis  
13          and generate high quality and analytical information and reports.

15   **Q.       Please describe your educational and professional background.**

16   A.       I received a Bachelor of Science degree in Business with a concentration in  
17          Accounting from Southern New Hampshire University in May of 2007. I  
18          came to work for Unitil Service Corp. in August of 2004. I began working in  
19          the Customer Accounting department as the Senior Financial Systems  
20          Analyst. In this position I was responsible for coordinating the month end  
21          revenue reconciliation for all Unitil subsidiaries. I also directed the Billing  
22          Associates in the maintenance of the customer billing system, ensuring

1 accurate and timely bills were generated. In August of 2010, I was promoted  
2 to Senior Financial Analyst as a member of the Finance Department. From  
3 my prior role in Customer Accounting, I have direct experience with revenue  
4 reconciliation and customer billing which are direct inputs into this lead lag  
5 study. I also have several years of experience in financial planning,  
6 forecasting and analysis from my approximate 7 years at Unitil in various  
7 roles.

8  
9 **II. PURPOSE OF TESTIMONY**

10 **Q. What is the purpose of your testimony?**

11 A. I will discuss the development of the 2010 UES Default Service and Renewable  
12 Energy Credits Lead Lag Study ("2010 Study"), which is integral to the  
13 calculation of cash working capital to be recovered in Default Service rates for G1  
14 and Non-G1 customers.

15  
16  
17 **III. SUMMARY OF TESTIMONY**

18 **Q. Please summarize your testimony.**

19 A. My testimony presents and supports UES' 2010 Default Service ("DS") and  
20 Renewable Energy Credits ("RECs") Lead Lag Study. The 2010 Study, presented  
21 in this filing as Schedule KG-1, is based upon data for the period January 1, 2010

1 through December 31, 2010 and calculates the net lead period for G1 customers to  
2 be 10.30 days and net lag period for Non-G1 customers to be 13.72 days  
3

4 **Q. Are the results of the 2010 Study included in the DS rates proposed in this**  
5 **filing?**

6 A. Yes, the 2010 Study results are used to derive supply-related working capital  
7 costs included in DS rates beginning May 1, 2011, as described in the testimony  
8 of UES witness Linda S. McNamara.  
9

10 **IV. LEAD LAG STUDY METHODOLOGY**

11 **Q. How was the 2010 Study conducted?**

12 A. The 2010 Study follows similar methodology as in UES' 2009 Default Service  
13 and Renewable Energy Credits Lead Lag Study ("2009 Study") that was  
14 submitted in Docket No. DE 10-028. The 2010 Study determines the number of  
15 days between the time funds are required to pay for DS purchased power and  
16 REC purchases (expense lead) and the time that those funds are available from the  
17 payment of customer bills (revenue lag). The revenue lag period includes four  
18 calculations: "receipt of electric service to meter reading", "meter reading to  
19 recording of accounts receivable", "billing to collection", and "collection to  
20 receipt of available funds". The expense lead period consists of the lead in  
21 payment of DS purchased power costs and REC costs based upon the following  
22 calculations: lead period, average days lead, weighted cost, days lead and

1 weighted days lead. Each of these steps is explained in more detail below. UES  
2 based its 2010 Study upon data for the twelve months ended December 31, 2010,  
3 and calculated net lead lag days separately for the G1 and Non-G1 customer  
4 classes.

5  
6 **Q. Does the 2010 Study incorporate the requirements of the Lead Lag**  
7 **Settlement Letter dated July 16, 2009, under docket DE 09-009?**

8 A. Yes, as in the 2009 Study in Docket No. DE 10-028, UES incorporated the  
9 requirements of the Settlement. The 2010 Study, in Docket No. 11-028, follows  
10 the same methodology as used in the 2009 Study which conforms to the  
11 requirements of the Settlement.

12  
13 **V. 2010 STUDY RESULTS**

14 **Q. Please define the terms “lag days” and “lead days.”**

15 A. Lag days are the number of days between delivery of electric service by UES to  
16 its customers and the receipt by the Company of available funds from customers’  
17 payments (revenue lag). Lead days are the number of days between the mid-point  
18 of the energy delivery period to UES and the payment date by UES to DS  
19 suppliers or for RECs (expense lead).

20  
21 **Q. How is revenue lag computed?**

1 A. Revenue lag is computed in days, consisting of four time components: (1) days  
2 from receipt of electric service to meter reading; (2) days from meter reading to  
3 recording of accounts receivable; (3) days from billing to collection; and (4) days  
4 from collection to receipt of available funds. The sum of the days associated with  
5 these four lag components is the total revenue lag. The calculations are  
6 performed separately for G1 and Non-G1 customer classes, as appropriate. Refer  
7 to Schedule KG-1, pages 4 through 19 of 23.

8

9 **Q. What is the lag period for the component "receipt of electric service to meter**  
10 **reading" in the 2010 Study?**

11 A. The 2010 average lag for "receipt of electric service to meter reading" is 15.21  
12 days. This lag was obtained by dividing the number of days in the test year (365  
13 days) by 24 to determine the average monthly service period. This result is  
14 applicable to both the G1 and Non-G1 customer classes. See Schedule KG-1,  
15 page 5 of 23.

16

17

18 **Q. What is the lag period for the component "meter reading to recording of**  
19 **accounts receivable?"**

20 A. The 2010 average "meter reading to recording of accounts receivable" lag is 1.14  
21 days, which is applicable to both the G1 and the Non-G1 customer classes. This

lag determines the time required to process the meter reading data and record accounts receivable. See Schedule KG-1, pages 6 through 10 of 23.

**Q. What is the lag period for the component "billing to collection?"**

A. The 2010 average "billing to collection" lag is 23.93 days for G1 customers and 32.78 days for Non-G1 customers. This component was calculated separately for the G1 and Non-G1 customer groups and is derived by the accounts receivable turnover method. The lag reflects the time delay between the mailing of customer bills and the receipt of the billed revenues from customers. See Schedule KG-1, pages 11 and 12 of 23 for G1 and Non-G1 results, respectively.

**Q. What is the lag period for the component "collection to receipt of available funds?"**

A. The 2010 average "collection to receipt of available funds" lag is 1.37 days. This represents the average weighted check-float period, or the lag that takes place during the period from when payment is received from customers to the time such funds are available for use by the Company. This result is applicable to both the G1 and Non-G1 customer classes. See Schedule KG-1, pages 13 through 19 of 23.

**Q. Is the total revenue lag computed from these separate lag calculations?**



1 A. Yes. The total revenue lag of 41.65 days for G1 customers and 50.50 days for  
2 Non-G1 customers is computed by adding the number of days associated with  
3 each of the four revenue lag components described above. This total number of  
4 lag days represents the amount of time between the recorded delivery of service to  
5 customers and the receipt of the related revenues from customers. See Schedule  
6 KG-1, page 4, line 6.

7  
8 **Q. Please turn to the lead periods in the 2010 Study. In determining the expense**  
9 **lead period, how is the weighted days lead in payment of DS purchased**  
10 **power costs determined?**

11 A. First, the monthly expense lead for each DS power supply vendor is determined  
12 by aggregating (1) the average days in the period that the energy or service is  
13 received and (2) the additional billing period including the payment day.

14  
15 The aggregate lead days are then weighted by the dollar amount of the billings.  
16 Weighted days lead are calculated separately for G1 and Non-G1 customers, by  
17 supplier, and are shown in the Confidential Workpapers to the 2010 Study,  
18 Schedule KG-2.

19  
20 As of March 1, 2011, prior period adjustments made in 2011 related to 2010 were  
21 included in the calculation. Prior year adjustments made in 2010 that relate to  
22 2009 were not included in the calculation.

1

2 **Q. How is the weighted days lead in payment for RECs determined?**

3 A. The weighted days lead in payment for RECs was determined using the same  
4 methodology applicable to DS power suppliers described above. In applying this  
5 methodology to 2010 RECs, three assumptions were made to reflect actual  
6 payment activity towards the Company's 2010 REC commitment. First, the  
7 monthly cost of the RECs was assumed to be equivalent to the estimated costs of  
8 RECs included in rates in 2010. Second, actual payment activity as of March 1,  
9 2011 towards the Company's 2010 REC commitment was applied in  
10 chronological order to the earliest month's estimated cost. Third, a payment date  
11 of July 1, 2011 was used for all remaining 2010 REC commitments, which is the  
12 last day to obtain 2010 RECs and/or make alternative compliance payments. See  
13 Schedule KG-1, page 21 of 23 for the REC summary related to G1 customers and  
14 page 23 of 23 for the REC summary related to Non-G1 customers.

15

16 **Q. What are the combined weighted days lead in payment of DS purchased**  
17 **power costs and RECs for G1 and Non-G1 customers?**

18 A. The weighted days lead for G1 customers is 51.95 days, as shown on Schedule  
19 KG-1, page 20 of 23. The weighted days lead for Non-G1 customers is 36.78  
20 days, as shown on Schedule KG-1, page 22 of 23.

21

22 **Q. How is the total DS and REC lead lag determined?**

1 A. For G1 customers, the DS and REC expense lead of 51.95 days is subtracted from  
2 the lag in receipt of revenue of 41.65 days to produce the total DS and REC lead  
3 of 10.30 days. For Non-G1 customers, the DS and REC expense lead of 36.78  
4 days is subtracted from the lag in receipt of revenue of 50.50 days to produce the  
5 total DS and REC lag of 13.72 days. See Schedule KG-1, page 4 of 23.

6  
7 **Q. How do the results of the 2010 Study compare to the 2009 Study for G1**  
8 **customers?**

9 A. For G1 customers, the net lead in the 2010 Study of 10.30 days represents a  
10 difference of 16.77 days from the net lag in the 2009 Study of 6.47 days. The  
11 difference was driven by an increase in DS and REC expense lead of 16.60 days  
12 and by an overall revenue lag decrease of 0.17 days.

13  
14 The revenue lag component, "billing to collection" in the 2010 Study is 23.93  
15 days compared to 24.11 days in the 2009 Study, a decrease of 0.18 days. All of  
16 the other components in revenue lag increased a total of 0.01 days in the 2010  
17 Study compared to the 2009 Study. The combined change in all of the revenue  
18 lag components resulted in an overall revenue lag decrease of 0.17 days.

19  
20 The DS and REC expense lead is 51.95 days in the 2010 Study compared to 35.35  
21 days in the 2009 Study, an increase of 16.60 days. The overall net increase in the  
22 REC portion of the expense lead is attributable to an increase in the weighted days

1 lead which was largely driven by the increase in weighted cost from 2.33% in the  
2 2009 Study to 4.91% in the 2010 Study. The overall net increase in the DS  
3 portion of the expense lead is largely attributable to an increase in average days  
4 lead of 28.10 days in the 2009 Study to 36.25 days in the 2010 Study. This  
5 increase in average days lead in the 2010 Study is largely a result of negative  
6 prior period adjustments in the 2009 Study from one of its DS power supply  
7 contracts which resulted in decreasing the average days lead in the 2009 Study.  
8

9 **Q. How do the results of the 2010 Study compare to the 2009 Study for Non-G1**  
10 **customers?**

11 A. For Non-G1 customers, the net lag in the 2010 Study of 13.72 days is 4.32 days  
12 higher than the net lag in the 2009 Study of 9.40 days. The increase in net lag is  
13 attributable to a 1.12 day increase in revenue lag and a 3.20 day decrease in the  
14 DS and REC expense lead.  
15

16 The revenue lag component, “meter reading to recording of accounts receivable”  
17 was 1.14 days in the 2010 Study, which is 0.01 days less than that in the 2009  
18 Study. “Billing to collection” was approximately 1.11 days higher and all other  
19 revenue lag components were approximately 0.02 days higher in the 2010 Study  
20 compared to the 2009 Study. The net effect of all of the changes in the revenue  
21 lag components resulted in a 1.12 increase in the 2010 revenue lag compared to  
22 2009.

1

2       The DS and REC expense lead is 3.20 days lower in 2010 compared to 2009. In  
3       2010, the average days lead for DS was 28.42 days compared to 33.48 days in  
4       2009. The decrease in average days lead was driven by an increase in weighted  
5       cost of its semi-monthly power supply contract. The weighted cost of this semi-  
6       monthly contract went from 27.87% in 2009 to 69.88% in 2010. The shifting of  
7       the weighted cost to this semi-monthly contract is the primary contributor to the  
8       decrease in average days lead in 2010 for the DS portion. The REC portion of the  
9       expense lead went up from 7.19 weighted days lead in 2009 to 9.11 weighted days  
10      lead in 2010. This increase was largely driven by an increase in the weighted cost  
11      from 2.05% in 2009 to 2.65% in 2010.

12

13   **VI.   CONCLUSION**

14   **Q.   Does this conclude your testimony?**

15   **A.   Yes, it does.**