

UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF  
KRISTINA M. GUAY

New Hampshire Public Utilities Commission  
Docket No. DE 12-003

## 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.	2011 STUDY RESULTS	Page 4
VI.	CONCLUSION	Page 11

## LIST OF SCHEDULES

Schedule KG-1: Unitil Energy Systems, Inc. 2011 Default Service and  
Renewable Energy Credits Lead Lag Study

Schedule KG-2: Confidential/Redacted Workpapers for the Unitil Energy Systems, Inc.  
2011 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.

5

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.

14

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 8 years at Unitil in various  
7 roles.

8

9 **Q. Have you previously testified before the New Hampshire Public Utilities**  
10 **Commission (the “Commission”)?**

11 A. Yes, I have previously presented testimony before this Commission in Docket No.  
12 DE 11-028.

13

14 **II. PURPOSE OF TESTIMONY**

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

16 A. I will discuss the development of the 2011 UES Default Service and Renewable  
17 Energy Credits Lead Lag Study (“2011 Study”), which is integral to the  
18 calculation of cash working capital to be recovered in Default Service rates for G1  
19 and Non-G1 customers.

20

21 **III. SUMMARY OF TESTIMONY**

22 **Q. Please summarize your testimony.**

1 A. My testimony presents and supports UES' 2011 Default Service ("DS") and  
2 Renewable Energy Credits ("RECs") Lead Lag Study. The 2011 Study, presented  
3 in this filing as Schedule KG-1, is based upon data for the period January 1, 2011  
4 through December 31, 2011 and calculates the net lead period for G1 customers to  
5 be 0.85 days and net lag period for Non-G1 customers to be 12.21 days.

6

7 **Q. Are the results of the 2011 Study included in the DS rates proposed in this**  
8 **filing?**

9 A. Yes, the 2011 Study results are used to derive supply-related working capital  
10 costs included in DS rates beginning May 1, 2012, as described in the testimony  
11 of UES witness Linda S. McNamara.

12

13 **IV. LEAD LAG STUDY METHODOLOGY**

14 **Q. How was the 2011 Study conducted?**

15 A. The 2011 Study follows similar methodology as in UES' 2010 Default Service  
16 and Renewable Energy Credits Lead Lag Study ("2010 Study") that was  
17 submitted in Docket No. DE 11-028. The 2011 Study determines the number of  
18 days between the time funds are required to pay for DS purchased power and  
19 REC purchases (expense lead) and the time that those funds are available from the  
20 payment of customer bills (revenue lag). The revenue lag period includes four  
21 calculations: "receipt of electric service to meter reading", "meter reading to  
22 recording of accounts receivable", "billing to collection", and "collection to

1 receipt of available funds”. The expense lead period consists of the lead in  
2 payment of DS purchased power costs and REC costs based upon the following  
3 calculations: lead period, average days lead, weighted cost, days lead and  
4 weighted days lead. Each of these steps is explained in more detail below. UES  
5 based its 2011 Study upon data for the twelve months ended December 31, 2011,  
6 and calculated net lead lag days separately for the G1 and Non-G1 customer  
7 classes.

8

9 **Q. Does the 2011 Study incorporate the requirements of the Lead Lag**  
10 **Settlement Letter dated July 16, 2009, under docket DE 09-009?**

11 A. Yes, the 2011 Study conforms to the requirements specified in the Settlement  
12 Letter under Docket No. DE 09-009. The 2011 Study follows the same  
13 methodology as used in the 2009 and 2010 Studies which conform to the  
14 requirements of the Settlement.

15

16 **V. 2011 STUDY RESULTS**

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

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

1

2 **Q. How is revenue lag computed?**

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

10

11 **Q. What is the lag period for the component "receipt of electric service to meter  
12 reading" in the 2011 Study?**

13 A. The 2011 average lag for "receipt of electric service to meter reading" is 15.21  
14 days. This lag was obtained by dividing the number of days in the test year (365  
15 days) by 24 to determine the average monthly service period. This result is  
16 applicable to both the G1 and Non-G1 customer classes. See Schedule KG-1,  
17 page 5 of 23.

18

19

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

1 A. The 2011 average “meter reading to recording of accounts receivable” lag is 1.35  
2 days, which is applicable to both the G1 and the Non-G1 customer classes. This  
3 lag determines the time required to process the meter reading data and record  
4 accounts receivable. See Schedule KG-1, pages 6 through 10 of 23.

5

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

7 A. The 2011 average “billing to collection” lag is 24.73 days for G1 customers and  
8 33.16 days for Non-G1 customers. This component was calculated separately for  
9 the G1 and Non-G1 customer groups and is derived by the accounts receivable  
10 turnover method. The lag reflects the time delay between the mailing of customer  
11 bills and the receipt of the billed revenues from customers. See Schedule KG-1,  
12 pages 11 and 12 of 23 for G1 and Non-G1 results, respectively.

13

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

16 A. The 2011 average “collection to receipt of available funds” lag is 1.30 days. This  
17 represents the average weighted check-float period, or the lag that takes place  
18 during the period from when payment is received from customers to the time such  
19 funds are available for use by the Company. This result is applicable to both the  
20 G1 and Non-G1 customer classes. See Schedule KG-1, pages 13 through 19 of  
21 23.

22

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

2 A. Yes. The total revenue lag of 42.59 days for G1 customers and 51.02 days for  
3 Non-G1 customers is computed by adding the number of days associated with  
4 each of the four revenue lag components described above. This total number of  
5 lag days represents the amount of time between the recorded delivery of service to  
6 customers and the receipt of the related revenues from customers. See Schedule  
7 KG-1, page 4, line 6.

8

9 **Q. Please turn to the lead periods in the 2011 Study. In determining the expense**  
10 **lead period, how is the weighted days lead in payment of DS purchased**  
11 **power costs determined?**

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

15

16 The aggregate lead days are then weighted by the dollar amount of the billings.  
17 Weighted days lead are calculated separately for G1 and Non-G1 customers, by  
18 supplier, and are shown in the Confidential Workpapers to the 2011 Study,  
19 Schedule KG-2.

20

1 As of February 29, 2012, prior period adjustments made in 2012 related to 2011  
2 were included in the calculation. Prior year adjustments made in 2011 that relate  
3 to 2010 were not included in the calculation.  
4

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

6 A. The weighted days lead in payment for RECs was determined using the same  
7 methodology applicable to DS power suppliers described above. In applying this  
8 methodology to 2011 RECs, three assumptions were made to reflect actual  
9 payment activity towards the Company's 2011 REC commitment. First, the  
10 monthly cost of the RECs was assumed to be equivalent to the estimated costs of  
11 RECs included in rates in 2011. Second, actual payment activity as of February  
12 29, 2012 towards the Company's 2011 REC commitment was applied in  
13 chronological order to the earliest month's estimated cost. Third, a payment date  
14 of July 1, 2012 was used for all remaining 2011 REC commitments, which is the  
15 last day to obtain 2011 RECs and/or make alternative compliance payments. See  
16 Schedule KG-1, page 21 of 23 for the REC summary related to G1 customers and  
17 page 23 of 23 for the REC summary related to Non-G1 customers.  
18

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

1 A. The weighted days lead for G1 customers is 43.44 days, as shown on Schedule  
2 KG-1, page 20 of 23. The weighted days lead for Non-G1 customers is 38.81  
3 days, as shown on Schedule KG-1, page 22 of 23.

4  
5 **Q. How is the total DS and REC lead lag determined?**

6 A. For G1 customers, the DS and REC expense lead of 43.44 days is subtracted from  
7 the lag in receipt of revenue of 42.59 days to produce the total DS and REC lead  
8 of 0.85 days. For Non-G1 customers, the DS and REC expense lead of 38.81  
9 days is subtracted from the lag in receipt of revenue of 51.02 days to produce the  
10 total DS and REC lag of 12.21 days. See Schedule KG-1, page 4 of 23.

11

12 **Q. How do the results of the 2011 Study compare to the 2010 Study for G1**  
13 **customers?**

14 A. For G1 customers, the net lead in the 2011 Study of 0.85 days represents a  
15 difference of 9.45 days from the net lead in the 2010 Study of 10.30 days. The  
16 difference was driven by a decrease in DS and REC expense lead of 8.51 days and  
17 by an overall revenue lag increase of 0.94 days.

18

19 The revenue lag component, “billing to collection” in the 2011 Study is 24.73  
20 days compared to 23.93 days in the 2010 Study, an increase of 0.80 days. All of  
21 the other components in revenue lag increased a total of 0.14 days in the 2011

1 Study compared to the 2010 Study. The combined change in all of the revenue  
2 lag components resulted in an overall revenue lag increase of 0.94 days.

3  
4 The DS and REC expense lead is 43.44 days in the 2011 Study compared to 51.95  
5 days in the 2010 Study, a decrease of 8.51 days. The overall net decrease in the  
6 REC portion of the expense lead is attributable to two factors. First, there was a  
7 decrease in the weighted days lead which was largely driven by the decrease in  
8 weighted cost from 4.91% in the 2010 Study to 3.48% in the 2011 Study.

9 Second, there was a decrease in the average days lead from 355.97 days in the  
10 2010 Study to 313.70 days in the 2011 study. The overall net decrease in the DS  
11 portion of the expense lead is largely attributable to a decrease in average days  
12 lead of 36.25 days in the 2010 Study to 33.71 days in the 2011 Study.

13

14 **Q. How do the results of the 2011 Study compare to the 2010 Study for Non-G1**  
15 **customers?**

16 A. For Non-G1 customers, the net lag in the 2011 Study of 12.21 days is 1.51 days  
17 less than the net lag in the 2010 Study of 13.72 days. The decrease in net lag is  
18 attributable to a 0.52 day increase in revenue lag and a 2.03 day increase in the  
19 DS and REC expense lead.

20

21 The revenue lag component, “meter reading to recording of accounts receivable”  
22 was 1.35 days in the 2011 Study, which is 0.21 days more than that in the 2010

1 Study. “Billing to collection” was approximately 0.38 days higher and all other  
2 revenue lag components were approximately 0.07 days lower in the 2011 Study  
3 compared to the 2010 Study. The net effect of all of the changes in the revenue  
4 lag components resulted in a 0.52 increase in the 2011 revenue lag compared to  
5 2010.

6

7 The DS and REC expense lead is 2.03 days higher in 2011 compared to 2010. In  
8 2011, the average days lead for DS was 29.33 days compared to 28.42 days in  
9 2010. The REC portion of the expense lead went up from 9.11 weighted days  
10 lead in 2010 to 10.43 weighted days lead in 2011. This increase was largely  
11 driven by an increase in the weighted cost from 2.65% in 2010 to 3.26% in 2011.  
12

13 **VI. CONCLUSION**

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

15 **A.** Yes, it does.