

UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF  
DANIEL J. HURSTAK

New Hampshire Public Utilities Commission  
Docket No. DE 22-###

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LIST OF SCHEDULES

Schedule DJH-1            2021 UES External Delivery Charge Lead Lag Study

1 **I. INTRODUCTION**

2 **Q. State your name and business address.**

3 A. My name is Daniel J. Hurstak and my business address is 6 Liberty Lane West,  
4 Hampton, New Hampshire 03842.

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

6 A. I am the Chief Accounting Officer and Controller for Unitil Corporation (“Unitil”)  
7 and the Controller for Unitil Energy Systems, Inc. (“UES” or the “Company”). I  
8 am also the Controller for Unitil Service Corp. (“Unitil Service”), a subsidiary of  
9 Unitil Corporation that provides managerial, financial, regulatory and engineering  
10 services to Unitil Corporation’s utility subsidiaries including Unitil Energy  
11 Systems, Inc. I am responsible for the accounting and financial reporting  
12 activities for Unitil and its subsidiaries.

13 **Q. Describe your business and educational background.**

14 Prior to joining Unitil in March 2020, I was Vice President, Corporate  
15 Accounting, at Fidelity Investments (a multinational financial services  
16 corporation headquartered in Boston, Massachusetts), from June 2016 until  
17 February 2020. Prior to Fidelity, I was a senior manager at  
18 PricewaterhouseCoopers LLP (“PwC”) (a multinational professional services  
19 network of firms operating as partnerships under the PwC brand) from September  
20 2009 until May 2016, and I began my career at PwC in September 2001. I have a  
21 Bachelor of Science degree in Accounting from Bentley College, Waltham,

1 Massachusetts, and I am a Certified Public Accountant in the Commonwealth of  
2 Massachusetts.

3 **Q. Have you previously testified before the New Hampshire Public Utilities**  
4 **Commission (“NHPUC” or the “Commission”) or other regulatory agencies?**

5 A. Yes, I have previously testified before the Commission in the Company’s most  
6 recent base rate case proceeding (Docket DE 21-030).

7 **II. PURPOSE OF TESTIMONY**

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

9 A. The purpose of my testimony is to present the Company’s 2021 External Delivery  
10 Charge (“EDC”) Lead Lag Study (“2021 Study”), which is integral to the  
11 calculation of cash working capital to be recovered in External Delivery rates for  
12 Transmission and Non-Transmission related costs.

13 **III. CASH WORKING CAPITAL**

14 **Q. Define the term “cash working capital” as used in utility ratemaking.**

15 A. Cash working capital is the amount of investor-supplied capital required by the  
16 Company to fund operations in the time period between when expenditures are  
17 incurred to provide service to customers and when payment is actually received  
18 from customers. Cash working capital represents dollar amounts funded by  
19 investors to provide safe and reliable electric distribution services prior to receipt  
20 of payment for those services from customers.

1 **IV. SUMMARY OF TESTIMONY**

2 **Q. Please summarize your testimony.**

3 A. My testimony presents and supports the Company's 2021 EDC Lead Lag Study.  
4 The 2021 Study, presented in this filing as Schedule DJH-1, is based upon data  
5 for the period January 1, 2021 through December 31, 2021 and calculates a net  
6 lead period for Transmission related costs to be 0.40 days and a net lag period for  
7 Non-Transmission related costs to be 18.25 days.

8 **Q. Are the results of the 2021 Study included in the EDC rates proposed in this**  
9 **filing?**

10 A. Yes, the 2021 Study results are used to derive the Transmission and Non-  
11 Transmission related cash working capital amounts included in EDC rates  
12 beginning August 1, 2022, as described in the testimony of UES witness Linda S.  
13 McNamara.

14 **V. LEAD LAG STUDY METHODOLOGY**

15 **Q. What is a lead-lag study?**

16 A. A lead-lag study is an analysis designed to determine the funding required to  
17 operate a company on a day-to-day basis. A lead-lag study compares (1) the  
18 timing difference between the receipt of services by customers and their  
19 subsequent payment for these same services and (2) the timing difference between  
20 the incurrence of costs by the Company and its subsequent payment of those  
21 costs.

1 A lead-lag study therefore must compute a revenue lag or (lead), and an expense  
2 lag or (lead). Cash working capital was developed using systematic reviews of  
3 cash flows for the Company's revenues, Transmission related expenses, and Non-  
4 Transmission related expenses.

5 **Q. Define the terms "lag days" and "lead days" as used in your testimony.**

6 A. Revenue lag is the number of days between delivery of service to the Company's  
7 customers and subsequent receipt by the Company of payment for the service.  
8 Expense lag is the number of days between the receipt of goods or services  
9 provided to the Company by vendors and payment for such goods or services by  
10 the Company. Because the Company's electric customers receive service prior to  
11 paying for it, the Company experiences a revenue lag in its daily operations. The  
12 Company typically pays expenses after vendors have provided their goods or  
13 services, which results in an expense lag. The Company will occasionally pay for  
14 goods or services before they are provided, which results in an expense lead.

15 **Q. How was the 2021 Study prepared?**

16 A. The 2021 Study compares the lag days for the recovery of revenue to the lead or  
17 lag days for the payment of certain Transmission and Non-Transmission related  
18 costs to calculate net lead days or net lag days. UES prepared its 2021 Study  
19 using data for the twelve months ended December 31, 2021, and calculated net  
20 lead or lag days separately for Transmission and Non-Transmission related costs.

21 **VI. 2021 STUDY RESULTS**

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

1 A. Revenue lag is the length of time that occurs between the Company’s provision of  
2 service to its customers and the subsequent receipt of payment for those services.  
3 The measurement of revenue lag consists of four components: (1) service lag, (2)  
4 billing lag, (3) collection lag, and (4) collection to receipt of available funds  
5 (“revenue float”). Since the time periods for these four components are mutually  
6 exclusive, revenue lag is computed by adding the total number of days associated  
7 with each of the four revenue lag components. This total number of lag days  
8 represents the amount of time between the recorded delivery of service to  
9 customers and the receipt of the related revenues from customers. Refer to  
10 Schedule DJH-1, pages 2 to 8.

11 **Q. Describe how you calculate service lag.**

12 A. The service lag is the average time span between the mid-point of the customer’s  
13 consumption interval, also known as the usage period, and the time that such  
14 usage is recorded by the Company for billing purposes. This usage period  
15 determines the average length of time over which the billed services are provided  
16 and establishes a common point in time from which to measure (1) the time of  
17 reimbursement for the billed services, and (2) the time at which the accrued costs  
18 for the usage period are actually paid. The 2021 average service lag is 15.21  
19 days. This service lag was obtained by dividing the number of days in the test  
20 year (365 days) by 24 to determine the average monthly service period. Refer to  
21 Schedule DJH-1, page 3 of 27.

1 **Q. Describe the calculation of billing lag.**

2 A. The billing lag is the time required to process and send out customer bills. The  
3 billing lag begins at the end of the service period when customer consumption is  
4 metered, and it ends when the bills are rendered and billings are posted to  
5 accounts receivable. The billing lag may be influenced by factors such as whether  
6 automated or manual meter reading systems are employed, the generation of  
7 invoices from this metering data and other processes affecting the time to post  
8 billings to accounts receivable. The Company uses an automated meter reading  
9 system that posts meter readings daily for billing the next day, and the meter  
10 reading is recorded into accounts receivable on the same day. The 2021 average  
11 billing lag is 1.01 days. This billing lag determines the time required to process  
12 the meter reading data and record accounts receivable. Refer to Schedule DJH-1,  
13 pages 4 and 5 of 27.

14 **Q. Describe the calculation of collection lag.**

15 A. The collection lag identifies the time between the posting of customer bills to  
16 accounts receivable and the receipt of these billed revenues. Collection lag,  
17 which begins with the posting of bills and ends with the receipt of payment, may  
18 be influenced by payment arrangements, contract terms, postal delivery delays,  
19 customer inquiries, delinquent accounts, service termination practices, and other  
20 factors. The Company has employed the accounts receivable turnover ratio  
21 method to determine the collection lag. Using this approach, the average monthly  
22 accounts receivable balances (as measured by the average of the month-end



1 balances for the 12 months from January 2021 to December 2021) were divided  
2 by the average daily revenues for the 12 months ended December 31, 2021. The  
3 2021 average collection lag is 37.74 days. The lag reflects the time delay between  
4 the mailing of customer bills and the receipt of the billed revenues from  
5 customers. Refer to Schedule DJH-1, page 6 of 27.

6 **Q. Describe the final component of revenue lag, revenue float.**

7 A. Revenue float is the time between when funds are received from customers until  
8 customer payments clear the banks and are available to the Company. Certain  
9 funds are available the day payment is received while other funds are generally  
10 available within one or two days of receipt by the bank. The following day's  
11 bank statement reflects the prior day's bank availability of funds. The 2021  
12 average revenue float lag is 1.65 days. This lag represents the average weighted  
13 check-float period, or the lag that takes place during the period from when  
14 payment is received from customers to the time such funds are available for use  
15 by the Company. Refer to Schedule DJH-1, pages 7 and 8 of 27.

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

17 A. Yes. The total revenue lag of 55.61 days is computed by adding the number of  
18 days associated with each of the four revenue lag components described in this  
19 testimony. This total number of lag days represents the amount of time between  
20 the delivery of service to customers and the receipt of the related revenues from  
21 customers. Refer to Schedule DJH-1, page 2 of 27.

1 **Q. In determining the expense lead/lag period, how are the weighted days for**  
2 **Transmission and Non-Transmission related costs determined?**

3 A. First, the monthly expense lag or lead for each vendor is determined by  
4 aggregating (1) the average days in the period in which the service is received,  
5 and (2) the period including the payment day. The aggregate lead or lag days are  
6 then weighted by the dollar amount of the billings. Weighted lead or lag days are  
7 calculated separately for Transmission and Non-Transmission related costs.

8 **Q. What are the weighted days lag or lead in payment for Transmission and**  
9 **Non-Transmission related costs?**

10 A. The weighted days lag for Transmission related costs is 56.01 days, as shown on  
11 Schedule DJH-1, page 9 of 27. The weighted days lag for Non-Transmission  
12 related costs is 37.36 days, as shown on Schedule DJH-1, page 17 of 27.

13 **Q. How is the total Transmission and Non-Transmission lead lag determined?**

14 A. For Transmission related costs, the expense lag of 56.01 days is subtracted from  
15 the lag in receipt of revenue of 55.61 days to produce the total net lead of 0.40  
16 days. Refer to Schedule DJH-1, page 9 of 27. For Non-Transmission related  
17 costs, the expense lag of 37.36 days is subtracted from the lag in receipt of  
18 revenue of 55.61 days to produce the total net lag of 18.25 days. Refer to  
19 Schedule DJH-1, page 17 of 27.

## 20 VII. CONCLUSION

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

22 A. Yes, it does.