

UNITIL ENERGY SYSTEMS, INC.

DIRECT TESTIMONY OF
CHAD R. DIXON

New Hampshire Public Utilities Commission
Docket No. DE 23-###

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Schedule CRD-1 2022 UES External Delivery Charge Lead Lag Study

1 **I. INTRODUCTION**

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

3 A. My name is Chad R. Dixon 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 Manager, General Accounting for Unitil Service Corp. (“Unitil
7 Service”), a subsidiary of Unitil Corporation (“Unitil”) that provides managerial,
8 financial, regulatory and engineering services to Unitil’s principal subsidiaries
9 including Unitil Energy Systems, Inc. (hereinafter referred to as “UES” or the
10 “Company”). In this capacity, I am responsible for the general accounting team
11 that performs the accounting and financial reporting activities for Unitil and its
12 subsidiaries.

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

14 I joined Unitil Service as a Sr. Internal Auditor in 2000 and was promoted to
15 Director, Internal Audit & Controls in 2007; I served in that position until 2016
16 when I left to pursue another career opportunity. I rejoined Unitil Service in 2018
17 as a Regulatory Accountant and was promoted to Manager, General Accounting
18 in 2022. I have a Bachelor’s degree in Accounting from the University of Maine
19 at Presque in Presque Isle, Maine, a Master in Business Administration from
20 Franklin Pierce University in Rindge, New Hampshire and I am a Certified
21 Internal Auditor.

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

3 A. Yes, I have previously testified before the Maine Public Utilities Commission in
4 the Maine Division of Northern Utilities, Inc.’s most recent base rate case
5 proceeding (Docket No. 2023-00051).

6 **II. PURPOSE OF TESTIMONY**

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

8 A. The purpose of my testimony is to present the Company’s 2022 External Delivery
9 Charge (“EDC”) Lead Lag Study (“2022 Study”), which is integral to the
10 calculation of cash working capital to be recovered in External Delivery rates for
11 Transmission and Non-Transmission related costs.

12 **III. CASH WORKING CAPITAL**

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

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

20

1 **IV. SUMMARY OF TESTIMONY**

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

3 A. My testimony presents and supports the Company's 2022 EDC Lead Lag Study.
4 The 2022 Study, presented in this filing as Schedule CRD-1, is based upon data
5 for the period January 1, 2022 through December 31, 2022 and calculates a net
6 lead period for Transmission related costs to be 3.35 days and a net lag period for
7 Non-Transmission related costs to be 21.74 days.

8 **Q. Are the results of the 2022 Study included in the EDC rates proposed in this**
9 **filing?**

10 A. Yes, the 2022 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, 2023, 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 2022 Study prepared?**

16 A. The 2022 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 2022 Study
19 using data for the twelve months ended December 31, 2022, and calculated net
20 lead or lag days separately for Transmission and Non-Transmission related costs.

21 **VI. 2022 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 CRD-1, pages 2 to 10.

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 2022 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 12 months by 2 to determine the average monthly service
21 period. Refer to Schedule CRD-1, page 3 of 30.

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 2022 average
11 billing lag is 1.05 days. This billing lag determines the time required to process
12 the meter reading data and record accounts receivable. Refer to Schedule CRD-1,
13 pages 4-6 of 30.

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 2022 to December 2022) were divided
2 by the average daily revenues for the 12 months ended December 31, 2022. The
3 2022 average collection lag is 36.37 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 CRD-1, page 7 of 30.

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 2022
12 average revenue float lag is 1.63 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 CRD-1, pages 8-10 of 30.

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

17 A. Yes. The total revenue lag of 54.26 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 CRD-1, page 2 of 30.

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 57.61 days, as shown on
11 Schedule CRD-1, page 11 of 30. The weighted days lag for Non-Transmission
12 related costs is 32.52 days, as shown on Schedule CRD-1, page 19 of 30.

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

14 A. For Transmission related costs, the expense lag of 57.61 days is subtracted from
15 the lag in receipt of revenue of 54.26 days to calculate the total net lead of 3.35
16 days. Refer to Schedule CRD-1, page 11 of 30. For Non-Transmission related
17 costs, the expense lag of 32.52 days is subtracted from the lag in receipt of
18 revenue of 54.26 days to calculate the total net lag of 21.74 days. Refer to
19 Schedule CRD-1, page 19 of 30.

20 VII. CONCLUSION

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

22 A. Yes, it does.