Appendix A

Educational and Professional Background
James J. Cunningham, Jr.

I am employed by the New Hampshire Public Utilities Commission (Commission) as a Utility Analyst. My business address is 21 S. Fruit Street, Suite 10, Concord New Hampshire, 03301.

I am a graduate of Bentley University, Waltham, Massachusetts, and I hold a Bachelor of Science-Accounting Degree. Prior to joining the Commission I was employed by the General Electric Company (GE). While at GE, I graduated from the Corporate Financial Management Training Program and held assignments in General Accounting, Government Accounting & Contracts and Financial Analysis.

In 1988, I joined the staff of the NHPUC. I have provided expert testimony pertaining to depreciation studies, actuarial studies for pension and retirement benefits, energy efficiency programs and other topics pertaining to NH electric, natural gas, water, and steam utilities. In 1995, I completed the NARUC Annual Regulatory Studies Program at Michigan State University, sponsored by the National Association of Regulatory Utility Commissioners. In 1998, I completed the Depreciation Studies Program, sponsored by the Society of Depreciation Professionals, Washington, D.C. I am a member of the Society of Depreciation Professionals (SDP). In 2008, I was promoted to my current position of Utility Analyst.

Appendix B

List of Attachments

James J. Cunningham, Jr.

Footnote References:

1 Information in footnote
2 Information in footnote
3. NH PUC Audit Report (p. 81 and p.82)
4. Staff 2-33, Attachment 1 and Attachment 3
5. Technical Session 1-6 and 1-7
6. Staff 2-35, Attachment 1 and Attachment 3
7. Unitil SERP Actuarial Report
8. Technical Session 1-11 (Attachment)
9. Information in footnote
10. Staff 1-13
11. Staff 10-9
12. Staff 10-8
13. Information in footnote
14. Live link in footnote
15. Information in footnote
16. Information in footnote
17. Information in footnote
18. Information in footnote
19. Staff 7-5 and Technical Session 1-6
20. Information in footnote

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: August 5, 2016
AT (OFFICE): NHPUC

FROM: The NH Public Utilities Commission Audit Staff

SUBJECT: Unitil Energy Systems, Inc.
DE 16-384
Final Audit Report

TO: Tom Frantz, Director, Electric Division
Les Stachow, Assistant Director
Rich Chagnon, Utility Analyst IV

INTRODUCTION

As noted in the testimony of Mark Collin in DE 16-384, Unitil Corporation (Unitil) is a public utility holding company, with a principal business of retail distribution of electricity and natural gas throughout its service territories in New Hampshire, Massachusetts and Maine. Unitil Corporation is the parent company of three distribution utilities: Unitil Energy Systems, Inc., (Unitil Energy, UES) which provides electric service in the southeastern seacoast and state capital regions of New Hampshire, Fitchburg Gas and Electric Light Company (Fitchburg, FG&E), which provides both electric and natural gas service in the greater Fitchburg area of north central Massachusetts; and, Northern Utilities, Inc. (Northern, NU) which provides natural gas service in southeastern New Hampshire and portions of southern and central Maine. In addition, Unitil Corporation is the parent company of Granite State Gas Transmission, Inc., (Granite, GSG) an interstate natural gas pipeline company in New Hampshire and Maine.

Unitil Service Corp., (USC) a subsidiary of Unitil Corporation provides shared business functions to its utility affiliates on an “at-cost” basis.

Unitil Corporation’s other subsidiaries are Unitil Power Corp., Unitil Resources, Inc. and Unitil Realty Corp. Unitil Power Corp. has divested all of its long- term power supply contracts, but has stranded costs associated with the transmission contracts which are not scheduled to end until 2021. The Company indicated that the stranded costs associated with the contracts from UPC are passed on to UES each month through the UPC Power Bill. UES pays this bill within the month it is processed. The costs are recorded in Stranded Cost Charge reconciliation model. The account used is 10-29-13-33-555-01-00 and reflected a total of $177,556 for the year. Unitil Resources, Inc. is a wholly-owned non-regulated subsidiary with two additional subsidiaries: Usource, Inc. and Usource, LLC, collectively Usource, which provides electric and natural gas energy brokering and advisory services to large commercial and industrial customers in the northeastern United States; Unitil Realty Corp. owns the corporate office building in Hampton, New Hampshire.

On April 29, 2016, Unitil filed with the Public Utilities Commission a proposed increase in distribution rates. The Company's test year is the twelve-month period ending December 31, 2015.

Chart of Accounts

The Company's chart of accounts was included in the filing in the 1604.01(a) attachment 9. FERC is followed, and the number strings are summarized AA-BB-CC-DD-EEE-FF-GG, where:

AA – represents the Company identification
BB- represents the Division identification
CC-represents the Department identification
DD-represents the Reconciling Mechanism
EEE-represents the FERC account
FF-represents a sub-category
GG-represents a second sub-category

The specific identifications of each are found in the Company's Cost Allocation Manual (CAM), pages 243 – 246. Divisions 21 and 22 were noted on the general ledger but were not included in the cost allocation manual. Audit was told that the divisions are inactive but the accounts remain on the general ledger, in an inactive status. There were no balances or activity noted in any of those divisional accounts.

Intercompany Services

Audit requested and was provided with the Unitil Corporation CAM for 2015. The intercompany services provided to UES by others were summarized to be:
Unitil Corporation- tax sharing agreement and cash pool and loan agreement;
Fitchburg Gas and Electric - provides emergency response as requested;
Northern Utilities – provides emergency response as requested;
Unitil Power Corp.- provides contract release payments;
Unitil Service Corp. – provides emergency response as requested, and the following support services:

Accounting, Finance, Tax, Administration, Business Development, Cash Management, Communication, Corporate Administration, Customer Support, Distributed Energy Resources, Emergency Management and Compliance, Energy Resource Management, Energy Measurement and Control, Engineering, Executive, Legal, Corporate, Human Resources, Information Technology Systems, Operations Support, Regulatory.

Allocation factors for the USC services provided are based primarily on the R/C/A 3-factor allocators. Human Resources allocation is based on headcount.

Administrative and Finance are based on the 3-factor allocators and Non-regulated Revenue.

Audit requested and was provided with the standard costs and overhead factors for UES for each month of the test year:

UNITIL ENERGY SYSTEMS, INC.
STANDARD COSTS AND OVERHEAD FACTORS

CAPITAL — **EFFECTIVE: December 1, 2015**

	JAN	FEB	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	AVG
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
A. Transportation (JE820)													
Light Trucks (per mile)	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.50	0.50	0.71
Heavy Trucks (per hour)	24.00	24.00	24.00	24.00	24.00	24.00	32.00	32.00	32.00	32.00	20.00	20.00	26.00
B. Exempt Stock (JE850)													
A. Exempt Stock Overhead	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	45.00%	45.00%	55.00%	55.00%	48.00%	48.00%	42.17%
B. Exempt Stock Undergrnd	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	2.00%	2.00%	4.50%
C. Storeroom (JE807)	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	26.50%

SEACOAST

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	AVG
	1	2	3	4	5	6	7	8	9	10	11	12	**13**
A. Transportation (JE820)													
Light Trucks (per mile)	0.80	0.80	0.80	0.80	0.80	0.80	0.90	0.90	1.10	1.10	1.00	1.00	0.90
Heavy Trucks (per hour)	25.00	25.00	25.00	25.00	25.00	25.00	30.00	30.00	40.00	40.00	40.00	40.00	30.83
B. Exempt Stock (JE850)													
A. Exempt Stock Overhead	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%	25.00%	25.00%	35.00%	35.00%	38.00%	38.00%	27.83%
B. Exempt Stock Undergrnd	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	2.00%	2.00%	4.50%
C. Storeroom (JE807)	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%	23.00%	15.00%	15.00%	12.00%	12.00%	19.83%

UES

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	AVG
	1	2	3	4	5	6	7	8	9	10	11	12	**13**
A. Small tools (JE814)	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	2.00%	2.00%	4.50%
B. Indirect Constr. Overheads E & O (JE811)	58.32%	58.32%	58.32%	58.32%	58.32%	58.32%	63.00%	63.00%	63.00%	63.00%	50.00%	50.000%	58.49%
Indirect Constr. Overheads (General) (JE813)	7.92%	7.92%	7.92%	7.92%	7.92%	7.92%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	8.96%
C. Worker's Comp. (JE809)	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	3.95%	4.00%	3.95%
D. AFUDC (JE822)	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.13%	0.19%	0.19%	0.19%	0.19%	0.15%
E. Pension Costs and Payroll Taxes (JE866)													
Pension Costs	40.67%	40.67%	42.00%	45.00%	45.00%	45.00%	47.00%	47.00%	47.00%	47.00%	47.00%	37.00%	44.19%
Payroll Taxes	9.20%	9.20%	9.20%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	10.50%	7.00%	9.88%
F. Medical Costs (JE815)	22.30%	22.30%	28.00%	30.00%	30.00%	30.00%	30.00%	30.00%	30.00%	33.00%	33.00%	14.00%	27.72%
G. 401K Capitalized (JE 816)	4.13%	4.13%	4.13%	4.13%	4.13%	4.13%	5.00%	5.00%	5.00%	5.00%	7.00%	9.00%	5.06%
H. PBOP (JE 817) *	32.94%	32.94%	32.94%	32.94%	32.94%	32.94%	32.94%	32.94%	32.94%	32.94%	26.00%	27.00%	31.87%

* Post-Retirement Benefits Other than Pension

The percentages noted for January reflect the prior year end average. Testing of the rates was performed within the <u>Plant</u> and <u>Expense</u> sections of this report. Audit noted several journal entries across nineteen expense accounts which capitalized a total of $6,872,393 to Construction Work in Progress and Removal of Work in Progress, both account 107; two Stores Expense balance sheet accounts 163; two Engineering and Overhead balance sheet accounts 184; and six Light Truck and Heavy Truck balance sheet accounts 184.

Audit is aware of the FERC authorization to include certain expenses as capital items while a project is in process, such as insurance, direct and indirect payroll, as detailed in the CAM.

The CAM also discusses the allocation of certain service center overhead costs and building overhead costs, based primarily on the square footage, and the fixed distribution employees at the location. The ratios are updated annually. The expense accounts capitalized were:

10-20-10-00-408-10-00 Payroll Taxes Capitalized	$ (231,485)
10-20-10-00-590-06-00 Unproductive Time	$ (411,480)
10-20-10-00-590-06-01 Station Unproductive Time	$ (82,509)
10-20-10-00-920-05-00 Incentive Comp Capitalized	$ (104,488)
10-20-10-00-926-01-01 401k Capitalized	$ (114,593)
10-20-10-00-926-05-00 Benefit Cost Capitalized	$ (644,679)
10-20-10-00-926-08-00 FASB 87 Pension	$(1,022,255)
10-20-10-00-926-17-00 SFAS PBOP Capitalized	$ (736,208)
10-20-10-00-923-03-01 OS USC Capitalized	$(1,182,074)
10-20-10-00-923-03-07 Direct Charges Capitalized	$ (136,980)
10-20-10-00-926-08-12 FASB 87 Pension USC	$ (262,678)
10-20-10-00-926-17-12 SFAS PBOP Capital-USC	$ (193,415)
Subtotal Payroll and related benefit accounts	$(5,122,844)
10-20-10-00-924-00-01 Property Insurance	$ (9,120)
10-20-10-00-925-02-01 General Liability Insurance	$ (267,444)
10-20-10-00-925-04-01 Workmen's Compensation	$ (88,999)
Subtotal Insurance capitalized to CWIP	$ (365,563)
10-20-10-00-588-11-00 Service Ctr/Tel OH	$ (146,407)
10-20-10-00-921-19-00 Telephone Services	$ (76,895)
Subtotal Service Center and Building Overhead	$ (223,302)
Total Expense accounts moved to Capital	$(5,711,709)

External Audits and Internal Audits

External Audit

PUC Audit reviewed the results of the Unitil Corporation integrated audit of the financial statements performed by Deloitte & Touche LLP for the period ended 12/31/2015. The results were provided to Unitil's management and Audit Committee on 1/22/2016. The critical accounting policies, practices and estimates that were tested by Deloitte included regulatory assets, unbilled revenue, the bad debt reserve, pension, SERP, PBOP, and management incentive accrual, among others.

Actual expenses paid to Deloitte were $636,000 for the integrated financial audits and quarterly reviews, preapproved in 1/2015 and $2,500 for the 2014 SEC comment letter, with said fee preapproved in 11/2015. The actual fees incurred do not include time related to the new CIS system, and an estimate of fees for 2016 did not include the new

CIS system. Hours worked in 2016 on the new system, if any, will be billed on a per hour basis.

Audit reviewed the management representation letter within the Deloitte "Results of the Audit communication to Unitil Corp". One item indicated that deficiencies, which had been identified by the Unitil Internal Audit staff relating to the design or operation of internal control over financial reporting, had been provided to Deloitte. Audit requested clarification and status of the deficiencies. As part of the Section 404 Interim Compliance Testing in 2015, Internal Audit had identified four deficiencies relating to the information system controls. Combined, the four deficiencies did not constitute a significant deficiency or material weakness, and were noted to have been corrected by management not later than 9/30/2015.

<u>Internal Audit</u>

PUC Audit requested a listing of the internal audits conducted by Unitil's Internal Audit division. In 2014 and 2015, UES specific audits were:

<u>2014</u>
2013 Major Storm Cost Reserve
2014 Affiliate Transaction Rules Compliance Plan Review
Section 404 Interim Compliance Audits
<u>2015</u>
2014 Major Storm Cost Reserve
2014 Thanksgiving Storm Costs
2015 Affiliate Transaction Rules Compliance Plan Review
Section 404 Interim Compliance Audits

The Company provided their Affiliate Transaction Rules Compliance Plan Review dated June 2015 to NHPUC Audit. The Transaction Rules "*sets forth certain standards of conduct and related procedures governing the relationship between a distribution company and its affiliates transacting business in New Hampshire*," and applies to the relationship between Unitil Corporation's distribution companies, Unitil Energy Systems, Inc. and Northern Utilities, Inc., and competitive affiliates, Unitil Resources, Inc., Usource, Inc. and Usource, LLC.

The Compliance Plan concluded that as of June 2015, Unitil Energy Systems, Inc. and Northern Utilities, Inc. were operating in compliance with their respective plans to comply with New Hampshire Administrative Rule PUC 2100 and that Internal Audit recommended that the Annual Certifications be signed by the designated officers and filed with the New Hampshire Public Utilities Commission.

<u>Meeting Minutes of the Board of Directors and Committees</u>

Confidential minutes of the Unitil Corporation, Unitil Energy Systems Inc., Fitchburg Gas and Electric Light Company, Northern Utilities Inc., and Granite State Gas Transmission, Inc. from 2010 through current 2016 were made available for review while

Audit was onsite at the Company's headquarters. Also available for review were Committee minutes of the Audit Committee, Compensation Committee, Executive Committee, Nominating and Governance Committee, and Pension Committee. All related Consents were also reviewed.

The minutes of Unitil Corporation's Board of Directors were reviewed. Within each, minutes of the prior meeting and minutes of committee meetings are reviewed. The Board establishes the members of the committees, approves the officers and their compensation, reviews the financial results for a given period, sets the dividend rate, reviews capital and operating budgets, and ratifies the charters of committees, among many other issues. In 2015 the Board approved a three year contract with the Chief Executive Officer; approved providing Unitil Energy with $5 million equity infusion to improve its capital structure and leverage statistics, and approved the sale of shares of Time Warner. For specifics, refer to the Unitil Energy minutes section below.

The Audit Committee is a standing committee of the Board of Directors, comprised of at least 3 independent non-employee members of the board. The Committee oversees internal and external audits, management, and compliance, among other financial and accounting issues.

The Compensation Committee is appointed by the Board with 3 or more independent non-employee members of the board. The Committee is tasked with establishing and interpreting compensation policy, executive compensation salaries, reviewing of Compensation Discussion and Analysis, among other tasks.

The Executive Committee is appointed by the Board with 3 or more independent non-employee members of the board. The existence of the committee may be terminated at any time by the full board. The committee can act on behalf of the board, make recommendations to the full board, conduct annual evaluation of CEO, among other tasks.

The Nominating and Governance Committee is appointed by the Board with 3 or more independent non-employee members of the board. The Committee is charged with three primary criteria: (a) review, evaluate and recommend candidates for director positions; (b) evaluate director performance for nomination to additional terms; and (c) review, implement and oversee corporate government standards, procedures and practices.

The Pension Committee is comprised of two Unitil officers and three directors with expertise in investments. A review of the quarterly minutes from 2015 was conducted. Discussions center around the investment returns of specific funds, asset allocations, and long term return on assets, a review of the pension funding level, the funding level under the ERISA funding requirements, and the anticipated corporate level 2015 expense of $7 million. Using the projected benefit obligation model reflected better discount rates which reduced the liability, but the mortality table increased the exposure.

Audit did read the minutes of each subsidiary. Unitil Energy specifically indicated, for 2015, dividends of $1.50 per each $100 par outstanding share of non-cumulative preferred stock 6%, payable on the fifteenth of the month to shareholders of record 4/1/2015, 7/1/2015, 10/1/2015 and 12/31/2015 payable 1/15/2016. Common stock was declared as follows:

Dividend payable	Date payable	Shareholder of record
$ 9.76	04/15/2015	04/01/2015
$ 9.99	07/15/2015	07/01/2015
$ 9.57	10/15/2015	10/01/2015
$10.40	01/15/2016	12/31/2015

In addition, the meeting minutes reflect approval of the liquidation of shares of Time Warner Cable, which were being held as a result of a stock distribution to creditors to mitigate outstanding balances and other debts of Adelphia Cable (now Time Warner) at the time of its filing for bankruptcy protection under chapter 11. The bankruptcy was declared in 2002 and the stock dividend distributions were applied to outstanding balances. The minutes indicate that the balances were paid in full in April 2015. The shares were sold in June 2016 for a total $2,971. The proceeds were booked to cash and offset to Miscellaneous Revenue. The shares were not originally listed as assets of UES, because at the time of the bankruptcy they were deemed worthless.

Audit requested clarification of the $5 million equity infusion entries and was provided with both the Corporation's entries as well as UES. On the UES general ledger, the funds were booked:

10-20-00-00-146-01-15 A/R Assoc Cos –UC	$5,000,000	
10-20-00-00-211-00-00 Misc. Paid in Capital		$5,000,000
10-20-00-00-233-00-00 Note Payable Cash Pool	$5,000,000	
10-20-00-00-146-01-15 A/R Assoc Cos-UC		$5,000,000

Balance Sheet Assets

Cash – Account #131 $332,389

The Filing Requirement Schedules, Schedule 2, line 7, reports total cash in the amount of $335,389. Audit reviewed the cash bank reconciliations for the accounts shown below. The ending balances as of December 31, 2015 on the reconciliations agreed with the general ledger, the 2015 FERC Form 1 and the filing Schedule 2 with no exceptions noted.

10-20-00-00-131-00-00, Cash Remittance	$ (52,884)
10-20-00-00-131-00-01, Cash Suspense	379,424
10-20-00-00-131-10-00, Cash General Funds	5,849
10-20-00-00-131-20-00, Control Disbursement-Fleet	-0-
10-20-00-00-135-00-00, Working Fund	3,000
Total Cash	$335,389

The Company explained that all customer payments are processed through the Cash Remittance account and that the daily balance is transferred to the cash pool. Customers who have a credit balance are booked to the Suspense account by the billing system. Unitil uses the General funds account for payments to vendors by wire or ACH. The Control disbursement account is used for payments to vendors by check and has a zero balance at the end of the year.

Account #10-20-00-00-135-00-00, Working Funds in the amount of $3,000 showed no activity for the test-year 2015. This is the petty cash fund according to the Company.

Special Deposits – Account #132-134 $1,932,574

Audit verified the FERC Form 1 reported total of $1,932,574 to general ledger account #10-20-00-00-134-00-00 and to the Filing Requirement Schedules, Schedule 2, page 6 of 12, described as ISO deposit.

The Company explained that the activity in account 10-20-00-00-134-00-00 – Other Special Deposits is associated with activity between the Independent System Operator—New England (ISO-NE) and UES. Under the ISO-NE Financial Assurance Policy (Policy), Unitil's subsidiaries Unitil Energy, Fitchburg and Unitil Power are required to provide assurance of their ability to satisfy their obligations to ISO-NE. Under this Policy, Unitil's subsidiaries provide cash deposits covering approximately 2-1/2 months of outstanding obligations, less credit amounts that are based on the Company's credit rating. In addition, amounts due to/due from the ISO-NE are cleared within the account through net billing between UES and ISO-NE.

Customer Accounts Receivable – Account #142 $14,748,150

Audit verified the FERC Form 1 reported total to the Filing Requirement Schedules, Schedule 2, page 6 of 12, and to the following general ledger accounts:

10-20-00-00-142-01-00 A/R Electric	$12,092,422
10-20-00-00-142-02-00 A/R Merchandising	$ 707,035
10-20-00-00-142-03-02 Misc. A/R Accruals	$ 92,857
10-20-00-00-142-05-00 A/R Cash Sales	$ (7,656)
10-25-00-00-142-xx-xx External Suppliers (13 accounts)	$ 1,863,492
Total Customer Accounts Receivable	$14,748,150

The aged accounts receivable listing of 56,898 customer accounts was provided to Audit and reflects:

Current	$ 9,731,018
Over 25 days past due	$ 4,609
Over 30 days past due	$ 1,291,832
Over 60 days past due	$ 590,074
Over 90 days past due	$ 435,125
Over 120 days past due	$ 890,756
Over 360 days past due	$ 1,012,499
Total	$13,955,914
Less Seacoast Credit Balances	$ (232,956)
Less Capital Credit Balances	$ (146,468)
Net Receivables as of 12/31/2015	$13,576,490

The difference between the general ledger total Accounts Receivable and the aged listing, $1,171,660 is the result of excluding the receivable accounts for Merchandising, Accruals, and Cash Sales totaling $(792,236) as well as the inclusion of a liability account, 10-20-00-00-232-05-02, A/P Customer Credit Balances $(379,424).

Audit requested clarification of the $1,012,499 balance in the over 360 days past due column and was provided with the identification of medical accounts. Those accounts sum to $925,083 which agrees with Dan Main's testimony and Schedule DVM-1 page 1 of 1. Of the remaining $87,416 over 360, $40,200 was written off in 2016 and the remaining customers have entered a payment plan.

Other Accounts Receivable – Account #143 $1,372,702

Audit verified the total reported FERC Form 1 balance to the Filing Requirement Schedules, Schedule 2, page 6 of 12, and to the following general ledger accounts:

10-20-00-00-143-03-00 A/R Employee PC Purchases	$ 2,980
10-20-00-00-143-03-03 A/R Drug Subsidy	$ 20,064
10-20-00-00-143-89-00 Misc. A/R Insurance Recovery	$1,349,658
	$1,372,702

Unitil provides eligible employees with a two year, interest free loan to purchase a personal computer for their home. Account 10-20-00-00-143-03-00 A/R Employee PC Purchases, is used to track the outgoing loans and payroll deductions to repay the loan. In January 2015, two loans were given out; one in the amount of $2,500 and the other in the amount of $1,548. The account balance at the end of the year, for the 2015 loans and loans given in prior years and payments made on those loans, was $2,980.

Audit reviewed the two payments made to the employees in 2015. Both payments included a signed "Personal computer loan program promissory note and security agreement" noting the employee to whom the loan was given, the amount of the loan, the payback period and the amount to be deducted per paycheck. The employees are also required to provide proof of purchase prior to receiving the loan. Both payments included the purchase receipt. No exceptions were noted.

The A/R drug subsidiary account, 10-20-00-00-143-03-03, contained a monthly accrual for retiree drug subsidy. For the months of January through May the accrual amount was $1,889. For the months on June through December the accrual amount was reduced to $1,672.

Unitil's insurance policies generally contain a deductible of $500,000. The Miscellaneous A/R Insurance Recovery account 10-20-00-00-143-89-00 account tracks expenses associated with claims against the company that are in excess of the $500,000 limit. Expenses over the limit are submitted to the insurance provider for reimbursement.

Audit reviewed the activity in the Misc A/R Insurance Recovery account and selected three invoices to review in detail. Two of the invoices were for attorneys and one was for Fire Investigation.

The invoice from Brickley Sears & Sorett PA, in the amount of $69,956, and NEFCO Fire investigations, in the amount of $52,266, were for a fire at Hampton Beach. The third invoice for Sulloway & Hollis PLLC, in the amount of $44,356, was for a lawsuit against Unitil. No exceptions were noted.

Accumulated Provision for Uncollectible Accounts – Account #144 $(491,260)

Audit verified the total FERC Form 1 reported figure to seventeen individual general ledger accounts (see accounts 10-20-00-00-144-xx-xx), and to the Filing Requirement Schedules, Schedule 2, page 6 of 12, without exception. Refer to the Expense portion of this report, Uncollectible Accounts #904 for additional details. Based on that review, the Accumulated Provision does not appear to be adequate. **Audit Issue #1**

Accounts Receivable from Associated Companies – Account #146 $3,555,926

Audit verified the FERC Form 1 reported balance to the following two general ledger accounts and the Filing Requirement Schedules, Schedule 2, page 6 of 12 line 12:

10-20-00-00-146-01-00 A/R Associated Co-Accruals	$2,436,143
10-20-00-00-146-01-12 A/R Associated Co-USC	$1,119,783
Total Account 146	$3,555,926

The Company explained that the Accounts Receivable – Associated Companies Accrual account "*is used to rebook the updated attribution of the 2008 FAS158 balances from USC. These expenses include Pension, PBOP, SERP and related deferred taxes. The 2015 attribution factor used to allocate a portion of these expenses to UES was 25%, which is based on headcount. The Accounts Receivable – Associated Companies – USC account is used to book FAS158 balances from USC as of 12/31/15*".

Plant Materials and Operating Supplies – Account #154 $786,127

Audit verified the total FERC Form 1 reported balance of Materials and Supplies to two general ledger accounts:

10-20-50-00-154-01-00 Materials and Supplies General	$487,610
10-20-60-00-154-01-00 Materials and Supplies General	$298,517

The total $786,127 was also verified to the Filing Requirement Schedules-Schedule 2 page 6 of 12, and schedule 2B page 8 of 12. These accounts represent those stock items used directly in projects which are later completed and capitalized.

Audit reviewed the activity within the Capital region Materials and Supplies general ledger account (50) and noted that monthly credits were offset primarily to the Construction Work in Progress account. Debit activity was the result of purchases through Graybar Electric, among others. Debits booked were in excess of 400 entries, averaging approximately $1,180. Audit requested detailed support for one voucher paid to The Okonite Company in the amount of $37,517 in September 2015. An invoice was provided which reflected the purchase of Okoguard UR-OJ, underground cable.

The activity in the division 60, Seacoast, also reflected monthly credits, totaling $869,452. Again, the debit offsets reviewed were primarily to the Construction Work in Process account.

Over 500 debit entries were booked, averaging $1,397. Audit selected three vouchers paid in May 2015 to The Okonite Company in the amounts of $22,472, $28,187, and 29,670.   Each invoice was provided and reflected purchases of 35KV underground cables.

Stores Expense Undistributed – Account #163 $136,074

The FERC Form 1 reported Store Expense Undistributed figure was verified to the following two general ledger accounts:

10-20-50-00-163-00-00 Store Expense Undistributed	$ 94,010
10-20-60-00-163-00-00 Undistributed Stores Expense	$ 42,064
	$136,074

The total $136,074 was also verified to the Filing Requirement Schedules-Schedule 2 page 6 of 12, and schedule 2B page 8 of 12.

Audit reviewed the activity in both accounts and requested supporting information for a credit in the amount of $26,099 which was booked to 10-20-60-00-163-00-00. The majority of the offset was to CWIP. The Company provided an additional detailed, itemized listing of specific inventory items which were used in the completion of specific jobs. The itemization lists the stock code identifier, the description, the date the item was used, the quantity, the account number and related dollar amount, as well as any salvage.

Audit was told that the account generally represents the labor, transportation, allocated building costs, etc. incurred to operate the stock room.

Clarification was requested for a variety of monthly journal entry types noted in account 10-20-50-00-163-00-00, although the same types of entries were noted in the 60 division. Specifically the Company identified the journal entries as follows:

CMS804 Salvage Operations – reflects stock overages and shortages
CPA820 Transportation Journal Entry –applies transportation clearing charges
CPR800 Payroll St Plant – direct payroll related to Stockroom employees
SGA720 Bank by Mail –manual miscellaneous non-customer check deposits
SGA770 Monthly USC Service Bill-USC allocated charges
UEGA791C Capitalize Service Center Building/Telephone/Overhead represents capitalization of a portion of service center expenses, including phone and security system costs. 84% of the expenses are capitalized, based on square footage. Audit requested clarification of one entry and was provided with the journal entry and support. $24,801 of the $94,010 was traced to capitalization of expenses, or 26% of the balance. Refer to the Intercompany Services portion of this report.
UEGAR Stock Area Building Overheads is a recurring monthly entry used to capitalize a portion of property insurance and general liability insurance, based on square footage. Audit requested clarification of where within the FERC chart of account the capitalization of these types of regular, recurring expenses is authorized. The Company provided Electric Plant instructions, item 3, A, (14). Audit reviewed the entire Electric Plant instructions, and agrees that *while construction is in progress*, certain expenses may be capitalized. Refer to the Intercompany Services portion of this report.

Prepayments – Account #165 $7,616,460

Audit verified the reported Prepayments on the FERC Form 1 to the following general ledger accounts:

10-20-00-00-165-01-00 Prepaid Property Insurance	$ 17,768
10-20-00-00-165-01-01 Prepaid Injuries and Damages Insurance	$ 24,083
10-20-00-00-165-04-01 FASB 87-Prepaid Pension	$6,157,314
10-20-00-00-165-11-00 Prepaid Property Tax	$1,293,561
10-20-00-00-165-12-00 Prepaid Postage	$ 67,244
10-20-00-00-165-14-00 Prepaid Revolver	$ 15,027
10-20-00-00-165-25-00 Prepaid Line Maintenance	$ 18,250
10-20-50-00-165-01-00 Prepaid Property Insurance-Capital	$ 2,257
10-20-50-00-165-01-04 Prepaid Workers' Comp. Insurance-Capital	$ 8,463
10-20-60-00-165-01-00 Prepaid Property Insurance-Seacoast	$ 3,010
10-20-60-00-165-01-04 Prepaid Workers' Comp. Insurance-Seacoast	$ 9,483
	$7,616,460

Please refer to the Expense portion of this audit report for additional information regarding the Insurance, Injuries and Damages, Postage, Line Maintenance, Property

Insurance and Workers' Compensation Insurance. Please refer to the Debt portion of this report for additional information regarding the Revolver. Refer to the Payroll portion of this report for information regarding the Pension. Refer to the Tax portion of this report for information regarding the Property Tax. The Prepaid Postage balance was unchanged during the test year.

The total $7,616,460 was also verified to the Filing Requirement Schedules-Schedule 2, page 6 of 12.

Accrued Utility Revenue – Account #173 $14,246,081

Audit verified the Accrued Utility Revenue figure noted in the FERC Form 1 and the Filing Requirement Schedules, Schedule 2, page 6 of 12 to the following general ledger accounts:

10-20-00-00-173-10-00 Accrued Rev-Major Storm Reserve	$ 800,000
10-20-00-00-173-11-00 Accrued Rev-VMP	$ (452,441)
10-20-00-00-173-13-0x Accrued Rev-System Benefits Charge	$ (993,937)
10-20-00-00-173-22-00 Accrued Rev-Base	$ 4,422,918
10-20-00-00-173-42-00 Accrued Rev-Current Portion PPC	$ 341,577
10-20-00-00-173-44-00 Accrued Rev-RPS Current Portion	$ 1,597,643
10-20-00-00-173-90-0x Accrued Rev- Reclass and Accrual	$ 4,945,516
10-20-00-4x-173-00-00 Accrued Rev-Renewable Port Standard	$ (3,293,246)
10-20-00-44-173-0x-00 Accrued Rev-RGGI	$ (191,233)
10-20-00-47-173-00-00 Accrued Rev-Storm Recovery Adj.	$ 2,635,539
10-20-00-32-173-00-00 Accrued Rev-External Delivery	$ 584,591
10-20-00-33-173-00-00 Accrued Rev-Stranded Costs	$ (659)
10-20-00-3x-173-00-00 Accrued Rev-Default Service	$ 3,849,812
Total Accrued Revenue	$14,246,081

Within the Accrued Revenue Reclass and Accrual balance is account Accrued Revenue-Credit Balance Re-class, 10-20-00-00-173-90-00 in the amount of $4,931,516. The amount is directly offset to account 10-20-00-00-242-90-00, Regulatory Liabilities-Current. Audit requested clarification of the interaction between the 173 and 242 account and was told that "*the over or under collections from customers for particular flow through mechanisms is tracked in FERC 173 accounts. For GAAP accounting, if a flow through mechanism is in a credit (over collected) position it is reclassed to account 10-20-00-00-242-90-00 with the offset to 10-20-00-00-173-90-00*". Also within the Accrued Revenue Reclass and Accrual is account #10-20-00-00-173-90-01, Accrued Revenue Year-end FT AP Accrual $14,000. The amount represents one entry which was offset to 10-20-00-00-242-32-10, Accounts Payable Accrual.

Audit requested and was provided with the unbilled revenue calculations for the months of December 2015 and January 2016. Each entry reflected the debit and credit offsets calculated for External Delivery, Stranded Costs, Default Service G1 and Non-G1, Renewable Portfolio Standard G1 and Non-G1. The debits posted to #173 and the credits were booked to account #449. The net December 2015 entry was $2,599,290. The

January 2016 entry reflected $3,715,630. The supporting detail for 12/2015 reflected each revenue type and the prior twelve months' billed and unbilled kWh, the rate, and the resulting change for the month. The January detail included January billing detail only. The January 2016 entry, while higher than the December 2015 entry, was in line with the January 2015 information, which reflected an entry sum close to $6 million.

Miscellaneous Current and Accrued Assets – Account #174 $73,405

The Miscellaneous Accrual seen in FERC Form 1 was verified to the general ledger account 10-20-00-00-174-05-00, Vacation Accrual, without exception. Please refer to the Payroll portion of this report for additional information. The total $73,405 was verified to the Filing Requirement Schedules-Schedule 2 page 6 of 12.

Unamortized Debt Expenses – Account #181 $1,152,303

The general ledger shows the 2015 beginning balance for Unamortized Debt Discount and Expense, account 10-20-00-00-181-00-00, as $1,274,339. The expense for the year of $122,036 results in a year-end 2015 balance of $1,152,303. This amount agrees with the 2015 FERC Form 1 and the Filing Requirement Schedules-Schedule 2 page 6 of 12.

Amortization of Debt Expense, account 10-20-08-00-428-00-00 on the general ledger, reports 12 recurring monthly entries of approximately $10,170 resulting in a 2015 ending balance of $122,036. This amount agrees with the Income Statement on FERC Form 1 and the Filing Requirement Schedules-Schedule 3-12 page 2 of 4.

Other Regulatory Assets – Account #182.3 $32,784,416

Audit verified the reported balance in the FERC Form 1 to the following general ledger accounts, without exception:

10-20-00-00-182-00-27 Non-distribution Bad Debt	$ 111,570
10-20-00-00-182-03-00 SFAS 109 Fed	$ 769,040
10-20-00-00-182-04-00 Purchase Power Contracts	$ 1,609,062
10-20-00-00-182-04-09 PBOP	$ 7,667,491
10-20-00-00-182-04-10 Pension	$16,363,207
10-20-00-00-182-04-11 SERP	$ 705,370
10-20-00-00-182-07-00 DER Investment	$ 158,839
10-20-00-00-182-10-00 Major Storm Reserve Long Term	$ 2,048,068
10-20-00-47-182-86-00 Emergency Storm Restoration	$ 3,315,769
Total Regulatory Assets	$32,748,416

The $32,748,416 was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625. The accounts included are FERC 182, 183, 184, 185, 186 and 190.

Non-distribution Bad Debt was reviewed and activity verified to offsets in account #10-20-10-00-449-00-27, Accrued Revenue Non-distribution Bad Debt. UES stated that the Non-Distribution Bad Debt is as follows: "*Each month the company performs an analysis of the accounts receivable balance to determine the allowance for doubtful accounts. As the company begins shutoff procedures on customers who are 3 months delinquent paying their bills, the over 90 days balance in accounts receivable is used as the starting point in the allowance analysis. All customers with payment arrangements, budget plans or medical exemptions are removed from this calculation as the company fully expects payments from these categories. The company then estimates the collectability of the remaining balance based upon historical percentages of payments received. This remaining amount is split between non-distribution (supply) and distribution allowance accounts (based upon external/non external revenue). For the distribution balance, the 144 Allowance for Doubtful Accounts is offset against bad debt expense. For the non-distribution balance, the 144 Allowance for Doubtful Accounts is offset against a regulatory asset in account 182 since bad debt expense related to non-distribution is recoverable through a flow through mechanism".* UES indicated the flow-through mechanism by which the amount is reconciled is eventually reconciled to the semi-annual default service rates set by Commission Order.

Audit reviewed the activity in the SFAS 109 Fed and noted offsetting debit entries to account #10-20-10-00-407-09-00, Amortization Expense-FAS 109 Regulatory Asset. Audit was informed that the original balance was booked in December 2002 for $6,016,119.50 and is being amortized over fifteen years.

The Purchase Power Contract regulatory asset represents the remaining balance of a Hydro Quebec contract, signed by UPC in 2003. At that time, the estimated contract cost was $10,161,165. The estimated balance was set to amortize from 5/2003 through 10/2021, with the balance adjusted as actual contract charges are received. Offsetting monthly debit entries in the amount of $28,464.68 were noted in account 10-20-00-00-253-00-10, Regulatory Liability Purchase Power Contracts. That liability account reflects the mirror image of the activity and balance in this asset account.

PBOP, Pension, and SERP are discussed in detail in the Payroll section of this report.

Regarding DER Investment, Audit requested clarification of the original investment amount and the period over which the investment is being amortized. The Company indicated that the original amount was $385,682.31, and is being amortized over 20, 15, and 5 year periods in accordance with PUC Order 25,201 in docket DE10-292. A micro-turbine for the Exeter SAU 16 project is being amortized over 15 years, a photo-voltaic facility for the same district over 20 years, and costs associated with hiring a consultant over five years. The Order noted the investment to be $200,000. The Company further explained that the variance (between the Order and the booked amount) "was due to expenses incurred by its consultant, Energy Strategies, Inc. in the amount of $183,682.31. This amount was communicated to the Commission via the Company's DE 10-292 Unitil Energy Systems, Inc. Compliance Tariff Filing: Step Adjustment for

Distributed Energy Resources Investment in Exeter SAU 16 project. The amount listed for the consultant appears on the March 11, 2011 filing, Attachment 2, page 4". Audit reviewed the referenced filing and agrees that the consulting total as described was filed. The page also indicated that the costs would be amortized over a five year period at $36,736.46 per year.

The Major Storm Reserve represents the accrued revenue and interest relating to the $800,000 annual authorized funding.

The Emergency Storm Restoration account represents the amortization and accrued interest relating to the Storm Recovery Adjustment Factor assets. The storms included in the amortization are the Ice and Wind Storms, Hurricanes Irene and Sandy, and the October snowstorm. This account was reviewed as part of the annual Storm Reserve audit, with the 2015 report issued 4/19/2016 in docket DE 16-274.

Preliminary Survey and Investigation Charges – Account #183 $59,089

Audit verified the FERC Form 1 reported balance to two general ledger accounts:

10-20-50-00-183-00-00 Preliminary Survey and Investigation-Capital	$ 1,320
10-20-60-00-183-00-00 Preliminary Survey and Investigation-Seacoast	$57,769
	$59,089

Audit reviewed the activity in both accounts and noted that the balances are comprised of invoices from TF Moran. Audit verified one entry in the amount of $18,797 to an invoice from TF Moran for professional personnel service from 12/28/2014 – 1/31/2015. The project is identified as NH 111 Proposed Line Kingston and Danville NH.

The $59,089 was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625.

Clearing Accounts – Account #184 $488,123

Audit verified the FERC Form 1 reported balance to the following general ledger accounts:

10-20-50-00-184-04-00 Susp Clear Exempt Stock	$221,738
10-20-50-00-184-04-01 Susp Clear Undg Exempt Stock	$ 2,335
10-20-60-00-184-00-00 Susp Cl O/H Exempt Stock	$255,528
10-20-60-00-184-04-01 Susp Cl URD Exempt Stock	$ 8,522
	$488,123

The $488,123 was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625, and individually to the filing schedule 2B page 8 of 12.

The 10-20-50-00-184-04-00 Suspense Clear account represents asset values for very small items used during any construction in the Capital region, such as nuts and bolts. The Company indicated that it conducts an inventory once every three years.

10-20-60-00-184-00-00 represents similar overhead vs. underground nuts and bolts used in the Seacoast region.

Account 10-20-00-00-184-08-00 reflected a zero balance at the beginning and end of the test year. The account, Cash Discounts, did reflect debit and credit activity in the amount of $18,730. The discounts were primarily offset to the Undistributed Stores Expense account 10-20-60-00-163-00-00. Activity in the account indicates that the Company took advantage of discounts on purchased small tools, etc.

Temporary Facilities – Account #185 $(9,296)

The FERC Form 1 reported Temporary Facilities balance was verified to the following general ledger accounts:

10-20-50-00-185-01-00 Temporary Services (Capital)	$ (149)
10-20-60-00-185-01-00 Temporary Services (Seacoast)	$(9,147)
	$(9,296)

The $(9,296) was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625. The Company indicated that the credit entries to this account represent cash payments for the temporary services being supplied. Offsetting debits were noted in account #10-20-00-00-131-00-00, Cash Remittance-Citizens Bank.

Miscellaneous Deferred Debits – Account #186 $284,296

The FERC Form 1 reflected the total Miscellaneous Deferred Debit balance which was verified to two general ledger accounts:

10-20-00-00-186-00-14 LT Portion-Prepaid Revolver	$ 57,602
10-20-00-00-186-40-00 Deferred Charges-Storm Costs	$226,694
	$284,296

Refer to the Debt portion of this report for additional information related to the Revolver. Deferred Storm Charges are reviewed as part of the Major Storm Fund audit. The $284,296 was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625.

Accumulated Deferred Income Taxes – Account #190 $220,997

FERC Form 1 Accumulated Deferred Income Tax was verified to deferred federal and deferred state income tax accounts related to Customer Contributions:

10-20-00-00-190-01-30 DEF FIT-CIAC	$173,575
10-20-00-00-190-20-30 DEF SIT-CIAC	$ 47,422
	$220,997

The $220,997 was noted in the Filing Requirement Schedules-Schedule 2 page 6 of 12 as part of the total Other Deferred Debits $33,791,625. The $220,997 was also verified to the filing schedule 3 page 12 of 12.

Activity within the Accumulated Deferred Federal Income Tax CIAC account was offset to the Deferred Federal Income Tax Expense account 10-20-10-00-410-01-36, which reflected debits of $9,293 and credits of $36,107 for net activity for the year of $26,815. The net debit Deferred State Income Tax activity of $7,326 was offset to the Deferred State Income Tax expense account 10-20-10-00-410-02-36 without exception.

Balance Sheet Liabilities and Other Credits

Common Stock Issues – Account #201 $2,442,426

Audit verified the FERC Form 1 reported total to general ledger account #10-20-00-00-201-00-00. The total was verified to the Filing Requirement Schedules-Schedule 2 page 7 of 12. The figure has not changed since the prior test year audit (2009 in DE 10-055). 100% of the 131,746 shares of common stock is owned by Unitil Corporation.

Preferred Stock Issued – Account #204 $189,800

The total preferred stock figure on the FERC Form 1 was verified to general ledger account #10-20-00-00-204-02-00. The total was verified to the Filing Requirement Schedules-Schedule 2 page 7 of 12.

Audit requested and was provided with a listing of the holders of the preferred stock. 79% is held by a non-affiliated company, with the remainder held by non-affiliated individuals.

The $35,200 decrease from 2014 year-end balance is the result of the repurchase of preferred shares (6%, $100 par). The $25,200 debit entries noted in this account were offset to credit entries in account 10-20-08-00-930-02-00, Trustee/Registrar Expense. $10,000 debited to the 204 account was offset to Accounts Payable Vouchers 10-20-00-00-2312-01-00.

Premium on Capital Stock – Account #207 $1,005,875

Audit verified the FERC Form 1 figure to general ledger account #10-20-00-00-207-00-00. The total was verified to the Filing Requirement Schedules-Schedule 2 page 7 of 12. The figure has not changed since the prior test year audit (2009 in DE 10-055).

Other Paid-in Capital – Account #208-211 $39,028,170

The Other Paid-in Capital account within the FERC Form 1 reflected a $5 million increase from the 2014 year-end to the test year 2015 year-end. The total was verified to the Filing Requirement Schedules-Schedule 2 page 7 of 12. Audit reviewed the Unitil

Corporation Board minutes for July 2015 and noted approval to provide $5 million in equity to UES to improve its capital structure and leverage statistics. Audit requested and was provided with the journal entries which moved the money from Unitil Corporation to Unitil Energy. The offset to this 10-20-00-00-211-00-00, Miscellaneous Paid in Capital account was a debit to the Note Payable Cash Pool as discussed in the UES minutes section of this report.

Capital Stock Expense – Account 214 $(94,845)

Audit verified the Capital Stock expense total to the Filing Requirement Schedules-Schedule 2A page 7 of 12 as well as to the following general ledger accounts:

10-20-00-00-214-01-01 Capital Stock Expense 1926	$ (539)
10-20-00-00-214-01-02 Capital Stock Expense 1948	$ (2,390)
10-20-00-00-214-01-03 Capital Stock Expense 1950	$ (776)
10-20-00-00-214-01-04 Capital Stock Expense 1971	$ (8,568)
10-20-00-00-214-01-05 Capital Stock Expense 1973	$(47,472)
10-20-00-00-214-01-06 Capital Stock Expense 1974	$ (3,107)
10-20-00-00-214-01-07 Capital Stock Expense 1975	$(30,993)
	$(94,845)

The Capital Stock Expense figure was unchanged from the prior audit (test year 2009).

Retained Earnings – Account 216 $(34,903,325)

Audit reviewed the general ledger account #10-20-00-00-216-00-00 which reflected retained earnings of $(32,938,577). The net income for the year, noted on the FERC Form 1 in the amount of $(1,964,748) results in the total retained earnings figure of $(34,903,325) as identified in the Filing Requirement Schedules-Schedule 2 page 7 of 12.

Bonds – Account #221 $77,000,000

Audit reviewed the PUC orders for the approval of all the debt financing including the date, the rate and class and the principal amount issued.

Series	Docket No.	Order No.	Date of Issue
Series I	DF 94-180	21,360	9/20/1994
Series J	DF 98-119	22,988	7/24/1998
Series K	DE 01-151	22,662	3/23/2001
Series L	DF 94-190	21,361	9/20/1994
Series M	DF 98-118	22,987	7/24/1998
Series N	DE 01-052	22,663	3/23/2001
Series O	DE 06-103	24,658	9/25/2006
Series P	DE 09-236	25,069	1/22/2010

The original principal total of $80,000,000 was reduced by a total of $3,000,000 in October of 2015. The Series impacted were the original Series I $6,000,000 reduced by $1,200,000 to $4,800,000 and the Series L which was reduced by $1,800,000 from $9,000,000 to $7,200,000. The table below shows the outstanding bonds at year end 2015, the reported interest, and the associated Unamortized Discount expense:

Class/Series	Rate	Outstanding	Interest	(Premium)/Discount Exp.
1st Mortgage Bonds Series I	8.49%	$ 4,800,000	$ 488,175	$ 141,750
1st Mortgage Bonds Series J	6.96%	10,000,000	696,000	343,727
1st Mortgage Bonds Series K	8.00%	7,500,000	600,000	145,944
1st Mortgage Bonds Series L	8.49%	7,200,000	732,263	193,809
1st Mortgage Bonds Series M	6.96%	10,000,000	696,000	230,507
1st Mortgage Bonds Series N	8.00%	7,500,000	600,000	111,917
1st Mortgage Bonds Series O	6.32%	15,000,000	948,000	280,242
1st Mortgage Bonds Series P	5.24%	15,000,000	786,000	518,972
Totals		$77,000,000	$5,546,438	$1,966,868

The outstanding balances were verified to the general ledger accounts 10-20-00-00-221-xx-xx, with individual account identifiers for each issuance.

The interest for the Series I and series L issues did not calculate on FERC Form 1. The Company stated that *"on 10/13/15, we made two sinking fund payments for series I and series L ($1,200,000 and $1,800,000 respectively). As a result, the interest for the last two and a half months of 2015 was calculated using the new balances of $4,800,000 and $7,200,000"*. The Company provided a schedule of the monthly debt activity for the two bonds which showed the monthly interest expense reduced for the remainder of the year reflecting the sinking fund payments made in October for the two bond issues, Series I, account 10-20-00-221-08-00 and Series L, account 10-20-00-221-13-00. Audit verified that the monthly interest accruals, account 10-20-00-237-01-00, were reversed in the following month. Refer to the Interest Accrual portion of this report for additional information.

The Long-Term Debt schedule on the FERC Form 1, page 257 shows the interest for the year amounts for each debt issue totaling $5,546,438. This amount agrees with the general ledger account 10-20-08-00-427-00-00, Interest on Long-Term Debt and the net interest on the filing schedule RevReq-3-12, page 2 of 4. Each account was verified to the FERC Form 1 income statement individually, and to the general ledger account noted. The total test-year interest expense of $5,975,034, shown on schedule RevReq-2-12, line 6 is comprised of general ledger accounts 427 through 432 from FERC Form 1, less the Interest on Customer Deposits of $4,776, account 10-20-21-00-431-04-00. Specifically:

Interest on LT Debt	$5,546,438	10-20-08-00-427-00-00
Amort. of Debt Discount & Expense	122,036	10-20-08-00-428-00-00
Interest on Debt to Assoc. Companies	94,934	10-20-08-00-430-00-00
Other Interest Expense	338,701	10-2x-xx-xx-431-xx-xx
Less: AFUDC	(122,299)	10-20-10-00-432-00-00
Net Interest (FERC Form1)	$5,979,810	
Less: Interest on Customer Deposits	(4,776)	RevReq-2, 10-20-21-00-431-04-00
Net Interest RevReq-3-12, page 1 of 2	$5,975,034	

Other Interest Expense is the sum of several general ledger accounts, grouped for presentation as follows:

10-20-01-00-431-xx-xx	Energy Efficiency	$ 32,068
10-20-01-22-431-00-00	LI-EAP Reserve	$ 172
10-20-01-3x-431-00-00	Ext Del, SC, DS	$ 42,177
10-20-01-4x-431-00-00	RPS	$140,533
10-20-08-00-431-02-00	Cash Pool	$ 33,848
10-20-10-00-431-09-00	Other	$ 85,127
10-20-21-00-431-04-00	Customer Deposits	$ 4,776
		$388,701

The Energy Efficiency and Low Income Electric Assistance Program Reserve (LI-EAP) expense accounts are reviewed annually during the respective program audits. Detailed review was not conducted as part of this audit. The interest expense related to the External Delivery Charges (Ext Del), Stranded Costs (SC), and Default Service (DS) are included with the Company filings in each annual reconciling mechanism. Detailed review was not conducted as part of this audit. Interest related to the RPS, Renewable Portfolio Standard, is reviewed as part of an annual audit of the Renewable Energy Fund. The Cash Pool interest expense is discussed in the Debt portion of this report. Activity in the Other interest expense account reflected primarily monthly amortization of interest relating to the Riverwoods issue (see docket DE 11-105). Customer Deposit Interest is included within the Other total and is discussed in detail in the Customer Deposit and Revenue portions of this report.

Accounts Payable – Account #232 $13,878,447

Audit verified the total reports FERC Form 1 balance to the Filing Requirement Schedule 2A, page 7 of 12 and to thirty two general ledger accounts 10-2X-00-XX-232-XX-XX.

Audit reviewed all thirty-two accounts in detail. 65% of the account total comes from the Accounts Payable Accrual account. Most of the activity in the A/P accrual account is the accrual for power expenses. 14% of the Accounts Payable balance is revenue to be paid to external suppliers. 12% of the account is the A/P RPS (Renewable Portfolio Standards) current portion. The company accrues quarterly for the RPS payment that is due July 1 of each year.

Accounts Payable Vouchers $396,717account 10-20-00-00-232-01-00

Unitil's AP Manager reviews the trial balance aging on a monthly basis. Any payables over 90 days are researched.

Audit reviewed UES' Accounts Payable Aging report as of December 31, 2015. The net amount due of $396,717 was tied to GL account 10-20-00-00-232-01-00, Accounts Payable Vouchers, without exception. 99.1% of the net due is current. $984.02 or 0.2% of the total is in the 60 day bucket and $2,624.99, or 0.7%, is in the 90 day bucket. Both past due amounts are for the same vendor. For this same vendor, UES had a $4,000 credit on their account from August 2015 which shows on the aging in the "over period" bucket. The $4,000 credit was applied against the past due amount leaving a $305.99 credit as the net for vendor. The invoices are showing as past due on the aging because Unitil did not receive them until December, 2015. No exceptions were noted.

Accrued Payroll $81,507 10-20-00-00-232-02-01

Payroll for hourly employees is paid one week in arrears with pay weeks running from Wednesday through Tuesday. The last pay period of 2015 was on 12/29/2015 for the week ending 12/22/2015. Payroll was accrued for nine days at the end of the calendar year, from 12/22 through 12/31. A total of $81,507 was accrued to account 10-20-00-00-232-02-01, Accrued Payroll. The actual payroll for that nine day period was $76,889, a $4,617 difference. No exceptions were noted.

A/P Customer Credit Balances $379,424 10-20-00-00-232-05-02

Customers who have a credit balance on their account are moved from accounts receivable to the A/P Customer Credit Balance account. Credits on customer's accounts usually arise when the customer is on budget billing and the payment is in excess of the actual balance due.

A/P LI-EAP Over-collected Funds $25,508 10-20-00-00-232-06-00

This account is used to hold the over collected EAP funds that have not been paid to the PUC. Audit verified the balance of $25,508 to the EAP reconciliation that was submitted on January for the month of December. No exception was noted. The EAP is audited annually, thus additional detailed review was not conducted as part of this rate case audit.

Accounts Payable Process

The Accounts Payable group consists of five employees; a manager and four staff. Each member of the AP group is assigned a different company and is responsible for processing vendor invoices and issuing payment in the form of checks or ACH. AP processes vendor voucher packages on a daily basis. Checks are printed on Thursdays, weekly, and are mailed on Friday. ACH payments are processed daily. All invoices posted to Flexi-A/P are automatically exported and posted as journal entries to the Flexi General Ledger System.

Accounts Payable maintains the vendor information on the Flexi Accounts Payable System (Flexi-A/P). A new vendor will become activated once AP has received their W-9. A spreadsheet is maintained by the AP group that lists all vendors added to the system. The AP member that adds a vendor initials the addition and a second member of AP reviews it. Any changes to a vendor are also maintained in this spreadsheet and initialed by the person who changed it. AP reviews the vendor files annually and inactivates any vendor who has had no activity for three years.

Paid vendor files and all back up documentation for wires and cash pool transfers are stored for six months after the year they were paid and are then shredded by a contracted document destruction company. Documentation included in these files are the invoices, check request or purchase order, a copy of the check and any other supporting documents. All documents are scanned into RMS-Dataview and are available to view after the paper copies have been destroyed.

Any supporting documentation for confidential Human Resource (HR) payments is held by HR for four years unless the information is IRS related and then it is maintained for seven years. The AP file drawer only contains a copy of the check and the payment request for these confidential payments.

Check printing occurs on Thursday mornings. Prior to checks being processed, the cash requirements report batch totals and the payment selection total in Flexi-A/P must all match. AP selects criteria for payment, usually bank account and a date range, which processes all open payments as of that day. AP then reviews it to make sure the dollar amount is correct. Once everything is verified correct the record is added and posted to the payment production file. The Flexi Payment Register is printed and verified to the Bottomline Check Register.

AP logs onto Bottomline check printing software and selects the production file and confirms the next sequential check number is correct by comparing the prior check register. Batch totals from Flexi-A/P are verified to Bottomline and recorded on the Batch Total Checklist. Checks are printed and ACHs are released. Bottomline and Flexi-A/P check registers are reviewed by the Assistant Controller or Director of Finance prior to checks being distributed.

Payment production files are transferred to the Bank of America (BoA) server for processing at 3:30 PM on a daily basis. BoA provides an email confirming the bank account and how much the ACH file is for. The Assistant Controller or Director of Finance reviews and approves the ACH check register prior to electronically approving and releasing payment through the BoA Paymode system.

Checks under $5,000 are machine printed with the CEO's signature. Checks over $5,000 are also printed with the CEO's signature however they also require a manual signature.

The batch total checklist is reconciled to the bank statements on a monthly basis.

Notes Payable to Associated Companies – Account #233 $8,774,322

The 2015 general ledger reports an ending balance in account 10-20-00-00-233-00-00, Note Payable-Cash Pool, of $8,774,322. (Refer to the Cost Allocation Manual, section 5a - Unitil Corporation Tax Sharing and Cash Pooling Agreements for a discussion of the Cash Pool). This agrees with the filing schedule 2A and the Comparative Balance Sheet of the 2015 FERC Form 1.

The Amended and Restated Cash Pooling Agreement dated December 1, 2008, appendix A3, states how the interest is calculated. *"The interest rate applicable on any day to Surplus Advances shall be the daily rate of interest applicable to loans to Unitil by the bank designated from time to time by Unitil as the Lead Bank. The interest applicable on any day to Bank Advances shall be calculated to produce an aggregate interest charge on all such Bank Advances, at a rate which shall be uniform for all such Bank Advances, equal to the net cost to Unitil of the Bank Borrowings used to fund such Bank Advance on such day."*

The Interest on Debt to Associated Companies, account 10-20-08-00-430-00-00, is reported on the general ledger as $94,934. Audit traced the corresponding credits to account 10-20-00-00-233-00-00, Note Payable-Cash Pool, without exception.

Interest Expense - Cash Pool, account 10-20-08-00-431-02-00 totaled $33,848 on the general ledger for 2015. Audit traced the corresponding credits to account 10-20-00-00-233-00-00, Note Payable-Cash Pool, without exception.

Total Interest Paid

10-20-08-00-427-00-00 Interest on Long-Term Debt	$5,546,438
10-20-08-00-430-00-00 Interest on Debt to Associated Companies	94,934
10-20-08-00-431-02-00 Interest Expense - Cash Pool	33,848
Total	$5,675,220

Credit Agreement - Revolver

The Company provided an explanation of the credit agreement stating that the "*prepayment and deferred charges are associated with costs to set up the Company's Restated Credit Agreement, which is being amortized over the life of the agreement*."

10-20-00-00-165-14-00, Prepaid Revolver	$15,027
10-20-00-00-186-00-14, Long-Term Portion, Prepaid Revolver	$57,602

The Company explained that "*on October 4, 2013, the Company* (Unitil Corporation) *entered into an Amended and Restated Credit Agreement (the "Credit Facility") with a syndicate of lenders which amended and restated in its entirety the Company's prior credit agreement, dated as of November 26, 2008, as amended. The Credit Facility extends to October 4, 2018 and provides for a new borrowing limit of*

$120 million, which includes a $25 million sublimit for the issuance of standby letters of credit. The Credit Facility provides Unitil with the ability to elect that borrowings under the Credit Facility bear interest under several options, including at a daily fluctuating rate of interest per annum equal to one-month London Interbank Offered Rate plus 1.375%. Provided there is no event of default under the Credit Facility, the Company may on a one-time basis request an increase in the aggregate commitments under the Credit Facility by an aggregate additional amount of up to $30 million."

For the test-year 2015, an amendment to the credit agreement went into effect and incurred costs of $185,707 which were allocated to the cash pool participants based on their percentage of total borrowing.

Amortization of Revolving Credit Line Fees

Bank Fees and Commitments, account 10-20-08-00-921-01-08 shows the amortization of the revolving credit line fees as 12 monthly debits and two adjustments totaling $15,845. The 2015 credit line fees in addition to the 2013 fees are to be amortized until 2020.

Accounts Payable to Associated Companies – Account #234 $1,881,898

Audit verified the total reports FERC Form 1 balance to the Filing Requirement Schedule 2A, page 7 of 12 and to the following general ledger accounts:

10-20-00-00-234-01-02 A/P Assoc Co Flexi Only USC	$ (422,121)
10-20-00-00-234-01-05 A/P Assoc Co Service Bill	$(1,060,161)
10-20-00-00-234-01-12 A/P Assoc Co USC	$ (18,505)
10-20-00-00-234-01-15 A/P Assoc Co UC	$ (381,111)
	$(1,881,898)

A/P Assoc Co-Flexi Only USC $422,121

Unitil provided the following description on how the A/P Assoc Co-Flexi Only USC account is used: *"Account 10-20-00-00-234-01-02 is used to clear intercompany payables and receivables between companies. If an invoice is charged to both USC and UES the cash is withdrawn from the USC bank account, but an entry is created to debit USC intercompany receivable and an intercompany payable is credited to UES. The cash is then settled between USC and UES through the cash pool, which clears the intercompany payable/receivable."*

A/P Assoc Cos-Service Bill $1,060,161

Audit reviewed the December service billing, in the amount of $1,060,161, and tied it to the ending balance in account 10-20-00-00-234-01-05. The bill is broken down by department: Corporate & Administration; Customer Services; Energy Services; Engineering & Operations; Regulatory, Finance & Account; and Technology. The coversheet states the hour being billed for each division and a page within the bill breaks down the labor and overhead charges for each division and department therein. A direct charge amount of $29,538 is included in the total invoice for data management hardware leases and maintenance costs, and expense reports. An overhead rate of 110% is used. The final page of the invoice breaks down the total bill by general ledger account and how much is charged to each. No exceptions were noted.

Audit compared the USC overhead rate of 110% to the UES overhead rates. For the month of December, UES' total overhead for Worker's comp, Pension costs and payroll taxes, medical costs, 401K and PBOP was 98%. The average for the year was 123%.

A/P Assoc Cos – USC $18,505

Audit reviewed in detail the transactions on general ledger account 10-20-00-00-234-01-12. The account contained thirteen transactions. Twelve of them were an end of month entry for "USC Under-collection" and the reversal. The thirteenth entry was the December 31, 2015 $18,505 under-collection entry which would have been reversed January 1, 2016.

A/P Assoc Cos – UC $381,111

There were three entries in this account during the year and they all occurred on November 30, 2015. Two of the entries were a miscellaneous tax adjustment and the reversal. The third entry was a $381,111 miscellaneous tax adjustment. Per the CAM, Unitil Corporation provides intercompany services for tax sharing agreement.

<u>Customer Deposits – Account #235 $923,011</u>

The customer deposit account, FERC #235, was tied to filing Schedule 2A page 7 of 12 in the amount of $923,011. The following general ledger accounts were also tied to the FERC Form 1 and the filing:

10-20-00-00-235-01-00	Customer Deposits	$	(875,355)
10-20-00-00-235-02-00	Customer Billed Deposits	$	(47,655)
		$	(923,011)

Audit reviewed a listing of all customers, both Capital and Seacoast, who paid deposits. The original deposit amounts on these reports, $368,567 Capital and $506,788 Seacoast, were tied to account 10-20-00-00-235-01-00, Customer Deposits in the amount of $875,355. No exceptions were noted with the deposit amount.

Audit requested a listing of all customers that made up the Customer Billed Deposits general ledger account total of $47,655. These customers have been billed for deposits but have not yet paid them. Unitil provided a trial balance for each Seacoast and Capital which totals the account balance of $47,655. A customer listing for both the Seacoast and Capital were provided showing the customer ID, deposit amount billed and deposit amount unpaid. The total unpaid for the two divisions was verified to the Customer Billed Deposit account amount of $47,655.

Unitil provided a trial balance and customer listing as of July 7, 2016 of $92,963. The customer listing notes the customer, billed amount, and the amount that is still due. The customer listing for Capital and Seacoast matched the corresponding trial balance.

Audit was provided a separate report showing the interest on customer deposits paid during 2015. This amount, $4,777, was tied to general ledger account 10-20-21-00-431-04-00, Interest on Customer Deposits, without exception.

The customer deposit interest is calculated using the formula of Deposit Amount * (interest rate/365)* the number of days from the last billing period. The interest rate used to calculate the interest was 3.25%, which is equal to the prime rate, as PUC 1203.03 states. Audit recalculated the interest amount and the majority of the January interest amounts were correct. The interest calculations from January 3, 6 and 7, and the remaining eleven months of the year were unable to be verified by Audit.

Unitil explained to Audit that in January 2015 the policy on customer deposit interest changed. Previously, Unitil refunded the interest on customer deposits on a monthly basis. The January 2015 refunds were the last refunds that were done this way. After January 2015, Unitil will only refund the interest accrued on a yearly basis, in January, or when the deposit is given back to the customer.

The interest payments that were made from February through December were for deposits given back and calculated based on the last interest payment, which was in January 2015. Audit selected a few accounts to see how the interest was calculated. Unitil provided the number of days used to calculate the interest and Audit confirmed the interest amount paid was correct. No exceptions were noted on the interest calculations.

There were 44 customers that made deposits from 1977-1989 that Unitil was still holding. Audit questioned the customer with the deposit from 1977 and Unitil verified that the customer had not made twelve consecutive monthly payments on time since 1997, as far back as the system would show.

As interest is being paid to the customers on a yearly basis, which does agree with the PUC 1203.03 rule, Audit questioned which account the monthly interest is being accrued to. Unitil noted that they inadvertently did not accrue interest during 2015. The 2015 interest was posted to customer accounts in January 2016. Interest will be accrued in 2016 and paid in 2017.

<u>Taxes Accrued – Account #236 $1,118,735</u>

The filing schedule 2A reflects $1,118,735. The total was verified to the FERC Form 1 and to the general ledger accounts below:

10-20-00-00-236-02-30 State BPT-Current	$ (770,540)
10-20-00-00-236-02-40 State Tax-Current	$ (126,000)
10-20-00-00-236-02-41 State Tax-Prior	$ (123,348)
10-20-00-00-236-02-42 NH Consumption Tax	$ (99,171)
10-20-00-00-236-02-43 NH Consumption Tax Write-off	$ 324
	$(1,118,735)

Audit verified that the State BPT account and State Tax Current account began the test year with a zero balance. Activity within the BPT account reflected debits of $1,107,088 and credits of 1,877,628, resulting in the credit balance of $(770,540). Offsets to the activity were noted in the State Inc Tax-Crnt-BPT expense account 10-20-10-00-409-02-30.

Activity within the State Tax Current accrued account was the result of monthly entries of $10,500 each, which were offset to the NH BET Tax Expense account 10-20-10-00-408-02-18. The expense total was verified to the Schedule 28 Tax worksheet provided to Audit by the Company, as well as to the Filing Schedule RevReq 3-12, page 3 of 4.

The State Tax-Prior account reflected no activity during the test year.

The NH Consumption Tax accrual account began the year with a credit balance of $106,121, reflected monthly debit adjustments totaling $11,322, monthly revenue credits totaling $(679,250), and debits reflecting payments to the NH DRA totaling $674,870. Audit tested one month's remittance, without exception.

The Consumption Tax Write-off account reflected a beginning balance of debit $273. Activity in the account reflected write-offs in the amount of $2,724, recoveries in the amount of $412, and vouchers to the NH DRA in the amount of $2,262.

Refer to the Tax portion of this report for additional detail.

Interest Accrued – Account #237 $1,072,278

The general ledger reported the Interest Accrued associated with long-term debt at year-end in the amount of $5,528 and Accrued Interest Funded Debt of $1,066,750 for total accrued interest of $1,072,278. This amount ties to FERC Form 1 and the filing schedule 2A. Audit was able to recalculate the Accrued Interest – Funded Debt for the eight debt issues including the two bonds with the sinking fund payments.

10-20-00-00-237-00-00, Interest Accrued-Cash Pool	$ 5,528
10-20-00-00-237-01-00, Accrued Interest Funded Debt	1,066,750
Total Accrued Interest	$1,072,278

Dividends Declared – Account #238 $1,373,080

Per minutes of the Unitil Energy Board of Directors, the following dividends were declared during 2015:
Non-cumulative Preferred Stock 6% payable 4/15/15 $1.50 per each $100 par sor 4/1/15
Non-cumulative Preferred Stock 6% payable 7/15/15 $1.50 per each $100 par sor 7/1/15
Non-cumulative Preferred Stock 6% payable 10/15/15 $1.50 per each $100 par sor 10/15
Non-cumulative Preferred Stock 6% payable 1/15/16 $1.50 per $100 par sor 12/31/15
sor – shareholder of record

Audit verified the Preferred Dividend declared year-end balance of $2,922 to the general ledger account 10-20-00-00-238-01-00. There were 1,898 shares outstanding at year end. The calculated dividend of $2,847 is $75 less than the general ledger due to an adjusting entry for the third quarter, of that amount. Further review was not conducted, due to the immateriality of the adjustment.

The Board also declared the following common dividends. Common stock is solely owned by Unitil Corporation, which holds 131,746 shares.

Common payable 4/15/15 $9.76 per share to sor 4/1/15	$1,285,840.96
Common payable 7/15/15 $9.99 per share to sor 7/1/15	$1,316,142.54
Common payable 10/15/15 $9.57 per share to sor 10/1/15	$1,260,158.40
Common payable 1/15/16 $10.40 per share to sor 12/31/15	$1,370,158.40

Audit verified the year-end total of $1,370,158.40, reflected on the FERC Form 1 to the general ledger account 10-20-00-00-238-02-00 without exception. The total was also verified to the Filing Requirement Schedules-Schedule 2A page 7 of 12.

The dividends paid during the test year were verified to expense account 10-20-00-08-00-437-02-00, Preferred Dividends 6%, $12,179 and 10-20-08-00-438-00-00, Common Dividends in the amount of $5,232,951. The total represents each of the common dividend declarations made during 2015.

Miscellaneous Current and Accrued Liabilities – Account #242 $6,040,265

The filing schedule 2A page 7 of 12 reflects the $6,040,265 as Other Accrued Liabilities. The figure is noted on FERC Form 1 as Miscellaneous Current and Accrued Liabilities. Audit verified the total to the following accounts:

10-20-00-00-242-03-20	Accrued Health Insurance-Non-union	$ 27,400 *
10-20-00-00-242-03-25	Accrued Dental Insurance	$ 8,600 *
10-20-00-00-242-04-08	Accrued Legal Claims and Litigation	$ 1
10-20-00-00-242-05-11	Accrued Legal-Flow-through	$ 73,800
10-20-00-00-242-06-00	FAS 158 Adj SERP Current	$ 120,069
10-20-00-00-242-08-00	Accrued Audit Fees	$ 65,835
10-20-00-00-242-26-00	Accrued Incentive Compensation	$ 119,913 *
10-20-00-00-242-30-00	Accrued Vacation	$ 73,405 *
10-20-00-00-242-31-10	Insurance Claims-UES	$ 9,416
10-20-00-00-242-32-00	Accounts Payable Accrual	$ 54,600
10-20-00-00-242-32-10	Accounts Payable Accrual –BS	$ 334,000
10-20-00-00-242-33-00	Unearned Revenue-Misc.	$ 183,710
10-20-00-00-242-34-00	Accrued Postage	$ 38,000
10-20-00-00-242-90-00	Regulatory Liabilities-Current	$4,931,516
		$6,040,265

The accounts identified with * indicate they are related to employee compensation and have been reviewed in the Payroll portion of this report.

Audit reviewed the activity in the Accrued Legal Claims and Litigation account, 10-20-00-00-242-04-08, which ended the year at $1. There were debit entries which sum to $56,080 and credit entries which sum to $56,081. The credit entries were offset to the Legal Claims and Litigation expense account #10-20-08-00-923-00-00. $20,000 of the credits in this accrual account represents monthly legal accruals of $1,666.67. Audit requested clarification of the activities for which a variety of firms had been hired. Specifically, Williams Scotsman represents rental of a storage container which is holding evidence in a pending lawsuit in Rockingham County. The suit is the result of a 2010 fire near Hampton Beach. Sulloway and Hollis was hired in connection with Hillsborough County litigation and re-litigation regarding potential claims against the Company. Funds paid to Buchanan and Associates represented settlement made to a plaintiff through their counsel**.**

10-20-00-00-242-05-11, Accrued Legal-Flow-through, $73,800 was also reviewed. The activity reflected adjustments to accruals only. The Company indicated that the activity is a monthly auto-reversing entry.

The detail activity of the FAS 158 Adj-SERP Current account, which ended the year with $120,069 was reviewed. Audit requested clarification of the activity and the Company indicated that "*the FAS158 accounts tie to actuary reports during year end periods. On non-year end quarters entries are booked to allocate any changes USC FAS158 amounts to the operating companies*".

The $65,835 noted in account 10-20-00-00-242-08-00 Accrued Audit Fees, reflected account activity offset to Outside Audit Expenses account 10-20-10-00-923-02-00 which reflected year-end total expenses of $$246,914. Refer to the <u>Operations and Maintenance</u> portion of this report.

10-20-00-00-242-31-10 Insurance Claims-UES $9,416. The activity in the account was reviewed. Monthly credit entries, in the amount of $1,750 each, were booked and offset to General Liability Insurance Claims, account 10-20-08-00-925-02-02. Debits to this reserve account exceeded the credits by $1,083, resulting in the year-end balance of $9,416. Thirty three debit entries were identified as Damages-UES, averaging $821. One debit was traced to the Accounts Payable which was cleared through the Cash account. Further detailed review was not conducted.

The Accounts Payable accrual account, 10-20-00-00-242-32-00, reflects a year-end balance of $54,600. The account reflects one entry and one reversing entry which had no effect on the beginning balance of $54,600.

The Accounts Payable accrual account 10-20-00-00-242-32-10 reflected a beginning balance of zero. Two credit entries in December 2015 in the amounts of $320,000 and $14,000 result in the ending balance of $334,000. The $320,000 was noted as a debit offset to Construction Work in Progress, account 10-20-00-00-107-90-00. The $14,000 was verified to the only entry in account 10-20-00-00-173-90-01, Accrued Revenue-Year-end FT AP Accrual. The Company noted that an analysis is done at year-end to determine the accruals which will be booked in 2015 for processing in 2016. The accruals are grouped as construction related and flow-through respectively.

Unearned Revenue-Miscellaneous account 10-20-00-00-242-33-00 $183,710 is used to accrue cable TV rental revenue. Audit requested supporting documentation for $54,335 which was posted on 3/31/2015. The payment represented three month's advance rental. Each month one third of the rent reduces the Unearned Revenue account. The revenue is booked to 10-20-08-00-454-00-00, Rent-Elec, Prop, CATV. The total revenue in that account at year-end was $380,559. Refer to the Revenue portion of this report for additional information.

The activity in the Accrued Postage account 10-20-00-00-242-34-00 reflects eleven credit entries of $38,000 each and one credit entry of $76,000. The debit activity reflects the same, resulting in a net change for the year of zero. Offsets were booked to account 10-20-21-00-903-04-00, Postage. Refer to the Operations and Maintenance Expense portion of this report for additional information.

The Regulatory Liabilities-Current account is a mirror offset to account 10-20-00-00-173-90-00, Accrued Revenue-Credit Balance Reclass. Refer to the Accrued Revenue portion of this report for a detailed explanation of the accounts and the interactions between them.

Customer Advances for Construction – Account #252 $557,928

The filing Schedule 2A, page 7 of 12 reflects the Customer Advances for Construction $557,928 which agrees with the FERC Form 1 and the general ledger:

10-20-60-00-252-00-00 Customer Advances for Construction (Seacoast)	$332,361
10-20-50-00-252-00-00 Customer Advances for Construction (Capital)	$225,567
	$557,928

Refer to the Plant portion of this report for additional information.

Other Deferred Credits – Account #253 $55,206,989

Audit reviewed the Deferred Credits figure of $55,206,989 on the filing schedule 2A, page 7 of 12 and verified that it agrees with the 2015 FERC Form 1 and with the following general ledger accounts:

10-20-00-00-253-00-00 Regulatory Liability SFAS 109 Fed	$ 210,367
10-20-00-00-253-00-10 Regulatory Liab Purch Power Contracts	$ 1,609,062
10-20-00-00-253-01-04 Customer Gift Certificate	$ 1,815
10-20-00-00-253-02-00 System Benefit Charge-LIEAP Reserve	$ 57,323
10-20-00-00-253-04-03 Accrued SFAS 106 Liability	$ 6,536,045
10-20-00-00-253-04-11 FAS 158 Adj-Pension	$27,875,288
10-20-00-00-253-04-13 FAS 158 Adj-PBOP	$15,989,800
10-20-00-00-253-04-14 FAS 158 Adj-SERP	$ 2,936,058
10-20-60-00-253-01-03 State of NH Escrow Acct-SEA	$ (8,768)
	$55,206,989

The activity in the Regulatory Liability SFAS 109 Fed account reflected twelve monthly debit entries of $9,151 each representing the amortization of the regulatory liability for Federal taxes. The credits were verified to account 10-20-10-00-407-09-01, Amortization Expense-FAS 109 Reg Liability-Fed, without exception.

The Regulatory Liability Purchased Power Contracts activity reflected twelve monthly debit entries of $28,464.68 each to record the amortization of stranded power costs. The offsetting credits were verified to account 10-20-00-00-182-04-00, Reg Asset-Purchased Power Contracts, without exception.

Audit reviewed the Customer Gift Certificate account, which reflected one entry for the year, a debit in the amount of $100. Further review of the account was not conducted, due to the immateriality of the balance and activity.

The LI-EAP Reserve is reviewed annually as part of the Low Income Electric Assistance Program audit. The most recent report, issued for the fiscal year ending 9/30/2015 was issued on 3/1/2016 (see docket DE 14-205).

The Accrued SFAS 106 Liability activity primarily reflected recurring journal entries which were offset to debits to expense account 10-20-03-00-926-09-00, SFAS PBOP totaling $1,168,212. Debits noted in this 253 account summing to $442,844 were credited to accounts payable with vouchers to SEI Private Trust Company. Refer to the Payroll and Expense sections of this report for additional information.

The FAS 158 accounts reflect the UES allocations of Unitil Corporation's under-funding of each plan. Adjustments to each account are based on the actuarial annual review. Expense offsets were reviewed in the Payroll and Expense portions of this report.

Other Regulatory Liabilities – Account #254 $-0-

The general ledger account 10-20-00-00-254-04-00, Regulatory Liability Cost of Removal, reflects a year-end balance of $12,314,037. There is an offsetting debit balance noted in account #10-20-00-00-108-04-00 Accumulated Depreciation Cost of Removal. The FERC Form 1 balance sheet reflects the total of the six Accumulated Depreciation

accounts #108, inclusive of the cost of removal	$(86,665,999)
and the Regulatory Liability	$(12,314,037)
Total FERC Accumulated Depreciation	$(98,980,036)

Audit requested clarification of the FERC reporting and was provided with the following explanation: "T*he FERC Uniform System of Accounts requires that Accumulated Depreciation for Cost of Removal (ADCOR) be included in Accumulated Depreciation (account 108) on the FERC Form 1. Also, the corresponding Regulatory Liability for Cost of Removal (account 254) is not reported as a separate component on the FERC Form 1. Therefore, the ADCOR debit balance of $12,314,037 and the $12 million Regulatory Liability credit balance are not reported separately on the FERC Form 1." In addition, the Company provided a summary of an SEC audit of Unitil Corp (in 2012) which identified the reporting issue of whether the ADCOR should be reclassed out of account 108 into account 254 for FERC reporting requirements. The conclusion was that such a transfer equated to an "unapproved change and should not be done. The ADCOR should remain in account 108 until the corresponding assets are retired or otherwise disposed*".

Accumulated Deferred Income Taxes-Other Property– Account #282 $39,611,108

The combined Deferred Income Tax total of $25,214,705, noted on the filing schedule 2A page 7 of 12, represents the net of the $(39,611,108) and the $14,396,403 below.

Audit identified two general ledger accounts which sum to the FERC Form 1 reported account 282.

10-20-00-00-282-01-31 DEF FIT-Accel Depr	$(31,969,958)
10-20-00-00-282-02-31 DEF SIT Accel Depr	$ (7,641,150)
	$(39,611,108)

Accumulated Deferred Income Taxes-Other – Account #283 $(14,396,403)

Audit verified the net debit balance on FERC Form 1 of $(14,396,403) to a total of 82 general ledger accounts. All of the accounts reviewed were identified with FERC account #282, not FERC account #283.

OPERATING and CONSTRUCTION BUDGETS

Audit reviewed the operating and construction budgets for the 2015 test-year and compared the budgeted dollar amounts to the actual dollar amounts for the year. The following is a summary of capital additions combining the Seacoast and the Capital divisions for the test-year 2015:

Category	Budgeted 2015	Actual 2015	Increase/(Decrease)
Blankets Electric	$ 7,935,600	$8,072,500	$ 136,900
Communications Electric	354,400	167,800	(186,600)
Communications General	-0-	192,400	192,400
Distributions	5,905,500	8,455,100	2,549,600
Tools, Shop, Garage Electric	85,400	88,400	3,000
Tools, Shop, Garage General	-0-	13,800	13,800
Laboratory	52,000	55,100	3,100
Office	12,000	700	(11,300)
Structures	150,000	32,900	(117,100)
Substation	7,129,000	8,774,500	1,645,500
Transportation	-0-	-0-	-0-
Total	$21,623,900	$25,853,200	$4,229,300

The Blanket Electric category is described in the filing testimony as small projects where each is under $20,000 except for small equipment and other general purchases in which each individual project is under $4k and cannot be anticipated at budget time (See Sprague testimony for further discussion on the budgeting process and other parameters). The remaining categories are self-explanatory.

The total construction budget for 2015 when compared to the actual amounts at year-end shows a net increase of $4,229,300 or 17%.

USC and UES Lease Agreements

USC has a lease with Unitil Realty Corp. for the corporate building, containing 46,348 square feet, located at 6 Liberty Lane West. According to the rental agreement, (page 187 of the CAM) the base rent of $914,325 is paid in equal monthly installments of $76,193.25. This amount does not include any additional rent or adjustments due to actual cost of the landlord to own the building.

UES owns several distribution offices. A 24-hour customer call center in Concord located at 5 McGuire Street is leased to Unitil Realty Corp. who sub-leases to Unitil Service Corp. for use as a call center. This lease commenced on January 21, 1999 and terminates on September 30, 2017. The amount of revenue that UES received in the test year was $41,225.

UES also owns a storage shed on a site in Plaistow, NH that is partially leased to Northern Utilities. This lease is discussed in the Rental Revenue section of the report.

USC also has a lease agreement with Citizens Asset Finance. The lease covers two vehicles, furniture and Equipment, network equipment, PCs and PC equipment, phone system, software, and telephone system. The total lease costs paid by USC for 2009 were $484,228. The total lease costs paid by USC for 2015 were $507,334.42. The total amount charged to UES was $136,980.25 (27%).

PLANT

The table below summarizes the change in Utility Plant, Construction Work in Progress, Accumulated Provision for Depreciation, Amortization, and Depletion, since the prior rate case test year 2009. The information was obtained from the FERC Form 1 for the year noted.

	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
Utility Plant	$213,245,052	$222,872,050	$239,186,470	$252,131,493	$261,898,349	**$272,786,688**
CWIP	$ 7,050,744	$ 7,769,553	$ 4,446,252	$ 3,717,096	$ 8,437,398	$ 17,403,595
Total Utility Plant	$220,295,796	$230,641,603	$243,632,722	$255,848,589	$270,335,747	$290,190,283
Accm Dep/Amrt	$ (70,213,231)	$ (74,907,202)	$ (84,401,077)	$ (86,486,416)	$ (91,637,974)	$ (98,980,036)
Net Utility Plant	$150,082,565	$155,734,401	$162,231,645	$169,362,173	$178,697,773	$191,210,247

Utility Plant in Service (Classified) at the end of the test-year was $267,967,744 per the Continuing Property Records (CPR) which agrees to line 3 of the filing schedule RevReq-4-1 and the 2015 FERC Form No. 1, page 200, line 3.

Completed Construction not Classified was $4,818,943 and agrees to line 2 of the filing schedule RevReq-4-1 and the 2015 FERC Form No. 1, page 200, line 6 for a total of Utility Plant in Service of $272,786,687. Audit notes the amount of $9.8 million is included as proforma adjustment, and is related to the Kingston substation.

Bidding

Audit requested the current bidding policy UES has and UES indicated that, "*There is no established bidding policy for capital work at Unitil Energy Systems, Inc. ("UES"). Large capital projects are typically competitively bid unless technical, operational, or scheduling factors dictate sole source award.*" A review of the vendors used did not result in anything of concern. Audit did review the bid summary for the Kingston Substation project without exception.

Kingston Substation

Per the direct testimony of Mark Collin, page 12 of 28, of exhibit MHC-1, the Kingston Substation is a post-closing adjustment to the end of year figures (proforma) which UES argues should be included in the rate case. Specifically, the substation went into service in April 2016 but UES argues it should be included because the cost of the substation represents a considerable amount of the Company's rate base revenue requirement. Specifically, in his pre-filed direct testimony, Mr. Collin indicates it represents 6.5% of the rate base, and over 27% ($1.7 million) of the $6.3 million revenue requirement. Per page 99 of Mr. Chong's testimony, the $9.8 million is to be adjusted once all the work orders have been finalized and processed. The project at year end 2015 is in the Construction Work in Progress account 10-20-00-00-107-00-00.

The Kingston Substation is also referenced in Schedule RevReq 3-8, page 1 of the testimony of David Chong. While conducting the on-site portion of the Audit, UES explained that the Kingston Substation work order is considered "closed". Unitil explained that "closed" means the assets are being used (in service since April 2016) but that the work order file has not been audited by Unitil for expenses that should/should not be included in the final cost and therefore the appropriate plant accounts have yet to be debited the proper amounts.

Audit requested a Bid summary for the Kingston Substation project and Unitil provided a schedule of the winning and losing bids. Audit reviewed the schedule and in 3 cases the lowest bidder was not chosen, however UES provided detailed explanations as to other factors that were considered besides price, such as: Work Delivery, Communication Plan, Construction Schedule and Project Team. All of these factors are grouped together, given a score and then used as another comparison tool in process of who to choose for the project.

Within the files for the Kingston Substation Work Order (WO), there were several invoices from Calypso Communications, LLC. Specifically, Audit noted Calypso invoiced Unitil $6,500 for a two minute time lapse video of the construction of the substation. The other invoice from Calypso was for part three of a three part series detailing the three year project. This third invoice covers the cost of the third and final installment payment of $16,425.67; and the total for the three year video of $49,277. Both of the videos can be viewed on You Tube under the search heading of "Kingston substation". These videos, while they may present historical significance and possible future learning opportunities, should be classified as marketing expenses rather than capitalized with the substation itself. As discussed above however, Audit understands that the Kingston Substation work order is currently considered "closed" and has not been through the final review of expenses to be capitalized. Therefore, Audit is recommending the expenses be removed pending final review by Unitil. **Audit Issue #2**

<u>Landis + Gyr</u>

Audit reviewed one invoice from Landis + Gyr, one of the many vendors used by UES. The specific invoice had terms of 10 days 2%, Net 30. Meaning if UES were to pay the invoice within 10 days they would receive a 2% discount off the invoice amount. Audit requested and UES indicated that they do not typically accept the discount on the invoice and that it was a business decision by UES not to do so. Audit requested UES to provide the dollar amount of charges from Landis + Gyr in order to understand the business decision not to accept the discount. UES provided a breakdown of all the invoices for the test year that had a discount. The net total was $102,316. This means that if UES had paid each invoice within the 10 day discount window, they would have saved $2,046. While the amount of discount is not material and does not rise to the point of being an audit issue, it is notable that the discount is not taken and should be reviewed in the future for reasonableness.

Additions to Plant

Audit randomly selected several Plant work orders (since the prior rate case audit) for detailed review. Specifically:

Posting Date	Description	Posted Amount
2015	Guinea Substation	$358,677
2015	Meters-Seacoast	$135,079
2014	Upgrade Power Plan Module	$ 81,084
2014	Meter True-Up	$313,223
2013	Replace Pole and Light	$ 12,418
2013	Replace Pole and Light	$ 9,160
2013	Rebuild Three-phase 4KV	$527,198
2012	Replace Failed Communication Equipment	$ 35,047
2011	Upgrade /Add Circuit Positions E. Kingston	$606,352
2011	Easement from PSNH	$310,514
2010	Installation of Transformers	$295,210
2010	Meters-Capital	$ 59,214
2010	High Street Substation	$698,741

<u>2015- Work Order # E-013148-00035532- Upgrade Capacity of the 3360 and 3371 Breakers at the Guinea Substation, Hampton, Authorization #13148</u>

This project was for the upgrading of two breakers at the Guinea Substation due to capacity issues. Total project costs capitalized according to the Continuing Property Records (CPR) was $358,677 out of a budgeted $345,778, and the total cost credited to plant in service for the retired assets was $75,120.

Audit reviewed the work orders related to the project and noted the locations and descriptions of the work performed, materials used, crew member’s names and hours worked, and the vehicles used. Crew member’s hours were charged to either installation or removal and all work orders were signed off by at least one foreman and one supervisor. This specific job was performed by a combination of internal crews and outside contractors. The use of outside crews on large projects is an established practice and has been reviewed in the past by Audit with no notable exceptions.

<u>2015- Work Order # E-141007-20148018- Purchase and Installation of Meters and Meter Equipment for Customer Driven Projects, Seacoast, Authorization #141007</u>

This project was for the purchase, replacement and installation of new meters and meter equipment for the Seacoast area throughout 2014. The WO indicated the budget for the year was derived from an average of the past three years (2011-2013). This work order indicated 96 meters were purchased, installed and added to plant in service. The total cost of the meters and the installation charges for this project were placed directly in CWIP then moved to Plant in Service. The submitted CPR indicated no retirements were attached to this work order. Audit requested and the Company stated that not all additions have retirements and retirements are not always attached to the same work order if there are additions. UES further indicated that retirements may be posted to blanket retirement work orders or as documented in the prior rate case audit report, there is a lag time of around 3-4 months after an addition is placed in service that the replaced asset is retired and taken off the books and officially retired.

The total cost of this work order, $135,079, was booked to the 370 plant account, Meters and Meter Installations. This amount is part of a larger amount that was booked for the overall 370 plant account of $503,551 for the test-year.

In the meter work order files, Audit also found credit invoices from Hunt Technologies / Landis + Gyr for labor per special agreement. Audit inquired what sort of agreement and UES provided a copy of the agreement between UES and Hunt that stated that credits would be given to UES, on a per product basis, if products were to fail at a rate that was significantly in excess of the anticipated failure rate. Hunt would provide UES a replacement product at no cost and also reimburse UES for the cost of the replacement product up to $20 based upon a sliding scale of the age of the product being replaced with a degradation rate of 15% annually.

<u>2014- Work Order # C-013225-0039412- Upgrade Power Plan module from v10.2.1 to v 10.4, Capital, Authorization #S-000043</u>

This project was to upgrade the Power Plan system at Unitil. This upgrade affected similar systems at other Unitil companies, including Northern Utilities and Unitil's Electric business in the State of Massachusetts. The total budget was $276,000 and Unitil indicated a total of $81,084.21 was capitalized to account 303-02 Intangible Software with a 10 year amortization. Audit reviewed all the invoices with no exceptions noted.

The CPR indicated contractor costs of $70,162 and other direct costs of $10,607. Audit reviewed multiple invoices from the vendor, Power Plan that corresponded to the contractor costs and other invoices that corresponded to the other direct costs. Audit notes there were no retirements posted, and therefore no credit to plant account 303-02.

<u>2014- Work Order # E-141000-20143504- True Up Meter Installations- Seacoast</u>

This work order was to record the costs associated with Trueing-Up the meter installations in the Seacoast area. PUC Audit asked for some instances when meters would be retired with no additions and was told that sometimes a home has two meters and one is taken off, other times meters are added on one work order and retired on another work order. The total of the WO was $313,223, and according to the CPR's this WO was also used to retire other plant items as well, specifically: office furniture, stores equipment, tools, lab equipment and communications equipment that was labeled as over 30 years with a combined value of $61,168. While Audit commends Unitil for taking old assets off their books, because there does not appear to be anything replacing these assets, Audit is concerned that these assets may have been incorrectly included in prior rate base calculations and that there may be other assets on the books that are not actually being used and should not be counted in the current rate base calculation.

The remainder of the work order is composed of true-up meters and meter installations of $252,055. Specifically, 435 Meters were retired and 3,428 meter installations were retired. During the entire year 1,038 meters and 4,032 meter installations were retired. From Audit's understanding, the posting of the retirements is usually at least 3-4 months after the addition and sometimes the following year. To test this practice, Audit referenced the 2013 installations and found 732 meters and 719 meter installations added to Plant in service. Audit went back one more year and found 565 meters and meter installs added to Plant; and in 2011 546 meter and meter installs were added to Plant. Northing contained in the CPR files substantiates the large decrease in meter assets seen in 2013 and 2014. **Audit Issue #3**

2013- Work Order # C-013104-00038018- Replace Pole and Light, Authorization #13104

This project was for the replacement of a 40 foot aluminum pole and street light. The current pole and light had been damaged by a car involved in an accident. The total project cost booked to the plant accounts as of 12/31/2013 was $12,418. This amount agrees with the project listing provided by UES and the Project Cost Record provided with the work orders.

Audit reviewed the work orders related to the project and noted the location and description of the work performed, materials used, crew member's names and hours worked, and the vehicles used. Crew member's hours were charged to either installation or removal and all work orders were signed off by a supervisor. The work was performed by internal crews and charged to the Capital division. Invoices were reviewed by Audit with no exceptions noted.

2013- Work Order # E-013004-00038818- Replace Pole and Light, Authorization #013004

This project was for the replacement of a metal street light pole and the street light. The current pole and light had been damaged by a car involved in an accident. There was no copy of the accident report in the file. However, a cover sheet from the Seabrook Police Department indicated no accident report had been filed as of August 7, 2013. The total cost of this project booked to the plant accounts as of 12/31/2013 was $9,160, and was part of a larger amount added to plant for this year. Compared to a similar project in the Capital division, Audit concludes the difference in cost is mainly due to the salvage value of the pole indicated in this WO. This amount agrees with the project listing provided by UES and the Project Cost Record provided with the work orders.

Audit reviewed the work orders related to the project and noted the location and description of the work performed, materials used, crew member's names and hours worked, and the vehicles used. Crew member's hours were charged to either installation or removal and all work orders were signed off by a supervisor. The work was performed by internal crews and charged to the Seacoast division. Invoices were reviewed by Audit with no exceptions noted.

<u>2013- Work Order # E-013110-00035500- Rebuild approximately 35 sections of three-phase 4 kV construction and install new step-down transformers, Seacoast, Authorization #013110</u>

This work order covers the cost of rebuilding approximately 35 sections of three-phase 4kV construction along Amesbury Road, circuit 27X1 with new three-phase 35 kV spacer cable and converting to 35.5 kV operation. The existing 27X1 Amesbury Road stepdown transformers will be removed and new stepdown transformers will be installed on Trundlebed and Amesbury Roads.

The WO file submitted included time sheets for employees and contractors such as I.C. Reed & Sons, Inc. for labor and Asplundh Tree Expert Co for tree removal and trimming. Other invoices reviewed were from the Kensington, Kingston and East Kingston Police Departments, various vendors for parts and supplies for the project, as well as sheets from general accounting detailing the accounting for the invoices. Audit notes on the invoices from Asplundh, any charges due from others who have responsibility or assets linked to that specific job were deducted from invoice total charged to UES and therefore not capitalized.

UES provided detailed entry posting sheets for the additions, retirements, salvage and cost of removal for the project. According to the CPR provided to Audit, the total project additions for the work order amounted to $527,198, retirements of ($90,414). The cost of removal of removal was noted as being included in the total amount of additions.

<u>2012- Work Order # C-001014-00009102, Replace Failed Communication Equipment, Capital.</u>

This project covers the costs associated with purchasing and installing replacements for failed communication equipment within the UES Capital territory. In the WO were invoices for supplies and timesheets for UES employees to work with and install the parts. The cost of the work order as recorded to the CPR was $35,047 with an estimated budget of $37,546. Audit located a similar item being retired but the posting quantity was zero, even though the value of the item was listed as $10,000. UES has stated that the Company did not include quantities in the equipment accounts prior to the implementation of PowerPlant. As a result there were no quantities to remove and no chance of this type of asset existing at no cost. Therefore, a posting quantity of zero is correct.

2011- Work Order- E-001015-00005105- Upgrade and add circuit positions at the East Kingston Substation, Seacoast, Authorization #1015

This work order covers the cost for the addition of a 13.8 kV circuit position and to upgrade the existing 6W1 circuit position at the East Kingston Substation. For cost tracking purposes, UES broke the project into two work orders, 5105 for the electrical construction and 5106 for the SCADA installation. PUC Audit only reviewed #5105.

The WO file submitted included time sheets for employees and contractors such as IC Reed & Sons, Inc. as well as invoices from various vendors for parts and supplies for the project, design and drafting of the project, as well as sheets from general accounting detailing the consolidation of other WO's to the main WO within the CWIP Account (#107).

UES provided detailed entry posting sheets for the additions, retirements, salvage and cost of removal for the project. According to the CPR provided to Audit, the total project additions for the 5105 portion of the work order amounted to $606,352 including retirements of $ ($1,473,842.41). The cost of removal was noted as being included in the total amount of additions. There was no salvage value noted in the CPR or the work order file itself.

2011- Purchase of a 50 foot strip of Easement from PSNH, Authorization #0226

The description for this project reads as the following: Purchase of a 50 foot strip of the easement presently owned by PSNH which is occupied by the existing UES 396 line. The easement length runs from the Garvins Falls substation to the Bow Bog substation (approximately 2.6 miles end-to-end, approximately. 2.4 miles of easement of private property). The 50 foot strip is a portion of an overall 225 foot easement presently owned by PSNH. The existing 396 line facilities are not fully within the proposed 50 foot strip, some encroaching into what will remain as the PSNH owned easement. This purchase of 50 foot of easement includes permission from PSNH for those existing facilities to remain in place for now, and an obligation to relocate these facilities in the future if necessary for PSNH. The work order further stated the value of the easement was derived from an appraisal completed for PSNH in 2003. This appraisal found a 75ft strip of land along the right of way (23 acres) valued at $318,000 (approx. $14/acre). UES is negotiating a 50ft strip over 16 acres. The appraisal was not included in the work order file. The final cost to UES was $310,514.19. The final cost posted to Plant in 2011 included not only the land itself, but overhead charges for employees, employee's actual time, overheads, survey charges, professional fees and legal fees.

2010- Work Order # C-000206-00004016, Purchase and Installation of Transformers, Capital, Authorization #0206

This project covers the costs associated with purchasing and installing transformers in order to service new or maintain service to existing customers within the UES Capital territory. This WO covers only the first six months of 2010 with a revised WO and a revised budget to cover the remainder of 2010.

Within the WO file was supporting documentation for the purchase of transformers from various vendors. Other invoices included traffic control from New England Traffic Control for the installations, installation vendors such as Hi-Volt Line Construction & Maintenance, LLC.

UES provided detailed entry posting sheets for the additions, retirements, salvage and cost of removal for the project. As is seen with the meters, items are placed directly in CWIP and transferred out once used and useful. According to the CPR provided to Audit, the total project additions for the work order amounted to $295,210, retirements of ($157,044). The cost of removal was noted as being included in the total amount of additions.

2010- Work Order # C-00207-00004008, Purchase and Installation of Meters and Meter Equipment for Customer Driven Projects, Capital, Authorization #0207

This project was for the purchase, replacement and installation of new meters and meter equipment for the Capital area throughout 2010. The budgeted amount of $117,490.18 was derived from trending data from the last two years (2008/2009). The total cost of the meters was placed directly in CWIP as well as the corresponding installation charges. Once the work had been completed the final charges were taken out of CWIP and placed in the appropriate plant in service account. In this case, the WO indicated total charges of $59,213.88 were taken out of CWIP and $59,213.88 ($25,054.47 and $34,159.41) was placed in accounts 370.1 and 370.2 respectively. Audit notes there were not retirements associated with these meter installations as was the case in the 2015 meter WO reviewed.

The total project cost of $59,214 can be seen as an addition to the plant accounts in the provided CPR with no exceptions.

2010- Work Order E-009056-00009882- Upgrade the High Street substation to 13.8kV, Seacoast, Authorization #9056

This project is one of the work orders associated with the upgrade to the High Street substation. There are at least two other work orders, #9882 and #9883 which specifically cover the cost of the new transformer and labor and material to convert the station and unload and test the transformer itself. The CPR's indicated the project was posted to Plant in Service in April 2010.

The WO file submitted included time sheets for employees and contractors such as IC Reed & Sons, Inc. as well as invoices from various vendors for parts and supplies for the project, design and drafting of the project, as well as sheets from general accounting detailing the consolidation of other WO's to the main WO within the CWIP Account (#107). A sampling of the parts used included circuit breakers, SCADA cut-off switches, wire, regulator stands, insulators, brackets, pads.

UES provided detailed entry posting sheets for the additions, retirements, salvage and cost of removal for the project. According to the CPR provided to Audit, the total project additions for the work order amounted to $698,741, retirements of ($46,965). The cost of removal of removal was noted as being included in the total amount of additions.

Retirements

Audit reviewed the retirement information within the CPR files submitted as well as in detail for the specific files provided and discussed in the Plant section of the report. In each year since the last rate case UES was able to reproduce files that substantiate the total retirements for each year since the last rate case. Other information included in the files indicated the actual installation cost to UES as well as the original in service date for each item being removed from the Plant in Service totals.

In the CPR files provided, Audit notes that in some work orders, such as C-013285-00036347, there were no items subtracted from inventory. Audit inquired about these types of work orders and UES indicated that in some instances if items retired received a salvage value after the fact or if charges come in after the work order is closed a new work order must be opened adding the charge or credit but no items are added or subtracted from inventory.

Relating to retirements in Plant Account 368-01 Transformer Installations, UES indicated total retirements of $43.20 for 2015 against additions of $1,221,118. Audit has asked UES to verify if this amount is in fact correct as in the last rate case Audit Report, Issue #3, retirements were not always posted in the same year as the addition to which is was associated with. In their response, UES has indicated that The Company's normal practice is to retire the Transformers and related installations in the following year; in test year 2015 the Company would have retired 2014 transformers and installations. The Company did retire the transformers but inadvertently did not retire the corresponding installations. The 2014 installations will be retired in 2016 for an estimated amount of $75,000. Audit recommends removing $75,000 from the Plant in Service as of 12/31/12015. **Audit Issue #3**

Construction Overheads

Certain costs such as supervisory labor and related fringe costs, indirect transportation, plant clerks, general building overheads and general liability are charged to an overhead clearing account and then allocated to the work orders. These charges are either engineering and operation (E&O) overheads or general overheads. The E&O overheads include all charges from the engineering and operations groups and the general overheads only include charges from all other areas of USC such as Accounting, Finance and Information Systems.

UES states that the factor used to clear these overheads is monitored on a monthly basis and adjusted if needed during the year. The original rate is calculated from that year's total anticipated overhead charges divided by the Capital Budget base dollars. Audit observed the monthly USC charges in the work order files which were eventually posted to the plant accounts with no exceptions noted.

Accounting for Funds Used during Construction (AFUDC)

The balance in general ledger account 10-20-10-00-432-00-00 AFUDC-Borrowed Funds was $122,299. According to the 2015 UES FERC Form 1, the average interest rate applied during the test-year was 1.80%. UES has indicated the same 1.80% in a separate audit request. In discussing the method used to calculate the AFUDC, UES submitted an Excel spreadsheet detailing the calculation. Specifically, UES tracks the AFUDC at the project level and uses an average balance of the costs incurred, multiplied by a specific rate, to arrive at any month's given charge.

Audit reviewed the calculation for the October 2015 charge for a specific project. In this example the project was started in July 2014 and was still in construction through October 2015. The total of the cost incurred (not including interest) from July 2014 through September 2015 was $422,477. The construction costs incurred (not including interest) in October 2015 was $6,194. UES divides $6,194 in half and adds it to the cumulative total of the project, $422,477, to arrive at the average balance to calculate the AFUDC charge on. The October AFUDC charge of $808.59 is explained below:

Costs July 2014 –Sep 2015:	$422,477
Costs for Oct 2015:	$ 6,194
Costs for Oct 2015 / 2:	$ 3,097

$422,477 + $3.097 = $425,574 * .0019 = $808.59

Construction Work in Progress

Construction Work in Progress (CWIP) totaled $17,403,598 per the 2015 FERC Form 1 which matched the general ledger for 2015 and the filing, line 2, schedule 2 of the testimony of Mr. David Chong, page 118 and is a component of Total Electric Plant, line 4. The general ledger reflects the total CWIP in the following accounts:

10-20-00-00-107-00-00 Const Work in Progress	$17,050,946
10-20-00-00-107-01-02 RWIP Elec Salvage	$ (39,918)
10-20-00-00-107-01-03 RWIP Elec Cost of Removal	$ 207,716
10-20-00-00-107-90-00 Const Work in Progress GA	$ 184,854
	$17,403,598

Audit has reviewed the list of projects that comprise the CWIP balance and found no exceptions. As discussed above, the Kingston Substation was not used and useful until April 2016 and Audit has verified that the amounts corresponding to the substation were in CWIP at the end of 2015.

Customer Advances for Construction – Account #252 $557,928

The filing Schedule 2A, page 7 of 12 reflects the Customer Advances for Construction $557,928 which agrees with the FERC Form 1 and the general ledger:

10-20-60-00-252-00-00 Customer Advances for Construction (Seacoast)	$332,361
10-20-50-00-252-00-00 Customer Advances for Construction (Capital)	$225,567
	$557,928

UES stated that, "*Customer Advances for Construction (Acct 252) is the refundable portion of a customer project. The advanced payments are received prior to construction work starting in the field and are charged to account 252. As the customers connect for electric service a portion of the advanced payment is returned until all of the advance has been returned. If the number of services is less than the number originally estimated the remaining balance is applied to the original units installed (Plant in Service). This in essence reduces the Plant in Service amount. This happens very rarely. GL Acct 252 is reconciled on a monthly basis by the Plant Accountant and reviewed quarterly by the Manager, Utility Accounting and Budgeting".* Audit concurs this treatment of Customer Advances is line in with the FERC definition.

Intangible Plant

The 2015 FERC Form 1 contains a test-year ending balance for account 301 – Organization Costs of $380 with no additions during 2015. The FERC Form No. 1 indicated account 303 – Miscellaneous Intangible Plant with a starting balance of $6,194,912 with additions of $158,475 and an ending balance of $6,353,387. The CPR submitted indicates a starting balance of $6,140,828, additions of $212,559 and an ending balance of $ 6,353,386; the difference of $54,084 worth of additions was described as being in GL Account 106, Completed Construction not Classified.

Non-operating Plant

UES had did not have any non-operating plant for 2015.

Non-utility Property

Non-Utility Property, account 10-20-50-00-121-00-00, carried an ending balance of $50,606 for the test-year for the Capital area. This amount agreed with the FERC Form 1 for 2015 and the filing schedule 2 of the testimony of Mr. David Chong.

Land Held for Future Use

Account 105 Electric Plant Held for Future Use totaled $1 on the 2015 FERC Form 1, Annual Report Summary of Utility Plant, page 200 and agrees with the UES general ledger. UES has stated that the land in question is an easement valued at $1.

Transportation Equipment/Vehicles

UES had no additions to account 392, Transportation Equipment in the test-year but did have retirements of $171,727 and adjustments of $(10,418) for a year-end balance of $1,078,761 per the FERC Form No. 1. This amount agrees with the CPRs and the GL.

Schedule DLC-1, page 1 of 3, shows account 392 Transportation Equipment in the amount of $1,078,798 and then moved to the clearing account. UES has stated in the past that to clear the vehicle clearing account, a monthly time card or work order is completed for each vehicle indicating the construction work order, expense account or construction overhead account to be charged at a predetermined rate per mile (in the case of autos and light trucks) or per hour (in the case of heavy trucks). Charges to the clearing accounts include depreciation, lease payments, insurance, building overhead costs for the garage area, registration fees, fuel and maintenance costs.

Depreciation and Amortization

Accumulated Provision for Depreciation and Amortization in the 2015 FERC Form No. 1 totaled $98,980,036 for the test-year, which matches the RevReq 4 schedule of the Filing. The general ledger reflects Accumulated Depreciation of $94,897,499 and Accumulated Amortization of $4,082,537. In the FERC Form 1, Page 123.2, UES stated they calculate depreciation expense on a group straight-line basis based on the useful lives of the assets. According to the FERC Form 1, UES' average depreciation expense rate was 3.64% for the years ending 2014 and 2015.

Depreciation Expense for the test year totaled $9,639,845 on the 2015 Annual Report which agrees with the filing schedule RevReq-2, column 2, line 13 and to account 10-20-10-00-403-00-00 without exception. Audit notes in the Company's depreciation tables, land and land rights are correctly excluded from the depreciation expense calculation.

Test year distribution amortization expense per the filing schedule RevReq-2 totaled $1,748,355 for the test-year. This amount was verified to the following general ledger accounts:

10-20-10-00-404-03-00 Amortization of Other Software	$ 541,123
10-20-10-00-407-06-00 DER Investment Amortization	$ 47,756
10-20-10-00-407-09-00 Amort Exp-FAS 109 Reg Asset Fed	$ 401,280
10-20-10-00-407-09-01 Amort Exp-FAS 109 Reg Liab Fed	$ (109,812)
10-20-10-00-407-31-00 Amortization-Storm	$ 868,008
	$1,748,355
10-29-10-47-407-00-00 Amortization Storm Recovery	$2,682,029
Total Amortization Expense per General Ledger	$4,430,384

The total expense of $4,430,384 agrees with FERC Form 1 page 114, line 8 through 12, less line 13.

The Storm Recovery expense $2,682,029 is noted as the test year flow-through on RevReq-2.

Amortization-Storm $868,008 represents the $800,000 annual recovery through base rates, originally authorized in DE 10-055. $68,008 represents amortization of Deferred Charges-Storm Costs in account 10-20-00-00-186-40-00. The $68,008 was removed from the revenue requirement per Schedule RevReq-3-9.

Depreciation Rates

Audit reviewed the depreciation rates (Rates) and average service life (ASL), as submitted in the testimony of David Chong, Schedule DLC-1, page 1 of 3, and the rates found in the Settlement Agreement of DE 10-055 (prior rate case) Attachment 6, page 71 of 71. The following table displays any variances in the ASL or Rates. The DE16-384 ASL rates have been rounded from the actual submitted rates.

Plant Category	Acct #	Account Description	10-055 ASL	16-384 ASL	Change in ASL	10-055 Rate	16-384 Rate	Change in Rate
Distrbution Plant	343	Prime Movers	15	15	0	6.67%	6.80%	0.13%
Distrbution Plant	361	Struc / Improv	52	51	-1	2.45%	2.50%	0.05%
Distrbution Plant	362	station Equip.	51	50	-1	2.60%	2.66%	0.06%
Distrbution Plant	364	Poles and Fixt	41	40	-1	3.70%	3.80%	0.10%
Distrbution Plant	365	OH Conduc	39	38	-1	3.64%	3.74%	0.10%
Distrbution Plant	366	Undergrnd Cond	56	55	-1	2.04%	2.09%	0.05%
Distrbution Plant	367	Undergrnd Devices	52	51	-1	2.55%	2.61%	0.06%
Distrbution Plant	368.1	Line Transformers	35	34	-1	3.00%	3.07%	0.07%
Distrbution Plant	368.2	Line Trans Install	35	34	-1	2.89%	2.95%	0.06%
Distrbution Plant	369	Services	27	27	-1	5.67%	5.83%	0.16%
Distrbution Plant	370.1	Meters	20	20	0	5.00%	5.08%	0.08%
Distrbution Plant	370.2	Meter Install	20	20	0	5.00%	5.08%	0.08%
Distrbution Plant	371	Install on cust premise	17	17	0	7.56%	7.79%	0.23%
Distrbution Plant	373	Street Lighting and Signals	17	17	0	7.79%	8.04%	0.25%
General Plant	390	Structures & Improv	43	43	0	2.08%	2.08%	0.00%
General Plant	391.1	Office Furniture	15	15	0	5.83%	5.83%	0.00%
General Plant	393	Stores Expense	29	25	-4	3.36%	3.36%	0.00%
General Plant	394	Tools, Shop & Garage	25	25	0	3.64%	3.64%	0.00%
General Plant	395	Lab Equip.	25	15	-10	3.90%	3.90%	0.00%
General Plant	397	Comm Equip	15	20	5	6.60%	6.60%	0.00%
General Plant	398	Misc. Equip	20	23	3	4.88%	4.88%	0.00%

Kingston Substation

According to the Filing, RevReq 3-8, the Kingston Substation cost and associated depreciation is added into the general ledger figures as a pro forma adjustment. Audit agrees with this statement and concludes that the Utility Plant in Service amount of $272,786,687; and the Depreciation Expense amount of $ 9,639,845 does not include Kingston Substation.

REVENUE

Total revenue for the test year noted in the Schedule RevReq-2 portion of the filing reflected the following:

Distribution Revenue	$ 51,600,877
Flow-through Revenue	101,103,918
Other Operating Revenue	1,959,705*
Total Operating Revenue	**$154,664,500**

*Audit notes that $722,569 of the Other Operating Revenue is classified as Flow-through revenue on the filing schedule RevReq-2, and is not counted in the rate base mechanisms.

Audit was provided with a detailed breakdown of the general ledger accounts that sum to the Flow-through revenue, by customer class, and compared those accounts with a detailed breakdown of the Flow-through expenses. Audit also compared the Flow-through revenue to the reported revenue as found in the Schedule RevReq2 portion of the filing. Audit found no exceptions in either case. A sample of the Flow-through revenue accounts include the following: Storm Recovery, Stranded Costs, System Benefits Charges (LIHEAP, CORE), as well as Grant Funding and Loan Payback activity associated with RGGI funds.

In the testimony of Mr. Chong, it was stated on page 7 that flow-through revenue and expenses are items associated with various non-base rate mechanisms. Audit also notes that all of these items are either reconciled by the PUC Electrical Division or separately audited by PUC Audit.

Audit verified the above Total Operating Revenue of $154,664,500 to the 2015 FERC Form 1, page 114, line 2 and to the following general ledger accounts without exception:

Residential	440	$ 84,374,115
General Service	442	$ 57,811,254
Public Streets	444	$ 2,362,745
Sales to Public Auth.	445	$ 6,539,833
Sales for Resale	447	$ 861,268
Other Sales	449	$ 755,575
Total Electric Service		**$152,704,790**
Late Payment Charges	450	$ 481,634
Misc. Service	451	$ 160,503
Rent- Elec. Prop.	454	$ 443,899
Other Elec Rev	456	$ 873,670
Total Other Revenue		**$ 1,959,706**
Total Electric Service and Other		**$154,664,496**

Billing Test

Audit requested invoices from fifteen randomly selected customers to review for compliance with the applicable tariff rates. Audit was handed 29 invoices from the 15 customers; 6 residential and 23 representing all other rate classes. The sample included all customer classes and customers from both the Capital and Seacoast divisions. The invoices cover a variety of different tariff schedules encompassing energy service supply rate changes which happen two times a year as well as a change in the external delivery charge (EDC) as of August 1, 2015.

The following list summarizes the results for the residential/ domestic (D) rate class:

- Flat customer charges for all invoices tested were verified with one exception to the tariff. One invoice listed the Domestic Charge at $10.28 when it should have read $10.27.
- All six residential invoices reflected delivery charges within the approved tariff. Two reflected $.05477 and $.05977 for the first 250 kWh then in excess of 250 kWh respectively. While the other invoices reflected a blended rate due to the change in the EDC as of 8/1/15. The delivery charges shown represent the sum of the distribution charge and the external delivery charge and the Storm Recovery Adjustment Factor.
- The authorized Stranded Cost Charge of $.00018 was correctly reflected on five of the six invoices. One customer rate was reflected at $.00017; however there was no monetary difference in the bill due to the variance.
- The System Benefits Charge is currently at $.0033 per kWh sold. The rate was displayed correct in 3 of the 6 invoices. The other 3 invoices displayed $.00328 and $.00329. Two of the three bills were off by one penny as a result.
- The Consumption Tax during the test year was $.00055. On two of the six invoices the tax was not displayed correctly. The bills contained the rate of $.00054 and $.00053. Due to the minute difference in the rate, the money collected is not affected.

The following list summarizes the results for all other rate classes:

- All of the invoices displayed the correct Energy Service charges whether they were fixed or variable and if the invoice had different months.
- The Demand Charge was listed incorrectly on three of the twenty three invoices. Specifically, three G2 customers' invoices displayed the amount of $10.34925, $10.35024 and $10.35025. In all three cases however, there was no monetary difference due to the minimal variance from the authorized amount of $10.35.
- The System Benefits Charge of $.0033 correctly reflected on twenty one of the twenty three invoices. The two invoices for which the rate was not correct reflected it to be $.00329. The one invoice at the lower SBC resulted in a two cent variance. One invoice had no usage and therefore no SBC.
- The Consumption Tax, assessed at $.00055 per kWh was properly noted on twenty of the twenty three invoices. The three invoices on which the rate was not properly reflected ranged from $.00054 to $.00057. The resulting monetary difference was a combination of $.02.
- The Stranded Cost Charge was incorrectly displayed on three of the twenty three invoices, but there was no resulting monetary difference due to the charge being minimal. The current charge is $.00005 or $.00004 depending on the class and the bills listed $.00004 and $.00003 respectively.

Regarding the SunGard (HTE) billing system, UES stated that HTE calculates the billed charges by multiplying the usage times the tariff rate for the bill component, and the resulting amount is shown on the customer invoice, rounded to two decimals. The rate shown on the invoice is derived by dividing the rounded amount by the usage. Depending on the rounding in both calculations, the result may not exactly match the tariffed rate. USC/UES was made aware of tariff concerns with HTE through discussions in June 2009 and the Audit Report issued for the Low Income Electric Assistance Program (issued on December 21, 2009).

The Company discussed the current discrepancies with Audit and confirmed all discrepancies occurred on bills from August 2015. The Company's current billing system, HTE, requires that all rates have the same effective date in the system. This means that even if only one rate component is changing, all rates undergo a proration calculation during that billing period. The EDC rate changed on August 1, 2015, therefore all rate components for August bills were prorated. The noted discrepancies on a limited number of customers (usually a difference of $0.01 or $0.02) were due to rounding during the proration process.

The company is in the process of implementing the EnQuesta billing system. This system will not require proration of rates that are not changing, i.e. if only the EDC rate changes, only the EDC amount will be prorated. This will eliminate any rounding discrepancies for rate components that do not change during a period when other rate components do change. **Repeat Audit Issue #4**

<u>Special Rate Contracts</u>

UES has indicated that there are two special rate designations currently in effect. One of these is with the City of Concord. Specifically, UES has a special contract with the City for 5 ballfields that provides for a demand billing discount of 33.73% (actual demand is multiplied by 0.6627 of the currently prevailing rate). The discounted demand is billed at regular G2 rates. These contracts do not have an expiration date. The 5 accounts are as follows:

1056563-1059026 City of Concord
1056565-1059028 City of Concord
1056567-1059030 City of Concord
1056569-1059032 City of Concord
1056571-1059034 City of Concord

This special contract is discussed in Supplemental Order No. 17,131 in DR 83-256. Specifically the Order found that a 33.73% discount is an appropriate adjustment for the petitioned facilities within the City of Concord. Considering the rates in effect at the time, this resulted in a new special rate of $3.36/KW for the first 5 KW and $6.71/KW for all KWs in excess of 5KW.

In addition, UES has agreements with some outdoor lighting customers to provide 1,000 watt metal halide lamps which are in accordance with the tariff provision for Other Fixtures and Equipment. These agreements expire upon approval of a tariffed charge for this lamp type, which UES proposed in its recent distribution rate case filing.

Other Operating Revenue*

Late Payment Charges account 450	481,634
Miscellaneous account 451	160,503
Rent-Electric Property account 454	443,899
Other account 456	873,670
Other Operating Revenue	$1,959,706

*As stated above, $722,569 of the Other Operating Revenue total is classified as Flow-through revenue and is not counted in the distribution base rate calculation.

Late Payment Charges account 450

This represents an 8% increase in revenue over the period ending 12/31/2014 which was $447,493. The late payment revenue net of adjustments was split $199,062 and $282,571 between the Capital and Seacoast divisions respectively.

Miscellaneous account 451

This is comprised of disconnect / reconnect fees found in UES account 10-20-08-00-451-00-00. The account activity indicated the revenue was split $56,565 and $80,302 between the Capital and Seacoast divisions respectively.

The remainder of the account was from account 10-20-08-99-451-02-00, Enhanced Meter Charges of $23,635. This was split $13,161 and $9,611 between the Capital and Seacoast divisions respectively. As indicated in the prior rate case, the Enhanced Meter Revenue represents either Company owned metering equipment on which the customer's load can be read through telephone lines, or customer owned metering equipment to which the Company provides a pulse interface device through which the customer can access the meter data. The tariff outlines the terms and conditions.

Rent-Electric Property account 454

Audit requested clarification of two Rent general ledger accounts which sum to $443,899. The first sub-account noted was 10-20-08-00-454-00-00, $380,559, Rent Electric Property-Cable TV. In the prior rate case audit, the Company explained and provided twenty one pole attachment agreements with a variety of companies, each with specific calculations of gross pole investment, accumulated depreciation, accumulated deferred income taxes, the number of poles, average number of attachments, carrying charges based on percentages (as calculated on each agreement) of maintenance expense, depreciation expense, administrative expenses, normalized taxes, cost of capital, use ratios, among other calculations. UES has indicated that this statement is still accurate for this rate case.

Within the Rent-Electric Property, account 454, there is a Miscellaneous Rent account used to record revenue associated with rent received from Unitil Realty Corp. for the lease of the call center, as well as rental income from Northern Utilities for storage space rental at the Plaistow facility. Audit was provided with the lease agreement between Unitil Realty Corp. and UES, which was documented 1/21/1999 with a termination date of 9/30/2017 and discussed in the UES Lease section above. The lease outlines a calculation to be made each year by UES to determine the annual lease fee.

Audit has requested clarification of the calculation in the prior rate case audit, and was provided with the net asset value of the McGuire Street facility, and the average of the beginning balance and ending balance multiplied by the month end cost of capital rate. Property taxes on the land and buildings were allocated 8.67% and 14.33% respectively, thus adding $8,020 to the calculated carrying cost. For the test year, the combined calculated rent summed to $41,225. Refer to the Intercompany Services portion of this report.

It was found in the prior rate case that a rental agreement between UES and Northern Utilities did not exist for space at the Plaistow, NH facility. Audit requested and Unitil supplied a lease agreement with the terms of the lease and the duration of the lease. Specifically, Northern pays to UES "*a rental amount in monthly installments based on current rates for storage properties in the Plaistow, New Hampshire, area multiplied by the square footage of the Leased Premises*". The amount booked for the test year was $22,116, and includes 12 months' worth of rent. The actual lease agreement can be found on page 218 of the current Cost Allocation Manual of UES.

10-20-08-00-454-00-00 Rent Elect Prop-CATV	$380,559
10-20-08-00-454-02-00 Miscellaneous Rent	$ 63,341
Total Rent	$443,900

Other-account 456

Account 456 is primarily used to record revenue associated with multiple non-base rate mechanisms, such as various RGGI monies, loan payments and write-offs associated with the CORE Energy Efficiency program. PUC Audit has reviewed the accounts listed below and verified that the first three accounts are included, while the remaining accounts are properly not included, in the reported distribution revenue on page 2 of 12 of the Filing Requirements schedule of the attachments of David Chong.

10-20-08-00-456-00-00 Other Elec Revenues	$(97,281)
10-20-08-00-456-01-00 Line Extension Surcharge	$ (11,825)
10-20-08-00-456-10-00 Rev from Trans of Elec of Others	$ (41,996)
10-29-02-21-456-21-00 Other Elec Rev-Grant Funding RLI	$ (52,708)
10-29-02-21-456-22-00 Other Elec Rev-Grant Funding –CI	$(224,702)
10-29-02-21-456-80-00 Other Elec Rev – ISO ODR	$(284,289)
10-29-02-44-456-00-01 Loan Payback RGGI Res	$(101,311)
10-29-02-44-456-02-01 Loan Payback RGGI CI	$ (52,857)
10-29-02-48-456-00-01 Loan Payback EEBB Res	$ (27,794)

10-29-02-48-456-00-02 Loan Write-off EEBB Res	$ 10,769
10-29-02-48-456-20-00 EEBB Grant Funding-Reimbrsmt CDFA	$ 10,324
	$(873,670)

EXPENSES

Audit tied Unitil's FERC Form 1 expense section to the general ledger and filing Schedule RevReq-2 without exception.

Purchased Power	68,228,194
Transmission	25,531,654
Distribution	8,891,715
Customer Accounting	3,697,008
Customer Service	2,469,443
Administrative & General	9,124,580
Depreciation	9,639,845
Amortization	4,430,384
Taxes other than Income	5,305,221
Federal Income Tax	643,723
State Income Tax	869,095
Deferred Federal & State Income Taxes	2,822,623
Interest on Customer Deposits	4,777
Total Operating Expenses	$ 141,658,263

The following flow-through and proforma adjustments were made to the test year operating expenses:

	Test Year	Flow-Through	Proforma Adj	Test Year as Proformed
Purchased Power	68,228,194	67,946,756		281,438
Transmission	25,531,654	25,332,267		199,387
Distribution	8,891,715		331,108	9,222,823
Customer Accounting	3,697,008	618,642	515,729	3,594,095
Customer Service	2,469,443	2,468,005		1,438
Administrative & General	9,124,580	851,931	337,299	8,609,948
Depreciation	9,639,845		546,070	10,185,915
Amortization	4,430,384	2,682,029	(68,008)	1,680,347
Taxes other than Income	5,305,221		1,061,915	6,367,136
Federal Income Tax	643,723	416,190	(542,996)	-315,463
State Income Tax	869,095	113,713	(177,520)	577,862
Deferred Federal & State Income Taxes	2,822,623			2,822,623
Interest on Customer Deposits	4,777			4,777
Total Operating Expenses	$141,658,263	$100,429,533	$2,003,597	$43,232,327

The flow-through adjustments in the federal and state income tax columns reflect taxes on $1.3 million unbilled revenue reclassification.

The proforma adjustments can be found in the filing on Schedule RevReq-3-1 through Schedule RevReq-3-12 on pages 18 through 33 of David Chong's testimony's attachment.

<u>Operations & Maintenance Expenses</u>

The following accounts make up the total Operating and Maintenance (O&M) expense amount of $117,942,594.

Purchased Power	68,228,194
Transmission	25,531,654
Distribution	8,891,715
Customer Accounting	3,697,008
Customer Service	2,469,443
Administrative & General	9,124,580
	$ 117,942,594

Audit reviewed the all of the O&M expense general ledger accounts in detail. From that review Audit randomly selected transactions approximately 109 invoices to review.

Audit reviewed the allocation of costs and compared the percentages used to the CAM. The CAM notes that other allocation percentages may be used if the stated percentage did not accurately reflect the split of the charges. If a different percentage was used, a majority of the invoices would note the amount and percentage to be charged to each account.

<u>Purchased Power</u>

	Purchased Power	
	Other Power Supply Expenses	
555	Purchased Power	67,931,756
556	System Control and Load Dispatching	15,000
557	Other Expenses	281,438
		$68,228,194

Audit reviewed the detailed general ledger for accounts 555, 556, and 557. Activity mostly included accrued power expenses and remittance from the ISO.

<u>Renewable Energy Certificates and Alternative Compliance Payments</u>

Audit requested clarification of the accounts used to book REC and ACP, as well as the availability of supporting documentation relating to an annual Form E-2500 which is provided to the NH PUC Sustainability Division. The following information was provided:

RECs are booked to the following accounts:

10-29-13-42-555-65-01 Class 1 – Non-G1
10-29-13-42-555-65-02 Class 2 – Non-G1
10-29-13-42-555-65-03 Class 3 – Non-G1
10-29-13-42-555-65-04 Class 4 – Non-G1
10-29-13-43-555-65-01 Class 1 – G1
10-29-13-43-555-65-02 Class 2 – G1
10-29-13-43-555-65-03 Class 3 – G1
10-29-13-43-555-65-04 Class 4 – G1

RECs purchases are split between the Non-G1 and G1 groups based on retail kWh sales. The allocation is developed using calendar year sales for default service (Non-G1 and G1). This allocator is updated each July and goes through the following June. The basis for the July-June timeframe is that, for the most part, the Company is purchasing and booking RECs for a specific vintage year within this time period. As the alternative Compliance Payment ("ACP") is processed in June, that is considered to be the end of the compliance year. The trading window for the start of the next compliance year opens in July.

The ACP is also split between the Non-G1 and G1 accounts based on the RECs class to which the ACP pertains.

The Form E-2500 is the annual renewable portfolio standard compliance filing and is completed by the Energy Contracts ("EC") department. EC tracks the volume of RECs needed to meet the state RPS requirements and makes purchases in the RECs market accordingly. The underlying support for the form includes documentation of all Renewable Energy Certificates that have been settled in the Company's New England Power Pool Generation Information System ("NEPOOL GIS") account. Each provider of electricity must verify the number of RECs retired by submitting to the Commission a copy of its "My Settled Certificates Disposition" quarterly reports.

Group Net Metering

Unitil previously noted during the EAP audit that *"group net metered customers are eligible for compensation for any billing cycle surplus kWh at full retail rates. This compensation is recovered through energy supply rates as a cost of purchased power".*

To compensate the customer for the surplus kWh during a billing cycle, the surplus kWh are multiplied times the full retail rate effective that month. The dollar amount and kWhs are manually entered into the Customer Information System (HTE) to receivable code 13, which corresponds to account 10-29-13-36-555-00-00, NON-G1-PS.

The account balance at the end of the year in 10-29-13-36-555-00-00 was $8,545.

Audit reviewed a sample calculation for one of their group net metering customers. Audit verified the calculation without exception.

Transmission

	Transmission Expenses	
	Operation	
560	Operation Supervision and Engineering	14,391
561	Reliability, Planning and Standards Development	464,508
562	Station Expenses	16,709
563	Overhead Lines Expenses	22,573
565	Transmission of Electricity by Others	24,936,682
567	Rents	2,000
		25,456,864
	Maintenance	
568	Maintenance Supervision and Engineering	25,780
570	Maintenance of Station Equipment	33,546
571	Maintenance of Overhead Lines	3,617
		62,942
	Regional Market Expenses	
	Operations	
575	Market Facilitation, Monitoring and Complaince Services	11,849
		$25,531,654

Audit reviewed the detail general ledger for all of the transmission expenses, operation and maintenance. The majority of the activity was for payroll. See the Payroll section below for the testing Audit performed. There was also activity for small tools, year-end accruals and reversals, and a few accounts payable vouchers.

The Regional Market Expense account, 575 was also reviewed. This account contained monthly payments made to the ISO.

Distribution

Distribution Expenses

	Operations	
580	Operation Supervision & Engineering	1,230,624
581	Load Dispatching	62,144
582	Station Expenses	163,022
583	Overhead Line Expenses	263,243
584	Underground Line Expenses	141,391
585	Street Lighting and Signal System Expenses	199,283
586	Meter Expenses	589,769
587	Customer Installations Expenses	11,227
588	Miscellaneous Expenses	78,533
589	Rents	568
		2,739,804
	Maintenance	
590	Maintenance Supervision & Engineering	164,107
591	Maintenance of Structures	342
592	Maintenance of Station Equipment	133,884
593	Maintenance of Overhead Lines	5,819,976
594	Maintenance of Underground Lines	383
595	Maintenance of Line Transformers	969
596	Maintenance of Street Lighting and Signal Systems	2,488
597	Maintenance of Meters	11,956
598	Maintenances of Miscellaneous Distribution Plant	17,805
		$6,151,910
		$8,891,715

Audit reviewed the Seacoast Transportation Distribution - Detail journal entry for December 2015. The invoice lists the vehicle, date, hours/miles and the rate. The charges are listed and subtotaled by account number. No exceptions were noted.

Audit reviewed approximately 62 invoices from the Distribution Expense accounts. Invoices included, Travel & Expense reimbursements, snow plowing, line crews and equipment, tree trimming and 12/9/2014 storm expenses. The 12/9/2014 storm did not end up being as significant as expected and did not qualify as a winter storm for recovery purposes.

10-20-50-00-580-00-00 Dist Oper Gen Supervision – Cap

Audit reviewed a $758.34 invoice from In a Pinch Café. The invoice was allocated 50/50 with $379 being charged to the Distribution Operating account and $379 being charged to account 10-20-50-00-590-00-00 Dist Maint General Supervision – Cap. The charge was for a storm drill lunch on July 15. No exceptions were noted.

Audit also reviewed the Petty Cash invoice from September. The invoice totaled $1,677 and was allocated to fifteen different UES accounts. $267 of the total was allocated to this account. All of the accounts are reflected below:

10-20-50-00-580-00-00	Dist Oper Gen Supervision-Cap	$ 267	*
10-20-50-00-588-05-00	Dist System Training-Cap	$ 228	
10-20-50-00-590-00-00	Dist Maint General Supervision-Cap	$ 72	*
10-20-50-00-593-01-00	Dist Maint Unscheduled-Cap	$ 110	
10-20-50-00-921-17-00	Telephone Services-Service Center-Cap	$ 126	
10-20-00-00-107-00-00	Construction Work in Progress	$ 433	
10-20-X0-00-184-XX-XX	Clearing Accounts	$ 441	*
		$1,677	

*Petty cash charges were for monthly donuts for Safety meeting, Administrative Professionals Day lunch, and cake and ice cream for National Lineman's Appreciation Day. These amounts should be booked below the line:

10-20-50-00-580-00-00	$267
10-20-50-00-590-00-00	$ 72
10-20-00-00-184-00-01	$ 76

Audit Issue #5

10-20-50-00-580-00-20 Unallowable Meals Exp-Cap

This account is used to record 50% of all meal expenses incurred by the DOC's for tax purposes. Audit reviewed one Travel & Expense reimbursement where 50% of the meals were charged to this account. No exceptions were noted.

10-20-60-00-580-00-00 Dist Oper Gen Supervision –Sea

Audit reviewed two invoices from account 10-20-60-00-580-00-00. The first invoice was $47 from the Exeter Flower Shop Inc. A get well floral arrangement was sent to an employee. The second invoice reviewed was $228 for the Hampton Rotary. Poinsettias were ordered and the invoice was allocated between UES and NU. For UES $38 was allocated to Distribution Operation General Supervision – Seacoast and $38 to Capital. The floral arrangement and poinsettia purchase should be booked below the line. **Audit Issue #5**

10-20-50-00-588-12-00 Svc Cntr Expensed – Cap

Audit reviewed a $669 invoice for maintenance and repairs on the sprinkler system. 15% of the invoice, or $100, was allocated to UES. The remaining $569 was allocated to Unitil Realty Corp. Audit questioned the allocation amounts and was told the allocation was based on the Grounds (Outside) Allocation in the 2015 CAM, and specifically the employee headcount at 1 & 5 McGuire Street in Concord, NH.

The second invoice was a $580 charge from Dividers Plus for the painting of a small conference room. And the third invoice was for HOP Sales and Services in the amount of $178 for an injector repair kit and service.

No exceptions were noted.

10-20-50-00-590-00-00 Dist Maint General Supervision – Cap

Audit reviewed an invoice from Northeast Creations for camouflage hats. The invoice amount was $1,783. A total of $717 was charged to UES- Capital, $249 was charged to UES-Seacoast and $717 was charged to FGE.

10-20-28-00-593-04-10 Maintenance Circuit Pruning

Audit reviewed four tree trimming invoices for Asplundh Tree Expert Co, Lewis Tree Service Inc, Lucas Tree Experts, Mayer Tree Service. The Lewis, Lucas, and Mayer invoices all had notes on them to bill Fairpoint 20%. The Asplundh invoice had a reconciliation worksheet that shows the amount to bill Fairpoint and TDS.

Audit was provided the invoices sent to Fairpoint that were associated with the pruning invoices selected. Fairpoint was billed 20% of the full invoice amount for the Lewis, Lucas and Mayer invoices. For the Asplundh invoice, TDS and Fairpoint were both billed the amounts noted on the reconciliation worksheet. No exceptions were noted.

Audit also reviewed an invoice from Calypso Communications in the amount of $2,400 for professional photography services. The invoice was allocated 50 % to UES and 50% to FGE. The even allocation was due to NH and MA both using an equal number of web photos for publications.

10-20-28-00-593-04-18 VMP Storm Hardening

Audit reviewed a $16,000 invoice from Arbor Day Foundation for the purchase of “Energy Saving Trees”. 54% of the invoice, or $8,600, was booked to UES’ vegetation storm hardening account. The remaining $7,400 was charged to FGE. Audit questioned if the invoice should be booked to a more appropriate account such as 426.1, Donations. Unitil provided the following response, *“This invoice was for the Energy Saving Trees Event which includes the purchase of the trees from the nursery (executed by Arbor Day Foundation), use of the Arbor Day customized Unitil Energy Saving Trees website and materials, etc. 215 of the 400 trees were designated for NH or 53.75% = $8,600 charged to NH. Account 593 was used to group these charges with other vegetation expenses”.*
Audit Issue #6

Customer Accounting

Customer Accounts Expenses

Operation

902	Meter Reading Expenses	97,812
903	Customer Records and Collection Expenses	2,757,165
904	Uncollectible Accounts	842,031
		$3,697,008

Audit reviewed the detail general ledger for accounts 902, 903 and 904. Approximately five invoices were selected for Audit to review in detail.

10-20-26-00-902-00-00 Cust Acct Meter Read Exp

Audit reviewed an invoice from Landis & Gyr Technologies in the amount of $45,055. The invoice was for the annual software and support agreement. The allocation was 64%, or $27,934, UES and 38%, or $17,121, FGE. Unitil provided the following stated regarding the allocation percentages used. *"The allocation was based on the quantity of meters for each DOC in the Landis & Gyr metering system."*

10-20-21-00-903-04-00 Postage

Audit reviewed an invoice for Kubra Data Transfer. The invoice total is $38,417 which was charged to three 903 accounts. Included in the invoice total was $564.92 for tax. Audit questioned why tax was being paid for these items (envelopes, inserts, and first class mail). Unitil provided the following response, *"We were erroneously charged sales tax on these invoices in 2015. Our Tax Manager is in the process of providing Kubra with an exemption certificate".* **Audit Issue #7**

10-20-21-00-903-05-02 Cost of Collections

Audit reviewed a Western Union invoice for the amount of $4,695. The invoice was for transactions, return check handling, and bank service charges. 28% of the invoice, or $1,324 was charged to UES. 21% was charged to NU and 51% was changed to FGE. Per Unitil, the allocations were based on the amount of transactions per company.

Audit also reviewed an invoice from Global Connect for broadcasts. The total invoice was $13,566 with only $2,888 being charges to the Cost of Collections account.

10-20-21-00-903-05-03 Sundry Cost of Collections

Audit reviewed an invoice from Stevens Business Services. Unitil noted that *"this is one of 3 Collection Agencies that we send accounts to after they have gone Final but the customer has not paid their final balance, despite our internal collection efforts. Collection agencies refer customers to the Credit Bureaus if balances remain unpaid, so they have more leverage and are able to successfully collect on some unpaid balances."*

Account #904, Uncollectible Accounts $842,031 represents a 9% decrease from the 12/31/2014 expense total. The account is comprised of the following:

10-20-10-00-904-00-00 Provision for Doubtful Accounts	$(141,862)*
10-20-21-00-904-00-00 Provision for Doubtful Accounts	$ 500,855*
10-20-21-00-904-01-00 Provision for Doubtful Accounts-Sundry	$ 9,236*
10-20-10-00-904-00-27 Provision for Doubtful Accounts Non-dist	$(144,840)
10-29-21-36-904-00-00 Provision for Doubtful Accounts PSNon-G1	$ 618,642
Total Uncollectible expense for the test year	$ 842,031

The filing schedule RevReq 3-5 shows the bad debt expense (for distribution) to be $368,229. The figure is the combination of the first three account totals identified with an asterisk *.

Audit reviewed the reported balances of the Accumulated Provision for Uncollectible Accounts (account #144) per the FERC Form 1, for the years noted, as well as the reported Uncollectible expense accounts:

Accumulated Provision for Uncollectible Accounts #144:

12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014	12/31/2015
$(739,813)	$(678,888)	$(655,509)	$(928,262)	$(940,915)	$(491,260)

Uncollectible Accounts expense #904:

$ 840,255	$ 995,807	$ 734,393	$ 960,122	$ 925,112	$ 842,031

The Accumulated Provision for Doubtful Accounts appears inadequate based on the test year bad debt expense, and the historical bad debt expenses during the years since the last rate case (2009). **Audit Issue #1**

Customer Service

Customer Service and Informational Expenses

Operation

908	Customer Assistance Expenses	2,457,411
909	Informational and Instructional Expenses	12,032
		$2,469,443

Audit did not review any of the 908 and 909 accounts. These accounts are reviewed on a yearly basis as part of the CORE program and Electric Assistance Program. Please see those individual reports for more information regarding these programs.

Administrative & General

	Administrative and General Expenses	
	Operation	
920	Administrative and General Salaries	30,793
921	Office Supplies and Expenses	455,714
923	Outside Services Employeed	5,016,654
924	Property Insurance	46,684
925	Injuries and Damages	204,582
926	Employee Pensions and Benefits	2,465,949
927	Franchise Requirements	102
928	Regularoty Commission Expenses	553,073
930	General Advertising and Miscellaneous General Expenses	210,269
		8,983,820
	Maintenance	
935	Maintenance of General Plant	140,760
		$9,124,580

Audit reviewed accounts 920 through 935 in detail. Approximately forty invoices were selected for an in depth review by Audit.

10-20-21-00-921-01-09 Credit Card Fees

This account is used to record credit card fees related to customer payments.

10-20-60-00-921-17-00 Telephone Services – Service Center-Cap

Audit reviewed a $35 reimbursement to an employee for a telephone reimbursement. This reimbursement was not submitted on a Travel & Expenses reimbursement and Audit questioned the payment. Unitil noted, *"ON CALL Supervisors at the DOC receive a monthly amount of $35.00 towards their land line in their homes. They do not submit back up for these reimbursements. We create a PO each year and $35.00 a month is "received" against it for the month per employee*".

10-20-12-00-923-00-00 OS Legal- Engineering

Audit review one invoice from this legal account; a $2,951 invoice from Ransmeier & Spellman PC. The invoice was for professional services for the Broken Ground project. During 2015, expenses for the Broken Ground Substation project was booked to Account 107, Construction Work in Progress. Audit determines the professional services invoice of $2,951 should also be booked to CWIP. **Audit Issue #8**

10-20-08-00-923-00-01 OS Legal –Corporate

Audit reviewed one legal invoice for Duane Morris LLP. The invoice total was $4,842 for general legal fees rendered in June 2015. No exceptions were noted.

10-20-10-00-923-04-00 OS Other

One invoice was reviewed by Audit for Pierce Atwood LLP. The total invoice was $22,225 with $12,062 being allocated to UES and $10,163 being allocated to NU. The invoice notes that the charges are for New Hampshire Property Tax Appeals.

10-20-17-00-923-15-00 OS-Emergency Mgmt & Compliance

Audit review an invoice from the American Red Cross in the amount of $30,000. The invoice was for a heroes' breakfast and split the charges between New Hampshire, Maine and Massachusetts. Those expenses total $20,000 and were charged to account 426, Donations. The final $10,000 was a charge for "NH Community Resiliency". $5,000 of the charge was booked to UES and NU donation account ($2,500 each). The remaining $5,000 was allocated to six accounts in the amount of $833. The only $833 UES charge was booked to account 923. Audit feels the total invoice should have been charged to donations and not just a portion of the expense. **Audit Issue #9**

10-28-29-00-923-32-03 Field Operations/Account Management

Audit reviewed on invoice from this account and it was for The Exeter Inn. The invoice totaled $1,897 and was for the municipal officials annual breakfast. The expense for this event should be booked below the line. **Audit Issue #5**

10-20-60-00-925-01-00 Employee Safety – Sea

Audit reviewed one invoice from the Seacoast employee safety account from Bugband. The invoice totaled $103 and was for tubs of bug repellent towelettes. No exceptions were noted.

10-20-03-00-926-06-00 Employee Benefits Other

Audit reviewed the Pension Actuarial Report and the Postretirement Benefits Other than Pension (PBOP) funding report. Audit tied the net periodic benefit cost of $1,622,112 for Pension and $1,168,213 for PBOP to general ledger accounts 10-20-03-00-926-02-00, FASB 87-Pension and 10-20-03-00-926-09-00, SFAS 106-PBOP respectively.

$1,622,112 of Pension expenses was also tied to the filing Workpaper 3.1 and $1,168,213 of PBOP expenses was tied to filing Workpaper 3.2 without exceptions. Audit also verified the USC Pension and PBOP net periodic benefit costs in the amounts of $866,301 and $637,875 respectively, to Workpapers 3.1 and 3.2. The actuarial reports' stated net period benefit cost multiplied by the USC Labor & Overhead Charged of 28.32% (per Workpapers 3.1 and 3.2) calculated to the expense amount on Workpapers 3.1 and 3.2 without exception.

Audit reviewed an invoice in the amount of $5,525 for a Flu Shot Clinic. $1,050 or 19% of the invoice was allocated to UES. 20% of the invoice was allocated to each, FGE and NU, and 41% was allocated to USC. The allocation to the different companies was based on the employees and retirees who participated in the clinic.

Audit reviewed an $835 invoice from Liberty Lane Catering for a full breakfast on February 11, 2015. The invoice from the caterer notes it as a corporate breakfast and Unitil's batch sheet states it is an employee breakfast. Audit determined this expense should be booked below the line. **Audit Issue #5**

Three invoices, each in the amount of $50, were reviewed by Audit as the GL detail noted they were donations. All three invoices were donations made in the memory of an employee's family member to a specific organization. These expenses, of $150, should be booked below the line. **Audit Issue #5**

Audit reviewed a $143 invoice from Milk N It for dairy products. The invoice was allocated 40% to UES, or $58, and 60% to USC, or $85. The $58 booked to UES should be below the line. **Audit Issue #5**

A $514 invoice from Newell Post Restaurant was also reviewed by Audit. This invoice was for an employee breakfast on August 13. The total invoice of $514 should be booked below the line.

Regulatory Commission Expense Account #928 $553,073

FERC Form 1 page 323 line 189 reflects a total of $553,073. Audit verified the total to details the Regulatory Commission Expense accounts:

10-20-01-00-928-01-00	REG COMM ASSESSMENT/FEES	$ 169,818	
10-29-01-32-928-01-00	PUC REG COMM ASSESSMENT AMORT - EDC	$ 337,862	
10-29-01-36-928-01-00	REG COMM - PUC ASSESSMENT - PS NONG1	$ 13,822	
10-29-01-37-928-01-00	REG COMM - PUC ASSESSMENT - PS G1	$ 1,178	$ 522,680
10-20-01-00-928-02-00	REG COMM EXP-MISC	$ 2,165	$ 2,165
10-29-01-32-928-01-01	TRANS BASED ASSESS/FEES - EDC	$ 10,347	$ 10,347
10-29-01-32-928-03-00	REG COMM EXP - EDC	$ 1,750	
10-20-01-00-928-03-00	REG COMM EXP - LEGAL	$ 13,733	
10-29-01-22-928-03-00	REG COMM EXP - LEGAL - LIEAP	$ 22	
10-29-13-36-928-03-00	REG COMM EXP-LEGAL-DS-NON-G1	$ 2,223	
10-29-13-37-928-03-00	REG COMM EXP-LEGAL-DS-G1	$ 153	$ 17,881
	Total GL acct 928 see FERC page 323 line 189	**$ 553,073**	**$ 553,073**

The first four general ledger accounts sum to $522,680. Audit verified the figure to the quarterly assessments per the PUC Business Office:

Assessment Due	Electric	IESR	Total
January 2015	$ 119,462	$ 28,760	
April 2015	$ 119,462	$ 28,759	
July 2015	$ 57,046	$ 13,459	
October 2015	$ 125,736	$ 29,996	
Total 2015	$ 421,706	$ 100,974	$ 522,680

The Regulatory Commission expense was verified to the Filing Requirement Schedules page 2 of 12, included within the Administrative and General Expense total of $9,124,580 on line 12.

10-20-24-00-930-52-00 Outreach and Educations

Audit reviewed two invoices from different vendors. The invoices were for a safety outreach program and overhead power newspaper and radio ads. The total charged to the Outreach and Education account for both invoices was $11,512. No exceptions were noted.

10-20-24-00-930-60-00 Emergency Communications

Audit reviewed a Washington Street Catering invoice in the amount of $740 from February 4, 2015. The invoice was for a catering charge for a lunch Unitil held. Audit also reviewed an invoice from Calypso Communications in the amount of $13,762. The invoice was allocated 50/50 to UES and FGE charging each $6,881. The Calypso invoice was for the design and development of the Unitil Thanksgiving Storm hats and shirts. The invoice was dated February 4, the day of the catered lunch event. Audit feels these changes for the catering and accessories in the amount of $7,621 should be booked below the line. **Audit Issue #5**

<u>Travel & Expense Reimbursement</u>

All employees receive the Unitil System Policy Number FS, AC 1.05(G) Reporting Business Expenses defining what business expenses are reimbursable and how to report the business expenses the individual incurred.

Employees submit Travel & Expense (T&E) requests through the WebOps Expense Report System. The Employee's manager or company office reviews and approved the request prior to payment being made. Employees note which company they work for, the accounts to be charged, the company in which the expenses were incurred for. A copy of the completed expense report is printed and forwarded to Accounts Payable with all receipts attached.

Audit reviewed two T&E for snow plowing. Per the Union contract employees that are assigned standby duty or employees working during an emergency storm restoration event may receive reimbursement for having their personal drive way plowed.

One reimbursement was for $90 for two plow jobs at $45 each. A copy of the vendor's invoice and the employee's cancel check were provided with the T&E. The second reimbursement was for $350 for plowing five times. Four of those times were at a cost of $50 and the fifth time was for $150. On page six of the Union contract Section J.6 states "*It is expected that the employee will exercise reasonable judgment with respect to pricing in selecting a vendor. The company reserves the right to deny reimbursement for excessive snow plowing costs."* $150 for plowing on January 27 seems excessive when plowing on January 3, 24, 28 and 30 only cost $50. Also, the Union contract states on page five, section J.4 states *"In order to be reimbursed, the employee shall provide the Company with an invoice from the vendor depicting the date(s) of the snow plowing, as well as proof of payment (i.e. cancelled check). A "paid-in-full" invoice is not acceptable proof of payment".* The T&E did not include a copy of a cancelled check and only notes "pd in full 2-6-15" on the invoice. **Audit Issue #10**

Audit reviewed another T&E for tolls, gas, and meals. The toll reimbursement was for $30, which is the amount to replenish an EZ-Pass account. Audit questioned if it was standard practice to reimburse for the replenishment and not just the actual tolls incurred. Unitil responded that this particular employee has a marked company vehicle that is only used for official company use. Due to this reason the employee is reimbursed for the replenishment of the EZ-Pass account and not the specific toll charges incurred.

Included in the meals reimbursement was a $13 charge for alcohol. This charge should be removed from account 10-20-28-00-921-02-00 Travel & Meals – Forestry. **Audit Issue #10**

Audit review a T&E to reimburse the employee for the purchase of chocolate covered strawberries and a cake pop bouquet. The total of $60 should be booked below the line. **Audit Issue #5**

The final T&E reviewed by Audit was for trees and planting material for a customer complaint. The amount of $121 was booked to account 10-20-28-00-593-04-02, CORE Work – Customer Request.

Payroll

A Compensation Committee is appointed annually by the Board of Directors and is responsible for the oversight of the executive compensation program. The Committee has overall authority to establish goals and objectives and to interpret the terms of the Company's compensation policies, including base salary, incentive compensation, equity compensation, sales commissions and benefits programs. (Annual Meeting of Shareholders, Proxy Statement, April 20, 2016)

The Committee has authority to obtain advice of outside counsel, compensation consultants and other advisors as needed. Since 2009 the Committee has been using Willis Towers Watson to provide compensation study data. In 2014 the Committee used Willis Towers Watson to prepare the "2014 Compensation Analysis", which included chief executive officers compensation and benefits survey data from comparable industry executives and middle management. This data was used determining executive compensation for 2015. Recommendations from Willis Towers Watson, based on the survey date, were also taken into consideration.

Every employee receives a base salary. The Company uses the Hay method (developed by the Hay Group) to evaluate jobs for base salary purposes. Each position received a numeric job grade based on comparable jobs at other companies. Base salary is set for every job grade and position based on the survey data provided by Willis Towers Watson. Base salary is set within a salary range and is based on individual performance relative to individual annual goals. The salaries of all employees are reviewed annually and also at the time of promotion or change of responsibilities. Merit increases are considered at the end of the year based on each employees performance as related to their job description and the achievement of individual goals established at the beginning of the year.

The following base pay increases were given to the executives in 2015:

Mr. Schoenberger	Chariman of the Board Chief Executive Officer and President	4.80%
Mr. Collin	Senior Vice President Chief Financial Officer and Treasurer	7.20%
Mr. Meissner	Senior Vice President and Chief Operating Officer	7.20%
Mr. Black	Senior Vice President, Unitil Service	4.90%
Mr. Long	Vice President, Unitil Service	6.90%

The annual base pay increase for the Executive Officers for 2016, per the 2015 Compensation Committee Minutes, is 3%-6%.

There are six different sources of payroll: USC Salary, USC Hourly, UES Capital Salary, UES Capital Hourly, UES Seacoast Salary, and UES Seacoast Hourly. The USC payroll is allocated to UES through the monthly service billing.

UES employees are either salary and get paid twice a month or hourly and paid on a weekly basis.

USC salary employees (paid monthly) record the allocation of their time in the USC Time and Billing system each pay period. The employee’s supervisor approves the allocation. UES salary employees do not complete timesheets. Fixed allocations for each employee are provided to payroll at the beginning of the year. Payroll enters the allocation into ADP and that data is used to post the expenses to the appropriate general ledger account.

USC hourly employees (paid weekly) complete a weekly timesheet in both the Unitil Employee Database (for ADP) and in the USC Time and Billing system. Employees print and sign their timesheets and given to their supervisor for review and approval.

UES hourly employees complete their timesheets manually on a daily basis. The timesheets are provided to Operations Support Associates who key them into TED, also on a daily basis. The supervisor reviews and signs the timesheets. Once all timesheets for the prior week are entered into TED and approved by supervisor, they are imported into the ADP system.

Payroll Review

Audit reviewed the ADP contract which became effective 2/28/2007. The contract was general in nature stating which services ADP will provide. The payment terms of the contract were not stated.

Audit reviewed, in detail, the International Brotherhood of Electrical Workers (IBEW) Union Contract for UES Capital and Seacoast divisions. The Contract has been in effect since June 1, 2012 and expires May 31, 2018. All of the payroll selections made were verified to the Union Contract. One exception was noted and discussed below.

Audit reviewed the payroll data for the final pay period of 2015. For the Salary employees this was dated 12/15/15 and for the hourly employees it was dated 12/29/2015. Payroll for Capital and Seacoast salary and hourly payroll was tied to GL account 10-20-00-00-232-02-00 without exception.

From the final pay period Audit selected three salary employees from both capital and seacoast and ten weekly employees, also from both capital and seacoast. A total of 26 employees' timesheets and paystubs were reviewed in detail. A total of 62 employees were paid over the course of 2015. The 26 employees reviewed represents approximately 50% of the final pay period population.

All eighteen of the Union employees' hourly rates were verified to the Union contract. Two of those employees received promotions during the year and their hourly rates were an average of the old rate and the new rate. The average rate was recalculated and verified to be correct by Audit. This practice of providing an average rate for promotions was stated in the Union contract.

The hourly employees' time consisted of regular pay, overtime pay, stand-by pay, shift differential, and meal allowances. Audit verified the overtime rates, stand by rate, shift differential rate and meal allowances to the Union contract. One exception was noted for a meal allowance. The Employee was to receive a breakfast reimbursement of $10 but received $20. Audit questions the rate given for breakfast and Unitil noted that they erroneously paid the employee twice. Unitil also noted they do not plan to take any action on the recoupment of the $10 overpayment. **Audit Issue #11**

All timesheets were signed by both the employee and supervisor.

For the capital and seacoast salary employees the paystubs were the only item reviewed by Audit. Pay included regular pay, standby pay, wellness, auto and prizes. The dollar value of wellness incentives, company vehicle used for personal use, and prizes are added into the salary amount and taxed as income.

Salary employees, which are part of management, are required to be on call for usually seven days at a time. For being on call, they receive $400 of standby pay for that seven day period.

Audit reviewed, in detail, the year-end summary for payroll. This report was provided for each USC, UES-Capital salary, UES-Capital hourly, UES-Seacoast salary, and UES-Seacoast hourly.

Payroll Taxes

Audit requested and reviewed the W-3 Transmittal of Wage and Tax Statements; Form 940, Employer's Annual Federal Unemployment Tax (FUTA); Form 941, Employer's Quarterly Federal Tax Return, State Unemployment Insurance (SUI).

Audit verified the end of year payroll summary for UES to the W-3 and 941. Total FICA payroll taxes in the amount of $366,762 were tied to GL account 10-20-03-00-408-03-10, Taxes FICA. FUTA taxes were tied to GL account 10-20-03-00-408-04-10, Taxes Federal Unemployment in the amount of $2442.77. SUI, in the amount of $812.96, was tied to GL account 10-20-03-00-408-06-10. No exceptions with payroll taxes were noted.

Vacation Accrual

$73,405 was booked to account 10-20-00-00-242-30-00, Accrued Vacation. Unitil provided a detailed spreadsheet noting each UES employee and how much accrual was associated with each. $27,076 of the accrual was for Capital employees and $46,329 was for Seacoast employees.

Management Incentive Plan

Cash Incentive compensation for the Executive Officers is also based on the Willis Towers Watson study. A score card was also developed to help set goals such as financial results, electric reliability, and other items for the annual performance incentives for both management and other employees. The purpose of the incentive plan is to provide executives with significant incentives related to performance which in turn helps maximize profits for shareholders. Executives receive a cash award if the quantitative goals that are set by the Compensation Committee are met. Each Officer's target award is established as a percentage of base salary.

Mr. Schoenberger	60%
Mr. Collin	45%
Mr. Meissner	45%
Mr. Black	35%
Mr. Long	35%

Awards may be more or less than the target award depending in the results achieved. The Compensation Committee has the authority to increase or decrease the incentive plans, including cash and stock, or can pay no incentive when an incentive should have been paid. In 2015, the Committee did not amend the awards.

Incentives are accrued monthly to account 10-20-00-242-26-00, Accrued Incentive Compensation. Incentives are paid in February for the prior calendar year. On 2/28/2015 $109,924 in incentives payments was charged to UES.

Stock Plan

Executives, Directors, and other employees and consultants approved by the Compensation Committee are entitled to an equity compensation of restricted stocks annually. The size of the annual award is based on the Company's performance and the target award is also based on the Willis Towers Watson data. The objective of the stock plan is to provide participants with an incentive for personal performance, promote teamwork amongst each other and to encourage stock ownership in the company. Equity based compensation also ensures that the employees have a continuing stake in the long term success of the company. The restricted stock shares are vested over a four year period. The employee must receive approval from the CEO or CFO to sell fully vested shares.

The target restricted stock awards for Executive Officers for 2015 were:

Mr. Schoenberger	$586,500
Mr. Collin	$134,232
Mr. Meissner	$134,232
Mr. Black	$74,786
Mr. Long	$74,786

The value of each possible award can range from 50% to 150% of the target award amount. The award is reduced for federal and Medicare taxes, and the net award is divided by the current stock price to calculate the shares the employee will receive. As the shares vest, they are taxable income and the taxes that were previously accounted for are credited back to the shareholder.

The Committee has authority to vary the size of the stock award, but it chose not to do so in 2015.

Retirement Plan

The retirement plan is a Defined Benefit Pension Plan that covers certain employees of Unitil and its subsidiaries. The retirement plan provides income benefits based on years or service, age at retirement and the average salary of the employees final five years. As of January 1, 2010, the retirement plan is closed to new employees who participate in an enhanced 401(K) plan instead. Existing employees were given a one-time option to remain active in the retirement plan or to accept a frozen retirement plan benefit and move to the enhanced 401(K).

Employees who elected the frozen retirement plan have a benefit based on years of service and average pay as of 12/31/2009.

Audit reviewed account 10-20-00-00-182-04-10, Reg Asset – Pension. The account balance of $16,363,207 was tied back to the actuarial statements through a reconciliation spreadsheet provided by Unitil.

Post-retirement Benefits Other than Pension PBOP

Account10-20-00-00-182-04-09, Reg Asset – PBOP's, balance of $7,667,491 was tied to the actuarial report by using a reconciling spreadsheet provided by Unitil. Audit reviewed the account's transactions in detail without exception.

Supplemental Executive Retirement Plan (SERP)

The main purposed of the SERP is to provide enhanced retirement benefits, to encourage continued service until retirement, to certain executives selected by the Board. The five Executive Officers named above are currently eligible for SERP. The SERP plan is set up as a Rabbi Trust, in which funds are invested in an irrevocable trust and held for the benefit of employees for retirement.

Benefits of the SERP include:

- Bypassing the compensation limits imposed by the Internal Revenue Service by counting all cash compensation towards the benefits formula;
- Including the compensation earned from the annual cash incentive awards in the benefits calculation;
- Using a three-year (rather than five year) average salary and cash incentives to determine the benefit

Account 10-20-00-00-182-04-11, Reg Asset – SERP, was reviewed in detail by Audit. The account balance of $705,370 was tied back to the actuarial report via a reconciliation spreadsheet provided by Unitil. No exceptions were noted.

Executives' Perquisites

The Company limits the use of gratuities as a means of compensation. Mr. Schoenberger is provided a Company automobile for business and personal use, and also receives reimbursement for a club membership. No other perquisites were provided to any Executive Officer. On the final pay period payroll detail, Audit reviewed Mr. Schoenberger's detail, and a line item for personal use of a company vehicle was noted.

Active Employee Benefits

The Company provides a benefit package to nearly all active employees. Benefits included in the package are medical, dental, vision, life, and long-term disability insurance plans. Also included is a defined benefit pension plan or a 401(K), in which the Company matches contributions. Other additional benefit plans and policies are also available.

Retired Employee Benefits

The Company provides non-union employees with company-paid life insurance and company-subsidized medical insurance to eligible retirees. Union employees receive retirement benefits as negotiated in the Collective Bargaining Agreement.

Severance Pay

There were no severance or signing bonuses paid by UES during the test year of 2015. USC did pay $8,365 in severance to one employee. The expense was not allocated to UES.

Temporary Employees

During 2015 USC used ten companies to obtain temporary employees. Total costs of the temporary employees were $709,555. 28.32%, or $200,946 of those costs were allocated to UES. There were no temporary employees hired from temp agencies that were directly billed to UES.

Insurance Policies

Audit reviewed a summary of the insurance policies Unitil holds. The summary provide the policy name, insurer, coverage amounts, deductible amounts, coverage period, renewal date, premium amount, broker name and broker fee.

Unitil holds insurance for Directors & Officers Liability, excess liability, crime, transit, all risk property, auto, workers comp, kidnap and extortion, fiduciary and employee benefit liability.

The insurance binder for each of the policies noted above was provided to Audit for review.

The Excess Liability coverage is the largest insurance expense incurred by Unitil with a premium of approximately $1,300,000. Audit reviewed the bid process for the excess liability insurance.

A broker is used by Unitil to solicit bid from insurance companies (other than the current carrier). Nine additional carriers received the insurance program and only one submitted a quote. A few of the carrier declined as they were not in the market for gas distribution companies. Others could not compete with the larger companies or could not provide the coverage required. Unitil analyzed and compared the two insurance companies (current carrier and one alternative) coverage and price and selected the one with the lowest cost and best coverage.

TAXES

FERC Form1 page 114, line 14, reflects total tax expenses of $9,640,662. The total was verified to the following general ledger accounts and the **bold totals** of each category:

FICA	10-20-03-00-408-03-10	$ 366,762
Federal Unemployment	10-20-03-00-408-04-10	$ 2,443
State Unemployment	10-20-03-00-408-06-10	$ 813
NH Surplus Tax	10-20-10-00-408-02-10	$ 11,060
NH Business Enterprise	10-20-10-00-408-02-18	$ 126,000
Local Property Taxes	10-20-10-00-408-09-01	$5,397,120
Local Property Abatements	10-20-10-00-408-09-02	$ (367,492)
Payroll Taxes Capitalized	10-20-10-00-408-10-00	$ (231,485)
Total Tax Other Than Income, FERC p. 114 Line 14		**$5,305,221**

Each account balance was individually verified to FERC page 262, Taxes Charged and Adjustments, during the year.

Federal Income Tax Current	10-20-10-00-409-01-30	$ (199,724)
Federal Income Tax Prior	10-20-10-00-409-01-31	$ 843,450
Total Federal Income Tax FERC p. 114 Line 15		**$ 643,723 ($3 immaterial)**
Fed Income Tax Non-oper	10-20-10-00-409-01-32	$ 92,044 pro forma
Total Taxes Charged per FERC page 262		$ 735,770 ($3 immaterial)

The total $735,767 (above less the $3 variance) was noted on the Filing Requirements, Schedule RevReq 3-12 page 3 of 4. Included in the total is the Non-operating account total $92,044. The pro forma noted in the RevReq 3-12 represents the Federal Income Tax Non-Operating identified above.

State Inc Tax Current BPT	10-20-10-00-409-02-30	$ 745,391
State Inc Tax Prior BPT	10-20-10-00-409-02-31	$ 123,704
Total Other Income Tax FERC p. 114 Line 16		**$ 869,095**
State Inc Tax Non-op BPT	10-20-10-00-409-02-32	$ 25,149 pro forma
Total Taxes Charged per FERC page 262		$ 894,244

The total $894,244 was noted on the Filing Requirements, Schedule RevReq 3-12 page 3 of 4. Included in the total is the Non-operating account total $25,149. The pro forma noted in the RevReq 3-12 represents the Federal Income Tax Non-Operating identified above.

Provision for Deferred Inc. Tax FERC p. 114 line 17	**$2,822,623**
Consumption Tax FERC page 262	$ 667,870
FERC Form 1 above the line Tax Expense	$1,512,818

The two non-operating tax accounts were noted on FERC form 1 page 117 lines 53 and 54, Income Statement, below the line.

Fed Income Tax Non-oper	10-20-10-00-409-01-32	$92,044
State Inc Tax Non-op BPT	10-20-10-00-409-02-32	$25,149

Deferred Taxes on the Balance Sheet were noted on page 113 lines 62 and 63:

Accumulated Deferred Income Taxes-Other Property (282)	$(39,611,108)
Accumulated Deferred Income Taxes-Other (283)	$ 14,396,403
Total Accumulated Deferred Income Taxes per FERC	$(25,214,705)

Audit verified the Deferred Income Tax totals to seventeen general ledger deferred tax related accounts, 10-20-00-00-282-xx-xx, without exception.

Audit verified the net changes to the balance sheet accounts were included in the calculation using the Power Tax software, to prepare the schedule M of the Federal income tax form, as well as the state tax forms.

Property Taxes

Audit noted the **Property Tax expense** total on FERC Form 1, page 262, and verified it to the following general ledger accounts:

10-20-10-00-408-09-01 Taxes Local Property	$5,397,120
10-20-10-00-408-09-02 Taxes Local Property Abatements	$ (367,492)
Total Property Tax Expense	$5,029,628

The two general ledger accounts agree with the filing Schedule RevReq 3-10.

The net property tax expense total of $5,029,628 should be adjusted by the following:

Allenstown inclusion of Statewide Education Tax	$(174)
Concord inclusion of Statewide Education Tax	$(1,248)
Possible Tax related to Greenland	$ 449
Property Tax Expense Recommended Adjustment total	$(973)

Audit Issue #12

A Seabrook variance of $10,501 is not included in the recommended adjustment total, as it is part of the Local Property Tax Abatement account noted above.

Audit was provided with Tax settlement agreements between UES and the towns of, Bow, Hampton, Kensington and Seabrook. Specifically:

Bow	$120,000	
Hampton	$145,492	
Kensington	$ 60,000	
Seabrook	$ 42,000	
Total Credits	$367,492	Abatements

The Bow settlement agreement referenced the valuation and assessment related to its 2011 and 2012 property tax bills. The agreement was signed 8/21/2015 and settled the claim by agreeing to credit the Company in four equal $30,000 installments applied to four property tax obligations beginning with the second 2015 issue and continuing through the first 2017 tax issue.

The Hampton settlement agreement, dated 6/1/2015, outlined the annual dispute regarding valuation and the related settled refund figures for property tax years 4/1/2011, 4/1/2-12, 4/1/2013 and 4/1/2014. The full refund of $145,492.43 was paid to UES within 14 days. The Company and the town agreed on a 4/1/2015 property tax year valuation of $20,634,500, to be reflected on the second issue 2015 tax bill. The parties also agreed that the Company would forego interest on the overpayments made in prior years.

The Kensington settlement agreement, dated 1/4/2016, resolved the 4/1/2012 assessment dispute in an amount totaling $60,000. The agreement documented that the credits will be applied in six equal amounts, beginning with the June 1, 2016 property tax obligation and continuing through the second issue 2018.

The Seabrook settlement agreement, dated 8/21/2015 resolved the 2011 property tax valuation in the amount of $42,000. The credit will be applied in two equal installments over two semi-annual property tax obligations, beginning with the second 2015 issue.

Audit requested clarification of two towns included in the tariff, Derry and Greenland, in which the Company conducts business, but for which property tax invoices were not provided. The Company indicated that there are no taxable assets in Derry, and the taxable assets in Greenland have been reported to the town, but a tax bill has yet to be issued. The original book costs of the assets in Greenland were reported to be $31,537. Audit reviewed the NH Department of Revenue property tax rate table for 2015 and the rate for Greenland, excluding the municipal level statewide education tax was $14.47. Audit calculated an estimated tax at $31k * $14.47 = $448.57. Refer to **Audit Issue #12**

The total reported for the Statewide Education tax, $1,169,024 on the filing Schedule RevReq 3-10, was verified to the 12/2014 and 12/2015 DRA notices of valuation and quarterly estimated payments.

FERC Form 1, page 214 details one two acre parcel in Plaistow with a value of $1 as held for future use. The parcel is an easement, for which no property tax is assessed.

The **Pre-paid Property Tax** $1,293,561 found in general ledger account #10-20-00-00-165-11-00, is part of the total Prepayments figure of $7,616,460 in the FERC Form 1 page 111 line 57.

The fourth quarterly estimated tax for the Statewide Property tax was	$ 189,895
The three months of the second issue relating to municipalities sum to	$1,103,666
	$1,293,561

The municipal figure above does not include the $(885) recommended expense adjustment above.

Unitil estimates the amortization for municipal and statewide property taxes annually, using the April through March fiscal tax year. A true-up reconciliation of actual annual amounts ensures that the adjusted amortization is reflected on the income statement and balance sheet at calendar year end.

Electricity Consumption Tax

RSA 83-E requires a consumption tax of $.00055 per kilowatt hour be collected by each electric utility (with certain municipal exclusions), and remitted to the Department of Revenue, along with a return, by the 15th day of the second month following the end of each month in which the tax was collected. RSA 83-E:7 outlines the books and records required to be maintained, including the kilowatt hours of electrical energy distributed or transmitted.

Audit requested and was provided with the NH Department of Revenue Administration form DP-133 for the remittance in November 2015 in the net amount of $62,920. The form reflects the straight calculation on 114,616,327 kWh sold in September which results in $63,039. That figure was verified to 10-20-00-00-236-02-42, NH Consumption Tax. The $119 difference noted on the DP-133 and the general ledger was identified on the form to be uncollectible accounts' related consumption tax. The kWh reported was verified to the test year's report of all kWh sales, as adjusted for cancel/rebills.

Federal Income Tax and NH Business Enterprise and Business Profits Taxes

Overall, the Company utilizes the Power Plan IT system, which includes Power Plant as the plant in service component of the IT system. Power Tax is the tax calculating component of the IT system. Each begins with the book basis noted in the Company's general ledger, and each interfaces with the other. Adjustments made to figures for tax purposes such as payments made on behalf of OPEB were verified to Flexi screen shots. Flexi is the accounts payable system used by the Company, and is tied into the accounts payable general ledger accounts.

Timing differences of accelerated depreciation vs. book depreciation are expensed to the 410 tax expense accounts and offset to accounts 282 and 283, deferral accounts.

Based on an onsite review of the components and discussion with the Tax Department at USC, Audit concludes that the schedule M, internal tax schedule 28 is based on the books and records of UES at 12/31/2015. The corporate tax returns are prepared by Grant Thornton.

The Company provided the 2014 Federal Income tax returns, as the 2015 returns will not be submitted until September 2016. The internal tax schedule 28, supporting the calculations for the 2015 schedule M return was provided. Audit reviewed the information contained in it and verified that the figures agree with those noted in the filing Schedule RevReq 3-12 page 3 of 4. The year-to-date pretax book income was verified to the FERC Form I income statement, within $16,188. The permanent items identified in the filing were verified to the 12/31/2015 general ledger balances of the accounts noted. The temporary items were verified to the net activity for the year of the accounts noted. Adjustments to balance sheet accounts were verified to the Flexi accounts payable system without exception.

Audit was provided with the 2014 NH Business tax returns. The returns for calendar year 2015 are not required to be filed until September 2016.

Audit Issue #1

Accumulated Provision for Uncollectible Accounts

Background

Audit reviewed the balance sheet Accumulated Provision for Uncollectible Accounts' for the period since the prior rate case (test year 2009).

Issue

The Accumulated Provision balance noted on the FERC Form 1, account #144, for the years 2010 – 2014 averaged $(788,677), with the write-offs in the respective years averaging $891,138. The Provision for the test year was reduced to $(491,260) while the write-offs for the year were $842,031.

Year	Provision #144	Write-off #904
12/31/2010	$(739,813)	$840,255
12/31/2011	$(678,888)	$955,807
12/31/2012	$(655,509)	$734,393
12/31/2013	$(928,262)	$960,122
12/31/2014	$(940,915)	$925,112
12/31/2015	$(491,260)	$842,031

Recommendation

Audit recommends that the Company adjust its Provision, based on the historical balances and the expense account activity.

Company Comment

The Company is seeking to recover its over-360 day past due accounts receivable from its Active Hardship Protected Accounts in this proceeding. The provision at 12/31/15 as shown above would be increased by the pro-forma adjustment to Bad Debt Allowance as described in Daniel V. Main's testimony and shown in Schedules RevReq-3 and RevReq-3-6.

Audit Comment

Audit appreciates the references to the filing testimony and schedules. The Distribution Bad Debt Adjustment noted on Schedule RevReq-3-5 reflects per books delivery retail billed revenue of $81,032,598 and test year bad debt expense of $368,229. The Revenue portion of this report discusses the retail revenue. The bad debt expense noted on RevReq-3-5 is the sum of three Provision for Doubtful Accounts general ledger accounts. Two other general ledger accounts comprise the difference between the expense for the year and the amount on RevReq-3-5. Those accounts are 10-20-10-00-904-00-27 Provision for Doubtful Accounts Non-distribution $(144,840) and 10-29-21-36-904-00-00 Provision for Doubtful Accounts-PS-Non-G1 $618,642.

Audit Issue #2

Expense Item in CWIP 107

Background

Only expenses that provide a public benefit and are prudently incurred are allowed to be capitalized and recovered from ratepayers. Audit reviewed the Kingston substation project in the CWIP account 107.

Issue

UES included costs in a capital project which provide no tangible benefit to the project or the customers of UES. Within the files for the Kingston Substation Work Order (WO), there were several invoices from Calypso Communications, LLC. Specifically, Audit noted Calypso invoiced Unitil $6,500 for a two minute time lapse video of the construction of the substation. A second set of invoices totaling $49,277 was for a three part video series detailing the three year project. The two videos have a combined total of $55,700. These videos, while they may present historical significance and possible future learning opportunities, should be classified as marketing expenses rather than capitalized with the substation itself.

Recommendation

As discussed in the Report, Audit understands that the Kingston Substation work order is currently considered “closed” but still in Account 107 and has not been through the final review of expenses to be capitalized to the proper plant accounts, and that these costs have been incurred past the past 3 years, rather than just the test year. Therefore Audit recommends the $55,700 worth of expenses be removed from CWIP and booked to marketing expenses.

Company Comment

The Company agrees with the recommendation. The cost of the video documentation of $55,700 will be removed from the Kingston Substation capital project, and will adjust the filing to reflect $39,400 of expense incurred in the test year as Operating Expenses under customer communications / public relations.

Audit Comment

Audit concurs with the Company comment, but reminds the reader that the expenses were incurred over a three year period. Thus, the filing should be adjusted based on an amortized expense, rather than included as a regular recurring annual expense item.

Audit Issue #3

Not Retiring Assets in Timely Manner
Repeat Audit Issue

Background

Once assets are replaced or removed from service they should be removed from the books and records of the Utility, in order for the books and records to reflect the actual, correct amount of Utility Plant in Service.

Issue

In the first instance, the work order, E-141000-20143504 True-Up Meters & Meter Installations, which was posted in 2014, was reviewed and found to contain meter installation retirements that did not correspond to meter and meter installation additions. Specifically it contained 435 meter and 3,428 meter install retirements when only 741 meters and 738 meter installs were added to Plant in 2014. The meter and meter installations for the prior years were as follows 2013: 732/719, 2012:565, and 2011:546. While Audit understands there are instances when meters and installs are retired with no corresponding addition, the figures as submitted do not seem reasonable. Timing of the True-Up work order to take assets off the books that have already been physically taken out of service appears to be an issue.

In another instance in the 2015 CPR files submitted, UES indicated retirements in Account 368, Distribution Line Transformers, of $112,053 and retirements in Account 368.01-Trnasformer Installations of $43. At the request of Audit, UES estimated the actual figure that should have been credited to Account 368.01 to be $75,000 of retirements. UES did not retire and take the assets off their books once the physical asset had been replaced or removed from service. This is a repeat issue.

Recommendation

Audit understands that the FERC Electric Plant Instructions allow for True-up work orders of minor items of property. In the first instance Audit recommends conducting a review of the circumstances that lead to what appears to be several years' worth of meter retirements in one True-up work order.

UES indicated they would be processing this retirement in 2016. In addition, UES should remove $75,000 of transformer installation costs from the Plant in Service rate base calculation for the test year.

Company Comment

The Company acknowledges the recommendation and will review its processes and modify where appropriate.

The Company agrees with the second recommendation and will remove the estimated $75,000 from the rate base calculation (Plant in Service and Accumulated Depreciation) for the test year.

Audit Comment

Audit concurs with the Company comment.

Audit Issue #4

Bill Presentation
Repeat Issue

Background

All utilities regulated by the NH PUC shall abide by the Rules set forth by the PUC, specifically the 1200 rules for certain aspects of the rates as displayed on the customers' bills.

Issue

In several cases it was found that the rates, the customer charge, the stranded cost charge, the system benefits charge, the consumption tax, and the demand charge were not listed correctly on the customers' bills. Audit notes that due to the minimal discrepancy, there was either no or limited financial impact due to the discrepancy. Further, in the prior rate case, UES described the issue using the following description: *Regarding the SunGard (HTE) billing system, UES stated that HTE calculates the billed charges by multiplying the usage times the tariff rate for the bill component and the resulting amount is shown on the customer invoice, rounded to two decimals. The rate shown on the invoice is derived by dividing the rounded amount by the usage. Depending on the rounding in both calculations, the result may not exactly match the tariffed rate. Also, if there is a rate change during the billing period, the rate shown on the bill will be a weighted average of the two rates in effect during the billing period with the same caveat discussed previously applying.*

Recommendation

Audit recommends that UES update the Commission on the progress of fixing the system or replacing the system that causes the discrepancy to be presented on the bill

Company Comment

As noted in the Audit Report, the Company discussed the topic with Audit and confirmed all differences occurred on bills from August 2015. The Company's current billing system, HTE, requires that all rates have the same effective date in the system. This means that even if only one rate component is changing, all rates undergo a proration calculation during that billing period. The EDC rate changed on August 1, 2015, therefore all rate components for August bills were prorated. The noted differences on a limited number of customers (usually a difference of $0.01 or $0.02) were due to rounding during the proration process.

The Company is in the process of implementing the EnQuesta billing system. This system will not require proration of rates that are not changing, i.e. if only the EDC rate changes, only the EDC amount will be prorated. This will eliminate any rounding differences for rate components that do not change during a period when other rate components do change.

Audit Comment

Audit appreciates the additional information, and requests that the Company continue to communicate with Commission staff regarding the implementation of the EnQuesta billing system.

Audit Issue #5

Below the Line

Background

Audit reviewed approximately 106 O&M Expense invoices in detail.

Issue

During Audit's review it was determined that some expenses that should be booked below the line.

Recommendation

The following expenses should be booked below the line:

a)10-20-00-00-184-00-01	Food for Staff meetings	$ 76
b) 10-20-50-00-580-00-00	Donuts for Safety meetings	$ 267
c)	Hampton Rotary Poinsettias	$ 38
d) 10-20-60-00-580-00-00	Exeter Flower Shop Inc	$ 47
e)	Hampton Rotary Poinsettias	$ 38
f) 10-20-50-00-590-00-00	Employee of the Quarter, cake, ice cream	$ 72
g) 10-28-29-00-923-32-03	The Exeter Inn	$ 1,897
h) 10-20-30-00-926-06-00	Liberty Lane Catering	$ 835
i)	Donations	$ 150
j)	Milk N It	$ 58
k) 10-20-24-00-930-60-00	Washington Street Catering	$ 740
l)	Calypso Communications	$ 6,881
m) 10-20-24-00-930-53-00	Travel & Expense Reimbursement	$ 60
		$11,159

The filing should be reduced by the $11,159 noted.

Company Comment

a) Petty Cash Food for Staff meetings ($76): The Company believes that prudently incurred expenses for refreshments for meetings are a normal and customary operating expense.

b) Petty Cash: Donuts for Safety meetings ($267): The Company believes that prudently incurred expenses for refreshments for meetings are a normal and customary operating expense.
c) Hampton Rotary Poinsettias ($38): The Company believes these costs are normal and customary costs associated with operating its facilities.
d) Exeter Flower Shop Inc. ($47): This expense was for flowers sent to an employee who was hospitalized. The company believes this is a prudently incurred expense, but would be more appropriately classified as miscellaneous employee expense.
e) Hampton Rotary Poinsettias ($38): The Company believes these costs are normal and customary costs associated with operating its facilities.
f) Employee of the Quarter, cake, ice cream ($72): The Company believes that de minimus expenses for refreshments for employee recognition events and milestones are a normal and customary operating expense.
g) The Exeter Inn ($1,897): This expense is related to an annual meeting held by the Company with local emergency responders. The Company believes this is a prudently incurred expense.
h) Liberty Lane Catering ($835): This expense is for company information and recognition meetings, which are attended by a member of senior management to review company operations and results, provide updates to the company's strategic plan, and recognize employment milestones within the company. The Company believes these are prudently incurred expenses.
i) Donations ($150): The Company agrees and will remove this item from O&M expense in this filing.
j) Milk N It ($58): The company provides milk and cream for its coffee stations in the Company's break rooms. The company believes this is a prudently incurred expense.
k) Washington Street Catering ($740): This expense is for company information and recognition meetings, which are attended by a member of senior management to review company operations and results, provide updates to the company's strategic plan, and recognize employment milestones within the company.
l) Calypso Communications ($6,881): The Company believes that prudently incurred expenses for employee recognition items are a normal and customary operating expense.
m) Travel & Expense Reimbursement ($60): The Company believes that prudently incurred expenses for refreshments for meetings are a normal and customary operating expense.

<u>Audit Comment</u>

Audit appreciates that refreshments and flowers are expenses that a company may typically incur. Audit however, reiterates the below the line nature of each.

Audit Issue #6

Arbor Day Foundation

Background

Audit reviewed several O&M Expense invoices within account 593. One invoice selected to be reviewed was an $8,600 charge from the Arbor Day Foundation.

Issue

Until purchased trees that were to be given out during an Energy Saving Trees Event. Unitil booked the expense to account 10-20-28-00-593-04-18, VMP Storm Hardening.

Recommendation

FERC Account 593 is for maintenance of overhead lines, including trimming trees and clearing brush. The purchase of trees, especially to be distributed during a promotional event, should be booked to a more appropriate account, such as 426.1, Donations.

Company Comment

While the Company incurred this expense to raise community awareness and education regarding vegetation management, the Company agrees with the recommendation, and will remove the $8,600 from VMP Storm Hardening in the filing.

Audit Comment

Audit concurs with the Company comment.

Audit Issue #7

Sales Tax Charges

Background

Audit selected several O&M Expense invoices within account 903 to review in detail

Issue

Audit reviewed an invoice for Kubra Data Transfer. Kubra provides printing and mailing services to Unitil. The invoice total of $38,416 included $565 for sales tax. Audit questioned why tax was being charged and Unitil noted they were erroneously charged sales tax and their Tax Manger is in the process of providing Kubra with an exemption certificate.

Recommendation

Audit acknowledges Unitil is in the process of providing an exemption certificate to Kubra. Audit recommends invoices are thoroughly reviewed for such charges in the future. An adjustment to account 903 should be noted for the filing.

Company Comment

The Company agrees with the recommendation and will remove sales taxes associated with Kubra from the filing.

Audit Comment

Audit concurs with the Company comment.

Audit Issue #8

Expense to CWIP

Background

Audit selected several O&M Expense invoices within account 923 to review in detail

Issue

Audit reviewed an invoice for Ransmeier & Spellman PC. This particular invoice was for the Broken Ground project. During 2015, expenses incurred for the Broken Ground Substation project were booked to account 107, Construction Work In Progress.

Recommendation

Audit recommends booking the $2,951 legal expenses to CWIP under the Broken Ground work order. The filing expense total in account 923 should be reduced by $2,951.

Company Comment

The Company agrees with the recommendation, and will adjust the filing accordingly.

Audit Comment

Audit concurs with the Company comment.

Audit Issue #9

Expense to Donation

Background

Audit selected several O&M Expense invoices within account 923 to review in detail

Issue

Audit reviewed an invoice for the American Red Cross. The total invoice was $30,000 for NH, ME and MA. $25,000 of the invoice was booked to the appropriate companies’ 426 account, Donations. The remaining $5,000 was booked to the companies’ 923 account, Outside Services Employed. $833 was booked to UES 923 account.

Recommendation

Audit recommends booking the $833 to Account 426.1, Donations as it was for a heroes’ breakfast and was not for outside services.

Company Comment

The Company agrees with the recommendation, and will adjust the filing accordingly.

Audit Comment

Audit concurs with the Company comment.

Audit Issue #10

Travel and Expense Reimbursements

Background

Audit selected a sample of Travel and Expense Reimbursements booked to account 921 to review in detail.

Issue

Two of the T&E reviewed by Audit presented issues. The first issue T&E was for a snow plowing reimbursement. The Union contract allows for employees on call or on storm duty to get reimbursed for having their personal driveway plowed. The contract stated the charged must be reasonable and proof of payment, such as a cancelled check must be provided. The contract specifically states that a paid in full invoice is not acceptable as proof of payment. This particular reimbursement included a single plow charge of $150 when the others were only $50. Also, no cancelled check was provided, only a “paid” invoice.

The second T&E issue included a reimbursement for alcohol in the amount of $13.

Recommendation

Audit feels that the full $350 should be removed from the rate case as the proper supporting documentation was not provided by employee and reimbursement should not have happened. If proper support was provided, Audit would recommend $100 be removed as the $150 plowing charge is excessive when the same vendor was providing the service on other dates for only $50.

Audit also notes that the alcohol charge of $13 be removed, as rate payers should not be liable for this expense.

Company Comment

The referenced employee is a company manager, and not a member of the Union. It is the Company’s practice to provide plowing to essential supervisory and management personnel that are on call or on storm duty. The Company believes that an invoice marked “paid in full” is sufficient documentation for its non-Union supervisory and management personnel to qualify for reimbursement.

The $150 referenced above was for snowplowing on January 27, 2015 when over 2 feet of snow fell in New Hampshire. This heavy snowfall required the employee’s driveway to be plowed multiple times on that day.

The company agrees with the second recommendation and will remove the alcohol charge of $13 from the filing.

Audit Comment

Audit appreciates the clarification of the employment classification of the referenced employee, as well as the significant snowfall. As a result, Audit agrees that the $150 is reasonable based on the information. In addition, the Union contract requirement for additional documentation would not have been required.

Audit concurs with the minimal charge for alcohol, and encourages the Company to ensure its review process identifies such charges and books them below the line, if they are reimbursed at all.

Audit Issue #11

Payroll Meal Allowance

Background

Audit reviewed the final pay period in detail. Approximately half of the employees' timesheets and paystubs were reviewed by Audit.

Issue

One particular employee's timesheet and paystub reviewed included meal reimbursement. Audit verified the reimbursement rates to the Union contract and noticed the breakfast rate did not match. Audit questions payroll and they stated that the employee was erroneously reimbursement for two breakfasts. The overpayment was in the amount of $10. Unitil stated they did not intend to take any action to recoup the overpayment.

Recommendation

Audit understands the immateriality of the error, but recommends that supervisors and payroll personnel review meal allowances in detail to help mitigate this from happening again.

Company Comment

The Company agrees with the recommendation, and will communicate the recommendation to supervisors and payroll personnel.

Audit Comment

Audit concurs with the Company regarding the reinforcement of the control procedures.

Audit Issue #12

Property Tax Expense

Background

Audit reviewed all municipal and state property tax invoices to ensure the expensed figure was correct.

Issue

The expense account 10-20-10-00-408-09-01 should be reduced by $973 based on the inclusion of the statewide education tax on invoices from Allenstown and Concord, as well as an increase for a possible tax related to property in Greenland.

Allenstown inclusion of Statewide Education Tax	$(174)
Concord inclusion of Statewide Education Tax	$(1,248)
Possible Tax related to Greenland	$ 449
Property Tax Expense Recommended Adjustment total	$(973)

Recommendation

Audit recommends that the filing 408 tax expense be reduced by $973.

Company Comment

The company agrees and will reduce the filing accordingly:

- The amount overpaid to the Town of Allentown was (77,300 x 2.48 / 1000) $191.70.
- The amount overpaid to the City of Concord was $2,332.24. The Company is pursuing a refund from the City of Concord.

Audit Comment

Audit concurs with the Company comment. The Allenstown overpayment figure used by the Company is based on the second issue property tax rate, rather than the rates noted within the calendar year calculated by Audit.

Audit also concurs with the Company comment regarding seeking a refund from the City of Concord. The amount reflects the cash paid rather than the expensed amount in the calendar year.

The Greenland property ownership has been communicated to the town, which has not issued property tax bills. The amount is minimal.

Unitil Corporation Retirement Plan
ASC 715-30 Disclosure

Fiscal Year Ending 12/31/2015

Line No.	(a)	UES NU (b)	UES U (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Obligations and Funded Status													
	Change in benefit obligation													
1	Benefit obligation at beginning of year	$ 16,629,356	$ 17,073,606	$ 10,851,955	$ 20,463,025	$ 61,089,315	$ 1,367,333	$ 503,166	$ 3,975,531	$ 916,113	$ 3,557,611	$ 111,232	$ 124,343	$ 136,662,586
2	Service cost	$ 94,894	$ 353,340	$ 178,869	$ 437,018	$ 2,035,883	$ 28,629	$ 64,076	$ 177,078	$ 135,979	$ 179,650	$ -	$ 3,468	$ 3,688,884
3	Interest cost	$ 647,182	$ 671,043	$ 423,281	$ 802,665	$ 2,415,869	$ 53,874	$ 19,853	$ 156,397	$ 36,395	$ 156,400	$ 4,284	$ 4,906	$ 5,392,149
4	Participant contributions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Plan amendments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 473,911	$ -	$ -	$ 473,911
6	Acquisitions/divestitures	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	Exchange rate changes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8	Curtailment (gain) or loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	Settlement (gain) or loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Special termination benefits	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	Benefits paid	$ (831,437)	$ (545,767)	$ (512,927)	$ (868,515)	$ (1,260,549)	$ (25,781)	$ (12,670)	$ (151,737)	$ (11,110)	$ (77,161)	$ (9,217)	$ (103,059)	$ (4,409,930)
12	Settlement payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	Actuarial (gain) or loss	$ (685,050)	$ (375,302)	$ (193,917)	$ 662,512	$ (1,170,307)	$ 53,350	$ 114,934	$ 392,669	$ 30,035	$ 61,543	$ 17,338	$ 100,299	$ (991,896)
14	Benefit obligation at end of year	$ 15,854,945	$ 17,176,920	$ 10,747,261	$ 21,496,705	$ 63,110,211	$ 1,477,405	$ 689,359	$ 4,549,938	$ 1,107,412	$ 4,351,954	$ 123,637	$ 129,957	$ 140,815,704
	Change in plan assets													
15	Fair value of plan assets at beginning of year	$ 10,555,184	$ 10,837,164	$ 6,888,083	$ 12,988,536	$ 38,775,341	$ 867,890	$ 319,376	$ 2,523,397	$ 581,486	$ 2,258,129	$ 70,603	$ 78,924	$ 86,744,113
16	Actual return on plan assets	$ (207,151)	$ 18,688	$ (118)	$ 631,352	$ (694,311)	$ 19,856	$ 94,293	$ 275,037	$ 68,501	$ 329,720	$ 9,759	$ 98,917	$ 644,543
17	Acquisitions/divestitures	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	Employer contributions	$ 300,858	$ 325,942	$ 279,715	$ 559,485	$ 2,257,649	$ 52,851	$ 25,855	$ 170,645	$ 46,838	$ 184,062	$ 5,412	$ 5,688	$ 4,215,000
19	Participant contributions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
20	Benefits paid	$ (831,437)	$ (545,767)	$ (512,927)	$ (868,515)	$ (1,260,549)	$ (25,781)	$ (12,670)	$ (151,737)	$ (11,110)	$ (77,161)	$ (9,217)	$ (103,059)	$ (4,409,930)
21	Settlement payments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
22	Administrative expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
23	Asset Transfer	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
24	Fair value of plan assets at end of year	$ 9,817,454	$ 10,636,027	$ 6,654,753	$ 13,310,858	$ 39,078,130	$ 914,816	$ 426,854	$ 2,817,342	$ 685,715	$ 2,694,750	$ 76,557	$ 80,470	$ 87,193,726
25	**Funded status at end of year**	$ (6,037,491)	$ (6,540,893)	$ (4,092,508)	$ (8,185,847)	$ (24,032,081)	$ (562,589)	$ (262,505)	$ (1,732,596)	$ (421,697)	$ (1,657,204)	$ (47,080)	$ (49,487)	$ (53,621,978)
	Amounts recognized in the statement of financial position consist of:													
26	Noncurrent assets	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
27	Current liabilities	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
28	Noncurrent liabilities	$ (6,037,491)	$ (6,540,893)	$ (4,092,508)	$ (8,185,847)	$ (24,032,081)	$ (562,589)	$ (262,505)	$ (1,732,596)	$ (421,697)	$ (1,657,204)	$ (47,080)	$ (49,487)	$ (53,621,978)
29		$ (6,037,491)	$ (6,540,893)	$ (4,092,508)	$ (8,185,847)	$ (24,032,081)	$ (562,589)	$ (262,505)	$ (1,732,596)	$ (421,697)	$ (1,657,204)	$ (47,080)	$ (49,487)	$ (53,621,978)
	Amounts recognized in accumulated other comprehensive income consist of:													
30	Net (gain) loss	$ 9,185,511	$ 9,540,594	$ 6,340,126	$ 11,664,492	$ 22,291,354	$ 527,936	$ 8,691	$ 834,785	$ 33,531	$ 666,792	$ 37,450	$ (2,787)	$ 61,128,475
31	Prior service cost	$ 4,735	$ 4,861	$ -	$ 10,218	$ -	$ -	$ -	$ 771,323	$ -	$ 829,175	$ -	$ 88,857	$ 1,709,169
32	Transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
33		$ 9,190,246	$ 9,545,455	$ 6,340,126	$ 11,674,710	$ 22,291,354	$ 527,936	$ 8,691	$ 1,606,108	$ 33,531	$ 1,495,967	$ 37,450	$ 86,070	$ 62,837,644
34	**Accumulated Benefit Obligation**	$ 15,158,078	$ 15,340,424	$ 10,143,098	$ 19,329,011	$ 55,139,068	$ 1,344,866	$ 605,985	$ 4,483,964	$ 991,165	$ 4,064,124	$ 123,637	$ 126,569	$ 126,849,989

Unitil Corporation Retirement Plan
ASC 715-30 Disclosure

Fiscal Year Ending 12/31/2015

Line No.	(a)	UES NU (b)	UES U (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Components of Net Periodic Benefit Cost and Other Amounts Recognized in Other Comprehensive Income													
	Net Periodic Benefit Cost													
35	Service cost	$ 94,894	$ 353,340	$ 178,869	$ 437,018	$ 2,035,883	$ 28,629	$ 64,076	$ 177,078	$ 135,979	$ 179,650	$ -	$ 3,468	$ 3,688,884
36	Interest cost	$ 647,182	$ 671,043	$ 423,281	$ 802,665	$ 2,415,869	$ 53,874	$ 19,853	$ 156,397	$ 36,395	$ 156,400	$ 4,284	$ 4,906	$ 5,392,149
37	Expected return on plan assets	$ (811,693)	$ (846,396)	$ (531,564)	$ (1,011,267)	$ (3,057,876)	$ (68,049)	$ (25,096)	$ (197,371)	$ (46,187)	$ (171,646)	$ (5,340)	$ (6,201)	$ (6,778,686)
38	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
39	Amortization of prior service cost	$ 787	$ 809	$ -	$ 4,476	$ 3,793	$ -	$ -	$ 117,163	$ -	$ 124,095	$ -	$ 13,619	$ 264,742
40	Amortization of net (gain) loss	$ 746,107	$ 766,039	$ 505,936	$ 895,329	$ 1,661,302	$ 35,940	$ (3,123)	$ 43,812	$ 2,176	$ 59,166	$ 2,068	$ (874)	$ 4,713,878
41	Curtailment (gain)/loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
42	Settlement (gain)/loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
43	Special termination benefits	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
44	Net periodic benefit cost	$ 677,277	$ 944,835	$ 576,522	$ 1,128,221	$ 3,058,971	$ 50,394	$ 55,710	$ 297,079	$ 128,363	$ 347,665	$ 1,012	$ 14,918	$ 7,280,967
	Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income													
45	Net (gain) loss	$ (412,313)	$ (313,633)	$ (168,171)	$ 147,098	$ 920,578	$ 65,603	$ 48,860	$ 271,191	$ 5,545	$ (155,697)	$ 10,851	$ 8,457	$ 428,369
46	Prior service cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 473,911	$ -	$ -	$ 473,911
47	Amortization of prior service cost	$ (787)	$ (809)	$ -	$ (4,476)	$ (3,793)	$ -	$ -	$ (117,163)	$ -	$ (124,095)	$ -	$ (13,619)	$ (264,742)
48	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
49	Total recognized in other comprehensive income	$ (413,100)	$ (314,442)	$ (168,171)	$ 142,622	$ 916,785	$ 65,603	$ 48,860	$ 154,028	$ 5,545	$ 194,119	$ 10,851	$ (5,162)	$ 637,538
50	Total recognized in net periodic benefit cost													
51	and other comprehensive income	$ 264,177	$ 630,393	$ 408,351	$ 1,270,843	$ 3,975,756	$ 115,997	$ 104,570	$ 451,107	$ 133,908	$ 541,784	$ 11,863	$ 9,756	$ 7,918,505
	Estimated amortizations from the accumulated other comprehensive income into net periodic pension cost over the next fiscal year													
52	Amortization of net (gain) loss	$ 660,883	$ 686,430	$ 456,162	$ 839,242	$ 1,603,828	$ 37,984	$ 625	$ 60,061	$ 2,413	$ 47,975	$ 2,694	$ (201)	$ 4,398,096
53	Amortization of prior service cost	$ 1,955	$ 2,009	$ -	$ 4,228	$ -	$ -	$ -	$ 117,163	$ -	$ 124,095	$ -	$ 13,619	$ 263,069
54	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Unitil Corporation Retirement Plan
ASC 715-30 Disclosure

Fiscal Year Ending 12/31/2015

Line No.	(a)	UES NU (b)	UES U (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Assumptions													
	Weighted-average assumptions used to determine benefit obligations at Measurement Date													
55	Measurement Date	12/31/2015	12/31/2014											
56	Discount rate	4.30%	4.00%											
57	Rate of compensation increase	3.00%	3.00%											
	Weighted-average assumptions used to determine net periodic benefit cost for													
58	Discount rate	4.00%	4.80%											
59	Expected long-term rate of return on plan assets	8.00%	8.00%											
60	Rate of compensation increase	3.00%	3.00%											

Line No.	**Plan Assets**	**Percentage of Plan Assets at Fiscal Year Ending**	
	Asset Category	**12/31/2015**	**12/31/2014**
61	Equity Securities	52%	49%
62	Debt securities	37%	35%
63	Real Estate	11%	10%
64	Asset Allocation	0%	5%
65	Other (Cash)	0%	1%
	Total	100%	100%

Line No.	**Cash Flows**	UES NU (b)	UES U (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Contributions													
66	2014	$ 691,000	$ -	$ 326,788	$ 616,212	$ 1,989,470	$ 44,530	$ 24,268	$ 191,732	$ 51,808	$ 201,192	$ 25,497	$ 28,503	$ 4,191,000
67	2015	$ 300,858	$ 325,942	$ 279,715	$ 559,485	$ 2,257,649	$ 52,851	$ 25,855	$ 170,645	$ 46,838	$ 184,062	$ 5,412	$ 5,688	$ 4,215,000
68	Expected 2016	$ 437,237	$ 473,693	$ 296,381	$ 592,822	$ 1,740,410	$ 40,743	$ 19,011	$ 125,475	$ 30,539	$ 120,015	$ 3,410	$ 3,584	$ 3,883,320
	Benefit Payments													
69	2014	$ 1,322,533	$ -	$ 487,085	$ 696,868	$ 1,129,296	$ 35,148	$ 12,088	$ 295,535	$ 4,831	$ 157,747	$ 7,403	$ 97,371	$ 4,245,905
70	2015	$ 831,437	$ 545,767	$ 512,927	$ 868,515	$ 1,260,549	$ 25,781	$ 12,670	$ 151,737	$ 11,110	$ 77,161	$ 9,217	$ 103,059	$ 4,409,930
	Estimated Future Benefit Payments													
71	2016	$ 912,959	$ 613,338	$ 597,011	$ 950,065	$ 1,572,071	$ 31,109	$ 14,536	$ 278,773	$ 14,168	$ 183,177	$ 9,944	$ 3,651	$ 5,180,802
72	2017	$ 893,667	$ 638,954	$ 603,724	$ 959,554	$ 1,759,791	$ 74,248	$ 15,205	$ 155,411	$ 43,299	$ 364,614	$ 9,796	$ 3,603	$ 5,521,866
73	2018	$ 900,377	$ 680,014	$ 602,192	$ 974,008	$ 1,896,188	$ 73,324	$ 16,013	$ 204,024	$ 52,341	$ 147,869	$ 9,639	$ 3,552	$ 5,559,541
74	2019	$ 911,719	$ 724,768	$ 631,823	$ 989,899	$ 2,114,193	$ 72,990	$ 17,432	$ 314,231	$ 53,056	$ 243,032	$ 9,472	$ 3,498	$ 6,086,113
75	2020	$ 895,540	$ 744,388	$ 651,716	$ 1,001,034	$ 2,300,568	$ 72,651	$ 19,030	$ 245,543	$ 72,175	$ 329,771	$ 9,293	$ 3,440	$ 6,345,149
76	2021 - 2025	$ 4,554,289	$ 4,555,141	$ 3,267,041	$ 5,747,992	$ 14,929,072	$ 389,240	$ 304,123	$ 1,928,805	$ 431,077	$ 1,690,743	$ 43,351	$ 16,178	$ 37,857,052

Unitil Corporation Retirement Plan
Preliminary ASC 715-30 Expense by division for Fiscal Year Ending 12/31/2016

Line No.	(a)	UES Non-Union (b)	UES Union (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Net Periodic Benefit Cost													
1	Service cost	89,754	329,997	157,276	391,394	1,812,089	42,075	68,395	186,413	122,474	198,031	-	4,387	3,402,285
2	Interest cost	662,341	725,560	449,432	904,147	2,680,294	62,867	29,333	189,717	47,317	183,237	5,105	5,510	5,944,860
3	Expected return on plan assets	(804,181)	(885,974)	(545,970)	(1,101,626)	(3,281,911)	(77,053)	(35,953)	(230,120)	(58,115)	(223,381)	(6,161)	(6,742)	(7,257,187)
4	Amortization of transition (asset) obligation	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Amortization of prior service cost	1,955	2,009	-	4,228	-	-	-	117,163	-	124,095	-	13,619	263,069
6	Amortization of net (gain) loss	660,883	686,430	456,162	839,242	1,603,828	37,984	625	60,061	2,413	47,975	2,694	(201)	4,398,096
7	Net periodic benefit cost	610,752	858,022	516,900	1,037,385	2,814,300	65,873	62,400	323,234	114,089	329,957	1,638	16,573	6,751,123

Line No.		
	Assumptions	
8	Discount rate	4.30%
9	Expected return on plan assets	8.00%
10	Rate of compensation increase	3.00%
	Contributions	
11	Retirement Plan - 2015	4,215,000
12	Retirement Plan - 2016	3,883,320

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Unitil Corporation Retirement Plan

Pension Cost and Financial Disclosure for the Fiscal Year Ended December 31, 2015

and

Preliminary Net Periodic Pension Cost for the Fiscal Year Ending December 31, 2016

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SECTION I

ACTUARIAL CERTIFICATION

Purpose of Report

This report presents the results of the financial disclosure information for the Unitil Corporation Retirement Plan for the fiscal year ended December 31, 2015 in accordance with the accounting requirements under the Financial Accounting Standards Board ASC 715-30. The end of year liabilities are based on a 4.30% discount rate. In addition, we have calculated the preliminary ASC 715-30 Net Periodic Pension Cost (Expense) for the fiscal year ending December 31, 2016. This amount can be considered final, unless there are any material changes affecting the Plan during the current fiscal year such as a change in the benefits provided or a significant change in the covered population or contributions to the Plan, which may require a re-measurement for the changes. Section II contains a summary of the results of the disclosure report.

Methodology

The employee data and financial information used in this valuation were provided by the Company. We have reviewed the information for reasonableness and consistency and have no reason to doubt its substantial accuracy, nor its suitability for this valuation. Please inform us if at any time you have knowledge that the information utilized is not complete or accurate as it may require revisions to previously provided results. Standard actuarial roll-forward techniques were used to adjust liabilities and service costs from the census date to the measurement date and no other adjustments were made. Plan asset information is summarized in Section VI. Census data is summarized in Sections VII and VIII. The Actuarial Assumptions are summarized in Section IX. The Plan Provisions are summarized in Section X.

Actuarial Certification of Assumptions and Methods

This report has been prepared in accordance with generally accepted actuarial principles and practices. The actuarial assumptions were selected by the company subject to the concurrence of its auditors. The accounting calculations in the report are consistent with our understanding of the provisions of FASB ASC 715-30. This report conforms to the Code of Professional Conduct of the American Academy of Actuaries. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein.

In accordance with ASOP Nos. 27 and 35, each economic and demographic assumption with the exception of the investment return shown in Section IX of the report reflects the actuary’s professional judgment in estimating future experience, takes into account relevant historical and current economic data, has no significant bias, and is reasonable and appropriate for the purpose of the ASC 715-30 financial accounting valuation. Different assumptions may also be reasonable. The investment return assumption was provided by an outside party. Transamerica has not been engaged to evaluate the investment return assumption and thus we express no opinion of the appropriateness of that assumption.

SECTION I

ACTUARIAL CERTIFICATION
(continued)

Disclaimers

Valuation results contained herein are based on a snapshot of the Plan at one point in time including assumptions as disclosed. They are not a prediction of the Plan's future accounting requirements which may be significantly different based on the Plan's actual experience including but not limited to economic and participant demographic experience. Ultimately plan costs will be determined by the actual benefits provided and the applicable laws and regulations in effect at the given particular time. Decisions regarding benefit provisions should be made only after careful consideration of a variety of factors and warrant more extensive in-depth analysis.

We are not aware of any substantive commitments for benefits that exceed the benefits defined by the written plans. We are not aware of any significant liability of the Plan, other than for benefits, such as for legal or accounting fees. We are not aware of any significant events subsequent to the current year's measurement date through the date this report, which could materially affect the amounts shown in the report. We have not been notified of any decision to fully or partially terminate the Plan nor are we aware of any other settlements, curtailments, or special terminations during the fiscal year ended December 31, 2015 other than those described in this report. To the best of our knowledge, there is no relationship with the Plan, Plan Sponsor or the Plan Sponsor's employees that would impair or appear to impair the objectivity of our work.

Francis P. Carberry

January 14, 2016
Date

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Nicole Devoe

January 14, 2016
Date

Peer Review by: Nicole Devoe, A.S.A., E.A., M.A.A.A.
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SECTION II

PRINCIPAL RESULTS

A. Comparative Summary of Disclosure

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Projected benefit obligation	$ 140,815,704	$ 136,662,586
(2)	Fair value of plan assets	87,193,726	86,744,113
(3)	Funded status	(53,621,978)	(49,918,473)
(4)	Accumulated other comprehensive income	62,837,644	62,200,106
(5)	Net amount recognized	9,215,666	12,281,633
(6)	Market-related value of assets	92,150,851	86,921,762
(7)	Final net periodic pension cost	7,280,967	4,910,593
(8)	Accumulated benefit obligation	$ 126,849,989	$ 121,793,233
(9)	Discount rate	4.30%	4.00%

B. Comparative Summary of Net Periodic Pension Cost

		Fiscal Year Ending December 31, 2016	Fiscal Year Ending December 31, 2015
(1)	Net periodic pension cost	$ 6,751,123	$ 7,280,967
(2)	Discount rate	4.30%	4.00%

SECTION III

ASC 715-30 DISCLOSURE

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
A.	Change in Projected Benefit Obligation		
(1)	Projected benefit obligation at beginning of year	$ 136,662,586	$ 108,295,080
(2)	Service cost	3,688,884	3,005,935
(3)	Interest cost	5,392,149	5,091,550
(4)	Participant contributions	0	0
(5)	Plan amendments	473,911	0
(6)	Acquisitions/divestitures	0	0
(7)	Exchange rate changes	0	0
(8)	Curtailment (gain) or loss	0	0
(9)	Settlement (gain) or loss	0	0
(10)	Special termination benefits	0	0
(11)	Benefits paid & administrative expenses	(4,409,930)	(4,245,905)
(12)	Settlement payments	0	0
(13)	Actuarial (gain) or loss	(991,896)	24,515,926
(14)	Projected benefit obligation at end of year	$ 140,815,704	$ 136,662,586
B.	Change in Plan Assets		
(1)	Fair value of plan assets at beginning of year	$ 86,744,113	$ 82,551,252
(2)	Actual return on plan assets	644,543	4,247,766
(3)	Acquisitions/divestitures	0	0
(4)	Employer contributions	4,215,000	4,191,000
(5)	Participant contributions	0	0
(6)	Benefits paid	(4,409,930)	(4,245,905)
(7)	Settlement payments	0	0
(8)	Administrative expenses	0	0
(9)	Asset transfer	0	0
(10)	Fair value of plan assets at end of year	$ 87,193,726	$ 86,744,113
C.	Funded Status at End of Year: B(10) – A(14)	$ (53,621,978)	$ (49,918,473)

SECTION III

ASC 715-30 DISCLOSURE
(continued)

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
D.	Amounts Recognized in the Statement of Financial Position Consist of:		
	(1) Noncurrent assets	$ 0	$ 0
	(2) Current liabilities	0	0
	(3) Noncurrent liabilities	(53,621,978)	(49,918,473)
	(4) Total	$ (53,621,978)	$ (49,918,473)
E.	Amounts Recognized in Accumulated Other Comprehensive Income (AOCI) Consist of:		
	(1) Net (gain) or loss	$ 61,128,475	$ 60,700,106
	(2) Prior service cost	1,709,169	1,500,000
	(3) Transition (asset) obligation	0	0
	(4) Accumulated other comprehensive income	$ 62,837,644	$ 62,200,106
F.	Accumulated Benefit Obligation	$ 126,849,989	$ 121,793,233
G.	Components of Net Periodic Pension Cost		
	(1) Service cost	$ 3,688,884	$ 3,005,935
	(2) Interest cost	5,392,149	5,091,550
	(3) Expected return on plan assets	(6,778,686)	(6,245,020)
	(4) Amortization of transition (asset) or obligation	0	0
	(5) Amortization of prior service cost	264,742	211,042
	(6) Amortization of net (gain) or loss	4,713,878	2,847,086
	(7) Curtailment (gain) or loss	0	0
	(8) Settlement (gain) or loss	0	0
	(9) Special termination benefits	0	0
	(10) Net periodic pension cost	$ 7,280,967	$ 4,910,593

SECTION III

ASC 715-30 DISCLOSURE
(continued)

H. Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (OCI)

	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1) Net (gain) or loss	$ 5,142,247	$ 26,513,180
(2) Prior service cost	473,911	0
(3) Amortization of net gain or (loss)	(4,713,878)	(2,847,086)
(4) Amortization of prior service cost	(264,742)	(211,042)
(5) Amortization of transition asset or (obligation)	0	0
(6) Total recognized in other comprehensive income	637,538	23,455,052
(7) Total recognized in net periodic benefit cost and OCI	$ 7,918,505	$ 28,365,645

I. Estimated Amortizations from the AOCI into Net Periodic Pension Cost Over the Next Fiscal Year

	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1) Amortization of net (gain) or loss	$ 4,398,096	$ 4,718,650
(2) Amortization of prior service cost	263,069	217,017
(3) Amortization of transition (asset) or obligation	$ 0	$ 0

SECTION III

ASC 715-30 DISCLOSURE
(continued)

	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
Weighted-average assumptions used to determine benefit obligations		
Measurement date	December 31, 2015	December 31, 2014
Discount rate	4.30%	4.00%
Rate of compensation increase	3.00%	3.00%
Weighted-average assumptions used to determine net periodic pension cost		
Measurement date	December 31, 2014	December 31, 2013
Discount rate	4.00%	4.80%
Expected long-term rate of return on plan assets	8.00%	8.00%
Rate of compensation increase	3.00%	3.00%

Plan Assets

Asset Category	Target Allocation 2016	Percentage of Plan Assets at December 31 2015	Percentage of Plan Assets at December 31 2014
Equity Securities	47%	46%	49%
Debt Securities	37%	37%	35%
Real Estate	10%	11%	10%
Asset Allocation	6%	6%	5%
Other	0%	0%	1%
Total		100%	100%

Cash Flows

Contributions	Employer	Participants
2014	$ 4,191,000	$ 0
2015	$ 4,215,000	$ 0
Expected 2016	$ 3,883,320	$ 0
Benefit Payments		
2014	$ 4,245,905	
2015	$ 4,409,930	
Estimated Future Benefit Payments		
2016	$ 5,180,802	
2017	$ 5,521,866	
2018	$ 5,559,541	
2019	$ 6,086,113	
2020	$ 6,345,149	
Years 2021 - 2025	$ 37,857,052	

SECTION IV

RECONCILIATION OF NET AMOUNT RECOGNIZED

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Net amount recognized at end of prior year	$ 12,281,633	$ 13,001,226
(2)	Net periodic pension cost for the fiscal year	7,280,967	4,910,593
(3)	Contributions paid during the fiscal year	4,215,000	4,191,000
(4)	Net amount recognized at end of current year (1) – (2) + (3)	$ 9,215,666	$ 12,281,633

SECTION V

DEVELOPMENT OF PRELIMINARY NET PERIODIC PENSION COST

The following calculations were performed in accordance with the Financial Accounting Standards Board ASC 715-30 and may be used for purposes of reporting pension cost. The net periodic pension cost, as required and calculated under ASC 715-30 will be charged against income, and it will also be disclosed in a footnote to the Company's financial statements.

Actuarial computations under ASC 715-30 are for purposes of fulfilling employer financial accounting requirements. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

A. Net Periodic Pension Cost		Preliminary Fiscal Year Ending December 31, 2016	Final Fiscal Year Ending December 31, 2015
(1)	Service cost	$ 3,402,285	$ 3,688,884
(2)	Interest cost	5,944,860	5,392,149
(3)	Expected return on assets	(7,257,187)	(6,778,686)
(4)	Amortization of transition (asset) or obligation from item B	0	0
(5)	Amortization of prior service cost from item C	263,069	264,742
(6)	Recognition of (gain) or loss from item D(13)	4,398,096	4,713,878
(7)	Net periodic pension cost: (1) + (2) + (3) + (4) + (5) + (6)	$ 6,751,123	$ 7,280,967

B. Amortization of Transition (Asset) or Obligation

None.

C. Amortization of Prior Service Cost

Date Established	Unrecognized Amount December 31, 2015	Remaining Years in Amortization Period	Amount to be Recognized During 2016
6/1/2005	19,814	2.42	8,192
12/1/2008	808,281	5.28	153,177
12/31/2012	404,485	8.49	47,643
12/31/2012	50,403	7.96	6,332
1/1/2015	426,186	8.93	47,725
	$ 1,709,169		$ 263,069

SECTION V

DEVELOPMENT OF PRELIMINARY NET PERIODIC PENSION COST
(continued)

D. Development and Recognition of (Gain) or Loss		Fiscal Year Ending December 31, 2016
(1)	Projected benefit obligation	$ 140,815,704
(2)	Fair value of assets	87,193,726
(3)	Unrecognized transition (asset) or obligation	0
(4)	Unrecognized prior service cost	1,709,169
(5)	Net amount recognized	9,215,666
(6)	Unrecognized (gain) or loss: (1) – (2) – (3) – (4) + (5)	61,128,475
(7)	(Gain) or loss not reflected in market-related value	
	(a) Fair value of assets	87,193,726
	(b) Market-related value of assets	92,150,851
	(c) Amount not reflected in market-related value of assets: (a) – (b)	(4,957,125)
(8)	(Gain) or loss subject to amortization: (6) + (7)(c)	56,171,350
(9)	Greater of (1) or (7)(b)	140,815,704
(10)	10% of (9)	14,081,570
(11)	(Gain) or loss, subject to recognition: excess of absolute value of (8) over (10), not less than zero	$ 42,089,780
(12)	Average future service of plan participants expected to receive benefits	9.57 years
(13)	Amount to recognize for the year: (11) ÷ (12)	$ 4,398,096

SECTION VI

DEVELOPMENT OF MARKET-RELATED VALUE OF ASSETS

(1)	Fair value as of January 1, 2015	$86,744,113
(2)	Contributions	4,215,000
(3)	Interest on (1) and (2), at 8.00% per annum	7,092,968
(4)	Benefit payments	(4,409,930)
(5)	Interest on (4), at 8.00% per annum	(173,004)
(6)	Expected fair value of assets as of January 1, 2016	93,469,147
(7)	Actual fair value of assets as of January 1, 2016	87,193,726
(8)	(Gain) or Loss for 2015 plan year: (6) – (7)	6,275,421
(9)	Adjustment to Market Value	

Year	(a) (Gain)/Loss	(b) Fraction not yet Recognized	(c) Amount not yet Recognized: (a) x (b)
2015	$ 6,275,421	2/3	$ 4,183,614
2014	2,320,534	1/3	773,511
			$ 4,957,125

(10)	Market-related value of assets as of January 1, 2016: (7) + (9)(c)	$ 92,150,851

SECTION VII

RECONCILIATION OF PLAN PARTICIPANTS

	Active Plan Members	Plan Members with Deferred Benefits	Plan Members Receiving Benefits	Total Number of Plan Members
As of January 1, 2014	**349**	**146**	**286**	**781**
New entrants	0	N/A	N/A	0
Rehires	2	0	0	2
Terminations with vesting	(7)	7	N/A	0
Terminations without vesting	0	N/A	N/A	0
Retirements	(13)	(3)	16	0
Disability retirements	0	0	0	0
Lump sums paid	(1)	0	0	(1)
Deaths	0	0	(11)	(11)
Survivors (with benefits)	N/A	0	3	3
Expiration of benefits	N/A	N/A	0	0
Transfers in	0	N/A	N/A	0
Transfers out	0	0	N/A	0
Adjustments	0	0	0	0
Net change	(19)	4	8	(7)
As of January 1, 2015	**330**	**150**	**294**	**774**

SECTION VIII

AGE/SERVICE DISTRIBUTION OF ACTIVE PLAN PARTICIPANTS
(as of January 1, 2015)

.... Completed Years of Credited Service ....

Age	0 to 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 +	Total
0 – 24	0	1	0	0	0	0	0	0	0	0	1
25 – 29	0	3	6	0	0	0	0	0	0	0	9
30 – 34	0	0	6	4	0	0	0	0	0	0	10
35 – 39	0	3	11	4	1	0	0	0	0	0	19
40 – 44	0	3	16	12	9	1	0	0	0	0	41
45 – 49	0	1	13	16	11	7	6	0	0	0	54
50 – 54	0	1	17	11	21	16	22	10	1	0	99
55 – 59	0	1	9	5	9	6	13	4	3	0	50
60 – 64	0	0	10	4	6	5	5	5	0	3	38
65 – 69	0	0	0	4	1	0	1	1	0	1	8
70 & Up	0	0	0	0	0	0	0	0	0	1	1
Totals	0	13	88	60	58	35	47	20	4	5	330

SECTION IX

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Projected Unit Credit Actuarial Cost Method. Under this method, the service cost and projected benefit obligation (PBO) are both based on an accrual of projected benefits over the period for which benefits are accrued. The service cost is the actuarial present value of one year's benefit accrual on this basis. The PBO for active participants is the actuarial present value of the projected benefit times the ratio of past service to total service. The PBO for retired and terminated vested participants is equal to the actuarial present value of the accrued benefit.

B. ASSET VALUATION METHOD

The market-related value of assets is equal to the market value of plan assets as of the end of the prior plan year adjusted for unrealized and realized gains (losses) phased in over a three year period.

C. VALUATION PROCEDURES

The valuation is based on employee and financial data provided by the company and trustee, respectively, and summarized in this report. A plan's actuary would not customarily verify this data. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

All employees who are participants in the plan on the valuation date are included in the actuarial valuation.

D. ACTUARIAL ASSUMPTIONS (as of December 31, 2015 Measurement Date)

Principal Rates

Discount rate	4.30% (previously, 4.00%).
Expected long-term rate of return on assets	8.00% (unchanged).
IRC maximum benefit and compensation limitation increases	2.50% (unchanged).
Wage base increases	3.00% (unchanged).
Pre- and Post-Retirement Mortality	RP-2014 Employee and Healthy Annuitant Tables adjusted back to 2006 and then projected forward with Scale MP-2015 for all years (previously, the RP-2014 Employee and Healthy Annuitant Tables projected with Scale MP-2014 for all years).

SECTION IX

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS
(continued)

D. ACTUARIAL ASSUMPTIONS *(cont'd)*

IRC Maximum Benefit and Compensation Limitations

Benefit Limit — $210,000 for 2015 (unchanged).

Compensation Limit — $265,000 for 2015 (previously, $260,000).

Salary Increases — 3.00% per year for all divisions.

Withdrawal Rates — Sample rates as follows:

Age	Male	Female
25	9.9%	14.9%
30	6.9%	9.9%
35	4.9%	6.9%
40	2.8%	4.9%
45	1.7%	2.8%
50	0.4%	1.7%
55	0.0%	0.4%

Retirement Age — Sample rates as follows:

Non-Bargained Employees:

Age	Rate
55-59	2.0%
60	10.0%
61	5.0%
62	50.0%
63-64	7.5%
65	100.0%

Bargaining Unit Employees

Age	Rate
55-59	3.0%
60	12.0%
61	7.0%
62	50.0%
63-64	10.0%
65	100.0%

SECTION IX

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS
(continued)

D. ACTUARIAL ASSUMPTIONS *(cont'd)*

Disability Rates

1985 Wyatt Company Table of Incidence. Sample rates as follows:

Age	Male	Female
25	0.093%	0.096%
40	0.314%	0.357%
45	0.505%	0.522%
50	0.830%	0.854%
55	1.502%	1.490%

Disability Mortality

RP-2014 Disabled Retiree Table adjusted back to 2006 and then projected forward with Scale MP-2015 for all years (previously, Revenue Ruling 96-7 Post Disability Mortality Table).

Marital Assumption

It has been assumed that 100% of all participants are married. Husbands are assumed to be three years older than their wives.

Form of Payment

Life annuity for all divisions other than Northern Utilities Union/Granite State Union.

For Northern Utilities Union and Granite State Union, it has been assumed that 30% elect a life annuity and 70% elect a lump sum payable at retirement age.

Plan Expenses

None.

SECTION X

SUMMARY OF PLAN PROVISIONS

Plan Status	Closed to new entrants.
Effective Date	January 1, 1985. Amended and restated generally effective January 1, 2013. Most recent amendment effective January 1, 2015.
Eligibility	All eligible employees shall become participants in the plan on the first day of the month following completion of three months of service. Employees hired on or after the decision and freeze date noted below for the applicable division are not eligible to participate in the Plan.
	The employees in the following divisions who were participants as of the Decision Date were given the choice to continue participation in the Plan or have their benefit frozen as of the Freeze Date and accrue future benefits outside the Plan:

Division	Decision and Freeze Date
All Non-Union	December 31, 2009
Northern Portsmouth Union	December 31, 2010
Northern Portland Union	December 31, 2012
Granite Union	December 31, 2012
UES Union (IBEW-Concord, Exeter)	December 31, 2012
Fitchburg Union	December 31, 2013 (*Freeze date May 31, 2013 for new entrants)*

	Participants who elected to freeze their benefits are still considered active participants of the Plan. Though their benefits under the Plan will not increase, they will earn additional service for vesting purposes.
Credited Service	One year of service is given for each calendar year in which a participant completes 1,000 hours.
	Northern Utilities Non-Union and Granite State Non-Union employees will earn credited service for benefit accrual purposes effective December 1, 2008. Service prior to December 1, 2008 will be granted for vesting and eligibility purposes only.
Annual Wages	Total wages inclusive of "sick pay" and lump sum payments made in lieu of merit or general pay increases but excluding overtime, bonuses, supplementary incentive compensation payments and other non-recurring compensation. For commission salesmen, total wages include 75% of commissions earned during a plan year.

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Average Monthly Wages	Highest 60 consecutive months of aggregate Annual Wages within the last 20 years.
Final Average Pay	Average of the highest three (3) years of Annual Wages in the ten (10) years preceding the effective date of the Employee's employment termination up to a maximum of $60,000 for Northern Portland Union (as of April 1, 2012, previously $50,000), Granite State Union (as of April 1, 2012, previously $50,000) and $73,000 for Northern Portsmouth Union Employees (as of June 1, 2016, previously $60,000).
Primary Social Security Benefit	Social Security benefits calculated for purposes of determining plan benefits are based on the Social Security Act in effect on December 31, 1970, current Average Monthly Wages, and no future earnings after termination.
Social Security Supplement	For the Northern Utilities Union and Granite State Union divisions only, an Employee who has attained age sixty (60) but not age sixty-two (62) retires from active service, then his benefit shall be increased, but only until such Employee reaches age sixty-two (62), by an amount equal to the smaller of (a) 2 percent of such Employee's Final Average Pay multiplied by his years of Credited Service (but not more than twenty-five (25) such years), or (b) the Primary Social Security Benefit to which such Employee would be entitled at age sixty-two (62). Such supplemental benefit shall be payable in the form of a single life annuity regardless of the form in which the Employee's other benefits hereunder are payable, terminating upon death if the Employee dies before attaining age sixty-two (62), provided, however, that if he elects a single lump sum form of payment for his other benefits hereunder, the value of such supplemental benefit shall also be payable as a single lump sum.

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Normal or Deferred Retirement

Employees who have attained age 65 with five years of service may retire and are eligible for the normal retirement benefit.

For all divisions except for Northern Utilities Union/Granite State Union, the normal retirement benefit is equal to a percentage (calculated below) of the employee's average monthly wages reduced by 50% of the Primary Social Security Benefit. The percentage of Average Monthly Wages is the sum of:

(i) 2% for each of the first 20 years of credited service, plus,

(ii) 1% for each of the next 10 years of credited service, plus,

(iii) 1/2% for each year of credited service in excess of 30 years.

The minimum monthly pension payable at normal retirement date is the greater of (a) $100 or (b) the employees' accrued benefit as of May 1, 1998 under the plan or any predecessor plan, as that term is defined in the plan document.

For Northern Utilities Union/Granite State Union Employees, their normal retirement benefit consists of 1.25% of Final Average Pay for each year of Credited Service (up to a maximum of forty-five (45) years).

Early Retirement Date

For all divisions except for Northern Utilities Union and Granite State Union, employees with 15 or more years of credited service earned subsequent to attaining age 18 who have attained the age of 55 may retire at the beginning of any month.

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Early Retirement Date *(cont'd)*

Effective June 1, 2005, bargaining unit employees (except for those in Northern Utilities and Granite State) may retire with an unreduced benefit if they have attained age 55, and the sum of age and credited service is greater than or equal to 85.

For Northern Utilities Union and Granite State Union, early retirement benefits are available for a participant who has attained the age of fifty-five (55) years and completed ten (10) or more years of Credited Service.

Early Retirement Benefit

For all divisions except for Northern Utilities Union and Granite State Union, the basic benefit is calculated the same as in the normal retirement formula but reduced, if payments commence before the employee's 60th birthday, by 5/12% for each month before age 60.

Employees who were employed by Fitchburg Gas and Electric Light Company as of May 1, 1998 may elect to have the early retirement provisions of their predecessor plan apply with respect to their accrued benefit as of October 1, 1998 with provisions of the restated plan applied to benefit accruals after May 1, 1998.

For the Northern Utilities Union and Granite State Union divisions, the basic benefit is calculated the same as in the normal retirement formula but reduced as follows:

(a) If at least twenty-five (25) years of Credited Service and retire after the age of fifty-five (55) years and prior to the age of sixty (60) years, three tenths (3/10) of 1 percent for each full month that the date such benefit is to commence precedes sixtieth (60^{th}) birthday;

(b) If at least twenty-five (25) years of Credited Service and retire after the age of sixty (60) years, no reduction; or

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Early Retirement Benefit *(cont'd)*

(c) If less than twenty-five (25) years of Credited Service, three tenths (3/10) of 1 percent for each full month that the date such benefit is to commence precedes Normal Retirement Date.

(d) If terminated employment before age 55, five ninths (5/9) of 1 percent for each full month that the date on which such benefit is to commence precedes Normal Retirement Date.

Disability Retirement

Employees with 15 or more years of credited service earned subsequent to age 18 who become totally and permanently disabled are eligible for a disability retirement benefit, subject to the following:

For all employees (except for Fitchburg Gas and Electric Light Company bargaining unit employees hired before June 1, 1985), the disability benefit commences on the employee's normal retirement date, and is based on the employee's average monthly wage at date of disability and on credited service that the employee had earned at his date of disability, plus credited service that he would have earned, had the employee not been disabled.

For Fitchburg Gas and Electric Light Company bargaining unit employees hired before June 1, 1985, the disability benefit is calculated based on the terms of the predecessor plan applicable to such employees. The disability benefit determined for such employees is payable immediately, and continues until such employee's normal retirement date (or cessation of disability, if earlier). The benefit is adjusted annually while in pay status to reflect additional credited service that would have been earned had the employee not been disabled.

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Pre-Retirement Death Benefit

Each employee with five or more years of credited service who has not yet retired shall have a survivor annuity in effect for his or her spouse beginning the first day of the month following the employee's earliest retirement date.

The spouse shall receive an amount equal to 50% of the amount which the employee would have received if the employee had terminated employment the day prior to death, survived to their earliest retirement age, retired as of such date under a qualified joint and survivor annuity and died on the day after their earliest retirement age. The benefit formula is the same as for early retirement.

Employees who have retired under the terms of the plan but have not commenced receiving benefits at death, as well as employees who die while actively employed by the employer and after having completed at least 15 years of service, are eligible for an alternative minimum spouse benefit, the value of which will at least equal the value of the benefit described above.

Vesting

An employee whose employment is terminated before death or retirement is eligible for a vested deferred retirement benefit if he or she has earned the following credited service subsequent to attaining age 18:

Division	Credited Service
Northern Portland Union	Three (3) Years
Northern Portsmouth Union	Three (3) Years
All Other Divisions	Five (5) Years

The benefit is calculated the same as for normal retirement. If the benefit commences prior to the employee's normal retirement date, the benefit prior to the Social Security benefit offset is reduced by 1/12% for each of the first 35 full calendar months between commencement of benefits and normal retirement date, 11/12% for each of the next 12 months, 5/12% for each of the next 12 months and 1/2% for each of the next 60 months.

SECTION X

SUMMARY OF PLAN PROVISIONS
(continued)

Form of Payment	The benefit is paid monthly ceasing at the retired employee's death. However, the normal form of payment for a married employee is a reduced payment which allows for a continuation of payments to the spouse after the employee's death. Spousal consent is required in the case of a married employee electing a form of benefit other than a joint and survivor annuity with the spouse as the contingent annuitant.
Lump-Sum Option	Northern Utilities Union and Granite State Union employees may elect a single lump sum upon termination or retirement in lieu of a monthly pension.
Funding	The Employer pays the entire cost of the plan.
Optional Forms of Payment	Single Life Annuity. Single Life Annuity with 5/10 Years Certain. 50% Joint and Survivor (QJSA). 66-2/3% Joint and Survivor. 100% Joint and Survivor. 50% Joint and Survivor with Pop-Up (Northern Utilities Union/Granite State Union only). Lump Sum (Northern Utilities Union/Granite State Union only).
Actuarial Equivalence	Non lump sum conversion basis is 1983 Group Annuity Mortality as described in Revenue Ruling 95-28 and interest at 7%. Lump sum conversion is 30-year Treasury for 4th month prior to plan year and mortality prescribed by Revenue Ruling 2001-62 (minimum is based on IRC Section 417(e)).
Significant Events Since Prior Valuation	None.
Benefits Not Valued	Other than small (under $5,000) lump sum cashout form of payment, none of which we are aware.

Received: September 14, 2016 Date of Response: September 26, 2016
Request No. September 8,9 Technical Session 1-6 Witness: David Chong

Request :

Please provide the calculation that supports the 4.3 percent discount rate and provide a copy of the internal memo supporting the calculation.

a) What is the justification for showing a proforma for 2017 payroll increase, which is more than 12 months beyond the end of the 2015 test year?

Response:

Please refer to Sep 8,9 Technical Session 1-6 Attachment 1 for a copy of the internal memo supporting the 4.3 percent discount rate. Please see Sep 8,9 Technical Session 1-6 Attachment 2 for an Excel version of the calculation.

a) Regarding part a, please see the Company's response to Staff 7-3:

"Without known and measurable adjustments extending through the pendency of this proceeding, the Company will experience earnings attrition and immediately under-earn coming out of this rate case. Mr. Collin presented testimony on earnings attrition at pages 9-14 of 28. Mr. Collin notes that earnings attrition occurs when a utility's costs rise faster than its revenues over time. Unitil Energy's revenues and costs are no longer matched. Since the last rate case in 2010, Unitil Energy's unit sales have been essentially flat, while its rate base has grown from $130.8 mm to $153.0 mm."

Indeed, due to earnings attrition and insufficient cast-off rates in 2010, the Company has chronically under-earned every year compared to its last authorized ROE in the Company's 2010 rate case.

Furthermore, the Company's proposal in this 2016 rate case is different than its position in the 2010 rate case. In the 2010 rate case, the Company did not propose adjustments past the year after the test year, because it did not propose a long-term rate plan with a rate stay-out. The rate plan in the 2010 rate case evolved during the proceeding. Therefore, the circumstances surrounding the Company in 2010 are very different than this 2016 rate case. It is imperative that the Company's cast-off rates are set appropriately, because it has proposed to operate under a rate stay out for the term of the 2016 Rate Plan.

Received: September 14, 2016 Date of Response: September 26, 2016
Request No. September 8,9 Technical Session 1-7 Witness: David Chong

Request :

Please provide a copy of the presentation by SEI which shows the 8 percent return on plan assets.

Response:

Please refer to September 8,9 Technical Session 1-6 Attachment 1 page 7 for the SEI presentation showing the 8 percent return on plan assets.

Unitil Corporation Postretirement Medical and Life Insurance Benefits
ASC 715-60 Disclosure

Fiscal Year Ending 12/31/2015

Line No.	(a)	UES Non-union (b)	UES Union (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Obligations and Funded Status													
	Change in benefit obligation													
1	Benefit obligation at beginning of year	7,907,386	4,808,234	4,959,920	15,866,456	25,999,801	814,827	1,817,076	4,901,555	1,443,872	4,892,074	242,290	269,638	73,923,129
2	Service cost	90,789	97,238	118,463	358,369	1,387,793	49,187	51,889	196,333	53,986	210,419	-	7,804	2,622,270
3	Interest cost	308,060	188,194	194,137	624,516	1,032,272	32,312	71,320	194,885	57,283	194,800	9,417	10,579	2,917,775
4	Participant contributions	-	1,536	172	4,926	34,809	-	4,828	11,552	1,025	3,163	-	516	62,527
5	Plan amendments	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Acquisitions/divestitures	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Exchange rate changes	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Curtailment (gain) or loss	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Settlement (gain) or loss	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Special termination benefits	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Benefits paid	(513,076)	(315,185)	(262,247)	(683,511)	(481,576)	(16,092)	(97,196)	(64,045)	(29,918)	(18,157)	(20,148)	(13,860)	(2,515,011)
12	Settlement payments	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Actuarial (gain) or loss	(237,307)	3,969,464	(396,131)	(962,742)	(2,159,640)	(17,652)	303,723	(498,223)	(89,537)	(656,694)	3,219	(19,962)	(761,482)
14	Benefit obligation at end of year	7,555,852	8,749,481	4,614,314	15,208,014	25,813,459	862,582	2,151,640	4,742,057	1,436,711	4,625,605	234,778	254,715	76,249,208
	Change in plan assets													
15	Fair value of plan assets at beginning of year	433,905	582,386	511,966	(327,292)	8,650,826	271,115	192,428	915,698	348,634	937,420	126,691	195,842	12,839,619
16	Actual return on plan assets	10,781	(18,462)	(12,417)	13,160	(126,090)	14,910	(5,484)	(34,246)	(10,093)	(36,036)	(2,640)	(6,981)	(213,598)
17	Acquisitions/divestitures	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Employer contributions	181,430	261,414	411,477	592,868	1,536,837	51,355	185,105	266,706	195,137	281,158	14,961	21,552	4,000,000
19	Participant contributions	-	1,536	172	4,926	34,809	-	4,828	11,552	1,025	3,163	-	516	62,527
20	Benefits paid	(513,076)	(315,185)	(262,247)	(683,511)	(481,576)	(16,092)	(97,196)	(64,045)	(29,918)	(18,157)	(20,148)	(13,860)	(2,515,011)
21	Settlement payments	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Administrative expenses	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Asset Transfer	-	-	-	-	-	-	-	-	-	-	-	-	-
24	Fair value of plan assets at end of year	113,040	511,689	648,951	(399,849)	9,614,806	321,288	279,681	1,095,665	504,785	1,167,548	118,864	197,069	14,173,537
25	Funded status at end of year	(7,442,812)	(8,237,792)	(3,965,363)	(15,607,863)	(16,198,653)	(541,294)	(1,871,959)	(3,646,392)	(931,926)	(3,458,057)	(115,914)	(57,646)	(62,075,671)
	Amounts recognized in the statement of financial position consist of:													
26	Noncurrent assets	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Current liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-
28	Noncurrent liabilities	(7,442,812)	(8,237,792)	(3,965,363)	(15,607,863)	(16,198,653)	(541,294)	(1,871,959)	(3,646,392)	(931,926)	(3,458,057)	(115,914)	(57,646)	(62,075,671)
29		(7,442,812)	(8,237,792)	(3,965,363)	(15,607,863)	(16,198,653)	(541,294)	(1,871,959)	(3,646,392)	(931,926)	(3,458,057)	(115,914)	(57,646)	(62,075,671)
	Amounts recognized in accumulated other comprehensive income consist of:													
30	Net (gain) loss	893,962	4,714,605	2,587	4,040,519	6,670,631	357,230	1,148,399	1,771,910	199,879	964,161	(27,323)	(113,263)	20,623,297
31	Prior service cost	2,198,903	1,337,092	1,160,178	2,721,899	786,180	-	23,712	419,234	31,995	954,261	10,606	66,600	9,710,660
32	Transition (asset) obligation	-	-	-	-	-	-	-	-	-	-	-	-	-
33		3,092,865	6,051,697	1,162,765	6,762,418	7,456,811	357,230	1,172,111	2,191,144	231,874	1,918,422	(16,717)	(46,663)	30,333,957

Unitil Corporation Postretirement Medical and Life Insurance Benefits
ASC 715-60 Disclosure

Fiscal Year Ending 12/31/2015

Line No.	(a)	UES Non-union (b)	UES Union (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
34	Components of Net Periodic Benefit Cost and Other Amounts Recognized in Other Comprehensive Income													
	Net Periodic Benefit Cost													
34	Service cost	$ 90,789	$ 97,238	$ 118,463	$ 358,369	$ 1,387,793	$ 49,187	$ 51,889	$ 196,333	$ 53,986	$ 210,419	$ -	$ 7,804	$ 2,622,270
35	Interest cost	$ 308,060	$ 188,194	$ 194,137	$ 624,516	$ 1,032,272	$ 32,312	$ 71,320	$ 194,885	$ 57,283	$ 194,800	$ 9,417	$ 10,579	$ 2,917,775
36	Expected return on plan assets	$ (26,638)	$ (48,432)	$ (49,687)	$ 25,371	$ (726,124)	$ (22,679)	$ (19,553)	$ (79,275)	$ (35,123)	$ (83,188)	$ (10,957)	$ (16,922)	$ (1,093,207)
37	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
38	Amortization of prior service cost	$ 283,730	$ 172,528	$ 149,701	$ 351,212	$ 101,443	$ -	$ 76,497	$ 163,883	$ 103,202	$ 219,089	$ 34,217	$ 26,174	$ 1,681,676
39	Amortization of net (gain) loss	$ 63,893	$ 38,851	$ 19,282	$ 288,804	$ 456,999	$ 21,029	$ 46,950	$ 123,535	$ 13,988	$ 86,016	$ (2,528)	$ (6,714)	$ 1,150,105
40	Curtailment (gain)/loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
41	Settlement (gain)/loss	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
42	Special termination benefits	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
43	Net periodic benefit cost	$ 719,834	$ 448,379	$ 431,896	$ 1,648,272	$ 2,252,383	$ 79,849	$ 227,103	$ 599,361	$ 193,336	$ 627,136	$ 30,149	$ 20,921	$ 7,278,619
	Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income													
44	Net (gain) loss	$ (285,343)	$ 3,997,507	$ (353,309)	$ (1,290,077)	$ (1,764,425)	$ (30,912)	$ 281,810	$ (508,237)	$ (58,309)	$ (623,486)	$ 19,344	$ 10,655	$ (604,782)
45	Prior service cost	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
46	Amortization of prior service cost	$ (283,730)	$ (172,528)	$ (149,701)	$ (351,212)	$ (101,443)	$ -	$ (76,497)	$ (163,883)	$ (103,202)	$ (219,089)	$ (34,217)	$ (26,174)	$ (1,681,676)
47	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
48	Total recognized in other comprehensive income	$ (569,073)	$ 3,824,979	$ (503,010)	$ (1,641,289)	$ (1,865,868)	$ (30,912)	$ 205,313	$ (672,120)	$ (161,511)	$ (842,575)	$ (14,873)	$ (15,519)	$ (2,286,458)
49	Total recognized in net periodic benefit cost													
50	and other comprehensive income	$ 150,761	$ 4,273,358	$ (71,114)	$ 6,983	$ 386,515	$ 48,937	$ 432,416	$ (72,759)	$ 31,825	$ (215,439)	$ 15,276	$ 5,402	$ 4,992,161
	Estimated amortizations from the accumulated other comprehensive income into net periodic pension cost over the next fiscal year													
51	Amortization of net (gain) loss	$ 45,476	$ 239,831	$ 132	$ 205,540	$ 339,332	$ 18,172	$ 58,419	$ 90,137	$ 10,168	$ 49,047	$ (1,390)	$ (5,762)	$ 1,049,102
52	Amortization of prior service cost	$ 283,730	$ 172,528	$ 149,701	$ 351,212	$ 101,443	$ -	$ 23,712	$ 163,883	$ 31,995	$ 171,196	$ 10,606	$ 26,174	$ 1,486,180
53	Amortization of transition (asset) obligation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

Unitil Corporation Postretirement Medical and Life Insurance Benefits
ASC 715-60 Disclosure

Fiscal Year Ending 12/31/2015

Line No.		UES Non-union	UES Union	Fitchburg Non-Union	Fitchburg Union	USC	Usource	Portland Non-Union	Portland Union	Portsmouth Non-Union	Portsmouth Union	Granite Non-Union	Granite Union	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
	Additional Information													
54	Assumed health care cost trend rates have a significant effect on the amounts reported. A one-percentage-point change in assumed health care cost trend rates would have the following effects:													
	1-Percentage Point Increase													
55	Effect on total of service and interest cost	$ 99,560	$ 71,249	$ 78,030	$ 245,345	$ 604,089	$ 20,344	$ 30,755	$ 97,655	$ 27,775	$ 101,150	$ 2,351	$ 4,589	$ 1,382,892
56	Effect on postretirement benefit obligation	$ 1,069,661	$ 1,673,724	$ 767,301	$ 2,678,168	$ 5,604,823	$ 190,776	$ 381,359	$ 1,044,683	$ 263,763	$ 1,110,417	$ 29,679	$ 62,279	$ 14,876,633
	1-Percentage Point Decrease													
57	Effect on total of service and interest cost	$ (74,906)	$ (53,606)	$ (58,708)	$ (184,591)	$ (454,503)	$ (15,306)	$ (23,139)	$ (73,473)	$ (20,897)	$ (76,102)	$ (1,769)	$ (3,452)	$ (1,040,452)
58	Effect on postretirement benefit obligation	$ (871,009)	$ (1,310,758)	$ (607,854)	$ (2,112,091)	$ (4,327,405)	$ (145,613)	$ (302,810)	$ (807,733)	$ (208,839)	$ (845,924)	$ (24,988)	$ (46,125)	$ (11,611,149)
	Assumptions													
	Weighted-average assumptions used to determine benefit obligations at Measurement Date													
59	Measurement Date													12/31/2015
60	Discount rate													4.30%
61	Rate of compensation increase													N/A
62	Health care cost trend rate assumed for next year													7.00%
63	Ultimate health care cost trend rate													4.00%
64	Year that the rate reaches the ultimate trend rate													2022
	Weighted-average assumptions used to determine net periodic benefit cost for years ended 12/31													
65	Discount rate													4.00%
66	Expected long-term rate of return on plan assets													8.00%
67	Rate of compensation increase													N/A
68	Health care cost trend rate assumed for next year													7.00%
69	Ultimate health care cost trend rate													4.00%
70	Year that the rate reaches the ultimate trend rate													2018
	Cash Flows													
	Contributions													
71	2014	$ 464,494	$ -	$ 436,404	$ 531,361	$ 1,254,462	$ 39,314	$ 174,352	$ 212,289	$ 207,573	$ 252,738	$ 34,728	$ 42,285	$ 3,650,000
72	2015	$ 181,430	$ 261,414	$ 411,477	$ 592,868	$ 1,536,837	$ 51,355	$ 185,105	$ 266,706	$ 195,137	$ 281,158	$ 14,961	$ 21,552	$ 4,000,000
73	Expected 2016	$ 181,430	$ 261,414	$ 411,477	$ 592,868	$ 1,536,837	$ 51,355	$ 185,105	$ 266,706	$ 195,137	$ 281,158	$ 14,961	$ 21,552	$ 4,000,000
	Benefit Payments													
74	2014	$ 696,744	$ -	$ 208,587	$ 696,337	$ 346,744	$ 10,867	$ 62,978	$ 63,954	$ 18,975	$ 52,264	$ 12,777	$ 13,792	$ 2,184,019
75	2015	$ 513,076	$ 315,185	$ 262,247	$ 683,511	$ 481,576	$ 16,092	$ 97,196	$ 64,045	$ 29,918	$ 18,157	$ 20,148	$ 13,860	$ 2,515,011
	Estimated Future Benefit Payments													
76	2016	$ 437,393	$ 254,888	$ 204,708	$ 582,188	$ 444,969	$ 11,570	$ 88,632	$ 63,333	$ 29,420	$ 30,092	$ 17,835	$ 12,599	$ 2,177,627
77	2017	$ 420,701	$ 272,458	$ 211,042	$ 579,032	$ 526,308	$ 20,638	$ 80,576	$ 76,971	$ 60,886	$ 51,861	$ 11,327	$ 5,853	$ 2,317,653
78	2018	$ 436,947	$ 289,772	$ 216,870	$ 614,239	$ 603,086	$ 22,183	$ 79,082	$ 91,665	$ 67,128	$ 63,906	$ 11,721	$ 6,087	$ 2,502,686
79	2019	$ 428,096	$ 321,965	$ 231,735	$ 665,875	$ 669,038	$ 24,429	$ 78,987	$ 108,665	$ 74,651	$ 77,773	$ 12,234	$ 6,385	$ 2,699,833
80	2020	$ 426,125	$ 342,116	$ 245,334	$ 666,044	$ 734,395	$ 30,348	$ 100,451	$ 135,175	$ 66,176	$ 100,129	$ 12,632	$ 6,660	$ 2,865,585
81	2021 - 2025	$ 2,125,647	$ 2,110,076	$ 1,257,471	$ 3,943,626	$ 5,264,876	$ 250,912	$ 615,006	$ 1,067,864	$ 317,653	$ 873,489	$ 67,591	$ 37,877	$ 17,932,088

Unitil Corporation Postretirement Medical and Life Insurance Benefits
Preliminary ASC 715-60 Expense by division for Fiscal Year Ending 12/31/2016

Line No.	(a)	UES Non-Union (b)	UES Union (c)	Fitchburg Non-Union (d)	Fitchburg Union (e)	USC (f)	Usource (g)	Portland Non-Union (h)	Portland Union (i)	Portsmouth Non-Union (j)	Portsmouth Union (k)	Granite Non-Union (l)	Granite Union (m)	Total (n)
	Net Periodic Benefit Cost													
1	Service cost	80,536	219,130	94,216	290,081	1,318,198	55,269	62,630	210,210	52,155	217,616	-	9,544	2,609,585
2	Interest cost	315,597	370,805	194,061	641,559	1,100,513	36,845	90,635	202,561	61,153	198,261	9,716	10,685	3,232,391
3	Expected return on plan assets	998	(41,191)	(60,027)	31,569	(812,019)	(27,264)	(26,159)	(95,632)	(46,884)	(103,253)	(9,396)	(16,116)	(1,205,374)
4	Amortization of transition (asset) obligation	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Amortization of prior service cost	283,730	172,528	149,701	351,212	101,443	-	23,712	163,883	31,995	171,196	10,606	26,174	1,486,180
6	Amortization of net (gain) loss	45,476	239,831	132	205,540	339,332	18,172	58,419	90,137	10,168	49,047	(1,390)	(5,762)	1,049,102
7	Net periodic benefit cost	726,337	961,103	378,083	1,519,961	2,047,467	83,022	209,237	571,159	108,587	532,867	9,536	24,525	7,171,884

Line No.		
	Assumptions	
8	Discount rate	4.30%
9	Expected return on plan assets	8.00%
10	Rate of compensation increase	3.00%
	Medical Trend Rates	
11	2016	7.00%
12	2017	6.50%
13	2018	6.00%
14	2019	5.50%
15	2020	5.00%
16	2021	4.50%
17	2022+	4.00%
	Assumed 2016 Contribution	4,000,000

TRANSFORM YOUR TOMORROW℠

TRANSAMERICA®
Retirement Solutions

Unitil Corporation
Postretirement Medical and Life Insurance Benefits Plan

Postretirement Benefit Cost and Financial Disclosure for the Fiscal Year Ended December 31, 2015

and

Preliminary Postretirement Benefit Cost for the Fiscal Year Ending December 31, 2016

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SECTION I

ACTUARIAL CERTIFICATION

Purpose of Report

This report presents the results of the financial disclosure information for the Unitil Corporation Postretirement Medical and Life Insurance Benefits Plan for the fiscal year ended December 31, 2015 in accordance with the accounting requirements under the Financial Accounting Standards Board ASC 715-60. The end of year liabilities are based on a 4.30% discount rate. In addition, we have calculated the preliminary ASC 715-60 Net Periodic Postretirement Benefit Cost (Expense) for the fiscal year ending December 31, 2016. This amount can be considered final, unless there are any material changes affecting the Plan during the current fiscal year such as a change in the benefits provided or a significant change in the covered population or contributions to the Plan, which may require a re-measurement for the changes. Section II contains a summary of the results of the disclosure report.

Methodology

The employee data and financial information used in this valuation were provided by the Company and maintained by Transamerica. We have reviewed the information for reasonableness and consistency and have no reason to doubt its substantial accuracy, nor its suitability for this valuation. Please inform us if at any time you have knowledge that the information utilized is not complete or accurate as it may require revisions to previously provided results. Standard actuarial roll-forward techniques were used to adjust liabilities and service costs from the census date to the measurement date and no other adjustments were made. Plan asset information is summarized in Section VII. The Actuarial Assumptions are summarized in Section VIII. The Plan Provisions are summarized in Section IX.

Actuarial Certification of Assumptions and Methods

This report has been prepared in accordance with generally accepted actuarial principles and practices. The actuarial assumptions were selected by the company subject to the concurrence of its auditors. The accounting calculations in the report are consistent with our understanding of the provisions of FASB ASC 715-60. This report conforms to the Code of Professional Conduct of the American Academy of Actuaries. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein.

In accordance with ASOP Nos. 27 and 35, each economic and demographic assumption with the exception of the investment return shown in Section VIII of the report reflects the actuary’s professional judgment in estimating future experience, takes into account relevant historical and current economic data, has no significant bias, and is reasonable and appropriate for the purpose of the ASC 715-60 financial accounting valuation. Different assumptions may also be reasonable. The investment return assumption was provided by an outside party. Transamerica has not been engaged to evaluate the investment return assumption and thus we express no opinion of the appropriateness of that assumption.

SECTION I

ACTUARIAL CERTIFICATION
(continued)

Disclaimers

Valuation results contained herein are based on a snapshot of the Plan at one point in time including assumptions as disclosed. They are not a prediction of the Plan's future accounting requirements which may be significantly different based on the Plan's actual experience including but not limited to economic and participant demographic experience. Ultimately plan costs will be determined by the actual benefits provided and the applicable laws and regulations in effect at the given particular time. Decisions regarding benefit provisions should be made only after careful consideration of a variety of factors and warrant more extensive in-depth analysis.

We are not aware of any substantive commitments for benefits that exceed the benefits defined by the written plans. We are not aware of any significant liability of the Plan, other than for benefits, such as for legal or accounting fees. We are not aware of any significant events subsequent to the current year's measurement date through the date this report, which could materially affect the amounts shown in the report. We have not been notified of any decision to fully or partially terminate the Plan nor are we aware of any other settlements, curtailments, or special terminations during the fiscal year ended December 31, 2015 other than those described in this report. To the best of our knowledge, there is no relationship with the Plan, Plan Sponsor or the Plan Sponsor's employees that would impair or appear to impair the objectivity of our work.

Francis P. Carberry

January 15, 2016
Date

Francis P. Carberry, F.S.A., E.A., M.A.A.A.
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Colin B. Cassidy

January 15, 2016
Date

Peer Review by: Colin B. Cassidy, A.S.A., E.A., M.A.A.A.
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SECTION II

PRINCIPAL RESULTS

A. Comparative Summary of Disclosure		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Accumulated postretirement benefit obligation	$ 76,249,208	$ 73,923,129
(2)	Fair value of plan assets	14,173,537	12,839,619
(3)	Funded status	(62,075,671)	(61,083,510)
(4)	Accumulated other comprehensive income	30,333,957	32,620,415
(5)	Net amount recognized	(31,741,714)	(28,463,095)
(6)	Market-related value of assets	14,173,537	12,839,619
(7)	Final net periodic postretirement benefit cost	7,278,619	5,491,572
(8)	Discount rate	4.30%	4.00%

B. Comparative Summary of Net Periodic Postretirement Benefit Cost		Fiscal Year Ending December 31, 2016	Fiscal Year Ending December 31, 2015
(1)	Net periodic postretirement benefit cost	$ 7,171,884	$ 7,278,619
(2)	Discount rate	4.30%	4.00%

SECTION III

ASC 715-60 DISCLOSURE

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
A.	Change in Accumulated Postretirement Benefit Obligation		
(1)	Accumulated postretirement benefit obligation at beginning of year	$ 73,923,129	$ 56,899,526
(2)	Service cost	2,622,270	1,988,041
(3)	Interest cost	2,917,775	2,685,787
(4)	Participant contributions	62,527	58,569
(5)	Plan amendments	0	0
(6)	Acquisitions/divestitures	0	0
(7)	Exchange rate changes	0	0
(8)	Curtailment (gain) or loss	0	0
(9)	Settlement (gain) or loss	0	0
(10)	Special termination benefits	0	0
(11)	Benefits paid	(2,515,011)	(2,184,019)
(12)	Settlement payments	0	0
(13)	Actuarial (gain) or loss	(761,482)	14,475,225
(14)	Accumulated postretirement benefit obligation at end of year	$ 76,249,208	$ 73,923,129
B.	Change in Plan Assets		
(1)	Fair value of plan assets at beginning of year	$ 12,839,619	$ 10,829,207
(2)	Actual return on plan assets	(213,598)	485,862
(3)	Acquisitions/divestitures	0	0
(4)	Employer contributions	4,000,000	3,650,000
(5)	Participant contributions	62,527	58,569
(6)	Benefits paid	(2,515,011)	(2,184,019)
(7)	Settlement payments	0	0
(8)	Administrative expenses	0	0
(9)	Asset transfer	0	0
(10)	Fair value of plan assets at end of year	$ 14,173,537	$ 12,839,619
C.	Funded Status at End of Year: B(10) – A(14)	$ (62,075,671)	$ (61,083,510)

SECTION III

ASC 715-60 DISCLOSURE
(continued)

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
D.	Amounts Recognized in the Statement of Financial Position Consist of:		
(1)	Noncurrent assets	$ 0	$ 0
(2)	Current liabilities	0	0
(3)	Noncurrent liabilities	(62,075,671)	(61,083,510)
(4)	Total	$ (62,075,671)	$ (61,083,510)
E.	Amounts Recognized in Accumulated Other Comprehensive Income (AOCI) Consist of:		
(1)	Net (gain) or loss	$ 20,623,297	$ 21,228,079
(2)	Prior service cost	9,710,660	11,392,336
(3)	Transition (asset) obligation	0	0
(4)	Accumulated other comprehensive income	$ 30,333,957	$ 32,620,415
F.	Components of Net Periodic Postretirement Benefit Cost		
(1)	Service cost	$ 2,622,270	$ 1,988,041
(2)	Interest cost	2,917,775	2,685,787
(3)	Expected return on plan assets	(1,093,207)	(920,297)
(4)	Amortization of transition (asset) or obligation	0	0
(5)	Amortization of prior service cost	1,681,676	1,681,676
(6)	Amortization of net (gain) or loss	1,150,105	56,365
(7)	Curtailment (gain) or loss	0	0
(8)	Settlement (gain) or loss	0	0
(9)	Special termination benefits	0	0
(10)	Net periodic postretirement benefit cost	$ 7,278,619	$ 5,491,572

SECTION III

ASC 715-60 DISCLOSURE
(continued)

G. Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (OCI)	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1) Net (gain) or loss	$ 545,323	$ 14,909,660
(2) Prior service cost	0	0
(3) Amortization of net gain or (loss)	(1,150,105)	(56,365)
(4) Amortization of prior service cost	(1,681,676)	(1,681,676)
(5) Amortization of transition asset or (obligation)	0	0
(6) Total recognized in other comprehensive income	(2,286,458)	13,171,619
(7) Total recognized in net periodic postretirement benefit cost and OCI	$ 4,992,161	$ 18,663,191
H. Estimated Amortizations from the AOCI into Net Periodic Postretirement Benefit Cost Over the Next Fiscal Year		
(1) Amortization of net (gain) or loss	$ 1,049,102	$ 1,150,105
(2) Amortization of prior service cost	1,486,180	1,681,676
(3) Amortization of transition (asset) or obligation	$ 0	$ 0

SECTION III

ASC 715-60 DISCLOSURE
(continued)

	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
Weighted-average assumptions used to determine benefit obligations		
Measurement date	December 31, 2015	December 31, 2014
Discount rate	4.30%	4.00%
Rate of compensation increase	N/A	N/A
Health care cost trend rate assumed for next year	7.00%	8.00%
Ultimate health care cost trend rate	4.00%	4.00%
Year that the rate reaches the ultimate trend rate	2022	2018
Weighted-average assumptions used to determine net periodic postretirement benefit cost		
Measurement date	December 31, 2014	December 31, 2013
Discount rate	4.00%	4.80%
Expected long-term rate of return on plan assets	8.00%	8.00%
Rate of compensation increase	N/A	N/A
Health care cost trend rate assumed for next year	8.00%	8.00%
Ultimate health care cost trend rate	4.00%	4.00%
Year that the rate reaches the ultimate trend rate	2018	2018

Assumed health care cost trend rates may have a significant effect on the amounts reported. A one-percentage-point change in assumed health care cost trend rates would have the following effect:

	December 31, 2015	December 31, 2014
1-Percentage Point Increase		
Effect on total of service and interest cost	$ 1,382,892	$ 989,216
Effect on postretirement benefit obligation	$ 14,876,633	$ 15,325,328
1-Percentage Point Decrease		
Effect on total of service and interest cost	$ (1,040,452)	$ (771,079)
Effect on postretirement benefit obligation	$ (11,611,149)	$ (11,828,515)

SECTION III

ASC 715-60 DISCLOSURE
(continued)

Plan Assets	Target Allocation	Percentage of Plan Assets at December 31	
Asset Category	**2016**	**2015**	**2014**
Equity Securities	55%	53%	56%
Debt Securities	45%	45%	44%
Real Estate	0%	0%	0%
Other	0%	2%	0%
Total		100%	100%

Cash Flows		
Contributions	Employer	Participants
2014	$ 3,650,000	$ 58,569
2015	$ 4,000,000	$ 62,527
Expected 2016	$ 4,000,000	$ 62,527
Benefit Payments		
2014	$ 2,184,019	
2015	$ 2,515,011	
Estimated Future Benefit Payments		
2016	$ 2,177,627	
2017	$ 2,317,653	
2018	$ 2,502,686	
2019	$ 2,699,833	
2020	$ 2,865,585	
Years 2021 - 2025	$ 17,932,088	

SECTION IV

ACCUMULATED POSTRETIREMENT BENEFIT OBLIGATION

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Active employees fully eligible	$ 14,105,772	$ 13,346,509
(2)	Active employees not fully eligible	34,368,328	34,644,968
(3)	Retirees	27,775,108	25,931,652
(4)	Total accumulated postretirement benefit obligation (1) + (2) + (3)	$ 76,249,208	$ 73,923,129

SECTION V

RECONCILIATION OF NET AMOUNT RECOGNIZED

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Net amount recognized at end of prior year	$ (28,463,095)	$ (26,621,523)
(2)	Net periodic postretirement benefit cost for the fiscal year	7,278,619	5,491,572
(3)	Contributions paid during the fiscal year	4,000,000	3,650,000
(4)	Net amount recognized at end of current year (1) – (2) + (3)	$ (31,741,714)	$ (28,463,095)

SECTION VI

DEVELOPMENT OF PRELIMINARY NET PERIODIC POSTRETIREMENT BENEFIT COST

The following calculations were performed in accordance with the Financial Accounting Standards Board ASC 715-60 and may be used for purposes of reporting Postretirement Benefit Cost. The net periodic postretirement benefit cost, as required and calculated under ASC 715-60 will be charged against income, and it will also be disclosed in a footnote to the Company's financial statements.

Actuarial computations under ASC 715-60 are for purposes of fulfilling employer financial accounting requirements. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

A. Net Periodic Postretirement Benefit Cost		Preliminary Fiscal Year Ending December 31, 2016	Final Fiscal Year Ending December 31, 2015
(1)	Service cost	$ 2,609,585	$ 2,622,270
(2)	Interest cost	3,232,391	2,917,775
(3)	Expected return on assets	(1,205,374)	(1,093,207)
(4)	Amortization of transition (asset) or obligation from item B	0	0
(5)	Amortization of prior service cost from item C	1,486,180	1,681,676
(6)	Recognition of (gain) or loss from item D(13)	1,049,102	1,150,105
(7)	Net periodic postretirement benefit cost: (1) + (2) – (3) + (4) + (5) + (6)	$ 7,171,884	$ 7,278,619

B. Amortization of Transition (Asset) or Obligation

None.

C. Amortization of Prior Service Cost

Unrecognized Amount December 31, 2015	Remaining Years in Amortization Period	Amount to be Recognized During 2016
$ 8,204,252	7.75	$ 1,058,614
87,496	0.31	87,496
467,081	2.52	185,693
933,078	6.22	150,013
2,392	3.75	637
16,361	4.39	3,727
$ 9,710,660		$ 1,486,180

SECTION VI

DEVELOPMENT OF PRELIMINARY NET PERIODIC POSTRETIREMENT BENEFIT COST
(continued)

D. Development and Recognition of (Gain) or Loss		Fiscal Year Ending December 31, 2016
(1)	Accumulated postretirement benefit obligation	$ 76,249,208
(2)	Fair value of assets	14,173,537
(3)	Unrecognized transition (asset) or obligation	0
(4)	Unrecognized prior service cost	9,710,660
(5)	Net amount recognized	(31,741,714)
(6)	Unrecognized (gain) or loss: (1) – (2) – (3) – (4) + (5)	20,623,297
(7)	(Gain) or loss not reflected in market-related value	
	(a) Fair value of assets	14,173,537
	(b) Market-related value of assets	14,173,537
	(c) Amount not reflected in market-related value of assets: (a) – (b)	0
(8)	(Gain) or loss subject to amortization: (6) + (7)(c)	20,623,297
(9)	Greater of (1) or (7)(b)	76,249,208
(10)	10% of (9)	7,624,921
(11)	(Gain) or loss, subject to recognition: excess of absolute value of (8) over (10), not less than zero	$ 12,998,376
(12)	Average future service of plan participants expected to receive benefits years	12.39 years
(13)	Amount to recognize for the year: (11) ÷ (12)	$ 1,049,102

SECTION VII

RECONCILIATION OF FAIR VALUE OF ASSETS

A. Union VEBA

(1)	Fair Value as of January 1, 2015	$ 2,304,054
(2)	Employer Contributions	1,423,698
(3)	Participant Contributions	21,435
(4)	Investment Return	(82,307)
(5)	Benefit Payments	1,094,758
(6)	Expenses	0
(7)	Fair Value as of December 31, 2015 (1) + (2) + (3) + (4) – (5) – (6)	$ 2,572,122

B. Non-Union VEBA

(1)	Fair Value as of January 1, 2015	$ 4,079,205
(2)	Employer Contributions	1,689,902
(3)	Participant Contributions	41,092
(4)	Investment Return	(97,957)
(5)	Benefit Payments	1,420,253
(6)	Expenses	0
(7)	Fair Value as of December 31, 2015 (1) + (2) + (3) + (4) – (5) – (6)	$ 4,291,989

C. 401(h) Account

(1)	Fair Value as of January 1, 2015	$ 6,456,360
(2)	Employer Contributions	886,400
(3)	Participant Contributions	0
(4)	Investment Return	(33,334)
(5)	Benefit Payments	0
(6)	Expenses	0
(7)	Fair Value as of December 31, 2015 (1) + (2) + (3) + (4) – (5) – (6)	$ 7,309,426

D. Fair Value of Assets as of December 31, 2015 $ 14,173,537
(A) + (B) + (C)

SECTION VIII

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

For each active employee, the discounted present value of all future postretirement benefits is determined using the assumptions stated in this section. This amount is divided into "n" equal parts, where "n" is the number of years between an employee's hire date and the date he is fully eligible for retirement; the amount of each of the equal parts is the *service cost* portion of the total expense. The service costs for years before the valuation are summed and called the *accumulated postretirement benefit obligation* (APBO). Full eligibility refers to the date at which the participant will meet the age and service requirements to begin receiving postretirement benefits. Participants who are fully eligible as of the valuation date no longer have a service cost because the entire discounted present value of future postretirement benefits is included in the APBO. Interest on the APBO as adjusted by the expected claim payments is the *interest cost*.

The *transition obligation* is equal to the APBO minus any reserves previously accrued for retiree health and any assets set aside for retiree health at the time FAS 106 was adopted. The transition obligation is divided by the average working lifetime (or a minimum of 20 years) of the active employees to yield the *amortization of transition obligation*. The amortization of the transition obligation may be reduced to take into account plan changes that reduce benefits. There is no remaining unrecognized transition obligation.

If plan experience is different than expected, there will be *gains or losses*, which may have to be amortized in accordance with ASC 715-60.

The *prior service cost* is the measure of the increase in APBO due to plan amendments, and is amortized over the average remaining years of service to full eligibility for benefits of the active plan participants.

The *expected return* is the assumed long-term rate of return multiplied by the assets adjusted by the expected claim payments. The sum of service cost, interest cost, and amortizations minus the expected return is the expense for the year.

B. ASSET VALUATION METHOD

Market-related value of assets is equal to the combined fair value of assets in the VEBA and 401(h) accounts.

C. VALUATION PROCEDURES

The valuation is based on employee, retiree, and financial data provided by the company and trustee, respectively. A plan's actuary would not customarily verify this data. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

SECTION VIII

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS
(continued)

D. ACTUARIAL ASSUMPTIONS (as of December 31, 2015 Measurement Date)

Principal Rates

Discount rate — 4.30% (previously, 4.00%).

Expected return on assets — 8.00% (unchanged).

Pre- and Post-Retirement Mortality — RP-2014 Employee and Healthy Annuitant Tables adjusted back to 2006 and projected generationally with Scale MP-2015 for all years (previously, RP-2014 Employee and Healthy Annuitant Tables projected with Scale MP-2014 for all years).

Employee Termination — Sample probabilities are as follows:

Age	Male	Female
25	9.9%	14.9%
30	6.9%	9.9%
35	4.9%	6.9%
40	2.8%	4.9%
45	1.7%	2.8%
50	0.4%	1.7%
55	0.0%	0.4%

Retirement Age

Age	Non-Union Rate	Union Rate
55-59	2.0%	3.0%
60	10.0%	12.0%
61	5.0%	7.0%
62	50.0%	50.0%
63-64	7.5%	10.0%
65	100.0%	100.0%

Incidence of Disability — 1985 Wyatt Company Table of Incidence. Sample rates are as follows:

Age	Male	Female
25	0.093%	0.096%
40	0.314%	0.357%
45	0.505%	0.522%
50	0.830%	0.854%
55	1.502%	1.490%

SECTION VIII

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS
(continued)

D. ACTUARIAL ASSUMPTIONS (cont'd)

Medical Trend Rates
(for inflation and increased utilization)

Year	Trend Rate
2016	7.00%
2017	6.50%
2018	6.00%
2019	5.50%
2020	5.00%
2021	4.50%
2022 and thereafter	4.00%

Sample age-graded annual claim costs used in determination of expense (excludes Medicare Part B reimbursement for participants age 65 and older).

(previously,

Year	Trend Rate
2015	7.00%
2016	6.00%
2017	5.00%
2018 and thereafter	4.00%)

Medical Claims Cost

2016 Annual Claim Cost

Age	UES Union	FGE PPO	FGE EPO	NH EPO	Maine EPO	CDHP
55	8,429	10,965	8,972	8,952	8,927	8,983
60	10,257	13,343	10,918	10,893	10,863	10,931
65	5,049	5,049	5,049	5,049	5,049	5,049
70	4,888	4,888	4,888	4,888	4,888	4,888
75	5,210	5,210	5,210	5,210	5,210	5,210
80	5,748	5,748	5,748	5,748	5,748	5,748
85	6,231	6,231	6,231	6,231	6,231	6,231

It is assumed that 60% of medical claims for Medicare eligible participants are for prescription drugs.

Medicare Part D Drug Subsidy

It is assumed that all Medicare eligible participants receive drug benefits through Unitil's plan and the Company will qualify for the Part D Drug Subsidy.

SECTION VIII

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS
(continued)

D. ACTUARIAL ASSUMPTIONS *(cont'd)*

Retiree Contribution	A percentage (as shown in the summary of plan provisions) of the annual premium.
Life Insurance Cost	A paid-up life insurance policy is assumed to be bought at the time of retirement.
Coverage Election	95% of active employees elect coverage (previously, 100%).
Marital Assumption	It has been assumed that 85% (previously, 100%) of all active employees are married and elect spousal coverage. Wives are three years younger than husbands. Actual spouse data is used for retirees.
Cadillac Tax	Additional trend of 0.5% applied from 2042 to 2058 to reflect the estimated additional cost imposed due to the application of the “Cadillac Tax” on high premium plans. This is based on current and projected per capita costs, including blending of pre and post 65 rates, and the age of the current youngest participant in the plan.
Participant Data	Participant census data was collected as of January 1, 2015.

SECTION IX

SUMMARY OF PLAN PROVISIONS

<u>Eligibility</u>: Retirement (or Disability Retirement) from active status. Portland union and Granite union employees became eligible effective January 1, 2010. Portsmouth union employees became eligible effective January 1, 2011.

<u>Medical Coverage</u>: Continued medical coverage until death.

<u>Spousal Coverage</u>: Continued medical coverage until death (even after death of retiree).

<u>Medicare Part B Reimbursement</u>

Eligibility: Northern (Portland, Granite, Portsmouth) union participants are not eligible. Other participants who either i) retired prior to January 1, 2006, or ii) were hired prior to January 1, 1986 (Fitchburg union), or iii) were hired prior to January 1, 1986 and retired prior to January 1, 2010 (non-union) or (iv) were hired prior to January 1, 1986 and retired prior to June 1, 2005 (Concord/Exeter Union).

Benefit: Reimbursement of Medicare Part B premium for retiree and spouse (capped at $50/month).

<u>New Hampshire Benefits</u>: Effective January 1, 2006, new retirees from the UES (Concord/Exeter Union) groups were covered by the New England Electrical Workers (NEEW) plan. Effective August 2015, this group is covered by the IBEW PPO plan.

<u>Retiree Contributions</u>: Post-65 contributions are as follows:

1. Non-Union:

Retirement Date	Hire Date	Percent of Premium
Prior to 1/1/2006	N/A	0%
1/1/2006 - 12/31/2009	Prior to 1/1/1986	0%
1/1/2006 -	1/1/1986-12/31/2009	20%
N/A	1/1/2010-	Not Eligible

2. UES Union (Concord/Exeter):

Retirement Date	Hire Date	Percent of Premium
Prior to 6/1/2012	N/A	0%
6/1/2012 - 12/31/2012	N/A	15%
1/1/2013-	Prior to 6/1/2012	16-20%*
N/A	6/1/2012-	Not Eligible

3. Fitchburg Union

Retirement Date	Hire Date	Percent of Premium
N/A	Prior to 6/1/2000	0%
N/A	6/1/2000-6/1/2013	20%
N/A	6/1/2013-	Not Eligible

SECTION IX

SUMMARY OF PLAN PROVISIONS
(continued)

Retiree Contributions *(cont'd)*

4. Portsmouth Union:

Retirement Date	Hire Date	Percent of Premium
Prior to 6/6/2010	Prior to 4/1/1993 *(at least 45 years old by 4/1/1993)*	0%
Prior to 6/6/2010	Prior to 4/1/1993 *(under age 45 years old by 4/1/1993)*	100% less $225 subsidy
6/6/2010-	Prior to 6/6/2010	20%
N/A	6/6/2010-	Not Eligible

5. Portland Union/Granite Union:

Retirement Date	Hire Date	Percent of Premium
N/A	Prior to 4/1/2009	20%
N/A	On or after 4/1/2009	Not Eligible

Pre-65 Contributions are as follows:

1. Non-Union:

Retirement Date	Hire Date	Percent of Premium
Prior to 1/1/2006	N/A	0%
1/1/2006 - 12/31/2009	Prior to 1/1/1986	0%
1/1/2006 -	1/1/1986-	20%

2. UES Union (Concord/Exeter):

Retirement Date	Hire Date	Percent of Premium
Prior to 1/1/2006	N/A	0%
1/1/2006-5/31/2012	Prior to 1/1/1986	0%
1/1/2006-5/31/2012	1/1/1986-	15%
6/1/2012- 12/31/2012	N/A	15%
1/1/2013-	N/A	16-20%*

3. Fitchburg Union:

Retirement Date	Hire Date	Percent of Premium
Prior to 1/1/2006	N/A	0%
N/A	Prior to 1/1/1986	0%
1/1/2006 -	1/1/1986-	20%

** 16% in 2013 grading up to 20% by 2017*

SECTION IX

SUMMARY OF PLAN PROVISIONS
(continued)

Retiree Contributions *(cont'd)*

4. Portsmouth Union:

Retirement Date	Hire Date	Percent of Premium
Prior to 6/6/2010	Prior to 4/1/1993 *(at least 45 years old by 4/1/1993)*	0%
Prior to 6/6/2010	Prior to 4/1/1993 *(under age 45 years old by 4/1/1993)*	100% less $1,100 subsidy
6/6/2010-	N/A	20%

5. Portland Union/Granite Union: 20%

Life Insurance

$10,000.

Health Savings Account

Retirees who elect the CDHP receive a $500 company contribution annually to a Health Savings Account.

TRANSFORM YOUR TOMORROW℠

TRANSAMERICA®
Retirement Solutions

Unitil Corporation
Supplemental Executive Retirement Plan

Pension Cost and Financial Disclosure for the Fiscal Year Ended December 31, 2015

and

Preliminary Net Periodic Pension Cost for the Fiscal Year Ending December 31, 2016

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SECTION I

ACTUARIAL CERTIFICATION

Purpose of Report

This report presents the results of the financial disclosure information for the Unitil Corporation Supplemental Executive Retirement Plan for the fiscal year ended December 31, 2015 in accordance with the accounting requirements under the Financial Accounting Standards Board ASC 715-30. The end of year liabilities are based on a 4.30% discount rate. In addition, we have calculated the preliminary ASC 715-30 Net Periodic Pension Cost (Expense) for the fiscal year ending December 31, 2016. This amount can be considered final, unless there are any material changes affecting the Plan during the current fiscal year such as a change in the benefits provided or a significant change in the covered population or contributions to the Plan, which may require a re-measurement for the changes. Section II contains a summary of the results of the disclosure report.

Methodology

The employee data and financial information used in this valuation were provided by the Company. We have reviewed the information for reasonableness and consistency and have no reason to doubt its substantial accuracy, nor its suitability for this valuation. Please inform us if at any time you have knowledge that the information utilized is not complete or accurate as it may require revisions to previously provided results. Standard actuarial roll-forward techniques were used to adjust liabilities and service costs from the census date to the measurement date and no other adjustments were made. Plan asset information is summarized in Section VI. Census data is summarized in Section VII. The Actuarial Assumptions are summarized in Section VIII. The Plan Provisions are summarized in Section IX.

Actuarial Certification of Assumptions and Methods

This report has been prepared in accordance with generally accepted actuarial principles and practices. The actuarial assumptions were selected by the company subject to the concurrence of its auditors. The accounting calculations in the report are consistent with our understanding of the provisions of FASB ASC 715-30. This report conforms to the Code of Professional Conduct of the American Academy of Actuaries. The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein.

In accordance with ASOP Nos. 27 and 35, each economic and demographic assumption shown in Section VIII of the report reflects the actuary's professional judgment in estimating future experience, takes into account relevant historical and current economic data, has no significant bias, and is reasonable and appropriate for the purpose of the ASC 715-30 financial accounting valuation. Different assumptions may also be reasonable.

SECTION I

ACTUARIAL CERTIFICATION
(continued)

Disclaimers

Valuation results contained herein are based on a snapshot of the Plan at one point in time including assumptions as disclosed. They are not a prediction of the Plan's future accounting requirements which may be significantly different based on the Plan's actual experience including but not limited to economic and participant demographic experience. Ultimately plan costs will be determined by the actual benefits provided and the applicable laws and regulations in effect at the given particular time. Decisions regarding benefit provisions should be made only after careful consideration of a variety of factors and warrant more extensive in-depth analysis.

We are not aware of any substantive commitments for benefits that exceed the benefits defined by the written plans. We are not aware of any significant liability of the Plan, other than for benefits, such as for legal or accounting fees. We are not aware of any significant events subsequent to the current year's measurement date through the date this report, which could materially affect the amounts shown in the report. We have not been notified of any decision to fully or partially terminate the Plan nor are we aware of any other settlements, curtailments, or special terminations during the fiscal year ended December 31, 2015 other than those described in this report. To the best of our knowledge, there is no relationship with the Plan, Plan Sponsor or the Plan Sponsor's employees that would impair or appear to impair the objectivity of our work.

Francis P. Carberry

January 14, 2016

Francis P. Carberry, F.S.A., E.A., M.A.A.A.
Vice President, Senior Consulting Actuary
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Date

Nicole Devoe

January 14, 2016

Peer Review by: Nicole Devoe, A.S.A., E.A., M.A.A.A.
Director, Consulting Actuary
Phone: (508) 903-6014
Email: nicole.devoe@transamerica.com

Date

SECTION II

PRINCIPAL RESULTS

A. Comparative Summary of Disclosure

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Projected benefit obligation	$ 9,177,125	$ 7,965,139
(2)	Fair value of plan assets	0	0
(3)	Funded status	(9,177,125)	(7,965,139)
(4)	Accumulated other comprehensive income	3,567,860	3,177,818
(5)	Net amount recognized	(5,609,265)	(4,787,321)
(6)	Market-related value of assets	0	0
(7)	Final net periodic pension cost	862,257	439,875
(8)	Accumulated benefit obligation	$ 6,975,880	$ 6,257,704
(9)	Discount rate	4.30%	4.00%

B. Comparative Summary of Net Periodic Pension Cost

		Fiscal Year Ending December 31, 2016	Fiscal Year Ending December 31, 2015
(1)	Net periodic pension cost	$ 1,112,151	$ 862,257
(2)	Discount rate	4.30%	4.00%

SECTION III

ASC 715-30 DISCLOSURE

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
A.	**Change in Projected Benefit Obligation**		
(1)	Projected benefit obligation at beginning of year	$ 7,965,139	$ 5,857,424
(2)	Service cost	120,218	56,940
(3)	Interest cost	329,906	272,047
(4)	Participant contributions	0	0
(5)	Plan amendments	608,329	0
(6)	Acquisitions/divestitures	0	0
(7)	Exchange rate changes	0	0
(8)	Curtailment (gain) or loss	0	0
(9)	Settlement (gain) or loss	0	0
(10)	Special termination benefits	0	0
(11)	Benefits paid & administrative expenses	(40,313)	(52,727)
(12)	Settlement payments	0	0
(13)	Actuarial (gain) or loss	193,846	1,831,455
(14)	Projected benefit obligation at end of year	$ 9,177,125	$ 7,965,139
B.	**Change in Plan Assets**		
(1)	Fair value of plan assets at beginning of year	$ 0	$ 0
(2)	Actual return on plan assets	0	0
(3)	Acquisitions/divestitures	0	0
(4)	Employer contributions	40,313	52,727
(5)	Participant contributions	0	0
(6)	Benefits paid	(40,313)	(52,727)
(7)	Settlement payments	0	0
(8)	Administrative expenses	0	0
(9)	Asset transfer	0	0
(10)	Fair value of plan assets at end of year	$ 0	$ 0
C.	**Funded Status at End of Year:** B(10) – A(14)	$ (9,177,125)	$ (7,965,139)

SECTION III

ASC 715-30 DISCLOSURE
(continued)

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
D.	Amounts Recognized in the Statement of Financial Position Consist of:		
	(1) Noncurrent assets	$ 0	$ 0
	(2) Current liabilities	(425,791)	(408,397)
	(3) Noncurrent liabilities	(8,751,334)	(7,556,742)
	(4) Total	$ (9,177,125)	$ (7,965,139)
E.	Amounts Recognized in Accumulated Other Comprehensive Income (AOCI) Consist of:		
	(1) Net (gain) or loss	$ 2,927,238	$ 3,060,130
	(2) Prior service cost	640,622	117,688
	(3) Transition (asset) obligation	0	0
	(4) Accumulated other comprehensive income	$ 3,567,860	$ 3,177,818
F.	Accumulated Benefit Obligation	$ 6,975,880	$ 6,257,704
G.	Components of Net Periodic Pension Cost		
	(1) Service cost	$ 120,218	$ 56,940
	(2) Interest cost	329,906	272,047
	(3) Expected return on plan assets	0	0
	(4) Amortization of transition (asset) or obligation	0	0
	(5) Amortization of prior service cost	85,395	11,209
	(6) Amortization of net (gain) or loss	326,738	99,679
	(7) Curtailment (gain) or loss	0	0
	(8) Settlement (gain) or loss	0	0
	(9) Special termination benefits	0	0
	(10) Net periodic pension cost	$ 862,257	$ 439,875

SECTION III

ASC 715-30 DISCLOSURE
(continued)

H. Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (OCI)

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Net (gain) or loss	$ 193,846	$ 1,831,455
(2)	Prior service cost	608,329	0
(3)	Amortization of net gain or (loss)	(326,738)	(99,679)
(4)	Amortization of prior service cost	(85,395)	(11,209)
(5)	Amortization of transition asset or (obligation)	0	0
(6)	Total recognized in other comprehensive income	390,042	1,720,567
(7)	Total recognized in net periodic benefit cost and OCI	$ 1,252,299	$ 2,160,442

I. Estimated Amortizations from the AOCI into Net Periodic Pension Cost Over the Next Fiscal Year

(1)	Amortization of net (gain) or loss	$ 374,911	$ 338,358
(2)	Amortization of prior service cost	189,257	11,209
(3)	Amortization of transition (asset) or obligation	$ 0	$ 0

SECTION III

ASC 715-30 DISCLOSURE
(continued)

	Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
Weighted-average assumptions used to determine benefit obligations		
Measurement date	December 31, 2015	December 31, 2014
Discount rate	4.30%	4.00%
Rate of compensation increase	3.00%	3.00%
Weighted-average assumptions used to determine net periodic pension cost		
Measurement date	December 31, 2014	December 31, 2013
Discount rate	4.00% and 4.30% from July 31, 2015	N/A
Expected long-term rate of return on plan assets	N/A	3.00%
Rate of compensation increase	3.00%	3.00%

Plan Assets		**Percentage of Plan Assets at December 31**	
Asset Category	**Target Allocation 2016**	**2015**	**2014**
Equity Securities	N/A	N/A	N/A
Debt Securities	N/A	N/A	N/A
Real Estate	N/A	N/A	N/A
Other	N/A	N/A	N/A
Total		N/A	N/A

Cash Flows		
Contributions	Employer	Participants
2014	$ 52,727	$ 0
2015	$ 40,313	$ 0
Expected 2016	$ 425,791	$ 0
Benefit Payments		
2014	$ 52,727	
2015	$ 40,313	
Estimated Future Benefit Payments		
2016	$ 425,791	
2017	$ 420,934	
2018	$ 415,773	
2019	$ 475,291	
2020	$ 468,868	
Years 2021 - 2025	$ 3,027,304	

SECTION IV

RECONCILIATION OF NET AMOUNT RECOGNIZED

		Fiscal Year Ending December 31, 2015	Fiscal Year Ending December 31, 2014
(1)	Net amount recognized at end of prior year	$ (4,787,321)	$ (4,400,173)
(2)	Net periodic pension cost for the fiscal year	862,257	439,875
(3)	Contributions paid during the fiscal year	40,313	52,727
(4)	Net amount recognized at end of current year (1) – (2) + (3)	$ (5,609,265)	$ (4,787,321)

SECTION V

DEVELOPMENT OF PRELIMINARY NET PERIODIC PENSION COST

The following calculations were performed in accordance with the Financial Accounting Standards Board ASC 715-30 and may be used for purposes of reporting pension cost. The net periodic pension cost, as required and calculated under ASC 715-30 will be charged against income, and it will also be disclosed in a footnote to the Company's financial statements.

Actuarial computations under ASC 715-30 are for purposes of fulfilling employer financial accounting requirements. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

A.	Net Periodic Pension Cost	Preliminary Fiscal Year Ending December 31, 2016	Final Fiscal Year Ending December 31, 2015
(1)	Service cost	$ 162,425	$ 120,218
(2)	Interest cost	385,558	329,906
(3)	Expected return on assets	0	0
(4)	Amortization of transition (asset) or obligation from item B	0	0
(5)	Amortization of prior service cost from item C	189,257	85,395
(6)	Recognition of (gain) or loss from item D(13)	374,911	326,738
(7)	Net periodic pension cost: (1) + (2) + (3) + (4) + (5) + (6)	$ 1,112,151	$ 862,257

B. Amortization of Transition (Asset) or Obligation

None.

C. Amortization of Prior Service Cost

Unrecognized Amount December 31, 2015	Remaining Years in Amortization Period	Amount to be Recognized During 2016
$ 4,512	5.00	$ 903
9,961	9.00	1,106
92,006	10.00	9,200
534,143	3.00	178,048
$ 640,622		$ 189,257

SECTION V

DEVELOPMENT OF PRELIMINARY NET PERIODIC PENSION COST
(continued)

D. Development and Recognition of (Gain) or Loss		Fiscal Year Ending December 31, 2016
(1)	Projected benefit obligation	$ 9,177,125
(2)	Fair value of assets	0
(3)	Unrecognized transition (asset) or obligation	0
(4)	Unrecognized prior service cost	640,622
(5)	Net amount recognized	(5,609,265)
(6)	Unrecognized (gain) or loss: (1) – (2) – (3) – (4) + (5)	2,927,238
(7)	(Gain) or loss not reflected in market-related value	
	(a) Fair value of assets	0
	(b) Market-related value of assets	0
	(c) Amount not reflected in market-related value of assets: (a) – (b)	0
(8)	(Gain) or loss subject to amortization: (6) + (7)(c)	2,927,238
(9)	Greater of (1) or (7)(b)	9,177,125
(10)	10% of (9)	917,713
(11)	(Gain) or loss, subject to recognition: excess of absolute value of (8) over (10), not less than zero	$ 2,009,525
(12)	Average future service of plan participants expected to receive benefits	5.36 years
(13)	Amount to recognize for the year: (11) ÷ (12)	$ 374,911

SECTION VI

DEVELOPMENT OF MARKET-RELATED VALUE OF ASSETS

The plan is not funded.

SECTION VII

RECONCILIATION OF PLAN PARTICIPANTS

	Active Plan Members	Plan Members with Deferred Benefits	Plan Members Receiving Benefits	Total Number of Plan Members
As of January 1, 2015	**4**	**0**	**2**	**6**
New entrants	1	N/A	N/A	1
Rehires	0	0	0	0
Terminations with vesting	0	0	N/A	0
Terminations without vesting	0	N/A	N/A	0
Retirements	0	0	0	0
Disability retirements	0	0	0	0
Lump sums paid	0	0	0	0
Deaths	0	0	(1)	(1)
Survivors (with benefits)	N/A	0	0	0
Expiration of benefits	N/A	N/A	0	0
Transfers in	0	N/A	N/A	0
Transfers out	0	0	N/A	0
Adjustments	0	0	0	0
Net change	1	0	(1)	0
As of January 1, 2016	**5**	**0**	**1**	**6**

SECTION VIII

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

A. ACTUARIAL COST METHOD

The actuarial cost method used to calculate the costs and liabilities of the plan is the Projected Unit Credit Actuarial Cost Method. Under this method, the service cost and projected benefit obligation (PBO) are both based on an accrual of projected benefits over the period for which benefits are accrued. The service cost is the actuarial present value of one year's benefit accrual on this basis. The PBO for active participants is the actuarial present value of the projected benefit times the ratio of past service to total service. The PBO for retired and terminated vested participants is equal to the actuarial present value of the accrued benefit.

B. ASSET VALUATION METHOD

There are no assets in the plan.

C. VALUATION PROCEDURES

The valuation is based on employee and financial data provided by the company and trustee, respectively, and summarized in this report. A plan's actuary would not customarily verify this data. We have reviewed the information for internal consistency and we have no reason to doubt its substantial accuracy.

All employees who are participants in the plan on the valuation date are included in the actuarial valuation.

D. ACTUARIAL ASSUMPTIONS (as of December 31, 2015 Measurement Date)

Principal Rates

Discount rate	4.30% (previously, 4.00%). Interim measurement, 4.30% as of July 31, 2015.
Expected long-term rate of return on assets	N/A
Compensation increases	3.00% (unchanged).
IRC maximum benefit and compensation limitation increases	2.50% (unchanged).
Wage base increases	3.00% (unchanged).
401(k) Contribution Rate (Match)	3.00% (unchanged).
401(k) Annuity Conversion Rate	3.00% (unchanged).
401(k) Interest Credit	4.00% (unchanged).

D. ACTUARIAL ASSUMPTIONS *(cont'd)*

IRC Maximum Benefit and Compensation Limitations for Basic Plan Benefit Offset

Benefit Limit	$210,000 for 2015 (unchanged).
Compensation Limit	$265,000 for 2015 (previously, $260,000).
Post-Retirement Mortality	RP-2014 Employee and Healthy Annuitant Tables adjusted back to 2006 and then projected forward with Scale MP-2015 for all years (previously, the RP-2014 Employee and Healthy Annuitant Tables projected with Scale MP-2014 for all years).
401(k) Annuity Conversion Table	1994 Group Annuity Reserving Table 50/50 Blend.
Retirement Age	Age 62 with 15 years of service.
Withdrawal Rates	None assumed.
Disability Rates	None assumed.
Form of payment	Life annuity.

SECTION IX

SUMMARY OF PLAN PROVISIONS

Participation	Employees shall be selected by the Board of Directors for participation in the plan.
Final Average Earnings	Highest three-year average earnings.
Normal Retirement Date (NRD)	First of the month in which participant attains age 65.
Early Retirement Date	First of the month in which participant attains age 55 and completes 15 years of service.
Benefit payable at NRD	60% of Final Average Earnings reduced by the following offsets: (a) Basic Plan Benefit; (b) Other Retirement Income; and (c) Primary Social Security Benefit.
Early Retirement Benefit	Benefit reduced 5% per year for each year prior to age 60.
Offsets	
Basic Plan Benefit	Annual benefit payable from the Unitil Corporation Retirement Plan.
Other Retirement Income	(a) Annual Life Annuity equivalent of account balance attributable to employer contributions made to 401(k) plan (b) Annual Life Annuity benefit payable to a participant from any previous employers
Primary Social Security Benefit	Age 65 Primary Insurance Amount under Social Security.
Termination of Employment	No benefits are payable upon termination prior to retirement eligibility.
Death Benefit	Designated beneficiary shall receive an annuity for life determined in accordance with the surviving spouse benefit provision of the Basic Plan (other than the requirement that such benefit may only be paid to the surviving spouse). Benefit will commence on the later of the date of death or the earliest retirement date the Participant was entitled to benefits at the time of death.

UNITIL CORPORATION
SUPPLEMENTAL EXECUTIVE RETIREMENT PLAN
AS ADOPTED BY UNITIL SERVICE CORP.

(as amended and restated effective December 31, 2007)

Table of Contents

Article 1
PURPOSE AND INTENT

The principal objective of the Unitil Corporation Supplemental Executive Retirement Plan As Adopted By Unitil Service Corp. (the "Plan") is to ensure the payment of a competitive level of retirement income in order to attract, retain and motivate selected executives. The Plan was designed to provide supplements to designated employees which, when combined with other employment related and government sponsored retirement benefits, will provide for the aggregate level of retirement benefits specified herein. The Plan is intended to be "a plan which is unfunded and is maintained by an employer primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees" within the meaning of sections 201(2), 301(a)(3) and 401(a)(1) of ERISA, and shall be interpreted and administered in a manner consistent therewith.

The Plan was originally established and adopted effective January 1, 1987, and was amended and restated effective January 1, 1998. The Plan is hereby amended and restated in its entirety, effective December 31, 2007.

Article 2
DEFINITIONS

Whenever used herein, unless the context clearly indicates otherwise, the following words and phrases shall have the meanings herein specified, and the following definitions shall be equally applicable to both the singular and plural forms of any of the terms herein defined. The masculine pronoun whenever used herein shall include the feminine and neuter genders and the singular number as used herein shall include the plural, and the plural the singular, unless the context clearly indicates a different meaning.

2.1 "Basic Plan" shall mean the Unitil Corporation Retirement Plan as adopted by the Employer.

2.2 "Basic Plan Benefit" shall mean the annual amount of benefit payable from the Basic Plan to a Participant in the form of a straight life annuity.

2.3 "Beneficiary" shall mean the individual designated by the Participant to receive payments upon the death of a Participant in accordance with Article 8.

2.4 "Board of Directors" shall mean the Board of Directors of Unitil Corporation or any successor thereof.

2.5 "Change in Control" shall mean the occurrence of any of the following:

(a) Unitil Corporation receives a report on Schedule 13D filed with the Securities and Exchange Commission pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (hereinafter referred to as the "Exchange Act"), disclosing that any person, group, corporation or other entity is the beneficial owner, directly or indirectly, of twenty-five (25%) percent or more of the outstanding common stock of Unitil Corporation;

(b) any person (as such term is defined in Section 13(d) of the Exchange Act), group, corporation or other entity other than Unitil Corporation or a wholly-owned subsidiary of Unitil Corporation, purchases shares pursuant to a tender offer or exchange offer to acquire any common stock of Unitil Corporation (or securities convertible into common stock) for cash, securities or any other consideration, provided that after consummation of the offer, the person, group, corporation or other entity in question is the beneficial owner (as such term is defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of twenty-five (25%) percent or more of the outstanding common stock of Unitil Corporation (calculated as provided in paragraph (d) of Rule 13d-3 under the Exchange Act in the case of rights to acquire common stock);

(c) the stockholders of Unitil Corporation approve (i) any consolidation or merger of Unitil Corporation in which Unitil Corporation is not the continuing or surviving corporation or pursuant to which shares of common stock of Unitil Corporation would be converted into cash, securities or other property (except where Unitil Corporation shareholders before such transaction will be the owners of more than seventy-five (75%) percent of all classes of voting stock of the surviving entity), or (ii) any sale, lease, exchange or other transfer (in one transaction or a series of related transactions) of all or substantially all the assets of Unitil Corporation; or

(d) there shall have been a change in a majority of the members of the Board of Directors within a twenty-five (25) month period unless the election or nomination for election by the Unitil Corporation stockholders of each new director was approved by the vote of two-thirds of the directors then still in office who were in office at the beginning of the twenty-five (25) month period.

Should the Change in Control be stockholder approval under paragraph 2.5(c) and if the Board of Directors determines the approved transaction will not be completed and is abandoned prior to any termination of the Participant's employment, a Change in Control shall no longer be in effect and the provisions of this Plan shall continue in the effect as if a Change in Control had not occurred.

2.6 "Change in Control Participant" shall have the meaning given to that term in Section 9.1.

2.7 "Early Retirement Date" shall mean the first day of the month in which the Participant has both attained age 55 and completed 15 years of Service (excluding Service completed prior to age 18).

2.8 "Earnings" shall mean, for any calendar year, the Participant's annual salary and any annual cash incentive paid to the Participant in such year (including any amounts that would have been paid but that were deferred by the Participant).

2.9 "Employer" shall mean Unitil Service Corp. and any affiliated employer and any successor company which may continue the Plan.

2.10 "Final Average Earnings" shall mean the highest annual average of any consecutive three years' Earnings of a Participant during such Participant's tenure as an employee with the Employer.

2.11 "Normal Retirement Date" shall mean the first day of the month in which occurs the Participant's 65th birthday.

2.12 "Other Retirement Income" shall mean the retirement income payable to a Participant from the following sources as of the date the Participant's benefits commence under this Plan:

(a) the straight life annuity equivalent of the value of the total contributions, but not including a Participant's salary deferral contributions, made by the Employer under the Unitil Corporation Tax Deferred Savings and Investment Plan on behalf of the Participant during such Participant's employment at the Employer; and

(b) retirement income in the form of a straight life annuity payable to a Participant from any previous employers.

In determining the straight life annuity equivalent under Section 2.12, the following actuarial assumptions shall be used: the interest rate or rates and table used by the Pension Benefit Guaranty Corporation to value immediate annuities (as of the beginning of the calendar year in which the determination is being made) under Section 4062 of the Employee Retirement Income Security Act of 1974.

2.13 "Participant" shall mean an employee of the Employer who is designated by the Board of Directors to participate in the Plan.

2.14 "Plan" shall mean the Unitil Corporation Supplemental Executive Retirement Plan As Adopted By Unitil Service Corp. and as set forth in this document and as may be amended from time to time.

2.15 "Primary Social Security Benefit" shall mean the annual primary insurance amount to which the Participant is entitled or would, upon application therefor, be entitled at the later of age 65 or actual retirement under the provisions of the Federal Social Security Act as in effect on the Participant's termination date assuming that the Participant will have no income after termination which would be treated as wages for purposes of the Social Security Act.

2.16 "Retirement Date" shall mean the first to occur of the Participant's Normal Retirement Date or Early Retirement Date.

2.17 "Service" shall mean a Participant's years of Credited Service as defined in the Basic Plan for benefit calculation purposes, provided that, except as provided in Section 7.2, no Service shall be credited to a Participant subsequent to his termination of Participation pursuant to Section 4.2.

Article 3
ADMINISTRATION

The Plan shall be administered by the Board of Directors. The Board of Directors shall have the authority to interpret the provisions of the Plan and decide all questions and settle all disputes which may arise in connection with the Plan, all in the sole exercise of its discretion. The Board of Directors may establish operative and administrative rules and procedures in connection therewith, provided that such procedures are consistent with the requirements of section 503 of ERISA. All interpretations, decisions and determinations made by the Board of Directors shall be final, conclusive and binding on all persons concerned. No member of the Board of Directors who is a Participant may vote or otherwise participate in any decision or act with respect to a matter relating to himself or his beneficiaries.

Article 4
PARTICIPATION

4.1 Participation. The Participants in the Plan shall be those "management" or "highly compensated" employees within the meaning of sections 201(2), 301(a)(3) and 401(a)(1) of ERISA who shall be employees of the Employer and who shall be selected from time to time by the Board of Directors. Unless selected by the Board of Directors in the sole exercise of its discretion, no employee of the Employer shall have a right to become a Participant in the Plan.

4.2 Termination of Participation. A Participant's participation in the Plan shall end upon his termination of service with the Employer for any reason or his ceasing to be a management or highly compensated employee within the meaning of Sections 201(2), 301(a)(3) and 401(a)(1) of ERISA. In addition, the Board of Directors may terminate an employee's participation in the Plan.

Article 5
ELIGIBILITY FOR BENEFITS

5.1 Eligibility for Retirement Benefits. A Participant shall be eligible to receive a benefit under the Plan if (a) the Participant's employment terminates on or after his Retirement Date or (ii) a Change in Control has occurred. Benefits shall be determined in accordance with Article 6 or Article 9, as the case may be, and shall commence in accordance with Article 7.

5.2 Eligibility for Pre-Retirement Death Benefits. The Beneficiary of each Participant who dies before commencement of benefits pursuant to Section 7.1 or Section 7.2, as the case may be, but after either (a) a Change in Control or (b) completing at least five years of Service shall be eligible to receive the benefit described in Article 8.

5.3 Termination Prior to Retirement. Except as otherwise provided in Section 5.2 and Article 9, no benefits are payable under the Plan if a Participant's employment terminates for any reason, including death, prior to the Participant's Retirement Date.

Article 6
AMOUNT AND FORM OF RETIREMENT BENEFITS

6.1 Amount of Benefit. The annual retirement benefit payable to a Participant under the Plan whose termination of employment occurs on or after his Normal Retirement Date shall equal 60% of such Participant's Final Average Earnings reduced, but not below zero, by the sum of (a), (b) and (c) where

(a) equals the Basic Plan Benefit;

(b) equals the Other Retirement Income; and

(c) equals the Primary Social Security Benefit.

6.2 Early Retirement Benefit. The annual retirement benefit payable to a Participant under the Plan whose termination of employment occurs on or after his Early Retirement Date shall be determined in accordance with the provisions of Section 6.1 but shall be reduced by 5/12 of 1% for each full calendar month that the Participant's termination of employment precedes the month in which occurs the Participant's 60th birthday.

6.3 Form of Benefit. The retirement benefits determined under this Article 6 shall be payable as a monthly annuity for the life of a Participant unless the Participant has elected to receive reduced benefits in an optional form of payment.

The optional forms of payment available for election by a Participant under the Plan shall be the same as those provided under the Basic Plan, provided that any such election shall be made prior to the Participant's termination of employment. However, the Participant may not elect a form of payment under the Plan different from the form of payment made to him under the Basic Plan. If an optional form of payment is elected, the benefits payable shall be the actuarial equivalent of the

Participant's retirement benefits under the Plan. In determining actuarial equivalence, the actuarial reduction factors set forth in the Basic Plan used to convert a straight life annuity to an optional form of payment shall be used under the Plan.

Article 7
PAYMENT OF RETIREMENT BENEFITS

7.1 Termination on or after Retirement Date. Except as otherwise provided in Section 7.2 and Articles 8 and 12, all benefits payable under the Plan shall commence on the date of the Participant's termination of employment. Benefits will continue to be paid on the first day of each succeeding month. The last payment will be on the first day of the month in which the retired Participant dies unless the Participant has elected an optional form of payment in accordance with Section 6.3.

7.2 Termination before Retirement Date after a Change in Control. Except as otherwise provided in Articles 8 and 12, benefits payable to a Change in Control Participant pursuant to Article 9 shall commence on the earlier to occur of the following: (i) the date the Change in Control Participant could have received benefits under Section 6.1 or (ii) the date the Change in Control Participant could have received benefits under Section 6.2, as the case may be, determined by assuming the Change in Control Participant had remained employed and continued to accrue additional years of Service after the date of employment termination. Benefits will continue to be paid on the first day of each succeeding month. The last payment will be on the first day of the month in which the retired Change in Control Participant dies unless the Change in Control Participant has elected an optional form of payment in accordance with Section 6.3. For avoidance of doubt, if a Participant's employment terminates on or after the Participant's Retirement Date, the Participant's benefits shall be determined pursuant to Article 6 and shall be paid pursuant to Section 7.1, whether or not a Change in Control has occurred.

Article 8
DEATH BENEFIT

8.1 Amount. A Beneficiary described in Section 5.2 shall receive an annuity for life determined in accordance with the surviving spouse benefit provision of the Basic Plan (other than the requirement that such benefit may only be paid to the surviving spouse) and the relevant provisions of Article 6 or, after a Change in Control, Article 9.

8.2 Commencement. The benefit described in Section 8.1 shall commence as of the first day of the month following the later of (1) the date the Participant dies or (2) the Participant's Retirement Date.

Article 9
CHANGE IN CONTROL

9.1 Eligibility for Change in Control Benefits. Notwithstanding anything contained herein to the contrary, if a Change in Control occurs, Participants in the Plan as of the date of the Change in Control shall be entitled to receive benefits determined in accordance with this Article 9 if the Participant's employment terminates prior to the Participant's Retirement Date (a "Change in Control Participant").

9.2 Amount of Change in Control Benefit. A Change in Control Participant's benefit payable pursuant to this Article 9 shall be determined in accordance with the provisions of (a) Section 6.1 if, pursuant to Section 7.2, the Change in Control Participant's benefits commence on the first date the Participant could have received benefits under Section 6.1 or (b) Section 6.2, if, pursuant to Section 7.2, the Change in Control Participant's benefits commence on the first date the Participant could have received benefits under Section 6.2.

9.3 Payment of Change in Control Benefit. A Change in Control Participant's benefits shall be paid in accordance with Section 7.2.

Article 10
FORFEITURE OF BENEFITS

Notwithstanding anything herein to the contrary, if a Participant or Beneficiary who is receiving, or may be entitled to receive, a benefit hereunder engages in competition with the Employer or any affiliated employer (without prior authorization of the Board of Directors) or is discharged for cause, or performs acts of willful malevolence or gross negligence in a matter of material importance to the Employer or any affiliated employer, payments thereafter payable hereunder to such Participant or Beneficiary shall, at the discretion of the Board of Directors, be forfeited and the Employer shall have no further obligation hereunder to such Participant or Beneficiary.

Article 11
NATURE OF CLAIM FOR PAYMENTS

Benefits under the Plan shall be paid from the general assets of the Employer (which term, solely for the purposes of this Article 11, shall mean the Employer or any affiliated employer). The Plan shall be administered as an unfunded plan which is not intended to meet the qualification requirements of section 401 of the Internal Revenue Code of 1986, as amended (the "Code"). Neither a Participant nor his Beneficiary shall be entitled to receive any payment for benefits under the Plan from the qualified trust maintained for the Basic Plan. Should the Board of Directors elect to insure the Plan, in whole or in part, through the medium of life insurance or annuities, or both, the Employer shall be the owner and beneficiary of any insurance or annuity contracts. The Employer reserves the absolute right, in its sole discretion, to terminate such life insurance or annuities, as well as any other program, at any time, either in whole or in part. At no time shall the Participant be deemed to have any right, title, or interest in or in any specified asset or assets of the Employer, including, but not by way of restriction, any insurance or contract or contracts or the proceeds therefrom. Any such policy shall not in any way be considered to be security for the performance of the obligations of the Employer under the Plan. If the Employer decides to purchase a life insurance or annuity policy on the life of the Participant, he shall sign any papers that may be required for that purpose and undergo any medical examination or tests which may be necessary.

Article 12
CODE SECTION 409A

The provisions of the Plan and all payments made pursuant to the Plan are intended to comply with, and should be interpreted so that they are consistent with, the requirements of Section 409A of the Code, and any related regulations or other applicable guidance promulgated thereunder (collectively, "Section 409A"). If the Participant is a "specified employee," as determined under the Employer's policy for determining specified employees, on the date on which the Participant's termination of employment occurs, the Participant's benefits shall not be paid or commence until the first business day after the date that is six months following the Participant's termination of employment or, if the Participant dies during such six month period, on the first business day after the date of the Participant's death. The first payment that can be made shall include the cumulative amount of any amounts that could not be paid during such six-month period. In addition, interest will accrue at the Federal short-term rate determined under Section 1274(d) of the Code (as in effect on the date of the separation from service or, if such date is not a business day, the first business day prior to such date) on all payments not paid to the Participant prior to the first business day after the sixth month anniversary of termination of employment that otherwise would have been paid during such six-month period had this delay provision not applied to the Participant and shall be paid with the first payment after such six-month period. For all purposes under the Plan, references to termination of employment or words of similar import shall be interpreted to mean "separation from service," as that term is used in Section 409A, and the Participant's employment shall in no event be deemed to have terminated unless and until a separation from service shall have occurred for purposes of Section 409A.

Article 13
NO ASSIGNMENT OR ALIENATION

The interest hereunder of any Participant or Beneficiary shall not be alienable by the Participant or Beneficiary by assignment or any other method and shall not be subject to be taken by his creditors by any process whatsoever, and any attempt to cause such interest to be so subjected shall not be recognized, except to such extent required by law.

Article 14
NO CONTRACT OF EMPLOYMENT

The Plan shall not be deemed to constitute a contract of employment between the Employer and any Participant, or to be consideration for the employment of any Participant. Neither the action of establishing the Plan for the Employer nor any action taken by or on behalf of the Employer or by the Board of Directors under the provisions hereof, nor any provision of the Plan, shall be construed as giving to any Participant the right to be retained in its employ or any right to any payment whatsoever except to the extent of the benefits provided for by the Plan. The Employer expressly reserves its right at any time to dismiss any Participant without liability for any claim against the Employer or for any claim for any payment whatsoever, except to the extent provided for in the Plan.

Article 15
AMENDMENT

The Plan may be altered, amended or revoked in writing by the Board of Directors at any time; provided, however, that no such alteration, amendment or revocation that adversely affects a Participant's or Beneficiary's vested benefits under the Plan shall be made without the prior written consent of the Participant or Beneficiary so affected.

Article 16
GOVERNING LAW

The Plan shall be governed and construed in accordance with the laws of the State of New Hampshire except to the extent preempted by federal law.

Article 17
SUCCESSORS

The provisions of the Plan shall bind and inure to the benefit of the Employer and its successors and assigns. The term successors as used herein shall include any corporate or other business entity which shall, whether by merger, consolidation, purchase or otherwise acquire all or substantially all of the business and assets of the Employer, and successors of any such corporation or other business entity.

Received: September 14, 2016 Date of Response: September 26, 2016
Request No. September 8,9 Technical Session 1-13 Witness: George Long

Request:

Please provide a summary of the SERP research of the proxies of the peer utility group conducted by the Company and explain how this research supports the proposed SERP.

Response:

Attached as September 8,9 Technical Session 1-13 Attachment 1 is the research of SERP benefits provided to executives by Unitil's 14 proxy peer companies.

During 2016, Unitil researched the proxy statements for all 14 of its peer companies. All 14 of these peer companies sponsor a SERP, and of these, 12 sponsor a defined benefit SERP which is similar to Unitil's defined benefit SERP. The remaining two companies sponsor defined contribution SERPs which supplement their defined contribution retirement plans. This research provided the Company with evidence that the SERP is a commonly-provided benefit for executives and that our current SERP appears to be reasonable in design.

Supplemental Executive Retirement Plans at Proxy Peer Companies - 2016

	Plan Summary	Comp Definition
ALLETE	No Defined Benefit (DB) SERP, only Defined Contribution (DC) SERP	Not Applicable
Black Hills	DB SERP to make up for IRS limits.	Salary + Bonus; highest 5 consecutive year average out of the last 10 years prior to retirement
Chesapeake Utilities	DB SERP to make up for IRS limits.	Salary + Bonus; highest 60 consecutive month average out of the last 120 months prior to retirement
Cleco	DB SERP, 1% per year of age to 45, 2% per year of service after age 45, max 65% of final average pay, offset by pension, 401(k), and other companies' pension benefits	Highest annual salary plus average of the 3 highes bonuses paid
El Paso Electric	DB SERP to make up for IRS limits, includes bonuses in average pay.	Final 5-year average pay & bonuses prior to retirement
Empire District Electric	DB SERP to make up for IRS lmiits.	Salary + Bonus + Stock; highest 5 consecutive years in final 10
IDACORP	DB SERP, 5% per YOS up to 10 years plus 1% per YOS for next 15 years, 65% max offset by pension.	Salary + Bonus; highest 5 consecutive years in final 10
ITC Holdings	DB SERP, 2.4% per YOS up to 25 years plus 1/2% for each year over 25. Offset by other retirement plans.	One fifth of annual average looking at highest 260 weeks of pay (including all bonus weeks)
MGE Energy	DB SERP up to 70% of final average pay, less pension benefit.	Salary + Bonus; 60 months of earnings prior to retirement
Northwest Natural Gas	DB SERP, 4.33% per year for first 15 YOS plus 1/2% per year for next 10 YOS (max 70% at 25 YOS). Offset by pension benefit, SS benefit, supplemental annuity benefit from deferred comp plan.	Salary + Bonus (bonus limited to 125% of Target); highest 5 consecutive years
Otter Tail	DB SERP up to 65% or 70% of final average pay, offset by pension and SS benefits.	Salary + Bonus; highest 42 consecutive months
PNM Resources	No DB SERP, only DC	Not Applicable
South Jersey Industries	DB SERP, 2% per year for 30 years plus 5% -- max 65% of final average pay. Offset by pension and 401(k).	Salary + Bonus; highest 3 non-consecutive years of the last 6 years
UIL Holdings	DB SERP to make up for IRS limits.	Salary + Bonus; highest 36 consecutive month average
Unitil	DB SERP; 60% Target Benefit offset by pension, SS benefits, 401(k) Match and other companies' pensions	Salary + Bonus; highest 3 consecutive years

Received: October 19, 2016 | Date of Response: November 2, 2016
Request No. Staff 10-9 | Witness: George Long

Request

Reference Tech Session 1-11, Attachment 1, page 1. According to the SERP Plan, the purpose and intent is to ensure the payment of a competitive level of retirement income in order to attract, retain and motivate selected executives.

a) Does the SERP plan compensate key executives if certain agreed upon performance based conditions are met? Please provide examples of some of these key conditions.

b) Do the SERP plan reward key executives who make important business decisions that have an impact on financial measurements such as earnings per share? Please explain.

c) What specific benefits do ratepayers receive from the expenditures incurred to fund SERP?

Response:

a) The SERP plan is a retirement program and is not tied to performance metrics. The benefits from the SERP are based solely on compensation earned by the Executive during their active employment years and years of service.

b) The SERP plan is a retirement plan and does not directly reward key executives for attainment of financial results. The benefits from the SERP are based solely on compensation earned by the Executive during their active employment years and years of service.

c) As stated by this question (above), the purpose of the SERP is to attract and retain selected executives. Because the federal government imposes severe limits on qualified pension benefits for highly compensated executives, non-qualified supplemental pension benefits such as a SERP are a standard component of compensation in the marketplace for executive talent. The Company would be unable to recruit senior

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Request No. Staff 10-9 Witness: George Long

executives without some sort of supplemental retirement benefits. Ratepayers receive the benefits of expert and experienced management resulting in excellence in utility operations and customer service.

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Request No. Staff 10-8 Witness: George Long

Request

Reference SERP Actuarial Report, January 14, 2016, page 9 and page 12 and Staff 8-15. These references show the SERP expenses that will be charged against income and included in rates.

a) In 2015, there were 6 participants and the SERP expenses were $862,257. Is that correct?

b) In 2016, there were 7 participants (including 1 who died during the year) and the SERP expenses are estimated be $2,393,555. Is that correct?

c) As more replacements are added, alongside existing participants and retirees, is it reasonable to assume that the total number of participants will continue to increase each year and the overall SERP expenses will continue to increase each year? Please include in your response the estimated increase over the next 5 years.

Response:

a) In 2015, we started the year with 6 participants (4 active employees and 2 retired participants). During 2015 one retired participant died and one active participant was added. The total 2015 SERP expense was $862,257. Unitil Energy Systems share of this expense is $174,402, net of capitalization (see Staff 8-10).

b) No. This is not correct. In 2016 there were 6 participants – 5 active employees and 1 retired participant. As shown in Staff 8-15 Attachment 1 (revised), the total 2016 SERP expense is estimated at $1,112,151. Unitil Energy Systems share of this expense is $224,945, net of capitalization.

c) As stated in Staff 10-1 (c), the SERP Plan is closed to new hires. The only way for the total number of participants to increase would be if an executive who is also a participant in the Unitil Corporation Retirement Plan is promoted to one of the top 5 senior executive positions, and if the Board of Directors approves the participant's membership in the SERP. Otherwise, it would be reasonable to assume that

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Request No. Staff 10-8 Witness: George Long

SERP expenses will remain fairly stable depending on discount rate changes, wage and salary changes, mortality rates and retirement dates.

Received: August 4, 2016 | Date of Response: August 18, 2016
Request No. Staff 7-5 | Witness: David L. Chong

Request

Reference Mr. Closson's testimony, page 7 of 8, line 18, page 075. Please explain in detail how customer payments to the company will be accounted for as contribution-in-aid of construction (CIAC). Please include in your response reference to the section of FERC's Uniform System of Accounts for electric utilities, Part 101 of Title 18 of the CFR, that supports this accounting.

Response:

Any payments received in aid of construction will be applied to the construction project and ultimately reduce Plant In Service.

FERC's Uniform System of Accounts for electric utilities, Part 101 of Title 18, Electric Plant Instructions, 2. Electric Plant To Be Recorded at Cost, D.: The electric plant accounts shall not include the cost or other value of electric plant contributed to the company. Contributions in the form of money or its equivalent towards the construction of electric plant shall be credited to accounts charged with the cost of such construction. Plant constructed from contribution of cash or its equivalent shall be shown as a reduction to gross plant constructed when assembling cost data in work orders for posting to plant ledgers of accounts. The accumulated gross costs of plant accumulated in the work order shall be recorded as a debit in the plant ledger of accounts along with the related amount of the contributions concurrently being recorded as a credit.