

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
WORKPAPERS SUPPORTING REVENUE REQUIREMENT
12 MONTHS ENDED DECEMBER 31, 2020**

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	2019 Base	2019 Flowthru	Total	2020 Base	2020 Flowthru	Total
OPERATING REVENUES						
Sales:						
Residential (480)	19,612,987	14,904,240	34,517,227	19,232,153	10,809,182	30,041,335
General Service (481)	11,028,771	17,278,063	28,306,834	10,623,702	11,698,198	22,321,900
Firm Transport Revenues (484, 489) (External Sup)	8,612,979	1,216,889	9,829,867	8,583,266	1,156,548	9,739,814
Sales for Resale (483)	-	2,870,979	2,870,979	-	1,107,459	1,107,459
Other Sales (495)	236,169	(3,751,608)	(3,515,439)	(201,864)	2,446,481	2,244,617
Total Sales	39,490,906	32,518,563	72,009,468	38,237,257	27,217,869	65,455,125
Other Operating Revenues:						
Late Charge (487)	76,773	-	76,773	36,761	-	36,761
Misc. Service Revenues (488)	875,755	-	875,755	852,304	-	852,304
Rent from Property (493 & 457)	200,952	-	200,952	218,628	-	218,628
Other Revenues	-	(311,587)	(311,587)	-	120,656	120,656
Total Other Operating Revenues	1,153,480	(311,587)	841,893	1,107,692	120,656	1,228,348
TOTAL OPERATING REVENUES	40,644,386	32,206,975	72,851,361	39,344,949	27,338,525	66,683,473
OPERATING EXPENSES						
Operation & Maint. Expenses:						
Production (710-813)	477,446	27,749,285	28,226,731	449,736	23,095,124	23,544,860
Transmission (850-857)	72,713	-	72,713	63,829	-	63,829
Distribution (870-894) (586)	3,509,448	-	3,509,448	3,733,377	-	3,733,377
Cust. Accounting (901-905)	2,580,251	188,507	2,768,758	2,508,645	99,544	2,608,189
Cust. Service & Info (906-910)	71,870	2,247,505	2,319,375	73,074	2,268,632	2,341,706
Sales Expenses (911-916)	64,467	-	64,467	69,178	-	69,178
Admin. & General (920-935)	7,607,751	71,540	7,679,291	6,682,552	58,225	6,740,777
Total O & M Expenses	14,383,947	30,256,837	44,640,784	13,580,391	25,521,524	39,101,915
Other Operating Expenses:						
Deprtn. & Amort. (403-407)	8,884,559	120,384	9,004,943	9,693,559	(0)	9,693,559
Taxes-Other Than Inc. (408)	4,306,298	-	4,306,298	4,867,774	-	4,867,774
Federal Income Tax (409)	52,380	-	52,380	(30,211)	-	(30,211)
State Franchise Tax (409)	(309,547)	-	(309,547)	(384,644)	-	(384,644)
Def. Income Taxes (410,411)	2,975,683	-	2,975,683	2,600,179	-	2,600,179
Total Other Operating Expenses	15,909,373	120,384	16,029,757	16,746,657	(0)	16,746,657
TOTAL OPERATING EXPENSES	30,293,320	30,377,221	60,670,541	30,327,047	25,521,524	55,848,571
NET UTILITY OPERATING INCOME	10,351,066	1,829,755	12,180,820	9,017,901	1,817,001	10,834,902
OTHER INCOME & DEDUCTIONS						
Other Income:						
AFUDC - Other Funds (41901)	-	-	-	-	-	-
Other (415- 421)	280,289	(37,502)	242,787	231,700	(25,362)	206,339
Other Income Deduc. (425, 426)	232,636	-	232,636	151,744	-	151,744
Taxes Other than Income Taxes:						
Income Tax, Other Inc & Ded	2,752	-	2,752	14,786	-	14,786
Net Other Income (Deductions)	44,901	(37,502)	7,400	65,170	(25,362)	39,809
GROSS INCOME	10,395,967	1,792,253	12,188,220	9,083,072	1,791,639	10,874,711
Interest Charges (427 - 432)	4,670,265	3,717	4,673,982	4,777,155	1,286	4,778,441
NET INCOME	5,725,702	1,788,536	7,514,238	4,305,917	1,790,353	6,096,270

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	Commodity Demand COG	Working Capital	Bad Debt	Residential Low Income Assistance	Energy Efficiency	Environ Response Costs	Rate Case Exp	Recoup	Lost Revenue	On-Bill Financing	Total Flowthru	Total Base	Total New Hampshire Division	Cost of Gas Total	LDAC Flowthrough Total
OPERATING REVENUES															
Sales:															
Residential (480)	\$ 9,402,656	\$ 6,775	\$ 66,784	\$ 15,479	\$ 977,734	\$ 103,733	\$ 0	\$ (0)	\$ 236,021	\$ -	\$ 10,809,182	\$ 19,232,153	\$ 30,041,335	\$ 9,476,216	\$ 1,332,967
General Service (481)	10,833,043	7,005	75,810	77,272	542,605	119,301	(25)	11	43,177	-	11,698,198	10,623,702	22,321,900	10,915,858	782,341
Firm Transport Revenues (484, 489) (External Sup)	-	-	-	114,130	802,535	175,875	25	(11)	63,995	-	1,156,548	8,583,266	9,739,814	0	1,156,548
Sales for Resale (483)	1,107,459	-	-	-	-	-	-	-	-	-	1,107,459	-	1,107,459	1,107,459	-
Other Sales (495)	2,291,577	11,582	(43,051)	115,868	41,657	-	-	-	15,896	12,952	2,446,481	(201,864)	2,244,617	2,260,108	186,373
Total Sales	23,634,735	25,362	99,544	322,748	2,364,531	398,908	(0)	-	359,089	12,952	27,217,869	38,237,257	65,455,125	23,759,640	3,458,228
Other Operating Revenues:															
Late Charge (487)	-	-	-	-	-	-	-	-	-	-	-	36,761	36,761	-	-
Misc. Service Revenues (488)	-	-	-	-	-	-	-	-	-	-	-	852,304	852,304	-	-
Rent from Property (493 & 457)	-	-	-	-	-	-	-	-	-	-	-	218,628	218,628	-	-
Other Revenues	120,656	-	-	-	-	-	-	-	-	-	120,656	-	120,656	120,656	-
Total Other Operating Revenues	120,656	-	-	-	-	-	-	-	-	-	120,656	1,107,692	1,228,348	120,656	-
TOTAL OPERATING REVENUES	23,755,391	25,362	99,544	322,748	2,364,531	398,908	(0)	-	359,089	12,952	27,338,525	39,344,949	66,683,473	23,880,296	3,458,228
OPERATING EXPENSES															
Operation & Maint. Expenses:															
Production (710-813)	22,696,215	-	-	-	-	398,908	-	-	-	-	23,095,124	449,736	23,544,860	22,696,215	398,908
Transmission (850-857)	-	-	-	-	-	-	-	-	-	-	-	63,829	63,829	-	-
Distribution (870-894) (586)	-	-	-	-	-	-	-	-	-	-	-	3,733,377	3,733,377	-	-
Cust. Accounting (901-905)	-	-	99,544	-	-	-	-	-	-	-	99,544	2,508,645	2,608,189	99,544	-
Cust. Service & Info (906-910)	-	-	-	-	2,255,679	-	-	-	-	12,952	2,268,632	73,074	2,341,706	(0)	2,268,632
Sales Expenses (911-916)	-	-	-	-	-	-	-	-	-	-	-	69,178	69,178	-	-
Admin. & General (920-935)	-	-	-	58,225	-	-	-	-	-	-	58,225	6,682,552	6,740,777	-	58,225
Total O & M Expenses	22,696,215	-	99,544	58,225	2,255,679	398,908	-	-	-	12,952	25,521,524	13,580,391	39,101,915	22,795,759	2,725,765
Other Operating Expenses:															
Deprtn. & Amort. (403-407)	-	-	-	-	-	-	(0)	-	-	-	(0)	9,693,559	9,693,559	-	(0)
Taxes-Other Than Inc. (408)	-	-	-	-	-	-	-	-	-	-	-	4,867,774	4,867,774	-	-
Federal Income Tax (409)	-	-	-	-	-	-	-	-	-	-	-	(30,211)	(30,211)	-	-
State Franchise Tax (409)	-	-	-	-	-	-	-	-	-	-	-	(384,644)	(384,644)	-	-
Def. Income Taxes (410,411)	-	-	-	-	-	-	-	-	-	-	-	2,600,179	2,600,179	-	-
Total Other Operating Expenses	-	-	-	-	-	-	(0)	-	-	-	(0)	16,746,657	16,746,657	-	(0)
TOTAL OPERATING EXPENSES	22,696,215	-	99,544	58,225	2,255,679	398,908	(0)	-	-	12,952	25,521,524	30,327,047	55,848,571	22,795,759	2,725,765
NET UTILITY OPERATING INCOME	1,059,176	25,362	-	264,523	108,852	-	-	-	359,089	-	1,817,001	9,017,901	10,834,902	1,084,537	732,463
OTHER INCOME & DEDUCTIONS															
Other Income:															
Other (415- 421)	-	(25,362)	-	-	-	-	-	-	-	-	(25,362)	231,700	206,339	(25,362)	-
Other Income Deduc. (425, 426)	-	-	-	-	-	-	-	-	-	-	-	151,744	151,744	-	-
Taxes Other than Income Taxes:															
Income Tax, Other Inc & Ded	-	-	-	-	-	-	-	-	-	-	-	14,786	14,786	-	-
Net Other Income (Deductions)	-	(25,362)	-	-	-	-	-	-	-	-	(25,362)	65,170	39,809	(25,362)	-
GROSS INCOME	1,059,176	-	-	264,523	108,852	-	-	-	359,089	-	1,791,639	9,083,072	10,874,711	1,059,176	732,463
Interest Charges (427 - 432)	1,286	-	-	-	-	-	-	-	-	-	1,286	4,777,155	4,778,441	1,286	-
NET INCOME	\$ 1,057,890	\$ -	\$ -	\$ 264,523	\$ 108,852	\$ -	\$ -	\$ -	\$ 359,089	\$ -	\$ 1,790,353	\$ 4,305,917	\$ 6,096,270	\$ 1,057,890	\$ 732,463

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
COST OF GAS OPERATING INCOME STATEMENT
12 MONTHS ENDED DECEMBER 31, 2020

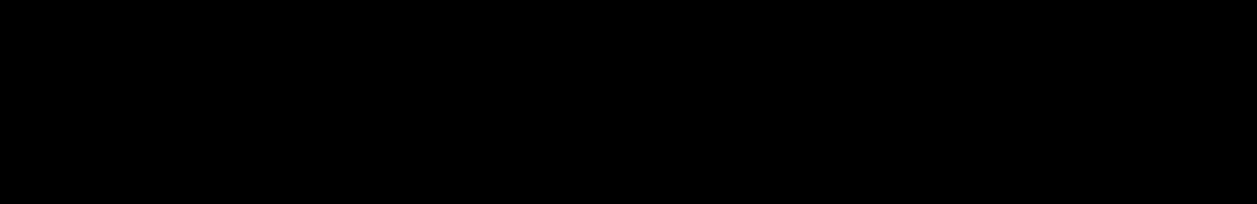
Workpaper - Cost of Gas
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	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	TEST YEAR COST OF GAS	LESS: INDIRECT PRODUCTION & O.H.	COST OF GAS EXCL. PROD. & O.H.
	OPERATING REVENUES			
1	TOTAL SALES	23,759,640	1,057,890	22,701,750
2	TOTAL OTHER OPERATING REVENUES	120,656	-	120,656
3	TOTAL OPERATING REVENUES	23,880,296	1,057,890	22,822,406
	OPERATING EXPENSES:			
4	PRODUCTION	22,696,215	-	22,696,215
5	TRANSMISSION	-	-	-
6	DISTRIBUTION	-	-	-
7	CUSTOMER ACCOUNTING	99,544	-	99,544
8	CUSTOMER SERVICE	(0)	-	(0)
9	SALES EXPENSE	-	-	-
10	ADMINISTRATIVE & GENERAL	-	-	-
11	DEPRECIATION	-	-	-
12	AMORTIZATIONS	-	-	-
13	TAXES OTHER THAN INCOME	-	-	-
14	FEDERAL INCOME TAX	-	-	-
15	STATE INCOME TAX	-	-	-
16	DEFERRED FEDERAL & STATE INCOME TAXES	-	-	-
17	INTEREST ON CUSTOMER DEPOSITS	-	-	-
18	TOTAL OPERATING EXPENSES	22,795,759	-	22,795,759
19	NET OPERATING INCOME	1,084,537	1,057,890	26,647

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
SPECIAL CONTRACT REVENUE ADJUSTMENT - CUSTOMER 1
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 1.1
REDACTED
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Confidential Special Contract Rates
Effective March 1, 2021



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2016
Meters	1	1	1	1	1	1	1	1	1	1	1	1	12
Customer Charge	A large black rectangular redaction box covering the entire data area of the table.												
Customer Charge Revenue													
Monthly Fixed Charge for First 200,000 Therms or Less													
Therms - First Step													
Consumption Charge - First Step													
Excess (1) - For Gas Use between 200,000 and 300,000 Therms													
Therms - Excess (1)													
Consumption Charge - Excess (1)													
Consumption Charge Revenue - Excess (1)													
Excess (2) - For Gas Use between 300,000 and 400,000 Therms													
Therms - Excess (2)													
Consumption Charge - Excess (2)													
Consumption Charge Revenue - Excess (2)													
Excess (3) - For Gas Use Over 400,000 Therms													
Therms - Excess (3)													
Consumption Charge - Excess (3)													
Consumption Charge Revenue - Excess (3)													
2021 Proforma Revenue													
Less: 2020 Actual Revenue													
Net Revenue Adjustment													

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
SPECIAL CONTRACT REVENUE ADJUSTMENT - CUSTOMER 2
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 1.2
REDACTED
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Confidential Special Contract Rates
Effective December 1, 2020

[REDACTED]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2016
Meters	1	1	1	1	1	1	1	1	1	1	1	1	12
Customer Charge	[REDACTED]												
Customer Charge Revenue													
Therms													
Consumption Charge													
Consumption Charge Revenue													
2021 Proforma Revenue													
Less: 2020 Actual Revenue													
Net Revenue Adjustment													

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
UNION PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 2.1
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LINE NO.	(1)		(2)	
	DESCRIPTION		TOTAL	
1	Payroll - Five Months Ended May 31, 2020		\$ 1,902,372	
2	2020 Salary & Wage Increase ⁽¹⁾		3.00%	
3	Union Payroll Annualization		<u>\$ 57,071</u>	

Notes

(1) Average Union increase of 3% effective June 1, 2020

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
UNION AND NONUNION PAYROLL/COMPENSATION ⁽¹⁾
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 2.2
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LINE NO.	(1)		(2)	
	DESCRIPTION		TOTAL	
1	Union Weekly Payroll ⁽¹⁾		\$ 3,475,844	
2	Total Nonunion Payroll ⁽¹⁾		<u>946,912</u>	
3	Total Payroll ⁽²⁾		<u>4,422,757</u>	
4	Payroll Capitalization ⁽³⁾		<u>(2,058,097)</u>	
5	Test Year O&M Payroll		<u>\$ 2,364,660</u>	

Notes

(1) Payroll Allocation to Union and Non-Union based on ADP 2020 Year End Payroll Registers

(2) Includes Incentive Compensation at Target of \$58,992

(3) Refer to Workpaper 2.3

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
PAYROLL SUMMARY
FOR COMPUTATION OF PAYROLL BENEFIT RELATED OVERHEADS

Workpaper 2.3
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(1)		(2)
LINE NO.	DESCRIPTION	2020 INCENTIVE COMP AT TARGET
1	O&M PAYROLL:	
2	OPERATIONS	1,325,952
3	MAINTENANCE	168,179
4	TOTAL O&M PAYROLL	1,494,131
5	CONSTRUCTION PAYROLL:	
6	DIRECT	687,402
7	INDIRECT	1,007,550
8	TOTAL CONSTRUCTION PAYROLL	1,694,952
9	OTHER PAYROLL:	
10	JOBGING	18,867
11	CLEARING ACCOUNTS	193,033
12	UNPRODUCTIVE TIME	165,091
13	MOBILE DATA SYSTEMS (MDS)	816,759
14	INCENTIVE COMPENSATION at TARGET	58,992
15	OTHER	23,646
16	TOTAL OTHER PAYROLL	1,276,387
17	TOTAL PAYROLL	4,465,470
18	O&M PAYROLL:	
19	OPERATIONS	1,325,952
20	MAINTENANCE	168,179
21	ALLOCATED CLEARING	54,513
22	ALLOCATED UNPRODUCTIVE	26,415
23	ALLOCATED MDS	780,163
24	ALLOCATED INCENTIVE COMPENSATION	9,439
25	TOTAL O&M PAYROLL	2,364,660
26	CONSTRUCTION PAYROLL:	
27	DIRECT	687,402
28	INDIRECT	1,007,550
29	ALLOCATED CLEARING	138,521
30	ALLOCATED UNPRODUCTIVE	138,676
31	ALLOCATED MDS	36,395
32	ALLOCATED INCENTIVE COMPENSATION	49,553
33	TOTAL CONSTRUCTION PAYROLL	2,058,097
34	TOTAL PAYROLL, NET OF OTHER PAYROLL	4,422,757
35	TOTAL OTHER PAYROLL:	
36	JOBGING	18,867
37	BELOW THE LINE MDS	201
38	OTHER	23,646
39	TOTAL OTHER PAYROLL	42,713
40	TOTAL PAYROLL, WITH INCENTIVE COMP ADJ TO TARGET	4,465,470

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
PAYROLL - INCENTIVE COMPENSATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 2.4
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LINE NO.	(1) Description	(2) Amount
1	<u>Northern Utilities, Inc. Payroll:</u>	
2	Adjustment to reflect Incentive Compensation at Target	
3	Test Year Accrued Incentive Compensation	\$ 58,992
4	Incentive Compensation at Target	<u>58,992</u>
5	Test Year Accounting Adjustment to reflect Incentive Compensation at Target	-
6	Capitalized Incentive Compensation at	84.00% <u>-</u>
7	Test Year Incentive Comp Accounting Adjustment to O&M	<u>-</u>
8	<u>USC Payroll, Allocated to Northern Utilities, Inc. - NH Division:</u>	
9	Adjustment to reflect Incentive Compensation at Target	
10	Test Year Accrued Incentive Compensation at USC	3,412,143
11	Test Year Accrued Incentive Compensation Percentage Billed to NuNH In 2020	20.18% 688,571
12	Incentive Compensation at Target	<u>688,571</u>
13	Test Year Accounting Adjustment to reflect Incentive Compensation at Target	-
14	Capitalized Incentive Compensation at	32.52% <u>-</u>
15	Test Year Incentive Comp Accounting Adjustment to O&M	<u>-</u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
MEDICAL AND DENTAL INSURANCE
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.1
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Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				- Cost -				
		- Medical -		- Dental -		- Medical -		- Dental -		- Medical -		- Dental -		Total
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	
1	Individual	6	5	11	-	\$ 792.45	\$ 1,090.53	\$ 46.56	\$ 45.21	\$ 4,755	\$ 5,453	\$ 512	\$ -	\$ 10,720
2	Two Person	2	8	11	-	1,362.76	1,966.94	83.34	80.82	2,726	15,736	917	-	19,378
3	Family	9	9	20	-	1,849.91	2,714.18	147.21	141.43	16,649	24,428	2,944	-	44,021
4	Total	17	22	42	-					24,129	45,616	4,373	-	74,118
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020										289,553	547,389	52,477	889,420
6	Employee Contribution ⁽³⁾										(57,911)	(109,478)	(10,495)	(177,884)
7	Net Cost										231,642	437,912	41,982	711,536
8	Plus: Company Contribution to HSA										14,000	-	-	14,000
9	Payments to Employees to Opt out										11,840	4,900	-	16,740
10	Total HSA and Opt out Payments										25,840	4,900	-	30,740
11	Proformed 2021 Medical Cost										257,482	442,812	41,982	742,276
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾										21,913	39,853	1,679	63,446
13	Proformed 2021 and 2022 Medical and Dental Cost										279,396	482,665	43,661	805,721
14	Amount Chargeable to Capital ⁽⁵⁾										(167,012)	(293,533)	(26,611)	(487,156)
15	Total Pro-formed Medical and Dental Insurance O&M Expense													318,565
16	Less Test Year O&M Expense ⁽⁶⁾													182,055
17	Total O&M Medical & Dental Insurance Adjustment													\$ 136,510

Notes

(1) Employee Benefit Census as of December 31, 2020

(2) Anthem and Northeast Delta Dental monthly insurance rates, effective January 1, 2021

(3) Employee Contributions: 20%

(4) Estimated increase effective January 1, 2022

Medical Increase 9.00%

Dental Increase 4.00%

(5) Capitalization Rate: 48.76%

(6) Refer to Workpaper 3.2

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
MEDICAL INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 3.2
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LINE NO.	(1) Description	(2) Amount
1	Medical Insurance Expense	\$ 665,259
2	Benefits Cost Capitalized at	48.76% (324,380)
3	Subtotal Medical Costs	<u>340,879</u>
4	Employee Contribution	(160,868)
5	Drug Subsidy	<u>(10,252)</u>
6	Subtotal	<u>(171,121)</u>
7	Net Test Year Medical Insurance Expense	<u>169,758</u>
8	Dental Insurance Expense	44,042
9	Benefits Cost Capitalized at	48.76% (21,475)
10	Subtotal Dental Costs	<u>22,567</u>
11	Employee Contribution	(10,270)
12	Net Test Year Dental Costs	<u>12,297</u>
13	Net Test Year Medical & Dental Costs	<u>\$ 182,055</u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
MEDICAL AND DENTAL INSURANCE - UNITIL SERVICE CORP
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.3
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Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				Costs					
		Medical		Dental		Medical		Dental		Medical		Dental			
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	Total	
1	Individual	80	-	79	48	\$ 792.45	\$ 1,033.07	\$ 46.56	\$ 45.21	\$ 63,396	\$ -	\$ 3,678	\$ 2,170	\$ 69,244	
2	Two Person	64	1	77	36	1,362.76	1,859.73	83.34	80.82	87,217	1,860	6,417	2,910	98,403	
3	Family	82	1	100	79	1,849.91	2,564.50	147.21	141.43	151,693	2,565	14,721	11,173	180,151	
4	Total	226	2	256	163					302,305	4,424	24,816	16,253	347,798	
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020										3,627,663	53,091	297,797	195,031	4,173,582
6	Employee Contribution ⁽³⁾										(725,533)	(10,618)	(59,559)	(39,006)	(834,716)
7	Net Cost										2,902,130	42,473	238,238	156,025	3,338,865
8	Plus: Company Contribution to HSA										186,000	-	-	-	186,000
9	Payments to Employees to Opt out										178,400	-	-	-	178,400
10	Total HSA and Opt out Payments										364,400	-	-	-	364,400
11	Proformed 2021 Medical Cost										3,266,531	42,473	238,238	156,025	3,703,266
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾										277,248	3,823	9,530	6,241	296,841
13	Proformed 2021 and 2022 Medical and Dental Cost										3,543,778	46,295	247,767	162,266	4,000,106
12	Apportionment to NuNH at 20.18%										715,134	9,342	49,999	32,745	807,221
13	Amount Chargeable to Capital at 31.51%										(225,339)	(2,944)	(15,755)	(10,318)	(254,355)
14	Total Pro-formed Medical and Dental Insurance O&M Expense														552,866
15	Less Test Year O&M Expense ⁽⁵⁾														284,783
16	Total O&M Medical & Dental Insurance Adjustment														\$ 268,083

Notes

(1) Employee Benefit Census as of December 31, 2020.

(2) Health Plans, Inc. and Northeast Delta Dental monthly insurance rates, effective January 1, 2021.

(3) Employee Contributions: 20%

(4) Estimated increase effective January 1, 2022

Medical Increase 9.00%

Dental Increase 4.00%

(5) Refer to Workpaper 3.4

UNITIL SERVICE CORP.
MEDICAL INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.4
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LINE NO.	(1) Description	(2) Medical	(3) Dental	(4) Total
1	Medical Insurance	\$ 2,587,331	\$ 304,575	\$ 2,891,906
2	Employee Contribution	(703,135)	(59,946)	(763,081)
3	Drug Subsidy	(34,106)	-	(34,106)
4	Subtotal	1,850,090	244,629	2,094,719
5	NuNH Apportionment at	19.85%	19.85%	19.85%
6	Expense Apportioned to NuNH	367,243	48,559	415,802
7	Capitalization Rate at	31.51%	31.51%	31.51%
8	NuNH Capitalization	(115,718)	(15,301)	(131,019)
9	Net USC Test Year Medical & Dental Costs Allocated to NuNH	\$ 251,525	\$ 33,258	\$ 284,783

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
PENSION EXPENSE
2020 ACTUAL EXPENSE RECORDED AND 2021 FORECAST EXPENSE

Workpaper 4.1
Table of Contents

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	2020 TEST YEAR	2021 FORECAST EXPENSE	PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to NU-NH	19.85%	19.85%	
A2	NU-NH Capitalization Rates	48.76%	48.76%	
A3	USC Labor & Overhead to Construction	31.51%	31.51%	
A4	Total USC Pension Expense	\$ 3,032,609	\$ 3,232,617	
<u>Calculation of Pension Expense, net of Amounts Chargeable to Construction</u>				
<u>A. NU-NH Pension Expense, net:</u>				
1	NU-NH Pension Expense	\$ 546,677	\$ 489,345	\$ (57,332)
2	Less: Amounts Chargeable to Construction	(266,560)	(238,605)	27,955
3	NU-NH Pension Expense, net	<u>\$ 280,117</u>	<u>\$ 250,740</u>	<u>\$ (29,377)</u>
<u>B. Unitil Service Pension Expense Allocated to NU-NH, net:</u>				
4	Unitil Service Pension Expense	\$ 601,973	\$ 641,674	\$ 39,702
5	Less: Amounts Chargeable to Construction	(189,682)	(202,192)	(12,510)
6	Total Unitil Service Pension Expense Allocated to NU-NH, net	<u>\$ 412,291</u>	<u>\$ 439,483</u>	<u>\$ 27,192</u>
7	Total NU-NH Pension Expense	<u>\$ 692,409</u>	<u>\$ 690,223</u>	<u>\$ (2,185)</u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
PBOP EXPENSE
2020 ACTUAL EXPENSE RECORDED AND 2021 FORECAST EXPENSE

Workpaper 4.2
Table of Contents

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	2020 TEST YEAR	2021 FORECAST EXPENSE	PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to NU-NH	19.85%	19.85%	
A2	NU-NH Capitalization Rates	48.76%	48.76%	
A3	USC Labor & Overhead to Construction	31.51%	31.51%	
A4	Total USC PBOP Expense	\$ 1,510,206	\$ 1,358,914	
<u>Calculation of PBOP Expense, net of Amounts Chargeable to Construction</u>				
<u>A. NU-NH PBOP Expense, net:</u>				
1	NU-NH PBOP Expense	\$ 397,889	\$ 399,488	\$ 1,599
2	Less: Amounts Chargeable to Construction	(194,011)	(194,790)	(780)
3	NU-NH PBOP Expense, net	<u>\$ 203,878</u>	<u>\$ 204,698</u>	<u>\$ 819</u>
<u>B. Unutil Service PBOP Expense Allocated to NU-NH, net:</u>				
4	Unutil Service PBOP Expense	\$ 299,776	\$ 269,744	\$ (30,031)
5	Less: Amounts Chargeable to Construction	(94,459)	(84,996)	9,463
6	Total Unutil Service PBOP Expense Allocated to NU-NH, net	<u>\$ 205,317</u>	<u>\$ 184,748</u>	<u>\$ (20,569)</u>
7	Total NU-NH PBOP Expense	<u>\$ 409,195</u>	<u>\$ 389,446</u>	<u>\$ (19,749)</u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
SERP EXPENSE
2020 ACTUAL EXPENSE RECORDED AND 2021 FORECAST EXPENSE

Workpaper 4.3
Table of Contents

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	2020 TEST YEAR	2021 FORECAST EXPENSE	PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to NU-NH	19.85%	19.85%	
A2	NU-NH Capitalization Rates	48.76%	48.76%	
A3	USC Labor & Overhead to Construction	31.51%	31.51%	
A4	Total USC SERP Expense	\$ 1,924,767	\$ 2,357,253	
<u>Calculation of SERP Expense, net of Amounts Chargeable to Construction</u>				
<u>A. NU-NH SERP Expense, net:</u>				
1	NU-NH SERP Expense	\$ -	\$ -	\$ -
2	Less: Amounts Chargeable to Construction	-	-	-
3	NU-NH SERP Expense, net	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
<u>B. Unitil Service SERP Expense Allocated to NU-NH, net:</u>				
4	Unitil Service SERP Expense	\$ 382,066	\$ 467,915	\$ 85,848
5	Less: Amounts Chargeable to Construction	(120,389)	(147,440)	(27,051)
6	Total Unitil Service SERP Expense Allocated to NU-NH, net	<u>\$ 261,677</u>	<u>\$ 320,475</u>	<u>\$ 58,798</u>
7	Total NU-NH SERP Expense	<u>\$ 261,677</u>	<u>\$ 320,475</u>	<u>\$ 58,798</u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
401(K) EXPENSE
2020 ACTUAL EXPENSE RECORDED AND 2021 FORECAST EXPENSE

Workpaper 4.4
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LINE NO.	(1) DESCRIPTION	(2) 2020 TEST YEAR	(3) 2017 & 2018 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to NU-NH	19.85%	19.85%	
A2	NU-NH Capitalization Rates	48.76%	48.76%	
A3	USC Labor & Overhead to Construction	31.51%	31.51%	
A4	Total USC 401k Expense ⁽¹⁾	\$ 1,994,120	\$ 2,081,861	
 <u>Calculation of 401k Expense, net of amounts chargeable to construction</u>				
A. Northern 401k Expense, net:				
1	Northern-401k Expense 2021 Proformed ⁽²⁾	\$ 181,223	\$ 186,714	\$ 5,491
2	NU-NH 401(k) Expense Adjusted for 2022 Wage Increase ⁽²⁾	-	5,657	5,657
3	Total NU-NH 401(k) Expense - Proformed	181,223	192,371	11,148
4	Less: Amounts Chargeable to Construction	(88,364)	(93,800)	(5,436)
5	Northern 401k Expense, net	\$ 92,859	\$ 98,571	\$ 5,712
B. Unitil Service 401k Expense Allocated to Northern, net:				
6	Unitil Service 401K Expense 2021 Proformed	\$ 395,833	\$ 413,250	\$ 17,417
7	Unitil Service 401K Adjusted for 2022 Wage Increase ⁽¹⁾	-	18,183	18,183
8	Total USC 401(k) Expense - Proformed	395,833	431,432	35,600
9	Less: Amounts Chargeable to Construction	(124,727)	(135,944)	(11,217)
10	Unitil Service 401k Expense Allocated to Northern, net	271,106	295,488	24,382
11	Total Northern 401k Expense	\$ 363,965	\$ 394,059	\$ 30,095

Notes

(1) Unitil Service Corp. - Average 2020/2021 Payroll Increase of 4.40%

(2) See Workpaper 3.5

401K ADJUSTMENT
2020 & 2021 WEIGHTED AVERAGE PAY INCREASE

	(1)	(2)	(3)	(4)	(5)	(6)
LINE NO.	DESCRIPTION	2020 ANNUALIZED PAYROLL	2021 AVERAGE PAY INCREASE ⁽¹⁾	WEIGHTED AVERAGE INCREASE	2022 AVERAGE PAY INCREASE ⁽²⁾	WEIGHTED AVERAGE INCREASE
1	Nonunion	\$ 946,912	3.12%	0.66%	3.12%	0.66%
2	Union	3,532,915	3.00%	2.37%	3.00%	2.37%
3	Total	<u>\$ 4,479,827</u>		<u>3.03%</u>		<u>3.03%</u>

Notes
(1) Refer to Schedule RevReq-3-4, Page 1 of 2 for 2021 Payroll Increases
(2) Refer to Schedule RevReq-3-4, Page 1 of 2 for 2022 Payroll Increase

DEFERRED COMPENSATION PLAN EXPENSE
2020 ACTUAL EXPENSE RECORDED AND 2021 & 2022 FORECAST EXPENSE

Workpaper 4.6
Table of Contents

	(1)	(2)	(3)	(4)
Line No.	Description	2020 TEST YEAR	2021 & 2022 FORECAST EXPENSE	PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to NU-NH	19.85%	19.85%	
A2	NU-NH Capitalization Rates	48.76%	48.76%	
A3	USC Labor & Overhead to Construction	31.51%	31.51%	
A4	Total USC Eligible Base Compensation	\$ 369,511	\$ 2,802,136	
A5	Total USC Eligible Incentive Compensation (at target)	\$ 241,091	\$ 952,203	
<u>Calculation of Deferred Compensation Expense, net of Amounts Chargeable to Construction</u>				
<u>A. NU-NH Deferred Compensation Expense, net:</u>				
1	NU-NH Deferred Comp Expense 2021 Proformed	\$ -	\$ -	\$ -
2	NU-NH Deferred Comp Expense adjusted for 2022 wage increase	-	-	-
3	Total NU-NH Deferred Comp Expense - Proformed	-	-	-
4	Less: Amounts chargeable to capital	-	-	-
5	Total NU-NH Deferred Comp Expense, net	\$ -	\$ -	\$ -
<u>B. Unitil Service Deferred Comp Expense allocated to NU-NH, net:</u>				
6	Unitil Service 2020 Deferred Comp. Expense	\$ 36,951	\$ 280,214	\$ 243,263
7	Unitil Service Deferred Comp Expense Allocated to NU-NH	7,335	55,622	48,287
8	Unitil Service Deferred Incentive Compensation Expense	24,109	95,220	71,111
9	Unitil Service Deferred Incentive Compensation Expense Allocated to NU-NH	4,786	18,901	14,115
10	Unitil Service Deferred Comp. Adjusted for 2021 Wage Increase ⁽¹⁾	-	2,447	2,447
11	Total Unitil Service Deferred Comp Expense Allocated to NU-NH - Proformed	12,121	76,970	64,849
12	Less: Amounts Chargeable to Construction	(3,819)	(24,253)	(20,434)
13	Unitil Service Deferred Comp Expense Allocated to NU-NH, net	\$ 8,302	\$ 52,717	\$ 44,415
14	Total NU-NH Deferred Comp Expense	\$ 8,302	\$ 52,717	\$ 44,415

Notes

(1) Unitil Service Corp - Estimated 2020 Average Payroll Increase of 4.40%

PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.1
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LINE NO.	DESCRIPTION	AMOUNT ⁽¹⁾
	Current Coverage Periods	
	Property:	
1	All Risk	\$ 18,989
2	Crime	3,256
3	K&E	285
4	Total Property	<u>\$ 22,531</u>
	Liability:	
5	Workers' Compensation	\$ 53,618
6	Excess	355,650
7	Cyber	17,698
8	Automobile	43,038
9	Directors & Officers	74,021
10	Fiduciary	5,044
11	Total Liability	<u>\$ 549,069</u>
12	Total NuNH Property & Liability Insurances	571,600
13	Less: Amounts Chargeable to Capital	<u>282,502</u>
14	Amount to O&M Expense	289,097
15	Less Test Year O&M Expense	<u>241,873</u>
16	O&M Property and Liability Insurance Increase	<u><u>\$ 47,224</u></u>

Notes

(1) Refer to Workpaper 5.3

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.2
Table of Contents

LINE NO.	DESCRIPTION	UNITIL SERVICE CORP. TOTAL ⁽¹⁾	AMOUNT TO NuNH ⁽²⁾	NuNH TOTAL
1	USC Cost For Current Coverage Periods			
2	Property:			
3	All Risk	\$ 6,952		\$ 1,403
4	Crime	968		195
5	K&E	124		25
6	Total Property	<u>\$ 8,044</u>	20.18%	<u>\$ 1,623</u>
7	Liability:			
8	Workers' Compensation	\$ 62,142		\$ 12,540
9	Excess	113,172		22,838
10	Automobile	8,799		1,776
11	Directors and Officers	23,554		4,753
12	Cyber	5,898		1,190
13	Fiduciary	1,605		324
14	Total Liability	<u>\$ 215,170</u>	20.18%	<u>\$ 43,421</u>
15	Total USC Property & Liability Insurances			45,045
16	Less Amount Chargeable to Capital		31.51%	<u>14,194</u>
17	Total Property & Liability Insurances to O&M Expense			<u><u>30,851</u></u>
18	Less Test Year O&M Expense ⁽³⁾			<u>17,377</u>
19	O&M Property and Liability Insurance Increase			<u><u>\$ 13,475</u></u>

Notes

(1) Refer to Workpaper 5.3

(2) Refer to Workpaper 5.1

(2) Refer to Workpaper 5.4

Casualty & Property Insurance

Workpaper 5.3
Table of Contents

		CASUALTY												PROPERTY				
		AL	NH-WC	XL*	XL	XL	Cyber	FL	D&O	D&O	D&O	D&O	CASUALTY	ARP	CRIME	K&E	TOTAL	
		(prem)	(prem)	(prem)	(brkr) ⁽²⁾	Surplus Tax	(prem)	(prem)	(prem)	Surplus Tax	(brkr) ⁽²⁾	Side A	TOTAL	(prem)	(prem)	(prem)	PROP	TOTAL
NuNH	2018a	26,696	90,284	239,335	7,351	7,180	8,376	3,481	34,907	1,047	4,420	-	423,077	10,171	1,468	255	11,894	434,971
	2019a	29,196	84,634	273,415	8,843	8,202	8,399	3,876	35,820	1,093	4,544	-	458,024	8,778	1,503	266	10,547	468,571
	2020a	33,155	66,093	285,336	13,321	8,560	10,467	3,876	42,690	1,281	-	-	464,779	12,588	1,520	266	14,373	479,152
	2021a	40,175	50,051	309,521	13,184	9,286	17,698	4,709	51,976	1,559	-	15,561	513,720	17,726	3,039	266	21,032	534,752
	2022e ⁽¹⁾	43,038	53,618	331,579	14,124	9,947		5,044	55,680	1,670	-	16,670	549,069	18,989	3,256	285	22,531	571,600
	2018a	5,933	97,653	123,302	3,787	3,699	3,948	1,794	17,983	540	2,277	-	260,917	5,399	756	116	6,270	267,187
	2019a	8,029	92,581	133,432	4,316	4,003	4,327	1,892	17,481	533	2,218	-	268,811	5,581	733	130	6,444	275,255
USC	2020a	7,120	85,858	95,093	4,439	2,853	3,488	1,892	14,227	427	-	-	215,397	6,489	506	130	7,125	222,522
	2021a	9,206	65,019	110,396	4,702	3,312	5,898	1,679	18,538	556	-	5,550	224,857	7,274	1,013	130	8,416	233,273
	2022e ⁽¹⁾	8,799	62,142	105,512	4,494	3,165		1,605	17,718	532	-	5,305	215,170	6,952	968	124	8,044	223,214

Notes

(1) Estimated 2022 premiums reflect annual growth rate from 2018 to 2021. All 2022 policies, except for Cyber will updated with actuals during pendency of case

(2) In 2020 the Company changed brokers and now the D&O broker fee is included in the XL broker fee

UNITIL SERVICE CORP.
PROPERTY & LIABILITY INSURANCE TEST YEAR COSTS
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.4
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LINE NO.	DESCRIPTION	TOTAL
	USC O&M Test Year	
1	12-30-08-00-9240100 PROPERTY INSURANCE	\$ 5,519
2	12-30-08-00-9250100 INJURIES & DAMAGES	120,204
3	Total	\$ 125,723
4	NuNH Apportionment	20.18%
5	NuNH Amount	\$ 25,371
6	Capitalization Rate	31.51%
7	Capitalization Amount	\$ 7,994
8	O&M Expense Amount	17,377

**NuNH - OPERATING FACILITY
COMPUTATION OF BUILDING OVERHEAD
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 5.5
Table of Contents**

<u>SQUARE FOOTAGE OF SERVICE CENTER UPDATED:</u>		Dec-20	ALLOCATION OF
DESCRIPTION	SQ FT	%	SERVICE CENTER OVERHEADS
SERVICE CENTER ALLOCATED:			
General Area Capitalized (184.00.00)	13,864	54.51%	6,384
Ratio of Payroll Capitalized			48.76%
General Area Capitalized (184.00.01)			3,113
Stock Area Capitalized (163.00.00)	5,741	22.57%	2,643
Ratio of Stock Capitalized			90.00%
Stock Area Capitalized			2,379
<u>Garage Area Capitalized:</u>			
Auto-184.01.00	-	0.00%	-
Light Truck-184.02.00	-	0.00%	-
Heavy Truck-184.03.00	-	0.00%	-
Sub-Total Garage Area	-	0.00%	-
Ratio of Garage Area Capitalized			48.76%
Garage Area Capitalized			-
Total Service Center to DOC	19,605	77.09%	5,492
<u>Non-DOC Space:</u>			
Exclude: USC & Usource	5,827	22.91%	2,683
Ratio of Non-DOC Space Capitalized			0.00%
Non-DOC Space Capitalized			-
TOTAL SERVICE CENTER	25,432	100.00%	5,492

(b) DETERMINATION OF SERVICE CENTER PROPERTY INSURANCE:

BUDGETED ALL RISK PROPERTY INSURANCE	11,723
RATIO OF SERVICE CENTER TO TOTAL PROPERTY	99.89%
TOTAL SERVICE CENTER PROPERTY INSURANCE	11,710

Service Center Property Insurance Capitalization Ratio 46.90%

	Asset 1000c or Asset 1020		
	SERVICE CENTER	ALL STRUCTURE	SERVICE RATIO
GAS STRUCTURES - DIST. ACCT. 375.20	39,504	45,256	
STRUCTURES-OTHER DIST SYS 375.70	3,128,853	3,128,853	
GENERAL PLANT - (TOTAL LESS COMMUN. EQ)	1,923,719	1,923,719	
(ACCT. 391,393,394,395,396,398)	-	-	
TOTAL COST	5,092,075	5,097,827	99.89%

**VEHICLE CLEARING ACCOUNT
TOTAL CHARGES & TOTAL CLEARINGS TO EXPENSE & CAPITAL
12 MONTHS ENDED DECEMBER 31, 2020**

Workpaper 5.6
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Total Clearings from Clearing Account:

	Expense	Capital	NuNH Total GL	Total Sch 12	Variance
Jan-20	28,022	47,758	75,780	75,780	-
Feb-20	29,141	31,696	60,837	60,837	-
Mar-20	29,755	29,979	59,735	59,735	-
Apr-20	26,484	25,236	51,719	51,719	-
May-20	30,248	31,224	61,473	61,473	-
Jun-20	36,093	51,333	87,427	87,427	-
Jul-20	23,989	40,521	64,510	64,510	-
Aug-20	20,998	29,112	50,111	50,111	-
Sep-20	25,188	32,644	57,832	57,832	-
Oct-20	83,045	146,259	229,304	229,304	-
Nov-20	1,576	4,394	5,970	5,970	-
Dec-20	1,505	4,908	6,413	6,413	-
	<u>336,045</u>	<u>475,064</u>	<u>811,109</u>	<u>811,109</u>	

Capitalization Rate 58.57%

**VEHICLE CLEARING ACCOUNT
AUTO LIABILITY INSURANCE**

Auto Liability Insurance Payments into Clearing Account ⁽¹⁾

Jan-20	3,316
Feb-20	3,316
Mar-20	3,316
Apr-20	3,316
May-20	3,316
Jun-20	3,316
Jul-20	3,316
Aug-20	
Sep-20	
Oct-20	
Nov-20	8,035
Dec-20	4,018
Total	<u><u>35,261</u></u>

(1) Payments during test year (Jan-Jul) were for 2019-2020 coverage year 10/1/19-9/30/20
Payments in November & December 2020 are for 10/1/20 - 9/30/21 coverage year

Auto Liability Insurance Expense through Clearing Account

	<u>NuNH</u>
Gross Amount	35,261
Cap. Rates	58.57%
Cap. Amount	<u>20,652</u>
O&M Amount	<u><u>14,609</u></u>

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 6.1
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Source: Energy Information Administration
Short-Term Energy Outlook
Publication Date: June 8, 2021

Table 1. U.S. Energy Markets Summary

	2019												2020											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	18,915	18,953	18,984	18,990	19,019	19,053	19,103	19,142	19,180	19,269	19,267	19,226	19,309	19,065	18,658	17,427	17,191	17,289	18,328	18,637	18,825	18,714	18,791	18,878
Percent change from prior year	2.3	2.3	2.2	2	1.9	1.9	2	2.1	2.1	2.6	2.4	2	2.1	0.6	-1.7	-8.2	-9.6	-9.3	-4.1	-2.6	-1.9	-2.9	-2.5	-1.8
GDP Implicit Price Deflator (Index, 2005=100)	111.3	111.5	111.7	112.0	112.2	112.4	112.5	112.6	112.7	112.9	113.0	113.1	113.4	113.4	113.3	112.8	112.8	113.0	113.6	113.9	114.1	114.1	114.4	114.7
Percent change from prior year	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.8	1.7	1.5	0.7	0.5	0.5	1.0	1.1	1.2	1.1	1.2	1.4
Real Disposable Personal Income (billion chained 2005 dollars - SAAR)	14,841	14,864	14,856	14,817	14,810	14,827	14,840	14,912	14,934	14,936	14,997	14,960	15,070	15,163	14,949	17,287	16,454	16,150	16,204	15,636	15,715	15,574	15,349	15,378
Percent change from prior year	3.5	3.4	2.9	2.4	2.0	1.9	1.6	1.8	2.0	1.8	2.1	0.8	1.5	2.0	0.6	16.7	11.1	8.9	9.2	4.9	5.2	4.3	2.3	2.8
Manufacturing Production Index (Index, 2012=100)	106.9	106.3	106.3	105.4	105.5	106.1	105.7	106.4	105.7	105.1	106.1	106.4	106.2	106.1	100.8	84.8	88.1	95.0	99.0	100.7	100.6	102.1	103.1	104.0
Percent change from prior year	2.7	1.1	1	-0.4	0.5	0.3	-0.5	-0.3	-1	-1.5	-0.7	-1.1	-0.7	-0.2	-5.2	-19.5	-16.5	-10.5	-6.3	-5.4	-4.7	-2.8	-2.8	-2.2
Weather																								
U.S. Heating Degree-Days	859	719	632	288	158	34	5	10	41	254	589	715	739	652	483	359	156	25	5	7	58	247	421	749
U.S. Cooling Degree-Days	9	18	18	42	130	227	373	336	243	75	16	14	15	13	43	43	105	247	398	357	181	83	32	7
	2021												2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2009 dollars - SAAR)	18,976	19,084	19,203	19,375	19,505	19,629	19,728	19,848	19,971	20,128	20,237	20,329	20,389	20,454	20,512	20,560	20,603	20,639	20,660	20,689	20,718	20,744	20,773	20,803
Percent change from prior year	-1.7	0.1	2.9	11.2	13.5	13.5	7.6	6.5	6.1	7.6	7.7	7.7	7.4	7.2	6.8	6.1	5.6	5.1	4.7	4.2	3.7	3.1	2.6	2.3
GDP Implicit Price Deflator (Index, 2005=100)	115.1	115.5	116.0	116.2	116.5	116.7	116.9	117.0	117.2	117.4	117.5	117.7	117.8	118.0	118.2	118.4	118.6	118.8	119.0	119.2	119.4	119.6	119.8	120.0
Percent change from prior year	1.5	1.9	2.4	3	3.3	3.3	2.9	2.8	2.7	2.8	2.7	2.6	2.4	2.1	1.8	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2	2
Real Disposable Personal Income (billion chained 2005 dollars - SAAR)	17,114	15,725	19,336	16,406	16,100	15,908	15,969	15,895	15,829	15,726	15,706	15,724	15,843	15,894	15,939	15,971	16,006	16,038	16,070	16,096	16,117	16,121	16,143	16,170
Percent change from prior year	13.6	3.7	29.3	-5.1	-2.1	-1.5	-1.5	1.7	0.7	1	2.3	2.3	-7.4	1.1	-17.6	-2.6	-0.6	0.8	0.6	1.3	1.8	2.5	2.8	2.8
Manufacturing Production Index (Index, 2012=100)	105.2	100.9	104.2	104.6	104.8	105.5	106.2	107.0	107.8	109.0	109.8	110.4	110.9	111.4	111.8	112.1	112.4	112.6	112.6	112.7	112.8	112.9	113.0	113.1
Percent change from prior year	-0.9	-4.9	3.3	23.3	19	11	7.2	6.3	7.1	6.8	6.4	6.2	5.4	10.4	7.3	7.2	7.2	6.7	6	5.4	4.6	3.6	2.9	2.4
Weather																								
U.S. Heating Degree-Days	802	791	505	305	147	28	7	10	55	243	490	777	848	685	558	312	137	30	7	11	55	243	490	777
U.S. Cooling Degree-Days	10	12	28	37	116	244	355	331	184	67	22	11	11	12	23	41	124	243	353	326	184	67	22	11

Notes: Prices are not adjusted for inflation.

The approximate break between historical and forecast values is shown with estimates and forecasts in italics.

Historical data: Latest data available from Energy Information Administration databases supporting the following reports: Petroleum Supply Monthly , DOE/EIA-0109;

Petroleum Supply Annual , DOE/EIA-0340/2; Weekly Petroleum Status Report , DOE/EIA-0208; Petroleum Marketing Monthly , DOE/EIA-0380; Natural Gas Monthly , DOE/EIA-0130;

Electric Power Monthly , DOE/EIA-0226; Quarterly Coal Report , DOE/EIA-0121; and International Petroleum Monthly , DOE/EIA-0520.

Minor discrepancies with published historical data are due to independent rounding.

Projections: EIA Regional Short-Term Energy Model. Macroeconomic projections are based on Global Insight Model of the U.S. Economy.

Weather projections from National Oceanic and Atmospheric Administration.

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
INFLATION ADJUSTMENT - TEST YEAR USC AMORTIZATIONS
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 6.2
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LINE NO.	(1) DESCRIPTION	(2)	
		2020	
1	12-30-10-00-404-03-00 SOFTWARE AMORT - OTHER	\$	343,313
2	12-30-10-00-404-04-00 FINANCIAL REPORT WRITER AMORTIZATION		7,350
3	12-30-10-00-404-23-00 POWER TAX SYSTEM AMORT		30,284
4	12-30-10-00-404-25-00 AMORTIZATION - PAYMENT SYSTEM		1,492
5	Total	\$	382,438
6	NuNH Allocation		19.85%
7	Amount Billed to NuNH		75,914

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
INFLATION ADJUSTMENT - TEST YEAR FACILITY LEASES
12 MONTHS ENDED DECEMBER 31, 2020**

**Workpaper 6.3
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LINE NO.	(1) DESCRIPTION	(2)	
		2020	
1	12-30-10-00-9310100 BUILDING RENT	\$	1,252,284
2	12-30-10-00-9310700 CALL CENTER RENT		158,796
3	12-30-10-00-9310800 PORTSMOUTH RENT EXPENSE		203,988
4	Total	\$	1,615,068
5	NuNH Allocation		19.85%
6	Amount Billed to NuNH		320,591

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
TEST YEAR AMORTIZATION EXPENSE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 7.1
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LINE NO.	(1) DESCRIPTION	(2) BEGINNING UNAMORTIZED BALANCE 2020 ⁽¹⁾	(3) 2020 AMORTIZATION EXPENSE	(4) ENDING UNAMORTIZED BALANCE 2020
1	Northern Utilities 303-Intangible Plant:			
2	Power Plant	\$ 36,832	\$ 15,785	\$ 21,047
3	Power Plan Upgrade	15,843	4,045	11,798
4	Meter Data Management	1,093,248	138,095	955,154
5	2019 Voice System Repl	239,694	23,321	214,318
6	2019 Interface Enhancements	13,177	1,355	11,706
7	Customer Facing Enhancements	232,484	23,543	207,039
8	CIS Billing Integration	202,420	69,401	133,018
9	2014 Infrastructure	586	586	-
10	2014 Desktop Client Mgmt	76	76	-
11	2014 Enhance Critical Financial	769	769	-
12	2014 CMS Rewrite	1,113	1,113	-
13	Gen Software enhancements	160	160	-
14	2014 EETS Enhancements	58	58	-
15	Gas Construction Estimating Model	4,875	4,875	-
16	Electronic Large Vol. Meter Form	1,868	1,868	-
17	2014 AM/SCADA Cyber Project	3,235	3,235	-
18	AMI Vers Updt PLX Functionality	1,837	1,837	-
19	Milsoft IVR Upgrade	186	186	-
20	2015 Infrastructure	6,105	4,884	1,221
21	SalesForce App for Gas Sales	12,609	7,964	4,645
22	First Responder - iRestore	26,280	13,140	13,140
23	General Software Enhancements	2,792	1,289	1,503
24	2016 IT Infrastructure	15,367	6,830	8,537
25	Gas Inspections	5,264	2,339	2,924
26	CMS 2015 Rewrite	7,397	3,288	4,110
27	2015 Cyber Security Enhancements	99	44	55
28	2016 Cyber Security Enhancements	144	64	80
29	Unify Workforce Management System	4,046	1,798	2,248
30	2016 General Software Enhancements	2,274	1,011	1,264
31	Verotrack Upgrade to myWorld	8,985	3,267	5,718
32	Itron MVRs Upgrade	1,262	459	803
33	New Century Dist Risk Alg. Upgrade	5,340	1,942	3,398
34	EETS Enhancements	11,139	3,819	7,320
35	CMS NH/ME Isolation	1,410	484	927
36	Power Plant Upgrade 2016.1	37,818	12,966	24,852
37	LocusView GPS/GIS Track & Trace	75,602	23,262	52,340
38	2017 Cyber Security Enhancements	1,291	387	903
39	2017 IT Infrastructure	5,831	1,749	4,081
40	SalesForce for Gas Sales Phase II	31,670	9,269	22,401
41	Electronic Time Sheet - Phase One	3,504	978	2,526
42	2017 General Software Enhancements	6,778	1,891	4,886
43	UPC/GEM Enhancements	11,339	3,164	8,175
44	Upgrade to MyWorld Insepction	9,754	2,601	7,153
45	Meter Data Archiving Plan	1,566	408	1,157
46	Sales Force Application	12,770	3,331	9,438
47	OMS Web Page Upgrade	3,103	760	2,343
48	Power Plan License Update	45,014	11,024	33,990
49	GIS Version Upgrade	44,529	10,477	34,052
50	IS Project Tracker Replacement	4,233	996	3,237
51	Comp Mgmt Sys Enhncmnts	27,228	6,407	20,821
52	Legacy Interface Job Rewrite	2,337	550	1,787
53	Gen. Software Enhancements 2018	11,362	2,673	8,689
54	TESS Replacement	3,716	874	2,842
55	Salesforce App for Gas Sales	13,714	3,227	10,487
56	UPS Reporting	558	131	427
57	2018 IT Infrastructure	24,422	5,529	18,892
58	WebOps Replacement - Year 1 of 3	11,750	2,564	9,186
59	2018 Cyber Security Enhancements	3,787	826	2,961
60	DEV Staging Refresh	5,309	1,098	4,211
61	Microsoft Exchange Upgrade	2,425	502	1,923
62	Electronic Timesheet - Phase 2	13,540	2,801	10,738
63	CMS Data Reports	1,616	334	1,282
64	ODI Plant Records - GIS Recon	2,323	481	1,843
65	Metersense Upgrade 4.2 to 4.3	267	55	212
66	FCS Upgrade	770	155	615
67	FCS Upgrade	451	75	376
68	FCS Upgrade	9,038	847	8,191
69	MARS/GEM Enhancements	25,798	2,150	23,648
70	General Software Enchancements 2019	11,825	2,209	9,476
71	WebOps Replacement	13,547	2,408	10,948
72	2019 Reporting Blanket	22,028	1,836	20,193
73	Infrastructure PC & Network 2019	196,345	39,585	154,000
74	2019 Regulatory Work Blanket	5,608	467	5,140
75	LocusView Mobile Data Collections	10,880	907	9,973
76	Compliance Mgmt Sys Enhancements	17,992	3,246	14,625
77	GIS Enhancements	3,998	333	3,665
78	Gas SCADA-Historical Database	5,219	435	4,784
79	Metersense Upgrade 2020	6,725	112	6,613
80	Power Plan Upgrade	68,580	1,143	67,437
81	Cyber Security Enhancements	21,917	365	21,552
82	2020 IT Infrastructure Budget	301,181	5,020	296,162
83	2020 Customer Facing Enhancements	138,605	2,310	136,295
84	2020 Interface Enhancements	29,156	486	28,670
85	2020 General Software Enhancements	829	14	815
86	Reporting Blanket	26,585	443	26,142
87	Pipeline Compliance Syst. Integ.	71,157	1,186	69,971
88	EE Tracking & Reporting System	36,085	601	35,483
89	MV-90xi Upgrade v 4.5 to 6.0	9,579	160	9,419
90	MV-90 Comm Bank Module	3,327	577	2,715
91	Salesforce Gas Sales Reporting	15,123	252	14,871
92	LocusView Paperless Work Flows	26,180	436	25,744
93	Total NuNH Amortization Expense for Account 303	\$ 3,456,660	\$ 522,006	\$ 2,927,332

NOTES

(1) Projects Installed in 2020 Reflect Total Project Cost

NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
RATE YEAR AMORTIZATION EXPENSE

Workpaper 7.2
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LINE NO.	(1) DESCRIPTION	(2) TOTAL PROJECT COST	(3) ANNUAL AMORTIZATION EXPENSE
1	Northern Utilities 303-Intangible Plant:		
2	Power Plant	\$ 157,853	\$ 15,785
3	Power Plan Upgrade	40,449	4,045
4	Meter Data Management	1,380,945	138,095
5	2019 Voice System Repl	239,694	24,036
6	2019 Interface Enhancements	13,177	1,313
7	Customer Facing Enhancements	232,484	23,219
8	CIS Billing Integration	902,212	69,401
9	2015 Infrastructure	24,419	4,884
10	SalesForce App for Gas Sales	39,818	7,964
11	First Responder - iRestore	65,700	13,140
12	General Software Enhancements	6,443	1,289
13	2016 IT Infrastructure	34,149	6,830
14	Gas Inspections	11,697	2,340
15	CMS 2015 Rewrite	16,438	3,288
16	2015 Cyber Security Enhancements	220	44
17	2016 Cyber Security Enhancements	321	64
18	Unify Workforce Management System	8,991	1,798
19	2016 General Software Enhancements	5,054	1,011
20	Verotrack Upgrade to myWorld	16,336	3,267
21	Itron MVRs Upgrade	2,295	459
22	New Century Dist Risk Alg. Upgrade	9,709	1,942
23	EETS Enhancements	19,095	3,819
24	CMS NH/ME Isolation	2,418	484
25	Power Plant Upgrade 2016.1	64,831	12,966
26	LocusView GPS/GIS Track & Trace	116,310	23,262
27	2017 Cyber Security Enhancements	1,936	387
28	2017 IT Infrastructure	8,746	1,749
29	SalesForce for Gas Sales Phase II	46,347	9,269
30	Electronic Time Sheet - Phase One	4,890	978
31	2017 General Software Enhancements	9,457	1,891
32	UPC/GEM Enhancements	15,822	3,164
33	Upgrade to MyWorld Insepction	13,005	2,601
34	Meter Data Archiving Plan	2,042	408
35	Sales Force Application	16,656	3,331
36	OMS Web Page Upgrade	3,800	760
37	Power Plan License Update	55,120	11,024
38	GIS Version Upgrade	52,387	10,477
39	IS Project Tracker Replacement	4,980	996
40	Comp Mgmt Sys Enhncmnts	31,938	6,407
41	Legacy Interface Job Rewrite	2,749	550
42	Gen. Software Enhancements 2018	13,313	2,673
43	TESS Replacement	4,372	874
44	Salesforce App for Gas Sales	16,134	3,227
45	UPS Reporting	657	131
46	2018 IT Infrastructure	27,627	5,529
47	WebOps Replacement - Year 1 of 3	12,818	2,564
48	2018 Cyber Security Enhancements	4,131	826
49	DEV Staging Refresh	5,492	1,098
50	Microsoft Exchange Upgrade	2,508	502
51	Electronic Timesheet - Phase 2	14,006	2,801
52	CMS Data Reports	1,672	334
53	ODI Plant Records - GIS Recon	2,403	481
54	Metersense Upgrade 4.2 to 4.3	277	55
55	FCS Upgrade	779	157
56	FCS Upgrade	451	90
57	FCS Upgrade	9,038	1,927
58	MARS/GEM Enhancements	25,798	5,160
59	General Software Enhancements 2019	11,825	2,230
60	WebOps Replacement	13,547	2,479
61	2019 Reporting Blanket	22,028	4,406
62	Infrastructure PC & Network 2019	196,345	39,319
63	2019 Regulatory Work Blanket	5,608	1,122
64	LocusView Mobile Data Collections	10,880	2,176
65	Compliance Mgmt Sys Enhancements	17,992	3,510
66	GIS Enhancements	3,998	800
67	Gas SCADA-Historical Database	5,219	1,044
68	Metersense Upgrade 2020	6,725	1,345
69	Power Plan Upgrade	68,580	14,205
70	Cyber Security Enhancements	21,917	4,383
71	2020 IT Infrastructure Budget	301,181	63,804
72	2020 Customer Facing Enhancements	138,605	28,287
73	2020 Interface Enhancements	29,156	5,831
74	2020 General Software Enhancements	829	166
75	Reporting Blanket	26,585	5,317
76	Pipeline Compliance Syst. Integ.	71,157	14,231
77	EE Tracking & Reporting System	36,085	7,217
78	MV-90xi Upgrade v 4.5 to 6.0	9,579	1,916
79	MV-90 Comm Bank Module	3,327	639
80	Salesforce Gas Sales Reporting	15,123	3,024
81	LocusView Paperless Work Flows	26,180	5,236
82	FCS Upgrade	1,041	174
83	2020 IT Infrastructure Budget	19,607	3,268
84	2020 Customer Facing Enhancements	25,018	4,170
85	2020 Interface Enhancements	1,800	300
86	2020 General Software Enhancements	874	146
87	Reporting Blanket	7,763	1,294
88	Power Plan Upgrade	1,840	307
89	Total NuNH Amortization Expense for Account 303	\$ 4,922,826	\$ 669,511

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
TEST YEAR USC AMORTIZATION EXPENSE
12 MONTHS ENDED DECEMBER 31, 2020**

Workpaper 7.3
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		(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	BEGINNING UNAMORTIZED BALANCE 2020 ⁽¹⁾	2020 AMORTIZATION EXPENSE	ENDING UNAMORTIZED BALANCE 2020	
1	Financial Report Writer Replacement	\$ 7,350	\$ 7,350	\$ -	
2	Flexi Upgrade	10,798	5,890	4,908	
3	Dataview Upgrade	4,553	2,602	1,951	
4	Powertax Repair Module	75,709	30,284	45,425	
5	USC Time & Billing Enhancements	32,287	12,108	20,179	
6	PC & Furniture 032018	310,955	143,517	167,437	
7	Software - Facilities WO&PM Tracking/Reporting	17,052	4,991	12,061	
8	PC & Furniture 082018	312,111	120,817	191,294	
9	Upgrade C-Series Bottomline Check Printing	5,597	1,492	4,104	
10	ADP Vacation Enhancements	2,635	687	1,948	
11	General Infrastructure Enhancements	9,113	2,377	6,736	
12	2018 Flexi upgrade	16,530	4,048	12,482	
13	Flexi Report Writer	6,370	1,560	4,810	
14	USC Furn & Equipment - Hamp&CSC	4,263	867	3,396	
15	IT Control Testing Automation	320,088	21,339	298,749	
16	HR & Payroll Record Scanning	26,917	1,794	25,122	
17	USC 2019 Furniture & PC's	310,711	20,714	289,996	
18	Total	\$ 1,473,037	\$ 382,438	\$ 1,090,598	
19	NuNH Apportionment		20.18%		
20	Total Billed to NuNH		77,176		

NOTES

(1) Projects Installed in 2020 Reflect Total Project Cost

**NORTHERN UTILITIES, INC. - NEW HAMPSHIRE
RATE YEAR USC AMORTIZATION EXPENSE**

Workpaper 7.4
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		(1)	(2)	(3)
LINE NO.	DESCRIPTION	TOTAL PROJECT COST	ANNUAL AMORTIZATION EXPENSE	
1	Powertax Repair Module	151,418	30,284	
2	USC Time & Billing Enhancements	58,522	12,108	
3	PC & Furniture 032018	574,070	143,517	
4	Software - Facilities WO&PM Tracking/Reporting	24,953	4,991	
5	PC & Furniture 082018	483,268	120,817	
6	Upgrade C-Series Bottomline Check Printing	7,462	1,492	
7	ADP Vacation Enhancements	3,437	115	
8	General Infrastructure Enhancements	11,887	396	
9	2018 Flexi upgrade	20,241	4,048	
10	Flexi Report Writer	7,800	1,560	
11	USC Furn & Equipment - Hamp&CSC	4,335	867	
12	IT Control Testing Automation	320,088	64,018	
13	HR & Payroll Record Scanning	26,917	5,383	
14	USC 2019 Furniture & PC's	310,711	62,142	
15	SOX Modernization	75,517	15,103	
16	USC Time & Billing Upgrade/Replacement	587,704	117,541	
17	2020 Flexi Upgrade	25,531	5,106	
18	Total	<u>\$ 2,693,861</u>	<u>\$ 589,489</u>	
19	NuNH Apportionment		20.18%	
20	Total Billed to NuNH		<u>118,959</u>	

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