

PEU Proforma Test Year 2022						
Pro forma Revenue Requirement -	\$	13,223,941	Inclusive of NCCRS Revenues			
Pro forma Revenue Requirement -	\$	13,045,026	Exclusive of NCCRS Revenues			
<b>Material Operating Expense Revenue Requirement, Inclusive of</b>						
		<b>CBRR</b>	<b>MOEF</b>	<b>Operating Expense Revenue Requirement<sup>8</sup></b>	<b>1.0 Debt Service Revenue Requirement</b>	<b>0.1 Debt Service Revenue Requirement</b>
Revenue Requirement -	\$	926,309	\$ 9,471,624	\$ 40,053	\$ 2,370,036	\$ 237,004
Percentage of Revenues -		7.00%	71.62%	0.30%	17.92%	1.79%
3 Years coverage -	\$	290,933	\$ 2,667,026	\$	\$ 667,356	\$ 66,736
DW20-156 Approved RSF fund level -	\$	31,000	\$ 898,000	\$	\$ 51,000	
Based on largest negative variance from five year ave. of -		16.14%				

Increase in Material Operating Expenses of 3.00%

Requested MOEF -	10.10%
Rate increase @ requested MOEF -	24.10%
Annual MOEF Cash -	\$ 862,641
DW20-156 Approved RSF fund level -	\$ 880,000
MOERR from 1604.06 Sch A -	\$ 8,541,003
Amortization Expense -	\$ 67,980

Calculation of MOER RSF		Projected MOE Revenues	Projected MOE's inclusive of Amort Expense (B)	Transfer into/out of MOER RSF Account	Combined RSF Balance (B)
Operating Expense Increases Over 2022 Pro Forma	Revenue Shortfall from lowest sales in last 5 years				
2024	\$ 256,230	\$ 833,286	12/31/2023	\$ -	\$ 980,000
2025	\$ 263,917	\$ 833,286	12/31/2024	\$ 8,567,353	\$ 682,140
2026	\$ 271,835	\$ 833,286	12/31/2025	\$ 9,471,624	\$ 1,024,635
	\$ 791,982	\$ 2,499,859	12/31/2026	\$ 9,471,624	\$ 1,095,294
Totals	\$ 3,291,841			\$ 4,735,812	\$ 1,290,155

Revenue Type	2018 PEU Billed Revenue	2019 PEU Billed Revenue	2020 PEU Billed Revenue	2021 PEU Billed Revenue	2022 PEU Billed Revenue
Total Volumetric Charges, includes Unbilled water sales and abatements not including recoupment	\$ 4,835,565	\$ 5,029,222	\$ 5,857,638	\$ 5,705,854	\$ 7,048,936
Net Unbilled and Billed Recoupment (fixed/Volumetric)	\$ 577,594	\$ (168)	\$ -	\$ -	\$ 936,385
Total Capital Recovery Surcharge (fixed)	\$ 232,134	\$ 181,603	\$ 182,112	\$ 181,321	\$ 179,140
Total Meter Charge (less recoupment - fixed)	\$ 1,947,853	\$ 2,192,482	\$ 2,189,948	\$ 2,351,681	\$ 2,511,417
QCPCAC revenues	\$ -	\$ 106,881	\$ 270,425	\$ 202,801	\$ 512,650
Total Fire Protection - Public & Private (fixed)	\$ 1,111,319	\$ 1,278,880	\$ 1,286,588	\$ 1,352,161	\$ 1,290,155
Total Billed Revenues	\$ 8,688,466	\$ 8,788,900	\$ 9,785,711	\$ 9,793,818	\$ 12,478,684
% of Revenues that are variable	55.5%	57.9%	61.5%	59.4%	56.5%
% of Revenues that are fixed	44.5%	42.1%	38.5%	40.6%	43.5%

Average percentage of revenues that were variable during the previous 5 years - 58.2%

Expense Type	2018 PEU Actual Variable Expenses	2019 PEU Actual Variable Expenses	2020 PEU Actual Variable Expenses	2021 PEU Actual Variable Expenses	2022 PEU Actual Variable Expenses	2023 PEU Pro Forma Variable Expenses
Purchased Water, exclusive of trucked water	\$ 1,094,365	\$ 1,002,160	\$ 1,377,329	\$ 1,135,336	\$ 1,432,358	\$ 1,306,491
Electric	\$ 313,229	\$ 337,595	\$ 323,915	\$ 353,219	\$ 391,131	\$ 412,722
Chemicals	\$ 53,875	\$ 38,663	\$ 46,211	\$ 39,546	\$ 62,338	\$ 62,128
Total Variable Costs	\$ 1,461,469	\$ 1,378,417	\$ 1,747,455	\$ 1,528,101	\$ 1,885,627	\$ 1,781,351
Variable Expenses as a Percent of Total Revenues	16.8%	15.7%	17.8%	15.6%	15.1%	

	2018 Actual CCF's sold by PEU	2019 Actual CCF's sold by PEU	2020 Actual CCF's sold by PEU	2021 Actual CCF's sold by PEU	2022 Actual CCF's sold by PEU	5 Year Ave. CCF's sold by PEU
Annual Metered Sales (CCF)	599,421	554,259	723,307	626,534	717,022	643,709
Percentage Variance between Current and High Consumption Year	-20.33%	-30.14%	0.00%	-15.13%	-0.60%	-12.05%
Average Consumption (CCF) over the past five years	643,709					
Variance between current and 5 Yr Ave Consumption	-7.39%	-16.14%	10.76%	-2.74%	10.22%	0.00%

Largest percentage reduction in volumetric sales at PEU of 16.14% over the past five years from the five year average of volumetric sales  
 Results in a Revenue loss of \$ 1,137,601  
 Results in an Operating Expense reduction of \$ 308,814  
 Results in an Operating Income reduction of \$ 833,286

	2018 PEU Actual Operating Expenses	2019 PEU Actual Operating Expenses	2020 PEU Actual Operating Expenses	2021 PEU Actual Operating Expenses	2022 PEU Actual Operating Expenses
Production Expenses	\$ 2,290,425	\$ 2,257,199	\$ 2,670,931	\$ 2,557,449	\$ 2,967,856
T&D expenses	\$ 737,584	\$ 1,006,211	\$ 743,329	\$ 859,496	\$ 946,176
Customer Acct & Collection Expenses	\$ 200,152	\$ 204,718	\$ 184,845	\$ 203,803	\$ 206,954
Admin and General Expenses (includes NMOE)	\$ 184,537	\$ 181,461	\$ 177,946	\$ 181,617	\$ 239,006
Inter Div Mgt Fee Expense (included PCP Mgt Fee)	\$ 2,356,956	\$ 2,399,261	\$ 2,481,134	\$ 2,649,703	\$ 2,947,710
Amortization Expenses	\$ 86,683	\$ 127,440	\$ 64,174	\$ 69,880	\$ 62,128
Property Tax Expense	\$ 1,021,406	\$ 1,174,044	\$ 1,182,385	\$ 1,136,001	\$ 1,293,748
Cash Tax Expense	\$ 18,779	\$ 3,775	\$ 3,978	\$ 4,382	\$ 4,293
Less NMOE's	\$ 36,869	\$ 27,863	\$ 24,393	\$ 45,947	\$ 40,093
Total Annual Material Operating Expenses, exclusive of NMOE's	\$ 6,895,523	\$ 7,352,320	\$ 7,509,322	\$ 7,852,480	\$ 8,673,733
Variable MOE's	\$ 1,461,469	\$ 1,378,417	\$ 1,747,455	\$ 1,528,101	\$ 1,885,627
Total Annual Fixed MOE's	\$ 5,434,053	\$ 5,973,903	\$ 5,761,867	\$ 6,324,379	\$ 6,788,096
Percent increase in MOE's over the prior year		6.61%	1.14%	1.91%	13.35%
				Total Increase between 2018 -2022 -	24.89%
				Ave. increase per year (inclusive of compounding) -	5.71%

- Notes:  
 1. Based on Debt Service Multiplier of 1.10 per Sch A of 1604.06 schedules. The 1.1 multiplier is not applied to the North Country Capital Recovery Surcharge P&I  
 2. Revenue requirements per Sch A of 1604.06 schedules  
 3. Requested Rate Stabilization fund for Operating Expense and P & I Coverage each have a contingency of 0% safety factor and are based on year ending 2019 results  
 4. PEU share of the \$5,000,000 RSF for distribution to the RSF, MOERSF and the P&IRSF is<sup>9</sup> 19.56% based on % of PWV revenues (2012 Case) to % of all three regulated utilities revenues (2012 Cases) or  
 5. Calculation of RSF Percentage based on Revenue requirements from DW13-126, 13-128 and 13-130

6. For Calculation of Operating Expense Requirement see Exhibit 1.1

7. QCPCAC revenues are divided between variable and fixed revenues based on the ratio between those revenues without the QCPCAC Revenues per year as follows

Year	Fixed	Variable
2018	44.5%	55.5%
2019	42.8%	57.2%
2020	40.2%	59.8%
2021	41.7%	58.3%
2022	43.5%	56.5%

8. Assumes reest of 12/31/2023 RSF to total combined imprecise value of \$ 980,000

Pennichuck East Utilities  
DW17-128  
Calculation of Rate Stabilization Funds

Ware Attachment B  
DLW Exhibit 1

Pittsford Aqueduct Company  
MOEF and RSF Analysis  
For the Twelve Months Ended December 31, 2022

PAC Proforma Test Year 2022						
Proformed Revenue Requirement <sup>1,2</sup> - \$ 898,812						
Material Operating Expense Revenue						
	CBFRR	MOEF	Operating Expense Revenue Requirement <sup>3</sup>	1.0 Debt Service Revenue Requirement	0.1 Debt Service Revenue Requirement	
Revenue Requirement <sup>4</sup> -	\$ 147,539	\$ 672,002	\$ 5,131	\$ 67,400	\$ 6,740	
Percentage of Revenues -	16.41%	74.77%	0.57%	7.50%	0.75%	
3 Years Coverage -	\$ 9,188	\$ 115,841	\$ -	\$ 4,197	\$ -	
Requested Rate Stabilization Fund by Revenue Category with no MOEF <sup>5,6</sup> -	\$ 9,000	\$ 166,000	No Stabilization Fund	\$ 4,000	No Stabilization Fund	
Requested Rate Stabilization Fund with MOEF -	\$ 9,000	\$ 87,000		\$ 4,000		
Based on largest negative variance from five year ave of -	4.36%					

Requested MOEF -	7.60%
Rate increase @ requested MOEF -	3.40%
Annual MOEF Cash -	\$ 47,309
Requested RSF funds with no MOEF -	\$ 179,000
Requested RSF funds with MOEF -	\$ 100,000
MOERR from 1604.06 Sch A -	\$ 622,492
Amortizin Expense -	\$ 2,201

Increase in Material Operating Expenses of 3.25% per year based on average increase of these expenses per year between 2018 and 2022. See Table below for calculation.

	2018 PAC Billed Revenue	2019 PAC Billed Revenue	2020 PAC Billed Revenue	2021 PAC Billed Revenue	2022 PAC Billed Revenue
Total Volumetric Charges	\$ 371,912	\$ 353,779	\$ 388,382	\$ 386,028	\$ 425,571
Total Meter Charges	\$ 211,604	\$ 213,224	\$ 212,621	\$ 214,703	\$ 225,115
Total Fire Protection - Public & Private (fixed)	\$ 204,973	\$ 204,973	\$ 204,973	\$ 205,937	\$ 215,923
Total Billed Revenue (does not include Total Other Revenues)	\$ 788,389	\$ 771,874	\$ 805,874	\$ 806,668	\$ 866,609
Misc Revenues	\$ 3,171	\$ 2,663	\$ 1,961	\$ 3,189	\$ 2,528
Total Annual Revenues inclusive of Total Other Revenues	\$ 791,559	\$ 774,537	\$ 807,835	\$ 809,857	\$ 869,137
% of Revenues that are variable	47.2%	45.8%	48.1%	47.9%	49.1%
% of Revenues that are fixed	52.8%	54.2%	51.9%	52.1%	50.9%

Calculation of MOER RSF, based on increase in MOE's over the past 5 years		
Year	Increased Operating Expenses	Revenue Shortfall
2024	\$ 20,231	\$ 13,935
2023	\$ 41,119	\$ 13,935
2021	\$ 62,687	\$ 13,935
2020	\$ 124,037	\$ 41,804
Totals -	\$ 165,841	

Projected MOERR Revenues	Projected MOERR Expenses	Transfer into/out of MOER RSF Account	Combined RSF Balance
\$ 672,002	\$ 644,924	\$ 27,078	\$ 127,078
\$ 672,002	\$ 686,043	\$ (14,041)	\$ 113,037
\$ 672,002	\$ 685,178	\$ (13,177)	\$ 99,861

Average percentage of revenues that were variable during the previous 5 years - 47.6%

Expense Type	2018 PAC Actual Variable Expenses	2019 PAC Actual Variable Expenses	2020 PAC Actual Variable Expenses	2021 PAC Actual Variable Expenses	2022 PAC Actual Variable Expenses
Electric	\$ 5,157	\$ 8,032	\$ 5,394	\$ 7,014	\$ 6,181
Chemicals	\$ 7,025	\$ 5,383	\$ 7,014	\$ 8,361	\$ 10,500
Total Variable Costs	\$ 12,182	\$ 13,414	\$ 12,408	\$ 15,375	\$ 16,681
Variable Expenses as a Percent of Total Revenues	1.55%	1.74%	1.54%	1.69%	1.92%

	2018 Actual CCF's sold by PAC	2019 Actual CCF's sold by PAC	2020 Actual CCF's sold by PAC	2021 Actual CCF's sold by PAC	2022 Actual CCF's sold by PAC
Annual Metered Sales (CCF)	57,011	55,342	60,280	57,873	58,269
Percentage Variance between Current and High Consumption Year	-5.73%	-8.92%	0.00%	-4.16%	-3.45%
Average Consumption (CCF) over the past five years	57,755				
Variance between current and 5 Yr Ave Consumption	-1.31%	-4.36%	4.19%	0.20%	0.88%

Largest percentage reduction in volumetric sales at PAC of 4.36% over the past five years from the five year average of volumetric sales  
Results in a Revenue loss of \$ 18,556  
Results in an Operating Expense reduction of \$ 727  
Results in an Operating Income reduction of \$ 17,828

Calculation of Annual Material Operating Expense Adjustment Percentage

	2018 PAC Material Operating Expenses	2019 PAC Material Operating Expenses	2020 PAC Material Operating Expenses	2021 PAC Material Operating Expenses	2022 PAC Material Operating Expenses
Production Expenses	\$ 128,290	\$ 131,316	\$ 158,864	\$ 152,533	\$ 160,074
Transmission & Distribution Expenses	\$ 73,811	\$ 61,179	\$ 66,438	\$ 107,517	\$ 104,608
Customer Acct & Collection Exp	\$ 12,552	\$ 15,594	\$ 11,602	\$ 16,659	\$ 12,950
Administrative & General Expense	\$ 23,978	\$ 26,789	\$ 13,542	\$ 16,107	\$ 26,505
Inter Div Management Fee	\$ 183,320	\$ 174,537	\$ 172,080	\$ 202,498	\$ 206,718
Amortization Expense	\$ 3,088	\$ 3,086	\$ 3,271	\$ 4,274	\$ 2,201
Property Taxes	\$ 181,659	\$ 187,692	\$ 168,175	\$ 126,782	\$ 118,309
Federal and State Income Taxes	\$ 28,406	\$ 1,258	\$ -	\$ 19,611	\$ 12,561
Less NOERR Expenses	\$ 2,617	\$ 8,993	\$ -	\$ 237	\$ 5,131
Total Annual MOERR Expenses exclusive of NMOE's	\$ 635,104	\$ 601,452	\$ 593,972	\$ 645,981	\$ 663,925
Less variable expenses for the year	\$ 12,182	\$ 13,414	\$ 12,408	\$ 15,375	\$ 16,681
Total Annual MOE's less variable expenses	\$ 622,922	\$ 588,038	\$ 581,564	\$ 630,606	\$ 647,244
Total Percentage Increase in Fixed Material Operating Expenses over the past four years -					3.80%
Total Percentage Increase in Fixed Material Operating Expenses over the past three years -					10.07%
Average annual increase in Material Operating expenses over the past four years -					0.96%
Average annual increase in Material Operating expenses over the past three years -					3.25%

Notes:

- Based on Debt Service Multiplier of 1.10 per Sch A of 1604.06 schedules.
- Revenue requirements per Sch A of 1604.06 schedules.
- Requested Rate Stabilization Fund for Operating Expense and P & I Coverage each have a contingency of 0%
- PAC share of the \$5,000,000 RSF for distribution to the RSF, MOERSF and the P&I RSF is 2.11% based on % of PAC revenues (2012 Case) to % of all three regulated utilities revenues (2012 TY Cases) or which was set at \$ 105,408
- Calculation of RSF Percentage based on Revenue requirements from DW13-126, 13-128 and 13-130
- For Calculation of Non Material Operating Expense Requirement see 1604.06 Sch 1, Attachment I
- Production expenses for 2015 and 2016 are the production expenses from 2013 and 2014 to eliminate the impact of the extra production that occurred in 2015 and 2016 due to leakage.

PWW Revenue Requirement -	\$ 27,680,214	per DW13-130 Settlement Agreement
PEU Revenue Requirement -	\$ 6,913,261	per DW13-126 Settlement Agreement
PAC Revenue Requirement -	\$ 745,186	per DW13-128 Settlement Agreement
Total Utility Revenue Requirement -	\$ 35,347,661	

PWV Proforma 5 Year Average 2021 Test Year					
Pro Forma Revenue Requirement <sup>1</sup> -		\$ 41,159,308	Actual Revenues collected after 3 yr credit of	\$ 40,736,437	
based on a requested rate increase of -		10.20%	\$ 422,871		
	CBFRR	Material Operating Expense Revenue Requirement (MOERR)	Operating Expense Revenue Requirement (NOERR)	1.0 Debt Service Revenue Requirement (1.0 DSRR) <sup>1</sup>	0.1 Debt Service Revenue Requirement (0.1 DSRR)
Revenue Requirement <sup>1</sup> -	\$ 7,729,032	\$ 24,703,026	\$ 546,634	\$ 7,436,923	\$ 743,692
Percentage of Revenues -	18.28%	60.02%	1.33%	18.07%	1.81%
3 Years coverage -	\$ 648,738	\$ 5,696,565	\$ -	\$ 624,219	\$ -
DW19-184 Approved RSF levels -	\$ 680,000	\$ 2,850,000	No Stabilization Fund	\$ 390,000	No Stabilization Fund
Based on largest variance from five year ave of -	4.83%				

Annual Operating Expense increases @ 4.50%

Percentage of revenues collected vs Revenue requirement due to 3 year credit - 98.97%

Requested MOEF -	9.45%
Rate increase @ requested MOEF -	10.20%
Annual MOEF Cash -	\$ 2,121,435
Approved DW19-184 MOER RSF Imprest value -	\$ 2,850,000
MOERR from 1604.06 Sch A -	\$ 22,449,048
Amortization Expense -	\$ 132,543
exclusive of amortization expense	\$ 23,504,714

Calculation of MOER RSF	
Operating Expense Increases Over 2021 Pro Forma	Revenue Shortfall from lowest sales in last 5 years
2023 -	\$ 1,010,207
2024 -	\$ 1,055,666
7/31/2025 -	\$ 1,103,171
	\$ 842,507
	\$ 842,507
	\$ 2,527,520
<b>Totals -</b>	<b>\$ 5,696,565</b>

	Projected MOE Revenues without recoupment	Projected MOE Revenues with recoupment	MOE's inclusive of Amort Expense (\$)	Transfer into/out of MOER RSF Account without recoupment	Transfer into/out of MOER RSF Account with recoupment	Comined RSF Balance without recoupment (\$)	Combined RSF Balance with recoupment (\$)
8/1/2023 -						\$ 5,059,837	\$ 5,059,837
12/31/2023 -	\$ 10,187,178	\$ 10,666,735	\$ 9,829,916	\$ 357,262	\$ 836,819	\$ 5,417,099	\$ 5,896,656
12/31/2024 -	\$ 24,449,227	\$ 25,120,608	\$ 24,647,465	\$ (198,238)	\$ 473,143	\$ 5,218,861	\$ 6,369,799
12/31/2025 -	\$ 24,449,227	\$ 24,449,227	\$ 25,750,636	\$ (1,301,409)	\$ (1,301,409)	\$ 3,917,452	\$ 5,068,390

Revenue Type	2017 PWV Billed Revenue	2018 PWV Billed Revenue	2019 PWV Billed Revenue	2020 PWV Billed Revenue	2021 PWV Billed Revenue
Total Volumetric Charges, includes Unbilled water sales, Unbilled/and Billed Recoupment and abatements	\$ 15,457,194	\$ 17,516,995	\$ 16,316,334	\$ 20,325,649	\$ 18,599,067
Total Meter Charge (fixed) includes fixed portion of special contracts	\$ 8,766,739	\$ 9,437,913	\$ 9,838,532	\$ 9,941,467	\$ 10,727,336
QCPAC revenues <sup>2</sup>	\$ 705,661	\$ 362,159	\$ 1,049,281	\$ 1,244,729	\$ 2,265,513
Total Private Fire Protection Charges (Fixed)	\$ 1,089,205	\$ 1,210,960	\$ 1,203,062	\$ 1,267,078	\$ 2,092,387
Total Municipal Fire Protection Charges (Fixed)	\$ 3,116,640	\$ 3,442,774	\$ 3,488,137	\$ 3,548,923	\$ 3,888,166
Total Billed Revenue	\$ 29,135,439	\$ 31,970,800	\$ 31,895,347	\$ 36,327,848	\$ 37,572,470
% of Revenues that are variable	54.4%	55.4%	52.9%	57.9%	52.7%
% of Revenues that are fixed	45.6%	44.6%	47.1%	42.1%	47.3%

Maximum percentage of revenues that were variable during the previous 5 years - 57.94%

Expense Type	2017 PWV Actual Variable Expenses	2018 PWV Actual Variable Expenses	2019 PWV Actual Variable Expenses	2020 PWV Actual Variable Expenses	2021 PWV Actual Variable Expenses	2022 Projected PWV Actual Variable Expenses
Purchased Water	\$ 437,664	\$ 472,407	\$ 464,894	\$ 579,959	\$ 548,677	\$ 552,307
Electric	\$ 1,053,878	\$ 1,152,305	\$ 1,198,435	\$ 1,367,715	\$ 1,501,095	\$ 1,747,085
Chemicals	\$ 765,438	\$ 908,981	\$ 913,829	\$ 888,950	\$ 919,216	\$ 1,396,267
Sludge Disposal	\$ 385,873	\$ 378,140	\$ 348,949	\$ 329,240	\$ 488,000	\$ 488,000
Total Variable Costs	\$ 2,642,853	\$ 2,911,833	\$ 2,926,107	\$ 3,165,865	\$ 3,456,989	\$ 4,183,660
Variable Expenses as a Percent of Total Revenues	9.1%	9.1%	9.2%	8.7%	9.2%	

	2017 Actual CCF's sold by PWV	2018 Actual CCF's sold by PWV	2019 Actual CCF's sold by PWV	2020 Actual CCF's sold by PWV	2021 Actual CCF's sold by PWV
Annual Metered Sales (CCF)	5,056,592	5,242,263	4,972,588	5,571,374	5,220,807
Percentage Variance between Current and High Consumption Year	-10.18%	-6.28%	-12.04%	0.00%	-6.71%
Average Consumption (CCF) over the past five years -	5,212,725				
Variance between current and 5 Yr Ave Consumption	-3.09%	0.56%	-4.83%	6.44%	0.15%

Largest percentage reduction in volumetric sales at PWV of 4.83% over the past five years from the five year average of volumetric sales between 2017 and 2021  
 Results in a Revenue loss of based on 5 year average sales of \$ 1,009,452 based on current permanent rate of \$ 4.01 per CCF  
 Results in an Operating Expense reduction of \$ 166,945 based on 2021 variable operating expenses  
 Results in a Revenue reduction of \$ 842,507

	2017 PWV Actual Operating Expenses <sup>3</sup>	2018 PWV Actual Operating Expenses <sup>3</sup>	2019 PWV Actual Operating Expenses <sup>3</sup>	2020 PWV Actual Operating Expenses <sup>3</sup>	2021 PWV Actual Operating Expenses <sup>3</sup>	2022 PWV Actual Estimated Expenses <sup>3</sup>
Production Expenses	\$ 4,571,844	\$ 5,074,509	\$ 5,064,262	\$ 5,287,617	\$ 5,675,210	\$ 6,457,643
T&D expenses	\$ 2,168,076	\$ 2,848,339	\$ 3,197,561	\$ 3,159,072	\$ 3,311,068	\$ 3,374,039
Engineering Expenses	\$ 1,169,360	\$ 1,287,747	\$ 1,351,622	\$ 679,636	\$ 964,232	\$ 946,956
Customer Acct & Collection Expenses	\$ 447,889	\$ 1,472,292	\$ 1,583,386	\$ 1,686,045	\$ 1,688,164	\$ 1,709,908
Information Systems Expense	\$ -	\$ -	\$ 1,132,112	\$ 1,086,015	\$ 1,196,632	\$ 1,338,675
Admin and General Expenses (Includes NMOE)	\$ 7,303,584	\$ 6,597,668	\$ 5,758,314	\$ 6,795,527	\$ 7,207,829	\$ 7,498,440
Inter Div Mgt Fee Expense (Included PCP Mgt Fee)	\$ (3,321,124)	\$ (3,288,063)	\$ (3,177,470)	\$ (3,212,059)	\$ (3,393,199)	\$ (3,493,286)
Amortization Expense	\$ 145,442	\$ 134,666	\$ 138,466	\$ 120,233	\$ 150,002	\$ 132,543
Property Tax Expense	\$ 4,553,766	\$ 4,438,775	\$ 4,048,124	\$ 4,191,436	\$ 4,631,638	\$ 4,276,013
Payroll Tax Expense	\$ 656,931	\$ 698,087	\$ 727,089	\$ 728,335	\$ 783,124	\$ 783,124
Cash Tax Expense <sup>4</sup>	\$ 90,755	\$ 103,249	\$ 90,703	\$ 95,775	\$ 59,828	\$ 104,171
Less NMOE <sup>5</sup>	\$ 556,688	\$ 607,875	\$ 491,669	\$ 448,736	\$ 492,716	\$ 546,634
Total Annual MOE's	\$ 17,229,834	\$ 18,759,594	\$ 19,422,499	\$ 20,068,896	\$ 21,781,813	\$ 22,581,591
Variable MOE's	\$ 2,642,853	\$ 2,911,833	\$ 2,926,107	\$ 3,165,865	\$ 3,456,989	\$ 4,183,660
Total Annual Fixed MOE's	\$ 14,586,981	\$ 15,847,761	\$ 16,496,392	\$ 16,903,031	\$ 18,324,824	\$ 18,397,931
Total Annual MOE's	\$ 17,229,834	\$ 18,759,594	\$ 19,422,499	\$ 20,068,896	\$ 21,781,813	\$ 22,581,591
Percent increase in MOE's over the prior year		8.88%	3.53%	3.23%	8.54%	3.67%
					Total Increase between 2019 - 2022 -	13.99%
					Ave. increase per year (inclusive of compounding) -	4.46%

Notes:

- Based on 1604.06 Schedule A Perm Rate based on Five Year Ave.
- QCPAC revenues are divided between variable and fixed revenues based on the ratio between those revenues without the QCPAC Revenues per year as follows

Year	Fixed	Variable
2017	45.6%	54.4%
2018	44.6%	55.4%
2019	47.1%	52.9%
2020	42.1%	57.9%
2021	47.3%	52.7%

- Actual year audited expenses, including non material operating expenses
- Cash tax expenses is estimated for non rate case test years 2017, 2019, 2020 and projected 2022.
- Projected level of combined RSF account as of 7/31/2023 per 1604.06 Sch 1, Attachment A, Page 3 (See cell AA12)
- 2023, 2024 and 2025 MOE's are projected based on 2021 proforma to actual 12/31/2021 expenses adjusted to the 5 year average with the projected annual operating expense increase of \$ 1,150,917 which is the difference between permanent rates sought and QCPAC collected from 8/1/2022 to 7/31/2023
- Recoupment collected over 12 months between August 2023 and July 2024 in the amount of \$ -
- The projected total combined RSF account balance is adjusted only for changes in the MOER RSF balance. This is based on that fact that the CBFRR expenses and revenues do not change between rate cases so that the CBFRR RSF balance is expected to remain at its DW19-184 target level of \$680,000. Additionally, due to the QCPAC process and annual adjustments to the Company's allowed DSRR 1.0 revenues to equal the timing and P&I interest associated with each annual bond offering it is expected that the DSRR 1.0 RSF will stay at its imprest level of \$390,000 per year

Pennichuck Water Works, Inc.  
Rate Stabilization Fund Calculations

DW Exhibit 1

PWV Proforma 5 Year Average 2022 Test Year					
Pro forma Revenue Requirement <sup>1</sup> - \$		55,918,502		Actual Revenues collected after 3 yr credit of	
based on a requested rate increase of -		9.95%			
	CFRR	Material Operating Expense Requirement (MOER)	Operating Expense Requirement (NOER)	1.0 Debt Service Revenue Requirement (1.0 DSRR)	0.1 Debt Service Revenue Requirement (0.1 DSRR)
Revenue Requirement <sup>2</sup> - \$	8,802,880	\$ 35,363,125	\$ 568,676	\$ 10,167,110	\$ 1,056,711
Percentage of Revenues -	15.74%	63.24%	1.02%	18.18%	1.82%
Years coverage <sup>3</sup> - \$	1,002,216	\$ 4,664,608		\$ 1,269,702	
DW19-184, DW20-156 and DW20-151 Approved RSF levels <sup>4</sup> - \$	720,000	\$ 1,835,000	No Stabilization Fund	\$ 445,000	No Stabilization Fund
Based on largest variance from five year ave of -					
Based on largest variance from five year ave of - 9.88%					

Annual Operating Expense increases @ -4.00%

Requested MOE<sup>5</sup> - 8.20%  
Rate increase @ requested MOE<sup>5</sup> - 9.95%  
Annual MOE<sup>5</sup> Cash - 2,665,157  
Consolidated MOE RSF Imprest value - 3,835,000  
MOE<sup>5</sup> from 1604-06 Sch A - 12,505,923  
Amortization Expense - 196,047  
Revenue from Credit/Debit associated with RSF true up - \$ -

Calculation of MOER RSF		
Operating Expense Increases Over 2022 Pro Forma	Revenue Shortfall from Lowest sales in last 5 years	
2024 \$ 1,300,077	\$ (2,037,677)	
2025 \$ 1,302,080	\$ (2,037,677)	
2026 \$ 1,406,163	\$ (1,188,645)	
7/31/2026		
\$ 4,008,320	\$ (5,261,071)	
	100%	\$ (1,252,751)

	Projected MOE Revenues	MOE's inclusive of Amort Expense (\$)	Transfer into/out of MOER RSF Account without recognition	Comined RSF Balance without recognition (\$)
Projected 12/31/2023	\$ 22,873,355			\$ 5,000,000 (3/17)
12/31/2024	\$ 35,363,125	\$ 33,998,044	\$ 1,365,081	\$ 6,365,081
12/31/2025	\$ 35,363,125	\$ 35,350,124	\$ 13,001	\$ 6,378,081
7/31/2026	\$ 35,363,125	\$ 36,756,281	\$ (1,393,156)	\$ 4,984,925

Revenue Type	2018 Consolidated Billed Revenue	2019 Consolidated Billed Revenue	2020 Consolidated Billed Revenue	2021 Consolidated Billed Revenue	2022 Consolidated Billed Revenue
Total Volumetric Charges, includes Unbilled water sales and abatements not including recoupment	\$ 22,708,473	\$ 21,699,333	\$ 25,571,669	\$ 24,690,948	\$ 27,376,425
Net Unbilled and Billed Recoupment (Fixed/Volumetric)	\$ 577,594	\$ (168)			\$ 306,305
Total Capital Recovery Surcharge (Fixed)	\$ 232,134	\$ 181,603	\$ 182,132	\$ 181,321	\$ 179,140
Total Meter Charge (less recoupment - Fixed) (QEPAC revenues)	\$ 14,977,393	\$ 12,344,338	\$ 12,344,037	\$ 13,297,293	\$ 13,213,566
Total Meter Charge (less recoupment - Fixed) (QEPAC revenues)	\$ 362,119	\$ 1,156,162	\$ 1,155,155	\$ 2,468,114	\$ 3,335,393
Total Fire Protection - Public & Private (Fixed)	\$ 9,069,470	\$ 6,174,950	\$ 6,310,461	\$ 7,338,602	\$ 7,630,110
Total Billed Revenues	\$ 47,467,237	\$ 41,966,323	\$ 45,933,434	\$ 46,172,264	\$ 52,560,559
% of Revenues that are variable	55.3%	53.9%	58.5%	54.0%	55.5%
% of Revenues that are fixed	44.7%	46.1%	41.5%	46.0%	44.5%

Maximum percentage of revenues that were variable during the previous 5 years - 41.47%

Expense Type	2018 Consolidated Actual Variable Expenses	2019 Consolidated Actual Variable Expenses	2020 PWV Consolidated Variable Expenses	2021 Consolidated Actual Variable Expenses	2022 Consolidated Actual Variable Expenses
Purchased Water	\$ 1,586,775	\$ 1,467,095	\$ 1,957,388	\$ 1,684,013	\$ 1,974,487
Electric	\$ 1,470,690	\$ 1,544,062	\$ 1,697,025	\$ 1,859,592	\$ 2,280,006
Chemicals	\$ 669,294	\$ 597,473	\$ 984,543	\$ 662,263	\$ 1,654,878
Sludge Disposal	\$ 378,140	\$ 348,349	\$ 329,240	\$ 488,000	\$ 532,015
Total Variable Costs	\$ 4,385,443	\$ 4,317,939	\$ 4,918,096	\$ 4,994,859	\$ 6,441,426
Variable Expenses as a Percent of Total Revenues	9.25%	10.28%	10.9%	10.8%	12.2%

Remove Litchfield purchased water expense

	2018 Consolidated CCF <sup>6</sup> sold by PWV	2019 Consolidated CCF <sup>6</sup> sold by PWV	2020 Consolidated CCF <sup>6</sup> sold by PWV	2021 Consolidated CCF <sup>6</sup> sold by PWV	2022 Consolidated CCF <sup>6</sup> sold by PWV
Annual Metered Sales (CCF)	5,902,721	5,585,314	6,364,672	5,911,232	6,922,666
Percentage Variance between Current and High Consumption Year	-17.28%	-23.94%	-8.77%	-17.11%	0.00%
Average Consumption (CCF) over the past five years	6,137,340.60				
Variance between current and 5 Yr Ave Consumption	-3.98%	-9.88%	1.57%	-3.83%	11.34%

Remove CCF sold to PEU

Largest percentage reduction in volumetric sales at PWV of -9.88% over the past five years from the five year average of volumetric sales between 2018 and 2022  
Results in a Revenue loss of based on 5 year average sales of \$ (2,674,088) based on current permanent rate of \$ 4.41 per CCF (PWV DW22-032 volumetric rate)  
Results in an Operating Expense reduction of \$ (12,037,877) based on 2022 variable operating expenses

Calculation of Annual Material Operating Expense Adjustment Percentage					
	2018 Consolidated Operating Expenses <sup>7</sup>	2019 PWV Consolidated Operating Expenses <sup>8</sup>	2020 PWV Consolidated Operating Expenses <sup>9</sup>	2021 PWV Consolidated Operating Expenses <sup>10</sup>	2022 PWV Consolidated Operating Expenses <sup>11</sup>
Production Expenses	\$ 7,493,225	\$ 7,452,777	\$ 8,117,412	\$ 8,385,192	\$ 10,165,561
T&D expenses	\$ 3,659,294	\$ 4,264,971	\$ 3,969,438	\$ 4,278,081	\$ 4,655,397
Engineering Expenses	\$ 1,287,747	\$ 1,353,522	\$ 679,636	\$ 964,232	\$ 1,091,043
Customer Acc't & Collection Expenses	\$ 1,854,996	\$ 1,803,998	\$ 1,882,492	\$ 1,908,897	\$ 2,045,848
Information Systems Expense	\$ 1,005,009	\$ 1,132,112	\$ 1,086,015	\$ 1,343,754	\$ 1,343,754
Admin and General Expenses (includes NMDE)	\$ 5,749,314	\$ 7,003,778	\$ 6,987,015	\$ 7,405,512	\$ 7,439,617
Inter Div Mgt Fee Expense (includes POP and Fee)	\$ (968,338)	\$ 605,978	\$ (658,845)	\$ (778,862)	\$ (530,712)
Amortization Expense	\$ 224,437	\$ 268,392	\$ 187,679	\$ 214,217	\$ 228,419
Property Tax Expense	\$ 5,641,840	\$ 5,409,960	\$ 5,541,996	\$ 5,894,421	\$ 5,413,104
Payroll Tax Expense	\$ 688,097	\$ 727,388	\$ 728,135	\$ 781,104	\$ 834,768
Cash Tax Expense	\$ 109,279	\$ 85,303	\$ 90,132	\$ 99,807	\$ 106,101
Less NMDE's	\$ 647,341	\$ 526,525	\$ 473,129	\$ 588,900	\$ 591,759
Total Annual MOE's exclusive of MOE's	\$ 26,091,181	\$ 28,956,917	\$ 28,611,509	\$ 30,516,361	\$ 32,768,718
Total Annual Fixed MOE's	\$ 4,385,443	\$ 4,317,939	\$ 4,918,096	\$ 4,994,859	\$ 6,441,426
Total Annual MOE's	\$ 22,505,738	\$ 24,638,978	\$ 23,693,413	\$ 25,521,502	\$ 26,327,292
Total Annual MOE's exclusive of MOE's	\$ 26,637,149	\$ 28,855,220	\$ 28,611,505	\$ 30,516,183	\$ 32,768,718
Percent increase in MOE's over the prior year		8.48%	-0.98%	6.68%	7.37%
Total Increase between 2019 - 2022 - 13.41%					
Avg. increase per year between 2019 and 2022 (inclusive of compounding) - 4.28%					

Notes:

- Based on 1604-06 Schedule A Perm Rate based on Five Year Ave.
- QEPAC revenues are divided between variable and fixed revenues based on the ratio between those revenues without the QEPAC Revenues per year as follows

Year	Fixed	Variable
2018	44.2%	55.8%
2019	45.7%	54.3%
2021	46.4%	54.4%
2022	44.1%	55.9%

- Actual year audited expenses, including non material operating expenses
- Cash tax expense is estimated for non rate cases for years 2017, 2018, 2020
- Projected level of combined RSF account as of 12/31/2023 per 1604-06 Sch A Attachment A, Page 1 (See call 1632)
- 2023, 2024 and 2025 MOE's are projected based on 2022 proforma to actual 12/31/2022 expenses adjusted to the 5 year average with the projected annual operating expense increase of 4.0%
- Recoupment collected over 12 months between August 2023 and July 2024 in the amount of \$
- The projected total combined RSF Account balance is allocated only for changes in the MOE RSF balance. This is based on the fact that the CFRR expenses and revenues do not change between the years so the CFRR RSF balance is expected to remain at
- The projected total combined RSF Account balance is allocated only for changes in the MOE RSF balance. This is based on the fact that the CFRR expenses and revenues do not change between the years so the CFRR RSF balance is expected to remain at
- DW19-184 target level of \$680,000. Additionally, due to the QEPAC process and annual adjustments to the Company's allowed DSM 1.0 revenues to equal the timing and P&I interest associated with each annual bond offering it is expected that the DSM 1.0 RSF will stay at its target level of \$330,000 per year

PWV Proforma 5 Year Average 2022 Test Year					
Pro forma Revenue Requirement <sup>1</sup> -		\$ 42,621,029	Actual Revenues collected after 3 yr credit of		
based on a requested rate increase of -		7.43%			
	CBFRR	Material Operating Expense Revenue Requirement (MOERR)	Operating Expense Revenue Requirement (NOERR)	1.0 Debt Service Revenue Requirement (1.0 DSRR) <sup>2</sup>	0.1 Debt Service Revenue Requirement (0.1 DSRR)
Revenue Requirement <sup>1</sup> -	\$ 7,729,032	\$ 25,872,666	\$ 546,114	\$ 7,702,925	\$ 770,292
Percentage of Revenues -	18.13%	60.70%	1.28%	18.07%	1.81%
3 Years coverage -	\$ 898,862	\$ 2,988,867	\$ -	\$ 892,836	\$ -
DW19-184 Approved RSF levels -	\$ 680,000	\$ 2,850,000	No Stabilization Fund	\$ 390,000	No Stabilization Fund
Based on largest variance from five year ave of -	9.19%				

Annual Operating Expense increases @ 4.50%

Requested MOE <sup>3</sup> -	9.25%
Rate increase @ requested MOE <sup>3</sup> -	7.43%
Annual MOE Cash -	\$ 2,179,935
Approved DW19-084 MOER RSF Imprest value -	\$ 2,850,000
MOERR from 1604.06 Sch A -	\$ 23,566,865
Amortization Expense -	\$ 125,866
Revenues from Credit/Debit associated with RSF true up -	\$ -

exclusive of amortization, non material operating expense and MOE

Revenue Type	2018 PWV Billed Revenue	2019 PWV Billed Revenue	2020 PWV Billed Revenue	2021 PWV Billed Revenue	2022 PWV Billed Revenue
Total Volumetric Charges, includes Unbilled water sales, Unbilled/and Billed Recoupment and abaterments	\$ 17,516,995	\$ 16,316,334	\$ 20,325,649	\$ 18,599,067	\$ 19,901,918
Total Meter Charge (Fixed) includes fixed portion of special contracts	\$ 9,437,913	\$ 9,838,524	\$ 9,941,467	\$ 10,727,336	\$ 10,476,574
QCPAC revenues <sup>4</sup>	\$ 362,159	\$ 1,049,281	\$ 1,244,728	\$ -	\$ -
QCPAC revenues <sup>4</sup>	\$ 4,653,439	\$ 4,691,193	\$ 4,816,003	\$ 5,980,553	\$ 6,104,032
Total Private & Municipal Fire Protection Charges (fixed)	\$ -	\$ -	\$ -	\$ -	\$ -
Total Billed Revenue	\$ 31,970,505	\$ 31,895,346	\$ 36,327,849	\$ 37,572,470	\$ 39,311,566
% of Revenues that are variable	55.4%	52.9%	57.9%	52.7%	54.0%
% of Revenues that are fixed	44.6%	47.1%	42.1%	47.3%	45.4%

Maximum percentage of revenues that were variable during the previous 5 years - 42.1%

Expense Type	2018 PWV Actual Variable Expenses	2019 PWV Actual Variable Expenses	2020 PWV Actual Variable Expenses	2021 PWV Actual Variable Expenses	2022 PWV Actual Variable Expenses
Purchased Water	\$ 472,407	\$ 464,884	\$ 579,959	\$ 548,677	\$ 542,129
Electric	\$ 1,152,305	\$ 1,198,435	\$ 1,367,715	\$ 1,501,095	\$ 1,882,735
Chemicals	\$ 908,981	\$ 913,829	\$ 888,950	\$ 919,216	\$ 1,387,257
Sludge Disposal	\$ 378,140	\$ 348,940	\$ 329,240	\$ 488,000	\$ 632,015
Total Variable Costs	\$ 2,911,833	\$ 2,926,107	\$ 3,165,865	\$ 3,456,989	\$ 4,544,236
Variable Expenses as a Percent of Total Revenues	9.1%	9.2%	8.7%	9.2%	11.0%

	2018 Actual CCF's sold by PWV	2019 Actual CCF's sold by PWV	2020 Actual CCF's sold by PWV	2021 Actual CCF's sold by PWV	2022 Actual CCF's sold by PWV
Annual Metered Sales (CCF)	5,242,263	4,972,588	5,571,374	5,220,807	6,139,578
Percentage Variance between Current and High Consumption Year	-17.12%	-23.47%	-10.20%	-17.60%	0.00%
Average Consumption (CCF) over the past five years -	5,429,322.16				
Variance between current and 5 Yr Ave Consumption	-3.57%	-9.19%	2.55%	-3.99%	11.57%

Largest percentage reduction in volumetric sales at PWV of -9.19% over the past five years from the five year average of volumetric sales between 2017 and 2021  
 Results in a Revenue loss of based on 5 year average sales of \$ (1,989,755) based on current permanent rate of \$ 3.99 per CCF  
 Results in an Operating Expense reduction of \$ (417,390) based on 2021 variable operating expenses  
 Results in a Revenue reduction of \$ (1,572,365)

	2018 PWV Actual Operating Expenses <sup>5</sup>	2019 PWV Actual Operating Expenses <sup>5</sup>	2020 PWV Actual Operating Expenses <sup>5</sup>	2021 PWV Actual Operating Expenses <sup>5</sup>	2022 PWV Actual Operating Expenses <sup>5</sup>
Production Expenses	\$ 5,074,509	\$ 5,064,262	\$ 5,287,617	\$ 5,675,210	\$ 7,037,521
T&D expenses	\$ 2,848,339	\$ 3,197,564	\$ 3,159,072	\$ 3,311,068	\$ 3,600,613
Engineering Expenses	\$ 1,287,747	\$ 1,351,620	\$ 678,636	\$ 964,232	\$ 1,091,043
Customer Acct & Collection Expenses	\$ 1,472,292	\$ 1,583,386	\$ 1,686,045	\$ 1,688,164	\$ 1,825,944
Information Systems Expense	\$ 1,057,009	\$ 1,132,112	\$ 1,086,015	\$ 1,343,754	\$ 1,343,754
Admin and General Expenses (includes NMOE)	\$ 5,540,899	\$ 6,795,527	\$ 6,795,527	\$ 7,207,829	\$ 7,174,105
Inter Div Mgt Fee Expense (includes PCP Mgt Fee)	\$ (3,508,214)	\$ (2,117,470)	\$ (3,312,050)	\$ (3,611,063)	\$ (3,611,063)
Amortization Expense	\$ 134,666	\$ 138,466	\$ 120,233	\$ 150,002	\$ 158,238
Property Tax Expense	\$ 4,438,775	\$ 4,048,124	\$ 4,191,436	\$ 4,631,638	\$ 4,001,047
Payroll Tax Expense	\$ 698,087	\$ 727,089	\$ 728,335	\$ 783,124	\$ 814,768
Cash Tax Expense (NHRET Tax)	\$ 89,000	\$ 80,528	\$ 84,654	\$ 83,229	\$ 100,300
Less NMOE <sup>6</sup>	\$ 607,875	\$ 491,669	\$ 448,736	\$ 492,716	\$ 546,114
Total Annual MOE <sup>7</sup>	\$ 18,524,594	\$ 20,449,538	\$ 20,057,975	\$ 21,745,166	\$ 22,990,165
Variable MOE <sup>8</sup>	\$ 2,911,833	\$ 2,926,107	\$ 3,165,865	\$ 3,456,989	\$ 4,544,236
Total Annual Fixed MOE <sup>8</sup>	\$ 15,612,761	\$ 17,523,431	\$ 16,892,110	\$ 18,288,176	\$ 18,445,929
Total Annual MOE's	\$ 18,524,594	\$ 20,449,538	\$ 20,057,975	\$ 21,745,166	\$ 22,990,165
Percent increase in MOE's over the prior year		10.39%	-1.51%	5.41%	5.23%
Total Increase between 2018 -2022 -					24.11%
Ave. increase per year between 2019 and 2022 (inclusive of compounding) -					5.55%

Notes:  
 1. Based on 1604.06 Schedule A Perm Rate based on Five Year Ave.  
 2. QCPAC revenues are divided between variable and fixed revenues based on the ratio between those revenues without the QCPAC Revenues per year as follows

Year	Fixed	Variable
2018	44.6%	55.4%
2019	47.1%	52.9%
2020	42.1%	57.9%
2021	47.3%	52.7%
2022	45.4%	54.6%

3. Actual year audited expenses, including non material operating expenses  
 4. Cash tax expenses is estimated for non rate case test years 2017, 2019, 2020  
 5. Projected level of combined RSF account as of 12/31/2023 per 1604.06 Sch 1, Attachment A, Page 3 (See cell N12)  
 6. 2023, 2024 and 2025 MOE's are projected based on 2022 proforma to actual 12/31/2022 expenses adjusted to the 5 year average with the projected annual operat: \$ 446,275 which is the difference between permanent rates sought and QCPAC collected from 8/1/2022 to 7/31/2023  
 7. Recoupment collected over 12 months between August 2023 and July 2024 in the amount of \$ -  
 8. The projected total combined RSF account balance is adjusted only for changes in the MOER RSF balance. This is based on that fact that the CBFRR expenses and revenues do not change between rate cases so that the CBFRR RSF balance is expected to remain at its DW19-084 target level of \$680,000. Additionally, due to the QCPAC process and annual adjustments to the Company's allowed DSR 1.0 revenues to equal the timing and P&I interest associated with each annual bond offering it is expected that the DSR 1.0 RSF will stay at its interest level of \$390,000 per year

Calculation of MOER RSF		Projected MOE Revenues	MOE's Inclusive of Amort Expense (6)	Transfer into/out of MOER RSF Account without recoupment	Comined RSF Balance without recoupment (8)
Operating Expense Increases Over 2022 Pro Forma	Revenue Shortfall from lowest sales in last 5 years	2024 \$ 1,060,509	\$ (1,572,365)		
2025 \$ 1,108,232	\$ (1,572,365)	12/31/2024 \$ 25,872,666	\$ 24,753,240	\$ 1,119,426	\$ 5,039,426
7/31/2026 \$ 3,326,841	\$ (4,061,942)	12/31/2025 \$ 25,872,666	\$ 25,861,472	\$ 11,194	\$ 5,050,620
Totals	\$ (735,099)	7/1/2026 \$ 25,872,666	\$ 27,019,574	\$ (1,146,908)	\$ 3,903,712

Projected 12/31/2023 -

PEU Programs Test Year 2022					
Pro forma Revenue Requirement -	\$	13,223,841	Inclusive of NCCRS Revenues		
Pro forma Revenue Requirement -	\$	13,045,026	Exclusive of NCCRS Revenues		
Material Operating Expense Revenue Requirement, Inclusive of MOE					
	CBFR	MOE	Operating Expense Revenue Requirement	1.0 Debt Service Revenue Requirement	0.1 Debt Service Revenue Requirement
Revenue Requirement -	\$	926,309	\$ 9,441,731	\$ 40,053	\$ 2,370,036
Percentage of Revenues -		7.00%	74.40%	0.30%	17.92%
3 Years coverage -	\$	263,917	\$ 833,286	\$ 120,801	\$ 667,422
DW20-156 Approved RSF fund level -	\$	31,000	\$ 898,000	\$	\$ 51,000
Based on largest negative variance from five year ave of -		16.14%			

Requested MOEF -	9.75%
Rate increase @ requested MOEF -	24.10%
Annual MOEF Cash -	\$ 832,748
DW20-156 Approved RSF fund level -	\$ 980,000
MOEF from 1604.06 Sch A -	\$ 8,541,003
Amortization Expense -	\$ 67,980

Calculation of MOER RSF		
Operating Expense Increases Over 2022 Pro Forma	Revenue Shortfall from lowest sales in last 5 years	
2024 -	\$ 256,230	\$ 833,286
2025 -	\$ 263,917	\$ 833,286
2026 -	\$ 271,835	\$ 833,286
	\$ 791,982	\$ 2,499,859
Totals -	\$	\$ 3,291,841

Projected MOE Revenues	Projected MOE's inclusive of Amort Expense (E)	Transfer into/out of MOER RSF Account	Combined RSF Balance (B)
12/31/2023	\$ -	\$ -	\$ 980,000
12/31/2024	\$ 8,540,314	\$ 8,865,213	\$ (324,899)
12/31/2025	\$ 9,441,731	\$ 9,129,130	\$ 312,601
12/31/2026	\$ 9,441,731	\$ 9,400,965	\$ 40,766
7/1/2026	\$ 4,720,865	\$ 4,836,390.52	\$ (115,524.52)
Totals -	\$	\$	\$ 892,934

Revenue Type	2018 PEU Billed Revenue	2019 PEU Billed Revenue	2020 PEU Billed Revenue	2021 PEU Billed Revenue	2022 PEU Billed Revenue
Total Volumetric Charges, includes Unbilled water sales and statements not including recognition	\$ 4,812,568	\$ 5,020,222	\$ 5,875,538	\$ 5,705,054	\$ 7,048,956
Net Unbilled and Billed Recoupment (Fixed/Volumetric)	\$ 577,594	\$ (168)	\$ -	\$ -	\$ 936,385
Total Capital Recovery Surcharge (Fixed)	\$ 232,134	\$ 181,603	\$ 182,112	\$ 181,321	\$ 179,140
Total Meter Charge (less recoupment - Fixed)	\$ 1,947,853	\$ 2,192,482	\$ 2,188,948	\$ 2,351,681	\$ 2,511,417
QCPC Revenues	\$ -	\$ 106,981	\$ 270,425	\$ 202,801	\$ 506,950
Total Fire Protection - Public & Private (Fixed)	\$ 1,111,319	\$ 1,278,880	\$ 1,289,588	\$ 1,352,161	\$ 1,290,155
Total Billed Revenues	\$ 8,688,466	\$ 8,788,900	\$ 9,789,711	\$ 9,793,818	\$ 12,472,384
% of Revenues that are variable	55.5%	57.9%	61.5%	59.4%	56.5%
% of Revenues that are fixed	44.5%	42.1%	38.5%	40.6%	43.5%

Average percentage of revenues that were variable during the previous 5 years - 58.2%

Expense Type	2018 PEU Actual Variable Expenses	2019 PEU Actual Variable Expenses	2020 PEU Actual Variable Expenses	2021 PEU Actual Variable Expenses	2022 PEU Actual Variable Expenses	2023 PEU Pro Forma Variable Expenses
Purchased Water, exclusive of trucked water	\$ 1,094,365	\$ 1,002,160	\$ 1,377,329	\$ 1,135,336	\$ 1,432,358	\$ 1,306,491
Electric	\$ 313,229	\$ 337,295	\$ 323,915	\$ 353,219	\$ 391,131	\$ 412,722
Chemical	\$ 53,875	\$ 38,562	\$ 40,211	\$ 39,546	\$ 62,138	\$ 62,138
Total Variable Costs	\$ 1,461,469	\$ 1,378,017	\$ 1,741,455	\$ 1,528,101	\$ 1,885,627	\$ 1,781,351
Variable Expenses as a Percent of Total Revenues	16.8%	15.7%	17.8%	15.6%	15.1%	

  

	2018 Actual CCF's sold by PEU	2019 Actual CCF's sold by PEU	2020 Actual CCF's sold by PEU	2021 Actual CCF's sold by PEU	2022 Actual CCF's sold by PEU	5 Year Ave. CCF's sold by PEU
Annual Metered Sales (CCF)	599,423	554,259	721,207	626,534	717,022	643,709
Percentage Variance between Current and High Consumption Year	-20.33%	-30.14%	0.00%	-15.13%	-0.60%	-12.05%
Average Consumption (CCF) over the past five years	643,709					
Variance between current and 5 Yr Ave Consumption	-7.39%	-16.14%	10.76%	-2.74%	10.22%	0.00%

Largest percentage reduction in volumetric sales at PEU of 16.14% over the past five years from the five year average of volumetric sales

Results in a Revenue loss of \$ 1,137,601

Results in an Operating Expense reduction of \$ 394,314

Results in an Operating Income reduction of \$ 833,286

Calculation of Annual Material Operating Expense Adjustment Percentage	2018 PEU Actual Operating Expenses	2019 PEU Actual Operating Expenses	2020 PEU Actual Operating Expenses	2021 PEU Actual Operating Expenses	2022 PEU Actual Operating Expenses
Production Expenses	\$ 2,290,425	\$ 2,257,199	\$ 2,670,931	\$ 2,557,449	\$ 2,967,856
T&D expenses	\$ 721,584	\$ 1,006,311	\$ 743,929	\$ 859,496	\$ 946,176
Customer Acct & Collection Expenses	\$ 200,152	\$ 204,718	\$ 184,845	\$ 203,803	\$ 206,954
Admin and General Expenses (Includes NMDE)	\$ 184,537	\$ 181,461	\$ 177,846	\$ 181,617	\$ 239,006
Inter Div Mgt Fee Expense (Includes P&I Mgt Fee)	\$ 2,256,954	\$ 2,397,261	\$ 2,481,314	\$ 2,649,703	\$ 2,873,622
Amortization Expense	\$ 86,683	\$ 127,440	\$ 64,174	\$ 59,980	\$ 67,880
Property Tax Expense	\$ 1,021,406	\$ 1,174,044	\$ 1,182,385	\$ 1,136,001	\$ 1,293,748
Cash Tax Expense	\$ 18,779	\$ 8,775	\$ 9,978	\$ 4,382	\$ 4,293
Less NMDE's	\$ 36,869	\$ 27,863	\$ 24,393	\$ 45,547	\$ 40,053
Total Annual Material Operating Expenses	\$ 8,859,654	\$ 7,324,265	\$ 7,484,929	\$ 7,606,483	\$ 8,559,582
Variable MOE's	\$ 1,461,469	\$ 1,378,017	\$ 1,741,455	\$ 1,528,101	\$ 1,885,627
Total Annual Fixed MOE's	\$ 5,398,184	\$ 5,946,248	\$ 5,743,474	\$ 6,078,382	\$ 6,673,955
Percent increase in MOE's over the prior year		8.77%	2.19%	1.62%	12.53%
					23.88%
					5.65%

- Notes:
- Based on Debt Service Multiplier of 1.10 per Sch A of 1604.06 schedules. The 1.1 multiplier is not applied to the North Country Capital Recovery Surcharge P&I
  - Revenue requirements per Sch A of 1604.06 schedules
  - Requested Rate Stabilization Fund for Operating Expense and P & I Coverage each have a contingency of 0% safety factor and are based on year ending 2019 results
  - PEU share of the \$5,000,000 RSF for distribution to the RSF, MOERSF and the P&I RSF is \$ 19.56% based on % of PWW revenues (2012 Case) to % of all three regulated utilities revenues (2012 Cases) or
  - Calculation of RSF Percentage based on Revenue requirements from DW13-136, 13-128 and 13-130
- |                                     |    |            |                                   |
|-------------------------------------|----|------------|-----------------------------------|
| PWW Revenue Requirement -           | \$ | 27,689,214 | per DW13-130 Settlement Agreement |
| PEU Revenue Requirement -           | \$ | 6,811,361  | per DW13-126 Settlement Agreement |
| PAC Revenue Requirement -           | \$ | 745,186    | per DW13-128 Settlement Agreement |
| Total Utility Revenue Requirement - | \$ | 35,347,661 |                                   |

6. For Calculation of Operating Expense Requirement see Exhibit 1.1

7. QCPC revenues are divided between variable and fixed revenues based on the ratio between those revenues without the QCPC Revenues per year as follows

Year	Fixed	Variable
2018	44.5%	55.5%
2019	42.8%	57.2%
2020	40.2%	59.8%
2021	41.7%	58.3%
2022	43.5%	56.5%

8. Assumes reset of 12/31/2023 RSF to total combined imprecise value of \$ 980,000

Pennichuck East Utilities  
DW17-128  
Calculation of Rate Stabilization Funds

DLW Exhibit 1

Ware Attachment D

Pittsfield Aqueduct Company  
MOEF and RSF Analysis  
For the Twelve Months Ended December 31, 2022

PAC Proforma Test Year 2022						
Proformed Revenue Requirement <sup>1,2</sup> - \$ 905,552						
Material Operating Expense Revenue						
	CBFRR	MOEF	Operating Expense Revenue Requirement <sup>3</sup>	1.0 Debt Service Revenue Requirement	0.1 Debt Service Revenue Requirement	
Revenue Requirement <sup>4</sup> -	\$ 147,539	\$ 672,002	\$ 5,131	\$ 67,400	\$ 13,480	
Percentage of Revenues -	16.29%	74.21%	0.57%	7.44%	1.49%	
3 Years coverage -	\$ 20,341	\$ 230,209	\$ 9,292	\$ -	\$ -	
Requested Rate Stabilization Fund by Revenue Category with no MOEF <sup>5</sup> -	\$ 20,000	\$ 230,000	No Stabilization Fund	\$ 9,000	No Stabilization Fund	
Requested Rate Stabilization Fund with MOEF -	\$ 20,000	\$ 71,000	\$ 9,000	\$ 9,000	\$ 9,000	
Based on largest negative variance from five year ave of -	9.65%					

Requested MOEF -	7.75%
Rate increase @ requested MOEF -	0.00%
Annual MOEF Cash -	\$ 47,309
Requested RSF funds with no MOEF -	\$ 259,000
Requested RSF funds with MOEF -	\$ 100,000
MOERR from 1604.06 Sch A -	\$ 622,492
Amortizin Expense -	\$ 2,201
Exclusive of amortization, non material operating expense and MOEF	

Increase in Material Operating Expenses of 3.60% per year based on average increase of these expenses per year between 2018 and 2022. See Table below for calculation.

	2018 PAC Billed Revenue	2019 PAC Billed Revenue	2020 PAC Billed Revenue	2021 PAC Billed Revenue	2022 PAC Billed Revenue
Total Volumetric Charges	\$ 371,912	\$ 353,779	\$ 388,382	\$ 386,028	\$ 425,571
Total Meter Charges	\$ 211,604	\$ 213,224	\$ 212,621	\$ 214,703	\$ 225,115
Total Fire Protection - Public & Private (Fixed)	\$ 204,973	\$ 204,973	\$ 204,973	\$ 205,937	\$ 215,923
Total Billed Revenue (does not include Total Other Revenues)	\$ 788,389	\$ 771,974	\$ 805,974	\$ 806,668	\$ 866,609
Misc Revenues	\$ 3,171	\$ 2,663	\$ 1,961	\$ 3,189	\$ 2,528
Total Annual Revenues inclusive of Total Other Revenues	\$ 791,559	\$ 774,537	\$ 807,835	\$ 809,857	\$ 869,136
% of Revenues that are variable	47.2%	45.8%	48.1%	47.9%	49.1%
% of Revenues that are fixed	52.8%	54.2%	51.9%	52.1%	50.9%

Calculation of MOER RSF, based on increase in MOE's over the past 5 years			
	Increased Operating Expenses	Revenue Shortfall	
2024	\$ 22,410	\$ 30,831	
2023	\$ 45,626	\$ 30,831	
2021	\$ 69,678	\$ 30,831	
	\$ 137,714	\$ 92,494	
	Totals -	\$ 230,209	

Projected MOERR Revenues	Projected MOERR Expenses	Transfer into/out of MOER RSF Account	Combined RSF Balance
\$ 672,002	\$ 647,103	\$ 24,900	\$ 124,900
\$ 672,002	\$ 692,728	\$ (20,726)	\$ 104,173
\$ 672,002	\$ 692,170	\$ (20,168)	\$ 84,005

Average percentage of revenues that were variable during the previous 5 years - 47.6%

Expense Type	2018 PAC Actual Variable Expenses	2019 PAC Actual Variable Expenses	2020 PAC Actual Variable Expenses	2021 PAC Actual Variable Expenses	2022 PAC Actual Variable Expenses
Electric	\$ 5,157	\$ 8,032	\$ 5,394	\$ 5,279	\$ 6,181
Chemicals	\$ 7,025	\$ 5,383	\$ 4,491	\$ 4,491	\$ 5,382
Total Variable Costs	\$ 12,181	\$ 13,414	\$ 10,776	\$ 9,769	\$ 11,563
Variable Expenses as a Percent of Total Revenues	1.55%	1.74%	1.34%	1.21%	1.33%

	2018 Actual CCF's sold by PAC	2019 Actual CCF's sold by PAC	2020 Actual CCF's sold by PAC	2021 Actual CCF's sold by PAC	2022 Actual CCF's sold by PAC
Annual Metered Sales (CCF)	61,037	58,667	71,991	63,800	66,056
Percentage Variance between Current and High Consumption Year	-17.95%	-22.71%	0.00%	-12.68%	-8.97%
Average Consumption (CCF) over the past five years	64,330				
Variance between current and 5 Yr Ave Consumption	-5.40%	-9.65%	10.64%	-0.69%	2.63%

Largest percentage reduction in volumetric sales at PAC of 9.65% over the past five years from the five year average of volumetric sales  
Results in a Revenue loss of \$ 41,079  
Results in an Operating Expense reduction of \$ 1,116  
Results in an Operating Income reduction of \$ 39,963

Calculation of Annual Material Operating Expense Adjustment Percentage

	2018 PAC Material Operating Expenses	2019 PAC Material Operating Expenses	2020 PAC Material Operating Expenses	2021 PAC Material Operating Expenses	2022 PAC Material Operating Expenses	Increase in Operating Expense over the past four years	Average annual increase in Operating Expenses over the past four years	Increase in Operating Expense between 2018 and 2019
Production Expenses	\$ 128,290	\$ 131,216	\$ 158,864	\$ 152,533	\$ 160,074	24.77%	5.69%	4.94%
Transmission & Distribution Expenses	\$ 73,814	\$ 61,179	\$ 66,438	\$ 107,517	\$ 104,608	41.72%	9.11%	2.71%
Customer Acct & Collection Exp	\$ 12,552	\$ 15,594	\$ 11,602	\$ 16,659	\$ 12,950	3.17%	0.78%	-22.27%
Administrative & General Expense including NMOE's	\$ 23,978	\$ 26,789	\$ 13,542	\$ 16,107	\$ 26,505	10.54%	2.54%	64.56%
Inter Div Management Fee	\$ 183,320	\$ 174,537	\$ 172,080	\$ 202,498	\$ 206,718	12.76%	3.05%	2.08%
Amortization Expense	\$ 3,088	\$ 3,086	\$ 3,271	\$ 4,274	\$ 2,201	-28.73%	-8.12%	-48.51%
Property Taxes	\$ 181,659	\$ 187,693	\$ 186,179	\$ 126,792	\$ 118,309	-34.87%	-10.17%	-6.68%
Federal and State Income Taxes	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500	\$ 1,500			
Less NMO Expenses	\$ 2,617	\$ 8,993	\$ -	\$ 237	\$ 5,131			
Total Annual MOERR Expenses	\$ 605,580	\$ 592,701	\$ 595,472	\$ 627,634	\$ 627,733	3.66%	0.90%	0.02%
Less variable expenses for the year	\$ 12,181	\$ 13,414	\$ 10,776	\$ 9,769	\$ 11,563	-5.08%	-1.29%	18.36%
Total Annual MOE's less variable expenses	\$ 593,399	\$ 579,287	\$ 584,696	\$ 617,864	\$ 616,171	3.84%	0.95%	-0.27%
Total Percentage Increase in Fixed Material Operating Expenses over the past four years -						3.84%		
Total Percentage Increase in Fixed Material Operating Expenses over the past three years -						6.37%		
Average annual increase in Material Operating expenses over the past four years -						0.95%		
Average annual increase in Material Operating expenses over the past three years -						2.08%		

Notes:

- Based on Debt Service Multiplier of 1.10 per Sch A of 1604.06 schedules.
- Revenue requirements per Sch A of 1604.06 schedules.
- Requested Rate Stabilization fund for Operating Expense and P & I Coverage each have a contingency of 0% based on % of PAC revenues (2012 Case) to % of all three regulated utilities revenues (2012 TY Cases) or \$ 100,000
- PAC share of the \$5,000,000 RSF for distribution to the RSF, MOERSF and the P&I RSF is<sup>2</sup> 2.11%
- Calculation of RSF Percentage based on Revenue requirements from DW13-126, 13-128 and 13-130
- For Calculation of Non Material Operating Expense Requirement see 1604.06 Sch 1, Attachment 1
- Production expenses for 2015 and 2016 are the production expenses from 2013 and 2014 to eliminate the impact of the extra production that occurred in 2015 and 2016 due to leakage.

PWW Revenue Requirement -	\$ 27,689,214	per DW13-130 Settlement Agreement
PEU Revenue Requirement -	\$ 6,913,261	per DW13-126 Settlement Agreement
PAC Revenue Requirement -	\$ 765,186	per DW13-128 Settlement Agreement
Total Utility Revenue Requirement -	\$ 35,347,661	

	PWW	PEU	PAC
Number of Customers -	29,368	8,623	649
Number of GM Customers -	28,613	8,347	636
CCF per GM customer per year-	214.6	91.4	91.6
CCF per single family residential customer (SFRC) per year -	91.3	79.7	64.6
Industrial/Commerical/Municipal CCF support per GM Customer -	123.3	11.7	27.1
Percentage of volumetric rates paid by SFRC's =	43%	87%	70%
Total 2022 Proforma Revenues Requirement -	\$ 42,621,029	\$ 13,045,026	\$ 898,812
Total Revenue Requirement per customer -	\$ 1,451	\$ 1,513	\$ 1,385
CBFRR Requirement -	\$ 7,729,032	\$ 926,309	\$ 147,539
Debt Service Debt Requirement per customer -	\$ 8,473,217	\$ 2,607,039	\$ 74,140
Cost of Captial adjusted Debt Service Revenue Requirement -	\$ 8,473,217	\$ 2,381,096	\$ 225,512
Debt Service Debt Requirement per customer -	\$ 289	\$ 302	\$ 114
Adjusted Debt Service Debt Requirement per customer <sup>2,3</sup> -	\$ 289	\$ 276	\$ 347
Total Operating Expense Revenue Requirement per customer (exclusive of MOEF) -	\$ 24,238,845	\$ 8,629,759	\$ 629,822
Material Operating Expense Revenue Requirement per customer (Exclusive of MOEF) -	\$ 825	\$ 1,001	\$ 970
venue Requirement (Inclusive water supply mgt fee, exclusive of MOEF) -	\$ 7,379,205	\$ 3,088,918	\$ 183,136
Water Supply Expense per GM customer -	\$ 258	\$ 370	\$ 288
Cost per customer, less water supply and adjusted for debt -	\$ 1,193	\$ 1,117	\$ 1,330

2022 TY Data -

Property Tax Expense (2022 actual expenses) -	\$ 4,001,047	\$ 1,293,748	\$ 118,309	
Property Tax Expense per customer -	\$ 136	\$ 150	\$ 182	
2022 CCF's sold -	6,139,578	762,730	58,269	
Variable Prouction Expenses (purchased/produced) -	\$ 4,012,221	\$ 1,885,627	\$ 16,681	
Variable Production expenses per CCF -	\$ 0.65	\$ 2.47	\$ 0.29	\$ 1.82
2022 YE outstanding Debt -	\$ 123,919,050	\$ 29,780,574	\$ 1,221,833	
2022 YE Debt per customer -	\$ 4,219.53	\$ 3,453.62	\$ 1,882.64	
Feet of Watermain -	2,634,088	1,127,001	49,417	
Feet of Watermain per customer-	90	131	76	

Notes:

1. All revenues and expenses are based on stand along rate case schedules provided in Exhibits A, B and C of this filing.
2. PEU 1.1 DSRR adjusted to to reflect cost of capital using PWW terms and rates vs. those of CoBank per prefiled testimony, Page x, lines x-x
3. PAC's debt adjusted for the construction of a 0.8 MG tank at an estimated cost of \$ 2,000,000 funded over 30 years at 5.5% resulting in a 1.1 DSRR of \$151,372



Pennichuck Water Works, Inc  
 DW 23-088  
 Exhibit D  
 Comparison of merged to Stand alone rates by Utility.

PWV Core Rate Impact on Single Family Residential				
	DW22-032	Stand Alone	TY 2022	All Rates same (Unique Fire)@ 20%
Average Single Family Residential Usage (CCF/Month) -	5.19		5.19	5.19
5/8" monthly meter charge - \$	26.90	\$	28.97	\$ 29.02
Volumetric Charge - \$	4.41	\$	4.70	\$ 5.27
Monthly Bill - \$	49.79	\$	53.36	\$ 56.38
Annual Bill - \$	597.45	\$	640.34	\$ 676.54
Additional Monthly Bill Amount (over TY 2022 Stand alone) -				\$ 3.02
Percentage increase over stand alone bill -				5.65%
Percentage increase over current bill -			7.18%	13.24%

PWV Non Core Rate Impact on Single Family Residential - PEU				
	DW20-156	Stand Alone	TY 2022	All Rates same (Unique Fire)@ 20%
Average Single Family Residential Usage (CCF/Month) -	5.19		5.19	5.19
5/8" monthly meter charge - \$	22.56	\$	28.00	\$ 29.02
Volumetric Charge - \$	9.50	\$	11.79	\$ 6.33
Monthly Bill - \$	71.87	\$	89.19	\$ 61.85
Annual Bill - \$	862.38	\$	1,070.24	\$ 742.21
Additional Monthly Bill Amount (over TY 2022 Stand alone) -				\$ (27.34)
Percentage increase over stand alone bill -				-30.65%

PWV Non Core Rate Impact on Single Family Residential - PAC				
	DW20-153	Stand Alone	TY 2022	All Rates same (Unique Fire)@ 20%
Average Single Family Residential Usage (CCF/Month) -	5.19		5.19	5.19
5/8" monthly meter charge - \$	25.82	\$	26.70	\$ 29.02
Volumetric Charge - \$	6.83	\$	7.06	\$ 6.33
Monthly Bill - \$	61.27	\$	63.35	\$ 61.85
Annual Bill - \$	735.21	\$	760.18	\$ 742.21
Additional Monthly Bill Amount (over TY 2022 Stand alone) -				\$ (1.50)
Percentage increase over stand alone bill -				-2.36%

	Core - PWV Rates			Non Core - PEU (Excludes Litchfield&NC) Rates			
	DW22-032	PWV Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core	DW20-156	TY 2019	PEU Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core
Average Single Family Residential Usage (CCF/Month) -	7.61	7.61	7.61	6.79	6.79	6.79	6.79
Fixed monthly charge based on 5/8" meter - \$	26.90	28.97	29.02	22.56	25.82	28.00	29.02
Volumetric Charge - \$	4.41	4.70	5.27	9.50	6.83	11.79	6.33
Monthly Bill - \$	60.46	64.74	69.14	87.07	63.35	108.05	71.97
Annual Bill - \$	725.52	776.84	829.64	1,044.78	760.18	1,296.60	863.68
Additional Monthly Bill Amount (over TY 2022 Stand alone) -		4.28	4.40			20.99	(36.08)
Percentage increase over stand alone bill -		7.07%	6.80%			24.10%	-33.39%
Additional Monthly Bill Amount (over last approved rates) -		4.28	8.68			20.99	(15.09)
Percentage increase over last approved rate -		7.07%	14.35%			24.10%	-17.33%

PWV Core Recoup 104.12 \$ PEU Recoup (181.10)

	Non Core - PWV CWS Rates			Non Core - PAC Rates			
	DW22-032	PWV Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core	DW20-153	TY 2019	PAC Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core
Average Single Family Residential Usage (CCF/Month) -	9.42	9.42	9.42	5.38	5.38	5.38	5.38
Fixed monthly charge based on 5/8" meter - \$	26.90	28.97	29.02	25.82	25.82	26.70	29.02
Volumetric Charge - \$	4.41	4.70	5.27	6.83	6.83	7.06	6.33
Monthly Bill - \$	68.44	73.24	88.61	62.57	63.35	64.69	63.05
Annual Bill - \$	821.31	878.94	1,063.34	750.78	760.18	776.28	756.63
Additional Monthly Bill Amount (over TY 2022 Stand alone) -		4.80	15.37			2.12	(1.64)
Percentage increase over stand alone bill -		7.02%	20.98%			3.40%	-2.53%
Additional Monthly Bill Amount (over last approved rates) -		4.80	20.17			2.12	0.49
Percentage increase over last approved rate -		7.02%	29.47%			3.40%	0.78%

PWV NCore Recoup 242.03 \$ PAC Recoup 5.85

Core - Litchfield Rates				
	DW20-156	TY 2019	PEU Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core
Average Single Family Residential Usage (CCF/Month) -	6.48	6.48	6.48	6.48
Fixed monthly charge based on 5/8" meter - \$	22.56	28.00	28.00	29.02
Volumetric Charge - \$	9.50	11.79	11.79	5.27
Monthly Bill - \$	84.12	104.40	104.40	63.18
Annual Bill - \$	1,009.44	1,252.74	1,252.74	758.15
Additional Monthly Bill Amount (over TY 2022 Stand alone) -		20.28	20.28	(41.22)
Percentage increase over stand alone bill -		24.10%	24.10%	-39.48%
Additional Monthly Bill Amount (over last approved rates) -		20.28	20.28	(20.94)
Percentage increase over last approved rate -		24.10%	24.10%	-24.89%

Core Litchfield Recoup (251.29)

Non Core - PEU North Country (NC) Rates				
	DW20-156	TY 2019	PEU Stand Alone TY 2022	Non Core Volumetric @ 20% greater than Core
Average Single Family Residential Usage (CCF/Month) -	3.48	3.48	3.48	3.48
Fixed monthly charge based on 5/8" meter - \$	22.56	28.00	28.00	29.02
Volumetric Charge - \$	9.50	11.79	11.79	6.33
Monthly Bill, exclusive of NCCRS - \$	55.62	69.03	69.03	51.03
Ave NCCRS - \$	11.88	11.88	11.88	11.88
Ave Total bill with NCCRS - \$	67.50	80.91	80.91	51.03
Annual Bill - \$	810.00	970.87	970.87	612.39
Additional Monthly Bill Amount (over TY 2022 Stand alone) -		13.41	13.41	(16.47)
Percentage increase over stand alone bill -		19.86%	19.86%	-24.40%
Additional Monthly Bill Amount (over last approved rates) -		13.41	13.41	(16.47)
Percentage increase over last approved rate -		19.86%	19.86%	-24.40%

Non Core NC Recoup (197.61)

Pennichuck Water Works, Inc  
 DW 23-088  
 Merged Utility Rates Single Family Residential customer impact

G-M Customer Charge based on Meter Size

Meter Size	PWW		PEU		PAC	
	DW22-032	22 TY Rates	DW20-156	22 TY Rates	DW20-153	22 TY Rates
5/8"	\$ 26.90	\$ 28.97	\$ 22.56	\$ 28.00	\$ 25.82	\$ 26.70
3/4"	\$ 39.14	\$ 41.72	\$ 44.03	\$ 54.64	\$ 36.79	\$ 38.04
1"	\$ 63.03	\$ 67.18	\$ 62.32	\$ 77.34	\$ 55.56	\$ 57.45
1" meter with private residential fire service	\$ 39.26	\$ 41.85	\$ 32.27	\$ 40.05		
1 1/2"	\$ 122.88	\$ 130.97	\$ 135.68	\$ 168.38	\$ 100.27	\$ 103.68
2"	\$ 201.15	\$ 214.40	\$ 203.30	\$ 249.82	\$ 155.12	\$ 160.39
3"	\$ 368.87	\$ 393.17	\$ 465.33	\$ 577.49	\$ 288.18	\$ 297.97
4"	\$ 608.39	\$ 648.46	\$ 730.90	\$ 907.07	\$ 472.28	\$ 488.32
6"	\$ 1,207.21	\$ 1,286.72	\$ 1,461.77	\$ 1,814.10	\$ 942.05	\$ 974.04
8"	\$ 1,925.97	\$ 2,052.82	\$ 2,355.67	\$ 2,955.71	\$ 1,566.83	\$ 1,620.04
10"	\$ 2,764.31	\$ 2,946.38	\$ 3,435.67	\$ 4,265.71		
Volumetric Rate per CCF	\$ 4.41	\$ 4.70	\$ 9.50	\$ 11.79	\$ 6.83	\$ 7.06
Muni Fire "Inch-Rt" Charge per year	\$ 0.18896	\$ 0.21587	\$ 0.12743	\$ 0.15814	\$ 0.21091	\$ 0.21807
Muni Fire "Hydrant" Charge per year	\$ 27.38	\$ 31.28	\$ 19.65	\$ 24.39	\$ 100.10	\$ 103.50
1 1/2" connections	\$ 12.36	\$ 13.31	\$ 9.71	\$ 12.05	\$ 71.37	\$ 73.79
2" connections	\$ 29.42	\$ 31.68	\$ 17.25	\$ 21.41	\$ 71.37	\$ 73.79
3" connections	\$ 49.39	\$ 53.18	\$ 38.82	\$ 48.18	\$ 71.37	\$ 73.79
4" connections	\$ 117.73	\$ 126.77	\$ 69.02	\$ 85.66	\$ 71.37	\$ 73.79
6" connections	\$ 197.54	\$ 212.71	\$ 153.33	\$ 192.77	\$ 204.79	\$ 211.75
8" or larger connections	\$ 290.85	\$ 313.19	\$ 276.10	\$ 342.65	\$ 434.95	\$ 449.72
10" connection (PEU)			\$ 455.26	\$ 564.99		
12" connection (PEU)			\$ 733.22	\$ 909.95		
Private Fire Hydrant (PEU)			\$ 121.37	\$ 150.62		
PEU - Metered and Volumetric	\$ 196,503	\$ 209,446				
Hudson - Metered and Volumetric	\$ 539,434	\$ 574,963				
Anheuser Busch - Metered and Volumetric	\$ 513,095	\$ 553,285				
Tyngborough Metered and Volumetric	\$ 372,877	\$ 397,437				
Milford Metered and Volumetric	\$ 155,420	\$ 165,657				
MVD Volumetric	\$ 129,542	\$ 138,074				
PEU - Fixed Fee	\$ 192,979	\$ 192,979				
Hudson - Fixed Fee	\$ 457,441	\$ 457,441				
Anheuser Busch - Fixed Fee	\$ 356,622	\$ 356,622				
Tyngborough - Fixed Fee	\$ -	\$ -				
Milford - Fixed Fee	\$ 105,943	\$ 105,943				
MVD - Fixed Fee	\$ 181,718	\$ 181,718				
Based on a percentage increase of from last approved rate case with TY of Rate Case Docket No.		7.68%	24.10%	3.40%		
		DW22-032	DW20-156	DW20-153		

Option 3 - PWW rate with PWW Non Core Rate, Fire Protection by Community																
	Rate	PWW			PEU			PAC			Combined Revenues @ PWW rates					
		Quantity	Revenues	Rate	Quantity	Revenues	Rate	Quantity	Revenues	COSS Rates	Quantity	Revenues				
5/8"	\$ 28.97	26,604	\$ 9,241,480	28.00	8,017	\$ 2,693,480	\$ 26.70	596	\$ 190,936	29.02	35,217	\$ 12,262,305				
3/4"	\$ 41.72	567	\$ 23,814,89	54.64	77	\$ 50,490	\$ 38.04	3	\$ 1,369	43.52	647	\$ 337,921				
1"	\$ 67.18	609	\$ 409,962	77.34	153	\$ 141,998	\$ 57.45	15	\$ 10,340	72.54	777	\$ 676,364				
1 1/2"	\$ 130.97	469	\$ 737,118	168.38	53	\$ 107,091	\$ 103.68	10	\$ 12,441	145.08	532	\$ 926,193				
2"	\$ 214.40	294	\$ 756,398	249.82	43	\$ 128,907	\$ 160.39	11	\$ 21,171	232.13	348	\$ 969,369				
3"	\$ 393.17	56	\$ 264,207	577.49	4	\$ 27,119	\$ 297.97	1	\$ 3,976	464.26	61	\$ 339,836				
4"	\$ 648.46	9	\$ 70,034	907.07	-	\$ -	\$ 488.32	-	\$ -	725.40	8	\$ 69,639				
6"	\$ 1,286.72	6	\$ 92,644	1,814.10	-	\$ -	\$ 974.04	-	\$ -	1,450.80	6	\$ 104,458				
8"	\$ 2,052.82	1	\$ 2,052.82	2,955.71	-	\$ -	\$ 1,620.04	-	\$ -	2,321.29	1	\$ 27,895				
10"	\$ 2,946.38	-	\$ -	2,665.71	-	\$ -	\$ -	-	\$ -	-	-	\$ -				
		28,615	\$ 11,967,326		8,347	\$ 3,149,684		636	\$ 239,834		37,597	\$ 15,713,940				
Volumetric Rate per CCF	Current Rate 4.41	5 Yr Ave 4,364,043	\$ 19,245,428	Current Rate 9.50	5 Yr Ave 721,418	\$ 6,853,475	Current Rate 6.83	5 Yr Ave 57,755	\$ 394,467	Core Volumetric Revenues 5,239	4,225,474	\$ 22,277,038	Non Core Volumetric Revenues @ 20% over Core rate 6,326	\$ 917,742	\$ 5,806,093	-3.37%
Core - Group 1	Muni Fire "Inch-Rt" Charge per year	\$ 0.23247	15,005,040	\$ 3,488,218	175							\$ 3,488,393				
	Muni Fire "Hydrant" Charge per year	\$ 421.06	2,386	\$ 1,004,657								\$ 1,004,657				
				\$ 4,492,875								\$ 4,493,050				
Non Core - Group 2 - Large Fire flows	Muni Fire "Inch-Rt" Charge per year	\$ 0.12915	8,310,305	\$ 1,073,275	438							\$ 1,073,713				
	Muni Fire "Hydrant" Charge per year	\$ 421.06	820	\$ 345,272								\$ 345,272				
				\$ 1,418,547								\$ 1,418,985				
Non Core - Group 4 - Small Fire flows	Muni Fire "Inch-Rt" Charge per year	\$ 0.02583	713,372	\$ 18,426	88							\$ 18,514				
	Muni Fire "Hydrant" Charge per year	\$ 421.06	114	\$ 48,001								\$ 48,001				
				\$ 66,428								\$ 66,515				
Pittsfield - Group 3	Muni Fire "Inch-Rt" Charge per year	\$ 0.18081	483,668	\$ 87,452	613							\$ 88,065				
	Muni Fire "Hydrant" Charge per year	\$ 421.06	68	\$ 28,632								\$ 28,632				
				\$ 116,084								\$ 116,697				\$ 6,095,248
COSS Rates (monthly)	Quantity															
1 1/2" connections	\$ 3.68	103	\$ 4,550	\$ 3.68	111	\$ 4,904	\$ 3.68	0	\$ -	\$ 3.68	214	\$ 9,454				
2" connections	\$ 7.85	84	\$ 7,908	\$ 7.85	86	\$ 8,097	\$ 7.85	0	\$ -	\$ 7.85	170	\$ 16,005				
3" connections	\$ 22.79	0	\$ -	\$ 22.79	0	\$ -	\$ 22.79	0	\$ -	\$ 22.79	0	\$ -				
4" connections	\$ 48.57	135	\$ 75,763	\$ 48.57	43	\$ 20,960	\$ 48.57	1	\$ 583	\$ 48.57	174	\$ 101,406				
6" connections	\$ 141.08	419	\$ 709,332	\$ 141.08	71	\$ 120,197	\$ 141.08	10	\$ 16,929	\$ 141.08	500	\$ 846,458				
8" connections	\$ 336.25	282	\$ 1,137,876	\$ 336.25	47	\$ 189,646	\$ 336.25	1	\$ 4,035	\$ 336.25	330	\$ 1,331,556				
10" connection	\$ 336.25	4	\$ 16,140	\$ 336.25	4	\$ 16,140	\$ 336.25	0	\$ -	\$ 336.25	8	\$ 32,280				
12" connection	\$ 336.25	10	\$ 40,350	\$ 336.25	6	\$ 24,210	\$ 336.25	0	\$ -	\$ 336.25	16	\$ 64,560				
16" connection	\$ 336.25	1	\$ 4,035	\$ 336.25	0	\$ -	\$ 336.25	0	\$ -	\$ 336.25	1	\$ 4,035				
		1033	\$ 1,995,955		368	\$ 388,254		12	\$ 21,547		1,413	\$ 2,405,755				
								\$ 1,413	\$ 2,405,755							
PEU - Metered and Volumetric (eliminated)	Eliminated		\$ -									\$ -				
Anheuser Busch - Metered and Volumetric		\$ 385,466	\$ 564,464									\$ 545,415				
Hudson - Metered and Volumetric		\$ 487,968	\$ 602,969									\$ 582,620				
Tyngborough Metered and Volumetric		\$ 134,734	\$ 416,130									\$ 402,086				
Milford Metered and Volumetric		\$ 82,763	\$ 171,369									\$ 165,586				

MVD Volumetric	121,992	\$ 142,832		\$ 138,012	
		\$ 1,897,764		\$ 1,833,719	
PEU - Fixed Fee (Eliminated)		\$ -		\$ -	0.00%
Anheuser Busch - Fixed Fee		\$ 356,622		\$ 356,622	
Hudson - Fixed Fee		\$ 457,441		\$ 457,441	
Tyngborough - Fixed Fee		\$ -		\$ -	
Milford - Fixed Fee		\$ 105,943		\$ 105,943	
MVD - Fixed Fee		\$ 181,718		\$ 181,718	
	29,659	\$ 1,101,724	8,715	\$ 1,101,724	
Total Revenues @ Proposed Rates exclusive of Misc. Other Revenues -		\$ 39,599,347	\$ 10,391,413	\$ 655,848	
				\$ 50,646,608	
				\$ 55,233,517	← Goal seek on to equal cell O101 value by changing Cell M67 and manually adjusting cell T87
				\$ 4	
Combined Revenue Requirement (from 1604.06) -		\$ 40,733,700	\$ 12,978,727	\$ 892,412	
% Increase to PWW Volumetric rates required to meet revenue requirement with combined rates -	-3.375%			Consolidated \$ 55,233,521	\$ 54,604,839

  

1. PWW 2022 Test Year Muni Fire and Hydrants Charged adjusted up by	106.090%	to reflect 11/2023 adjustment of	3%	and 11/2024 adjustment of	3.0%	based on annual adjustment approved in DW19-084
2. Fixed Meter Charges (exclusive of 5/8" meter charge adjusted down by Litchfield average metered sales - 206,538 CCF	98.983%	to reflect 11/2023 adjustment of	-0.51%	and 11/2024 adjustment of	-0.51%	based on annual adjustment approved in DW19-085

Volumetric Quantities based on 5 year average.  
 Revenue requirement is exclusive of special contract fixed fees, misc. revenues and NCCRS