

Pennichuck Water Works, Inc.
BALANCE SHEET
ASSETS AND DEFERRED CHARGES
For the Twelve Months Ended December 31, 2019

Schedule LDG-1

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Pro Forma

	Account Number	12/31/2019	Pro Forma Adjustments	12/31/2019
<u>PLANT ASSETS</u>				
Plant in Service	301 to 348	236,700,679	-	236,700,679
Work in process	105	490,029	-	490,029
Utility Plant		237,190,708	-	237,190,708
Accumulated depreciation	108	61,209,912	-	61,209,912
Net Plant		175,980,796	-	175,980,796
Net Acquisition Adjustment	114 & 115	264,613	-	264,613
Total Net Utility Plant		175,716,183	-	175,716,183
<u>CURRENT ASSETS</u>				
Cash	131 & 133	6,000	-	6,000
Restricted Cash - RSF	131	1,121,291	2,798,709 (2)	3,920,000
Restricted Cash - 2014 Bond Project Fund	131	2,188,909	4,098,555 (3)	6,287,464
Restricted Cash - 2015 Bond Project Fund	131	1,190,619	2,874,495 (3)	4,065,114
Restricted Cash - 2018 Bond Project Fund	131	-	-	-
Restricted Cash - 2019 Bond Project Fund	131	46,174	-	46,174
Accounts receivable-billed, net	141 & 143	2,119,328	-	2,119,328
Accounts receivable-unbilled, net	173	1,826,777	-	1,826,777
Accounts receivable-other	142	-	-	-
Inventory	151	640,493	-	640,493
Prepaid expenses	162	29,741,981	-	29,741,981
Prepaid property taxes	163 & 236	-	-	-
Prepaid taxes	162.3	-	-	-
		38,881,572	9,771,759	48,653,331
<u>OTHER ASSETS</u>				
Debt issuance expenses	181	4,109,164	1,292,809 (1)	5,401,973
Acquisition Premium - MARA	186	64,741,956	-	64,741,956
Other & Deferred Charges	182,184,186	12,970,880	-	12,970,880
		81,822,000	1,292,809	83,114,809
TOTAL ASSETS		\$ 296,419,755	\$ 11,064,568	\$ 307,484,323

Notes:

- (1) To record the aggregate cost of issuance for the Taxable Bonds
- (2) To record the proceeds from the Bond issuance to refill the RSF funds, net of repayment of intercompany amounts due on parent company line of credit
- (3) To record the escrow deposit for the advanced refunding of the 2014 and 2015 bonds.

Pennichuck Water Works, Inc.
BALANCE SHEET
EQUITY AND LIABILITIES
For the Twelve Months Ended December 31, 2019

Schedule LDG-1

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	Account Number	12/31/2019	Pro Forma Adjustments		Pro Forma 12/31/2019
STOCKHOLDERS' EQUITY					
Common stock	201	\$ 30,000	\$ -		\$ 30,000
Paid in capital	211	\$ 106,951,795	-		106,951,795
Comprehensive Income	219	-	-		-
Retained earnings	215	386,829	(12,085)	(2)	374,744
		107,368,623	(12,085)		107,356,539
LONG TERM DEBT					
Bonds, notes and mortgages	221	104,280,476	12,547,191	(1)	116,827,667
Intercompany advances	223	-	(1,470,538)	(3)	(1,470,538)
Other Long Term Debt	224	-	-		-
CURRENT LIABILITIES					
Accounts payable	231	2,903,461	-		2,903,461
Accrued property taxes	236	6,761	-		6,761
Accrued interest payable	237	1,706,314	-		1,706,314
Other accrued expenses	241	1,276,352	-		1,276,352
Income taxes payable	236	-	-		-
Customer deposits & other	235	76,106	-		76,106
		5,968,992	-		5,968,992
OTHER LIABILITIES AND DEFERRED CREDITS					
Deferred income taxes & liability	282	17,666,580	-		17,666,580
Customer advances	252	-	-		-
CIAC, net	271 & 272	33,059,749	-		33,059,749
Other deferred credits	241 to 255	28,075,334	-		28,075,334
		78,801,663	-		78,801,663
TOTAL EQUITY AND LIABILITIES		\$ 296,419,755	\$ 11,064,568		\$ 307,484,323

Notes:

(1) To record the new Debt as follows:

Taxable Bonds - refunding of 2014 & 2015 Bonds	\$ 63,623,050
Taxable Bonds - New Money for RSF replenishment	\$ 5,500,000
Taxable Bonds - AULI Refinancing (incl make whole)	\$ 2,474,141
Tax Exempt Bonds	\$ -
Refinanced Bonds and AULI Debt	\$ (59,050,000)
Total New Debt	\$ 12,547,191

(2) To record the impact of interest, amortization and income tax benefit on retained earnings.

(3) To record the use of funds through the intercompany debt accounts

Pennichuck Water Works, Inc.
OPERATING INCOME STATEMENT
For the Twelve Months Ended December 31, 2019

Schedule LDG-2

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	Account Number	TWELVE MONTHS 12/31/19	PRO FORMA ADJUSTMENTS	PRO FORMA 12 MONTHS 12/31/19
Water Sales	460 to 462	\$ 31,899,019	\$ -	\$ 31,899,019
Other Operating Revenue	471	381,376	-	381,376
Total Revenues		32,280,395	-	32,280,395
Production Expenses	601 to 652	5,064,262	-	5,064,262
Transmission & Distribution Expenses	660 to 678	3,197,561	-	3,197,561
Engineering Expenses	660	1,351,622	-	1,351,622
Customer Acct & Collection Exp	902 to 904	1,583,386	-	1,583,386
Administrative & General Expense	920 to 950	6,890,427	-	6,890,427
Inter Div Management Fee	930	(3,177,470)	-	(3,177,470)
Total Operating Expense		14,909,788	-	14,909,788
Dep Exp/Acq Adj Expense	403 & 406	6,100,476	-	6,100,476
Amortization Expense:CIAC	405	(838,900)	-	(838,900)
Amortization Expense	407	2,013,171	-	2,013,171
Gain on Debt Forgiveness	414	(63,284)	-	(63,284)
Property Taxes	408.1	4,855,740	-	4,855,740
Income Tax	409 to 410	1,521,380	(18,411) (3)	1,502,969
Total Operating Deductions		13,588,583	(18,411)	13,570,172
Net Operating Income		3,782,024	18,411	3,800,435
Other Income and Deductions		121,612	-	121,612
AFUDC		-	-	-
Interest Expenses		3,516,808	30,495 (1)	3,547,303
Debt Issuance Cost New/Amortization		-	37,491 (2)	37,491
Net Income		386,829	(12,085)	374,744

- Notes:**
- 1 - To record the change in interest expense associated with New Debt.
 - 2 - To record the amortization of new debt expense.
 - 3- To record the tax impact resulting from additional expenses at statutory composite rate of 27.08%.

**Pennichuck Water Works, Inc.
OPERATING INCOME STATEMENT**

Schedule LDG-2

For the Twelve Months Ended December 31, 2019

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Supporting Calculations:

Interest Expense:

Refinanced Taxable Debt \$ 71,597,191

Retired Debt:

2014A + 2015 A&B Bonds \$ (56,650,000)

AULI Debt \$ (2,400,000)

Totals \$ 12,547,191

Interest	
Rate	Amount
3.67%	\$ 2,627,617
4.271%	\$ (2,419,522)
7.400%	\$ (177,600)
Net Interest	\$ 30,495

Debt issuance amortization

Costs	
New taxable bond debt	\$ 1,292,809
	\$ -
Totals	\$ 1,292,809

Amortization	
Rate	Amount
2.90%	\$ 37,491
Amortization	\$ 37,491

Weighted Average Current Interest Calculation as included in DW 19-084, 1604.08, schedule 5:

	Total Outstanding Balance	Current Year Int Expense from 1604.08 Sch 5	Weighted Avg Calc
2014A	36,695,000	4.13%	2.6750%
2015A	18,330,000	4.62%	1.4940%
2015B	1,625,000	3.56%	0.1020%
	56,650,000		4.2710%

**Pennichuck Water Works
2020 Refunding Analysis**

LDG-3

1) Taxable Bonds with Level Debt Service

Bond Year	Current Annual Debt Service (A)							(B)							
	Ending Dec. 31	2014A Total	2014B Total	2015A Total	2015B Total	2018A Total	2018B Total	Total Aggregate Debt Service Total	Total Debt Service: 2020 Refunding	Total Savings: 2020 Refunding	2020 New Money Debt Service (2)	AULI Savings	2020 New Money + Refunding DS	Total Refunding Savings	Estimated New Aggregate DS
2021	2,789,469	320,150	1,459,238	193,375	204,375	190,000	5,156,606	3,224,420	1,217,661	279,616	32,328	3,504,036	1,249,990	4,186,232	970,374
2022	2,793,344	320,088	1,462,363	192,500	204,375	200,000	5,172,669	3,219,023	1,229,183	277,418	34,088	3,496,441	1,263,271	4,186,816	985,853
2023	2,793,969	319,800	1,463,738	191,375	204,375	210,000	5,183,256	3,218,001	1,231,080	280,153	30,412	3,498,154	1,261,492	4,201,917	981,340
2024	2,786,469	324,175	1,458,488	190,000	204,375	220,000	5,183,506	3,220,999	1,213,957	277,799	31,714	3,498,799	1,245,671	4,215,635	967,871
2025	2,790,594	323,213	1,461,488	193,250	204,375	230,000	5,202,919	3,222,425	1,222,906	280,311	32,988	3,502,737	1,255,894	4,227,336	975,582
2026	2,786,094	322,025	1,462,488	191,125	204,375	240,000	5,206,106	3,222,340	1,217,366	277,695	34,219	3,500,035	1,251,585	4,232,216	973,890
2027	2,787,844	320,613	1,466,363	193,625	204,375	250,000	5,222,819	3,221,234	1,226,598	279,993	35,344	3,501,227	1,261,941	4,240,871	981,948
2028	2,790,469	323,863	1,458,238	190,750	204,375	260,000	5,227,694	3,218,470	1,220,986	277,151	31,488	3,495,621	1,252,475	4,252,370	975,324
2029	2,783,969	321,775	1,462,988	192,500	336,000		5,097,231	3,218,951	1,220,505	279,164	32,648	3,498,116	1,253,153	4,123,243	973,989
2030	2,788,094	324,350	1,460,363	193,750	339,000		5,105,556	3,223,135	1,219,071	276,086	33,692	3,499,221	1,252,763	4,128,880	976,676
2031	2,787,469	321,588	1,465,238	189,625	336,625		5,100,544	3,221,701	1,220,630	277,553	30,640	3,499,254	1,251,270	4,126,826	973,718
2032	2,782,969	323,488	1,461,644		338,875		4,906,975	3,219,559	1,025,054	278,487	33,438	3,498,046	1,058,492	4,126,970	780,005
2033	2,790,169	320,050	1,460,000		335,750		4,905,969	3,220,773	1,029,396	279,249	31,122	3,500,021	1,060,518	4,124,699	781,270
2034	2,788,869	321,275	1,461,338		337,250		4,908,731	3,220,257	1,029,950	279,837	33,692	3,500,094	1,063,642	4,124,927	783,805
2035	2,779,269	322,050	1,460,550		338,250		4,900,119	3,218,011	1,021,808	280,253	31,148	3,498,263	1,052,956	4,127,415	772,704
2036	2,781,169	322,375	1,457,638		338,750		4,899,931	3,218,948	1,019,858	280,495	33,490	3,499,443	1,053,348	4,127,078	772,853
2037	1,156,859	322,250	444,125		333,875		2,257,109	3,222,896	(1,621,912)	275,651	30,718	3,498,547	(1,591,194)	4,123,954	(1,866,845)
2038	1,157,519	321,675	445,738		338,500		2,263,431	3,224,768	(1,621,512)	275,721	32,832	3,500,489	(1,588,680)	4,127,832	(1,864,400)
2039	1,156,734	320,650	441,788		338,344		2,257,516	3,214,737	(1,616,215)	275,617	34,718	3,490,354	(1,581,497)	4,114,630	(1,857,114)
2040	1,154,506	324,063	442,275		338,569		2,259,413	3,222,630	(1,625,849)	280,254	31,490	3,502,884	(1,594,359)	4,134,025	(1,874,613)
2041	1,155,731	321,913	442,088		338,369		2,258,100	3,221,293	(1,623,474)	279,467	33,148	3,500,759	(1,590,326)	4,127,892	(1,869,792)
2042	1,155,306	324,200	441,225		337,744		2,258,475	3,225,563	(1,629,032)	278,336	34,578	3,503,899	(1,594,454)	4,131,265	(1,872,790)
2043	1,158,128	320,925	444,575		336,694		2,260,322	3,217,272	(1,614,568)	277,023	30,894	3,494,294	(1,583,674)	4,121,019	(1,860,697)
2044	1,154,197	322,088	442,138		335,047		2,253,469	3,216,418	(1,620,084)	275,526	32,096	3,491,944	(1,587,988)	4,116,982	(1,863,514)
2045	1,158,409		443,913		337,688		1,940,009	3,222,637	(1,620,315)	278,755	33,070	3,501,392	(1,587,245)	3,806,009	(1,866,000)
2046			444,788		334,781		779,569	3,220,836	(2,776,048)	276,710		3,497,545	(2,776,048)	3,832,326	(3,052,758)
2047					336,328		336,328	3,225,924	(3,225,924)	279,390		3,505,313	(3,225,924)	3,841,641	(3,505,313)
2048					337,219		337,219	3,217,901	(3,217,901)	276,795		3,494,696	(3,217,901)	3,831,914	(3,494,696)
2049								3,221,675	(3,221,675)	278,926		3,500,601	(3,221,675)	3,500,601	(3,500,601)
2050								3,221,973	(3,221,973)	275,783		3,497,755	(3,221,973)	3,497,755	(3,497,755)
2051								3,218,793	(3,218,793)	277,365		3,496,158	(3,218,793)	3,496,158	(3,496,158)
2052								3,221,954	(3,221,954)	278,581		3,500,534	(3,221,954)	3,500,534	(3,500,534)
2053								3,221,271	(3,221,271)	279,431		3,500,702	(3,221,271)	3,500,702	(3,500,702)
2054								3,221,654	(3,221,654)	279,915		3,501,569	(3,221,654)	3,501,569	(3,501,569)
2055								3,222,920	(3,222,920)	280,033		3,502,952	(3,222,920)	3,502,952	(3,502,952)

(1) 2020 Refunding Bonds assumed to be dated and delivered on Sept. 1, 2020. Last prior bond interest payment is due on July 1, 2020.
Proposed refinancing assumes that the 2020 Refunding includes accrued interest from Sept. 1, 2020 until April 1, 2021 principal payment.
(2) \$5.5 million Rate Stabilization Fund.

+ 100 basis point increases to the Taxable Bond Refunding Scenarios

1) Taxable Bonds with Level Debt Service

Bond Year	Current Annual Debt Service							(A)							(B)	(A)-(B)
	Ending Dec. 31	2014A Total	2014B Total	2015A Total	2015B Total	2018A Total	2018B Total	Total Aggregate Debt Service Total	Total Debt Service: 2020 Refunding	Total Savings: 2020 Refunding	2020 New Money Debt Service (2)	AULI Savings	2020 New Money + Refunding DS	Total Refunding Savings	Estimated New Aggregate DS	Cash Flow Savings
2021		2,789,469	320,150	1,459,238	193,375	204,375	190,000	5,156,606	3,947,222	779,505	317,017	28,096	4,264,239	807,601	4,666,022	490,585
2022		2,793,344	320,088	1,462,363	192,500	204,375	200,000	5,172,669	3,923,147	787,802	319,521	26,097	4,242,668	813,899	4,678,291	494,378
2023		2,793,969	319,800	1,463,738	191,375	204,375	210,000	5,183,256	3,913,397	791,323	316,935	28,563	4,230,331	819,886	4,680,305	502,951
2024		2,786,469	324,175	1,458,488	190,000	204,375	220,000	5,183,506	3,907,407	776,084	319,239	25,979	4,226,647	802,062	4,700,683	482,823
2025		2,790,594	323,213	1,461,488	193,250	204,375	230,000	5,202,919	3,904,496	782,266	321,309	28,400	4,225,805	810,666	4,713,561	489,357
2026		2,786,094	322,025	1,462,488	191,125	204,375	240,000	5,206,106	3,894,718	779,315	318,235	25,816	4,212,954	805,131	4,719,211	486,895
2027		2,787,844	320,613	1,466,363	193,625	204,375	250,000	5,222,819	3,888,539	786,515	320,054	28,166	4,208,592	814,681	4,728,191	494,627
2028		2,790,469	323,863	1,458,238	190,750	204,375	260,000	5,227,694	3,880,249	779,326	316,717	25,510	4,196,966	804,836	4,739,575	488,119
2029		2,783,969	321,775	1,462,988	192,500	336,000		5,097,231	3,874,722	777,749	318,222	27,845	4,192,944	805,594	4,609,860	487,372
2030		2,788,094	324,350	1,460,363	193,750	339,000		5,105,556	3,872,340	775,777	319,519	25,109	4,191,859	800,886	4,624,189	481,367
2031		2,787,469	321,588	1,465,238	189,625	336,625		5,100,544	3,858,891	782,247	320,274	27,703	4,179,165	809,949	4,610,868	489,676
2032		2,782,969	323,488	1,461,644		338,875		4,906,975	3,854,129	582,187	320,479	25,615	4,174,608	607,801	4,619,653	287,322
2033		2,790,169	320,050	1,460,000		335,750		4,905,969	3,846,916	587,852	320,462	28,413	4,167,377	616,264	4,610,166	295,803
2034		2,788,869	321,275	1,461,338		337,250		4,908,731	3,837,252	590,449	320,221	26,097	4,157,473	616,545	4,612,407	296,324
2035		2,779,269	322,050	1,460,550		338,250		4,900,119	3,834,913	575,297	319,758	23,781	4,154,670	599,077	4,620,799	279,320
2036		2,781,169	322,375	1,457,638		338,750		4,899,931	3,824,788	577,305	319,071	26,351	4,143,859	603,655	4,615,347	284,584
2037		1,156,859	322,250	444,125		333,875		2,257,109	3,811,993	(2,054,826)	318,162	28,693	4,130,154	(2,026,133)	4,601,404	(2,344,294)
2038		1,157,519	321,675	445,738		338,500		2,263,431	3,811,189	(2,058,854)	317,029	25,921	4,128,218	(2,032,934)	4,613,394	(2,349,963)
2039		1,156,734	320,650	441,788		338,344		2,257,516	3,802,155	(2,061,658)	320,562	28,035	4,122,717	(2,033,623)	4,611,701	(2,354,185)
2040		1,154,506	324,063	442,275		338,569		2,259,413	3,799,778	(2,068,126)	318,761	25,035	4,118,538	(2,043,091)	4,621,264	(2,361,852)
2041		1,155,731	321,913	442,088		338,369		2,258,100	3,787,072	(2,061,486)	316,576	26,921	4,103,648	(2,034,566)	4,609,242	(2,351,142)
2042		1,155,306	324,200	441,225		337,744		2,258,475	3,778,838	(2,061,644)	318,887	28,579	4,097,725	(2,033,065)	4,610,427	(2,351,952)
2043		1,158,128	320,925	444,575		336,694		2,260,322	3,776,407	(2,060,145)	320,732	25,123	4,097,139	(2,035,023)	4,616,077	(2,355,755)
2044		1,154,197	322,088	442,138		335,047		2,253,469	3,769,547	(2,066,758)	317,228	26,553	4,086,775	(2,040,205)	4,610,902	(2,357,433)
2045		1,158,409		443,913		337,688		1,940,009	3,758,255	(2,056,583)	318,374	27,755	4,076,629	(2,028,828)	4,287,211	(2,347,201)
2046				444,788		334,781		779,569	3,688,780	(3,244,194)	319,054		4,007,834	(3,244,194)	4,342,816	(3,563,247)
2047						336,328		336,328	3,690,659	(3,690,860)	319,268		4,009,926	(3,690,860)	4,346,456	(4,010,127)
2048						337,219		337,219	3,687,178	(3,687,379)	319,016		4,006,194	(3,687,379)	4,343,614	(4,006,395)
2049									3,688,106	(3,688,307)	318,298		4,006,403	(3,688,307)	4,006,604	(4,006,604)
2050									3,688,092	(3,688,293)	317,114		4,005,205	(3,688,293)	4,005,406	(4,005,406)
2051									3,682,020	(3,682,221)	320,347		4,002,367	(3,682,221)	4,002,568	(4,002,568)
2052									3,689,424	(3,689,625)	317,998		4,007,422	(3,689,625)	4,007,623	(4,007,623)
2053									3,689,838	(3,690,039)	320,067		4,009,904	(3,690,039)	4,010,105	(4,010,105)
2054									3,688,145	(3,688,346)	321,436		4,009,581	(3,688,346)	4,009,782	(4,009,782)
2055									3,688,997	(3,689,198)	317,223		4,006,220	(3,689,198)	4,006,421	(4,006,421)

(1) 2020 Refunding Bonds assumed to be dated and delivered on Sept. 1, 2020. Last prior bond interest payment is due on July 1, 2020.
Proposed refinancing assumes that the 2020 Refunding includes accrued interest from Sept. 1, 2020 until April 1, 2021 principal payment.
(2) \$5.5 million Rate Stabilization Fund.

**LDG-4
Taxable Net PV Calculation**

Closing
10/01/20

	Date	Principal	Year Fraction	PV Savings 3.260000%
	10/1/2020		0.0000	\$ -
1	4/1/2021		0.5000	\$ -
2	4/1/2022		1.5000	\$ -
3	4/1/2023		2.5000	\$ -
4	4/1/2024		3.5000	\$ -
5	4/1/2025		4.5000	\$ -
6	4/1/2026		5.5000	\$ -
7	4/1/2027		6.5000	\$ -
8	4/1/2028		7.5000	\$ -
9	4/1/2029		8.5000	\$ -
10	4/1/2030		9.5000	\$ -
11	4/1/2031		10.5000	\$ -
12	4/1/2032		11.5000	\$ -
13	4/1/2033		12.5000	\$ -
14	4/1/2034		13.5000	\$ -
15	4/1/2035		14.5000	\$ -
16	4/1/2036		15.5000	\$ -
17	4/1/2037		16.5000	\$ -
18	4/1/2038		17.5000	\$ -
19	4/1/2039		18.5000	\$ -
20	4/1/2040		19.5000	\$ -
21	4/1/2041		20.5000	\$ -
22	4/1/2042		21.5000	\$ -
23	4/1/2043		22.5000	\$ -
24	4/1/2044		23.5000	\$ -
25	4/1/2045		24.5000	\$ -
26	4/1/2046		25.5000	\$ -
27	4/1/2047		26.5000	\$ -
28	4/1/2048		27.5000	\$ -
29	4/1/2049		28.5000	\$ -
30	4/1/2050		29.5000	\$ -
31	4/1/2051		30.5000	\$ -
32	4/1/2052		31.5000	\$ -
33	4/1/2053	\$ 453,050.17	32.5000	\$ 159,717.45
34	4/1/2054	\$ 3,205,000.00	33.5000	\$ 1,094,213.30
35	4/1/2055	\$ 3,315,000.00	34.5000	\$ 1,096,037.39
	Total	\$ 6,973,050.17		\$ 2,349,968.14

Exhibit LDG-5

Calculation of net savings over next 35 years on new annual bond issues of \$10,000,000 per annum, if a one level change in the Bond Rating yields a 30 bps savings (or avoids a 30 bps increase in the bond issuance rates)

	Basis Point Sensitivity		0.30%		0.20%		0.10%		0.05%		0.025%	
Debt Amount	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000
Rate of Interest		4.50%		4.20%		4.50%		4.20%		4.50%		4.20%
Period (years)		35		35		34		34		33		33
Average Total Debt Service Pmt (annual)		\$572,704.48		\$550,412.07		\$579,819.12		\$557,684.95		\$587,445.28		\$565,470.63
Total Aggregated Debt Service (over 35 years)		\$20,044,656.74		\$19,264,422.41		\$19,713,850.03		\$18,961,288.42		\$19,385,694.29		\$18,660,530.90
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating				\$ 780,234.34				\$ 752,561.61				\$ 725,163.39
												\$ 698,046.77
												\$ 671,218.80
Debt Amount	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000
Rate of Interest		4.50%		4.20%		4.50%		4.20%		4.50%		4.20%
Period (years)		30		30		29		29		28		28
Average Total Debt Service Pmt (annual)		\$613,915.43		\$592,425.88		\$624,146.15		\$602,820.06		\$635,208.05		\$614,046.05
Total Aggregated Debt Service (over 35 years)		\$18,417,462.87		\$17,772,776.44		\$18,100,238.28		\$17,481,781.72		\$17,785,825.43		\$17,193,289.48
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating				\$ 644,686.43				\$ 618,456.56				\$ 592,535.95
												\$ 566,931.28
												\$ 541,649.10
Debt Amount	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000
Rate of Interest		4.50%		4.20%		4.50%		4.20%		4.50%		4.20%
Period (years)		25		25		24		24		23		23
Average Total Debt Service Pmt (annual)		\$674,390.28		\$653,722.45		\$689,870.30		\$669,367.06		\$706,824.93		\$686,485.75
Total Aggregated Debt Service (over 35 years)		\$16,859,757.01		\$16,343,061.15		\$16,556,887.19		\$16,064,809.36		\$16,256,973.39		\$15,789,172.25
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating				\$ 516,695.86				\$ 492,077.82				\$ 467,801.15
												\$ 443,871.81
												\$ 420,295.62
Debt Amount	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000	\$	10,000,000
Rate of Interest		4.50%		4.20%		4.50%		4.20%		4.50%		4.20%
Period (years)		20		20		19		19		18		18
Average Total Debt Service Pmt (annual)		\$768,761.44		\$748,907.53		\$794,073.44		\$774,377.39		\$822,368.98		\$802,827.79
Total Aggregated Debt Service (over 35 years)		\$16,859,757.01		\$16,343,061.15		\$16,556,887.19		\$16,064,809.36		\$16,256,973.39		\$15,789,172.25
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating				\$ 516,695.86				\$ 492,077.82				\$ 467,801.15
												\$ 443,871.81
												\$ 420,295.62

Total Aggregated Debt Service (over 35 years)	\$ 15,375,228.86	\$ 14,978,150.65	\$ 15,087,395.42	\$ 14,713,170.37	\$ 14,802,641.56	\$ 14,450,900.21	\$ 14,520,989.17	\$ 14,191,357.00	\$ 14,242,459.11	\$ 13,934,556.79
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating		\$ 397,078.22		\$ 374,225.05		\$ 351,741.35		\$ 329,632.17		\$ 307,902.32

Debt Amount	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000
Rate of Interest	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%
Period (years)	15	15	14	14	13	13	12	12	11	11
Average Total Debt Service Pmt (annual)	\$931,138.08	\$912,034.32	\$978,203.16	\$959,231.82	\$1,032,753.53	\$1,013,904.79	\$1,096,661.89	\$1,077,923.16	\$1,172,481.82	\$1,153,836.76
Total Aggregated Debt Service (over 35 years)	\$13,967,071.22	\$13,680,514.81	\$13,694,844.24	\$13,429,245.46	\$13,425,795.86	\$13,180,762.28	\$13,159,942.64	\$12,935,077.97	\$12,897,299.98	\$12,692,204.33
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating		\$ 286,556.40		\$ 265,598.78		\$ 245,033.58		\$ 224,864.67		\$ 205,095.66
Debt Amount	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000
Rate of Interest	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%
Period (years)	10	10	9	9	8	8	7	7	6	6
Average Total Debt Service Pmt (annual)	\$1,263,788.22	\$1,245,215.23	\$1,375,744.70	\$1,357,214.65	\$1,516,096.53	\$1,497,569.01	\$1,697,014.68	\$1,678,431.59	\$1,938,783.88	\$1,920,057.73
Total Aggregated Debt Service (over 35 years)	\$12,637,882.17	\$12,452,152.28	\$12,381,702.30	\$12,214,931.82	\$12,128,772.27	\$11,980,552.06	\$11,879,102.76	\$11,749,021.16	\$11,632,703.25	\$11,520,346.35
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating		\$ 185,729.90		\$ 166,770.48		\$ 148,220.20		\$ 130,081.60		\$ 112,356.90
Debt Amount	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000	\$ 10,000,000
Rate of Interest	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%	4.50%	4.20%
Period (years)	5	5	4	4	3	3	2	2	1	1
Average Total Debt Service Pmt (annual)	\$2,277,916.40	\$2,258,906.78	\$2,787,436.48	\$2,767,897.29	\$3,637,733.60	\$3,617,172.17	\$5,339,975.55	\$5,317,159.65	\$10,450,000.00	\$10,420,000.00
Total Aggregated Debt Service (over 35 years)	\$11,389,581.98	\$11,294,533.91	\$11,149,745.92	\$11,071,589.17	\$10,913,200.80	\$10,851,516.50	\$10,679,951.10	\$10,634,319.29	\$10,450,000.00	\$10,420,000.00
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating		\$ 95,048.07		\$ 78,156.75		\$ 61,684.31		\$ 45,631.81		\$ 30,000.00
Estimated Savings by 30 bps change in rates due to one level of change in the bond rating over 35 years										<u><u>\$12,973,634.67</u></u>

CORPORATE SECRETARY'S CERTIFICATE

PENNICHUCK WATER WORKS, INC.

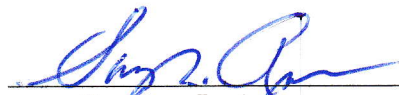
I, Suzanne L. Ansara, do hereby certify that I am the duly elected Corporate Secretary of Pennichuck Water Works, Inc. (the "Company"), a New Hampshire corporation, and that I am authorized to execute and deliver this Certificate on behalf of the Company. In that capacity, I do hereby further certify that:

1. The following resolution was adopted by the Board of Directors of the Company on February 28, 2020; and such resolution has not been altered, amended or repealed, and is in full force and effect, as of the date hereof:

Resolved: that management is hereby authorized to proceed with the following process and approvals required to complete the refinance of the 2014 Series A and 2015 Series A&B bonded debt, the refill of the rate stabilization fund, and the refinance of the AULI Note Payable:

- (1) obtain New Hampshire Business Finance Authority (NHBFA) approval to issue taxable or tax-exempt bonds sufficient to fund the debt restructuring;
- (2) file a financing petition with the New Hampshire Public Utilities Commission to seek approval to complete the financing activity;
- (3) file a shareholder approval request with the City of Nashua to seek approval to complete the financing activity;
- (4) file a joint approval request with the NHBFA to the State of New Hampshire Governor and Council, approving the funding of the taxable or tax-exempt bonds through the NHBFA; and
- (5) complete the entire bond issuance and documentation process with the investment bankers and respective counsels.

In Witness Whereof, I have hereunto set my hand this 21st day of April, 2020.



Suzanne L. Ansara
Corporate Secretary

PENNICHUCK CORPORATION

CORPORATE SECRETARY'S CERTIFICATE

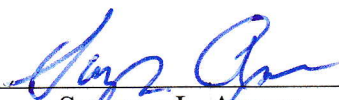
I, Suzanne L. Ansara, do hereby certify that I am the duly elected Corporate Secretary of Pennichuck Corporation (the "Company"), a New Hampshire corporation, and that I am authorized to execute and deliver this Certificate on behalf of the Company. In that capacity, I do hereby further certify that:

1. The following is a true and correct excerpt from the minutes of the Pennichuck Corporation Board of Directors meeting held on February 28, 2020:

"Pennichuck Water Works, Inc. - Debt Restructuring Plan

L. Goodhue reported that management is recommending that Pennichuck Water Works issue taxable or tax-exempt bonds of up to \$75 million to fund: (a) the refinancing of the currently outstanding balances of the 2014 Series A and 2015 Series A&B bonds; (b) the refinancing of the \$2.4 million note payable to American United Life Insurance which has a current interest rate of 7.4%; (c) the financing of \$5.5 million to refill the Rate Stabilization Fund; and (d) the cost of issuance for the bonds. This financing would eliminate the current bullet maturity obligation of the AULI note and replace with a lower interest rate; refill the Rate Stabilization Fund to its imprest level; and provide necessary cash flow savings to establish the proposed Material Operating Expense Supplement (MOES) in the current rate case. L. Goodhue answered several questions regarding the debt restructuring plan from the Board members. After discussion, the Board gave their approval to proceed. It was agreed by the Board that this matter will be voted on by the Pennichuck Water Works Board of Directors at their meeting later today."

In Witness Whereof, I have hereunto set my hand this 21st day of April, 2020.



Suzanne L. Ansara
Corporate Secretary

Pennichuck Water Works, Inc.
Schedule A - Modified per DW16-806
Computation of Revenue Deficiency

For The Twelve Months Ended December 31, 2018

Revised 12/21/2019, Per Staff DR 2's

Revised 1/24/2020, Per Staff Tech 2 DR's

Resubmitted 2/7/2020 per Staff 3-1

3.67 TIC

Revised 3/10/2020 per Staff Tech 3 DR's

Revised 4/1/2020 per Staff Tech DR4's

LDG-8

Schedule A

	12 Months Ending 12/31/18	PRO FORMA Adjustments to 2018 Test Year	PRO FORMA 12 Months Ending 12/31/18	Perm Rate PRO FORMA Adjustments based on FIVE YEAR AVE	Perm Rate Based on Five Year Ave
City Bond Fixed Revenue Requirement (CBFRR)	\$ 7,859,513 (1)	\$ (130,481) (5)	\$ 7,729,032	\$ -	\$ 7,729,032
Operating Expense Revenue Requirement (OERR)	\$ 21,650,451 (2)	\$ (2,175,724) (6)	\$ 19,474,727	\$ 22,420 (8)	\$ 19,497,147
Operating Expense Contingency, exclusive of Non material operating expenses			10.00%		10.00%
Operating Expense Contingency	\$ -	\$ -	\$ 1,886,685	\$ 22,420	\$ 1,888,927
Debt Service Revenue Requirement (DSRR 1.0)	\$ 6,337,838 (3)	\$ 664,793 (7)	\$ 7,002,631	\$ (970,374)	\$ 6,032,257
Principal and Interest Coverage Requirement	10%	10%	10%	10%	10%
0.1 Debt Service Revenue Requirement (0.1 DSRR)	\$ 633,784 (4)	\$ 66,479	\$ 700,263	\$ (97,037)	\$ 603,226
Required Total Revenue Requirement	\$ 36,481,586	\$ (1,574,933)	\$ 36,793,338	\$ (74,618) (9)	\$ 35,750,588
Total Other Revenues	\$ 419,872	\$ 841 (13)	\$ 420,712	\$ -	\$ 420,712
Revenues required from Customer Classes	\$ 36,061,714	\$ (1,574,092)	\$ 36,372,625		\$ 35,329,876
Total Current Revenues	\$ 32,390,671	\$ 815,868 (14)	\$ 33,206,539	\$ 111,587 (9)	\$ 33,318,125
Total Other Revenues	\$ 419,872	\$ 841 (13)	\$ 420,712	\$ -	\$ 420,712
Current Water Revenues excluding CBFRR, Other Revenues and QCPAC	\$ 23,749,129	\$ (84,591) (15)	\$ 23,664,538	\$ 125,265 (16)	\$ 23,789,803
Add back: City Bond Fixed Revenue Requirement	\$ 7,859,513	\$ -	\$ 7,859,513	\$ -	\$ 7,859,513
Current Water Revenues with CBFRR, less QCPAC and Other Revenues	\$ 31,608,641	\$ (84,591)	\$ 31,524,050		\$ 31,649,316
Proposed Percent Customer Class Revenue Increase (10)(11)	14.09%		15.38%		11.63%

Principal and Interest Coverage Requirement - 1.10

Notes:

- (1) The 12/31/2018 CBFRR reflects the actual revenues booked to this account during 2018 based on the percentage of overall revenues booked in 2018 per DW16-806
- (2) The 12/31/18 OERR reflects the actual revenues booked to this account (sum of Material and Non Material Operating Expense Revenues) during 2018 based on the percentage of overall revenues booked in 2018 to DW16-806
- (3) The 12/31/2018 DSRR 1.0 reflects the actual revenues booked to this account during 2018 based on the percentage of overall revenues booked in 2018 per DW16-806
- (4) The 12/31/2018 DSRR 0.1 reflects the actual revenues booked to this account during 2018 based on the percentage of overall revenues booked in 2018 per DW16-806
- (5) Per 1604.06 Schedule 1, Attach A, Page 2
- (6) Per 1604.06 Schedule 1
- (7) Per 1604.08 Schedule 5
- (8) Per 1604.06 Schedule 1
- (9) Adjustments to proformed current year revenues and operating expenses based on 5 year average and for TY ending meter count impact on fixed meter charges per Schedule 1C
- (10) Rate increase is inclusive of the cumulative QCPAC increases granted in DW18-022 for 2017 Capex and sought in DW19-029 for 2018 Capex of 4.06%
- (11) Customer Class Revenues are those derived from G-M volumetric and Fixed meter charges, Special Contract Volumetric and Fixed meter charges. Revenue increase does not apply to Fixed Special contract charges or to other revenues.
- (12) Reflects the savings in Principal and Interest expense projected to occur as a result of Pennichuck's proposed refinancing the existing BYN Melon-2014A, BYN Mellon-2105A, BYN Mellon-2015B Bonds and AULI note in addition to issuing new debt to refill the Rate Stabilization Funds from the current levels to the levels approved in DW16-806. Pennichuck hopes to issue the new and refunding bonds before the end of the summer of 2020.
The projected P&I savings of the refinancing and new money @ a TIC of 3.67% is projected to be: \$ 970,374
- (13) Per 1604.06 Schedule 1
- (14) Per 1604.06 Schedule 1
- (15) Per 1604.06 Schedule 1
- (16) Per 1604.06 Schedule 1