

ATTACHMENT A

**Exhibit DLW-1-5 PEU QCPAC Petition
Response to DOE DR Technical Session 2
December 29, 2021**

Pennichuck East Utilities, Inc.
DW 21-022
Computation of QCPAC Surcharge
2/11/2021

Revised 6/2/2021 per Staff Tech Session DR1.
 6/30/2021 Update, Revised 10/28/21 DOE DR1
 9/30/2021 Update
 Updated for DOE DR2's 12/1/2021
 12/29/2021 revised per Tech Session DR2

	Requested DW 20-156 Revenue Requirements	Projected 2020 Qualified Capital Project pro formas	Projected QCPAC Surcharge for 2020 Capital Additions	Projected 2021 Qualified Capital Project pro formas	Projected QCPAC Surcharge for 2021 Capital Additions	Projected 2022 Qualified Capital Project pro formas	Projected QCPAC Surcharge for 2022 Capital Additions	Projected QCPAC For 2023 Capital Additions pro formas	Projected QCPAC Surcharge for 2023 Capital Additions
City Bond Fixed Revenue Requirement (CBFRR)	\$ 926,309		\$ 926,309	\$ -	\$ 926,309	\$ -	\$ 926,309	\$ -	\$ 926,309
Material Operating Expense Revenue Requirement (MOERR)	\$ 6,982,335 (1)	\$ 109,255 (5)(11)	\$ 7,091,590	\$ 28,265 (5)	\$ 7,119,855	\$ 213 (5)(10)	\$ 7,120,068	\$ 58,855 (5)	\$ 7,178,923
Operating Expense Contingency	1.04 (2)		1.04		1.04		1.04		1.04
Material Operating Expense Revenue Requirement (MOERR)	7,261,628		7,370,883		7,399,148		7,399,361		7,458,216
Non Material Operating Expense Revenue Requirement (NOERR)	\$ 7,163		\$ 7,163		\$ 7,163		\$ 7,163		\$ 7,163
Amortization Expense (not subject to MOEF)	\$ 52,281		\$ 52,281		\$ 52,281		\$ 52,281		\$ 52,281
Debt Service Revenue Requirement (DSRR 1.0)	\$ 1,739,398 (3)	\$ 270,766 (6)(7)	\$ 2,010,164	\$ 78,080	\$ 2,088,244	\$ 200,689	\$ 2,288,933	\$ 166,277	\$ 2,455,210
Principal and Interest Coverage Requirement	1.10		1.10		1.10		1.10		1.10
Total Debt Service Revenue Requirement including the .01 DSRR	<u>\$ 1,913,338</u>		<u>\$ 2,211,181</u>		<u>\$ 2,297,069</u>		<u>\$ 2,517,827</u>		<u>\$ 2,700,731</u>
Revenue Requirement exclusive of NCCRS	\$ 10,160,719		\$ 10,567,817		\$ 10,681,969		\$ 10,902,941		\$ 11,144,700
Less Other Operating Revenues	<u>\$ 30,188 (4)</u>		<u>\$ 30,188</u>		<u>\$ 30,188</u>		<u>\$ 30,188</u>		<u>\$ 30,188</u>
Revenues required from Customer Classes exclusive of NCCRS	\$ 10,130,531		\$ 10,537,629		\$ 10,651,781		\$ 10,872,753		\$ 11,114,512
Revenues subject to QCPAC	\$ 10,130,531		\$ 10,537,629		\$ 10,651,781		\$ 10,872,753		\$ 11,114,512
Projected QCPAC Increase ⁸			4.02%		1.13%		2.18%		2.39%
Cumulative QCPAC increase ⁹			4.02%		5.15%		7.33%		9.71%
Cumulative QCPAC monthly increase in average single family residential bill			\$ 3.39		\$ 4.34		\$ 6.18		\$ 8.19
Average monthly single family residential bill with QCPAC			\$ 87.70		\$ 88.65		\$ 90.49		\$ 92.50

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense being sought in DW20-156.
- (2) Material operating expense factor requested in DW20-156. The MOEF was not applied to the QCPAC operating expenses.
- (3) Annual Principal and interest payments for PEU debt associated with plant in service being sought in DW20-156 less Georgetown project in Lock Lake.
- (4) Other Revenues from 2019 Test Year in DW20-156.
- (5) QCPAC operating expense proformas are based on the property taxes for plant added during the year.
- (6) See Calculation of annual principal and interest payments on spreadsheet titled "2020 QCPAC PEU Additions."
- (7) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant a placed in service between 1/1 and 12/31 for designated year based on a 25 year term loan with an actual total all in interest rate of 5.00% that was not recovered in DW20-156.
- (8) QCPAC percent revenue surcharges based on increase in revenues over the revenues requested in DW20-156.
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the revenues requested in DW20-156.
- (10) QCPAC operating expense proforma associated with property taxes is reduced by \$ 70,000 to reflect reduction in purchased water costs associated with the completion of the Londonderry Storage Tank.
- (11) QCPAC operating expense proforma associated with property taxes is reduced by \$ 28,000 to reflect reduction in arsenic treatment costs associated with the completion of the Locke Lake raw water well line to the Peacham Road Treatment plant.

Impact on PEU Single Family Residential Home:

Monthly meter charge requested in DW20-156.	\$ 22.56	
Average Single Family Consumption (CCF)	6.50	
Consumption Charge requested in DW20-156.	\$ 9.50	per CCF
Average Single Family monthly bill with rates requested in DW20-156	\$ 84.31	

Pennichuck East Utilities, Inc.
 DW 21-022
 2020 used and useful QCP's
 2/11/2021, Revised 10/28/21 for DOE DR1
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 Updated for DOE DR2's 12/1/2021

PEU QCPAC Filing
 Exhibit DLW-1
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Project Name/Description	Project Description	Work Order #	Board Approved 2020 Capex Budget	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Source of Funding	Eligible for 2021 QCPAC Surchage	Eligible for 2021 QCPAC Surchage	Estimated Project Cost as of 6/30/2020	Estimated Project Cost as of 9/30/2020	Estimated Project Cost as of 11/30/2020	Final Project cost as of 12/31/2020	Community	Taxable	Tax Rate (t)	2021 QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since Petition Filing
Elevated Storage Tank in Londonderry2	Construct 1.25 MG Elevated Storage Tank.	1818349, 1901641, 2000372	\$ 1,545,000	DW21-102	26,507	8/6/2021	CoBank	No	\$ -	\$ -	\$ -	\$ -	\$ -	Londonderry	Yes	\$ 24.78	\$ -	Project deferred to 2021 due to permitting.
Middleton Station Re-build	Re-build Sunrise Estates CWS Station. Existing Station is over 40 years old.	n/a	\$ -	DW21-102	26,507	8/6/2021	CoBank	No	\$ -	\$ 340,000	\$ -	\$ -	\$ -	Middleton	Yes	\$ 33.55	\$ -	Project deferred to 2021 due to the need to install additional treatment due to lower Arsenic standard.
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP.	1901642, 2000371	\$ 540,000	DW18-132	26,189	11/16/2018	SRF	Yes	\$ 540,000	\$ 633,000	\$ 600,000	\$ 633,000	\$ 618,531	Barnstead	Yes	\$ 27.84	\$ 17,220	Based on final low bid and actual construction. Different soil conditions encountered than bid estimate during construction.
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC.	2000363	\$ 10,000	DW18-132	26,189	11/18/2018	SRF	Yes	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	Barnstead	Yes	\$ 27.84	\$ 26,900	Recovery of these 2019 used and useful Capex was sought in DW20-019 filing. While the projects are completed the Company will not be closing on the loan supporting these capital improvements until June 2021 so it is seeking the P&I associated with these projects in 2021 QCPAC as opposed to the 2020 QCPAC.
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC.	2000364	\$ 10,000	DW18-132	26,189	11/20/2018	SRF	Yes	\$ 10,000	\$ 10,000	\$ -	\$ 1,056,000	\$ 966,252	Barnstead	Yes	\$ 27.84	\$ -	Based on final low bid and actual construction.
N.Barnstead Road - Eliminate deadend piping	Add 680 LF of 4 inch C-900 PVC to eliminate dead end. Replace 275 LF of 4 inch sch 40 PVC with 6 inch C900 PVC.	2000365	\$ 239,000	DW18-132	26,189	11/22/2018	SRF	Yes	\$ 239,000	\$ 265,620	\$ 255,000	\$ 255,000	\$ 244,214	Barnstead	Yes	\$ 27.84	\$ 6,799	Based on final low bid and actual construction.
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC.	2000366	\$ 5,000	DW18-132	26,189	11/24/2018	SRF	Yes	\$ 5,000	\$ 5,000	\$ -	\$ -	\$ -	Barnstead	Yes	\$ 27.84	\$ -	Deferred
Route 28 Replacement	Replace 720 LF of 2" PE with 720 LF of 4" C-900 PVC.	2000370	\$ 80,000	DW18-132	26,189	11/26/2018	SRF	Yes	\$ 80,000	\$ 59,500	\$ 59,500	\$ 56,500	\$ 69,061	Barnstead	Yes	\$ 27.84	\$ 1,923	Based on final low bid and actual construction.
Locke Lake Surface Water Treatment ⁴	Intake & Treatment Facility Construction	1813409, 1900433, 2000369	\$ 835,000	DW18-132	26,189	11/26/2018	SRF	Yes	\$ -	\$ 1,490,000	\$ 1,700,000	\$ 2,050,000	\$ 2,109,088	Barnstead	Yes	\$ 27.84	\$ 58,717	Existing Arsenic filters failed in Sept 2020. Increase in price reflects replacement of those filters. More work was completed in 2020 than anticipated, therefore there will be less cost in 2021
Locke Lake Surface Water Treatment ⁴	Intake & Treatment Facility Construction	1813409, 1900433, 2000369	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 175,334	Barnstead	Yes	\$ 27.84	\$ 4,881	Locke Lake project investment that exceeds the available loan amount of \$4,240,000. The \$240,000 of remaining funds available via SRF will be drawn down in 2021.
Rolling Hills Water Main Replacement - Site Restoration from 2019 Project	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC.	2000392	\$ 32,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 32,000	\$ 32,000	\$ 32,000	\$ 32,000	\$ 27,400	Plainow	Yes	\$ 26.20	\$ 718	
Pelham Main Replacement/Addition	Replace 1600 LF of 3 inch PE with 12 in C-900 and add 775 LF of 12 in C-900 Monticello & Lane.	2001241	\$ 285,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 285,000	\$ 590,550	\$ 658,600	\$ 658,600	\$ 332,855	Pelham	Yes	\$ 24.86	\$ 8,275	Project scope expanded for streets listed below over original budget.
Pelham Main Replacement/Addition	Replace Lane Road.	2003563	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 182,102	Pelham	Yes	\$ 24.86	\$ 4,527	Work on this street is in project total for Monticello & Lane Project above.
Pelham Main Replacement/Addition	Replace Simpson Road.	2003564	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 19,527	Pelham	Yes	\$ 24.86	\$ 485	Work on this street is in project total for Monticello & Lane Project above.
Pelham Main Replacement/Addition	Replace Andrea Lane.	2003565	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ -	Pelham	Yes	\$ 24.86	\$ -	Work on this street is in project total for Monticello & Lane Project above.
Pelham Main Replacement/Addition	Replace Mount Vernon Drive.	2004325	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 60,561	Pelham	Yes	\$ 24.86	\$ 1,506	Work on this street is in project total for Monticello & Lane Project above.
1 x revenue investments Normal Run Rate	Per Tariff	n/a	\$ 100,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 100,000	\$ 40,000	\$ 40,000	\$ 40,000	\$ 62,949	Various	Yes	\$ 27.23	\$ 1,714	103 Developer Installed Services Installed thru 12/31/2020.
Sunrise Estates	Station Replacement (design)	2003613	\$ 40,000					No	\$ -	\$ -	\$ 30,000	\$ 30,000	\$ 7,805	Middleton	No	\$ 33.55	\$ -	
Londonderry Core Re-Chloramination	Re-chloramination Evaluation and Preliminary Design	2003760	\$ 35,000					No	\$ -	\$ 35,000	\$ 35,000	\$ 35,000	\$ 11,820	Londonderry	No	\$ 24.78	\$ -	Design costs incorporated into Station rebuild above.
Atkinson Booster pump station design	Atkinson Booster pump station design	2000717	\$ 30,000					No	\$ -	\$ -	\$ -	\$ 3,000	\$ -	Atkinson	Yes	\$ 22.84	\$ -	Costs incorporated in Atkinson Station rebuild below.
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild	760 - 763 workorders	\$ 40,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 40,000	\$ 35,000	\$ 25,000	\$ 18,000	\$ 15,241	Various	Yes	\$ 27.23	\$ 415	5 Booster Pump Replace/Rebuilds through 12/31/2020.
Well Pump replacements	Well Pump replacements	760 - 763 workorders	\$ 40,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 40,000	\$ 16,000	\$ 15,000	\$ 15,000	\$ 14,665	Various	Yes	\$ 27.23	\$ 399	4 Well Pumps Repaired/Replaced through 12/31/2020.
Chemical Feed pump replacements	Chemical Feed pump replacements	760 - 763 workorders	\$ 10,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 10,000	\$ 5,000	\$ 2,000	\$ 2,000	\$ 1,695	Various	Yes	\$ 27.23	\$ 46	1 Chemical Feed Pump Repaired/Replaced through 12/31/2020.
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS.	n/a	\$ 25,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 25,000	\$ -	\$ -	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	None completed during 2020.
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 20,000	\$ 10,000	\$ 5,000	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	None completed during 2020.
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 10,000	\$ 5,000	\$ -	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	None completed during 2020.
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 30,000	\$ 27,602	\$ -	\$ 5,000	\$ -	Various	Yes	\$ 27.23	\$ -	See projects below.
Miscellaneous SCADA/Electrical	Replace Well #1 VFD, Lamplighter Village	2001215	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ 2,398	\$ 2,398	\$ 2,398	\$ 2,398	Windham	Yes	\$ 23.89	\$ 57	
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD, Liberty Tree	2006248	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ 1,735	\$ 1,735	\$ 1,735	\$ 1,735	Raymond	Yes	\$ 30.53	\$ 53	
Miscellaneous SCADA/Electrical	Replace Pump #1 VFD, Liberty Tree	2006387	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ 1,735	\$ 1,735	\$ 1,735	\$ 1,735	Raymond	Yes	\$ 30.53	\$ 53	
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	DW21-102	26,507	8/6/2021	CoBank	No	\$ -	\$ 15,000	\$ 15,000	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	None completed during 2020.
Atkinson Station Rebuild	Station cannot provide required fire flow. Hydropneumatic tank is in need of	n/a	\$ 500,000	DW21-102	26,507	8/6/2021	CoBank	No	\$ -	\$ -	\$ -	\$ -	\$ -	Atkinson	Yes	\$ 22.84	\$ -	Project deferred into 2021 subject to evaluation of financial analysis of rebuilding the station vs. interconnect with HAWC.
Install web based communication equipment, 4 locations.	Install web based communication equipment, 4 locations.	n/a	\$ 20,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 20,000	\$ 17,901	\$ 17,901	\$ 17,901	\$ -	Various	Yes	\$ 27.23	\$ -	
Install web based communication equipment, 4 locations.	Fletcher's Corner, Install Cellular Based Communication	2002270	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ 2,099	\$ 2,099	\$ 2,099	\$ 2,099	Various	Yes	\$ 27.23	\$ 57	
Interconnect the W&E CWS to the Town of Salem Water System.	Interconnect the W&E CWS to the Town of Salem Water System.	2004243	\$ -	DW21-102	26,507	8/6/2021	DWGT/CoBank	No	\$ -	\$ 125,000	\$ 125,000	\$ -	\$ -	Windham	Yes	\$ 23.89	\$ -	Added as part of PEU-Salem Windham Franchise exchange. MSDC charge paid for by PEU. Work will not be Used and Useful in 2021.
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 25,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 25,000	\$ 15,000	\$ 7,950	\$ 10,586	\$ 10,586	Various	Yes	\$ 27.23	\$ 288	2 new services installed through 12/31/2020.
Renewed Services (10)	Replacement of failed services.	721 & 722 workorders	\$ 55,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 55,000	\$ 1,912	\$ 7,014	\$ 7,014	\$ 10,137	Various	Yes	\$ 27.23	\$ 276	5 Renewed Service installed through 12/31/2020.
Hydrants (6)	Replacement of non-functional hydrants.	730 & 731 workorders	\$ 30,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 30,000	\$ 18,000	\$ 18,000	\$ 6,000	\$ -	Various	Yes	\$ 27.23	\$ -	None completed during 2020.
Meters 5/8"-6" Lead Meter Exchange - PEU (600)	Replace High lead brass meter with new no lead brass meter.	750 workorders	\$ 22,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 22,000	\$ 30,000	\$ 26,000	\$ 26,000	\$ 25,672	Various	Yes	\$ 27.23	\$ 699	235 Meters installed/replaced through 12/31/2020. This is new and replacements together.
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 32,000	\$ 6,109	\$ 18,000	\$ 17,954	\$ 17,872	Various	Yes	\$ 27.23	\$ 487	5 Gates Installed/Repaired through 12/31/2020.
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.	754 workorders	\$ 32,000	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ 32,000	\$ 18,500	\$ 15,023	\$ 21,000	\$ 24,231	Various	Yes	\$ 27.23	\$ 660	236 Radios installed/replaced through 12/31/2020.
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers (220).	750 workorders	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	Incorporated in Row 48 above.
PEU-PWW Interconnection	PEU-PWW Interconnection	2007474	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 3,449	Merimack	Yes	\$ 28.84	\$ 99	
MSDC Payment to Manchester Water Works	MSDC Payment to Manchester Water Works	2009024	\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 127,007	Various	No	\$ 27.23	\$ -	
Interest on CoBank FaLOC	Short term interest from 11/23/2020 - 7/31/2021		\$ -	DW21-102	26,507	8/6/2021	CoBank	Yes	\$ -	\$ -	\$ -	\$ -	\$ 16,000	Various	No	\$ 27.23	\$ -	Anticipates closing on CoBank long term loan to pay off CoBank FaLOC on 8/1/2021.

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 4,373,000																	Projected annual property tax expenses for QCPAC eligible projects - \$ 137,255		
										Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment less 0.1 DSRR funded projects - \$ 1,692,000		\$ 3,681,000		\$ 3,714,955		\$ 4,951,522		\$ 5,142,555	
										Funded with CoBank Loan ¹ - \$ 1,692,000		\$ 2,371,000		\$ 2,014,955		\$ 979,022		\$ 1,135,409	
										Funded with SRF ² - \$ -		\$ 1,490,000		\$ 1,700,000		\$ 3,972,500		\$ 4,007,147	

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000.																			
2. The 2020 PEU Capital Expenditures Budget presented were approved by the Board in January 2020.																			
3. 9/29/2021 CoBank Loan Terms are	25 Years at	4.18%																	
4. Remainder of Locke Lake Surface Water Treatment project to completed in early 2021 at a total projected cost of	\$		232,853																
5. Projected SRF Terms for Locke Lake project are	30 Years at	2.704%																	
Total projected P&I on debt incurred to support 2020 used and useful capex -										Total projected annual P&I for 2020 used and useful QCP's -		\$ 227,825		\$ 214,894		\$ 258,864		\$ 270,766	

Pennichuck East Utilities, Inc.
 DW 21-022
 Projected 2021 QCPAC Capital Expenditures
 2/11/2021
 6/30/2021 Update, Revised 10/28/21 DOE DR1
 9/30/2021 Update

PEU QCPAC Filing
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Project Name/Description	Project Description	Work Order #	2021 Board Approved Budgeted	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Source of Funding	Eligible for 2021 QCPAC Surcharge	Eligible for 2021 QCPAC Surcharge	Estimated Project Cost as of 6/30/2021	Estimated Project Cost as of 9/30/2021	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since Petition Filing
Locke Lake Surface Water Treatment ¹	Intake & Treatment Facility Construction	2101752	\$ 200,000	DW18-132	26,189	11/26/2018	SRF	Yes	\$ 200,000	\$ 240,000	\$ 200,000	Barnstead	Yes	\$ 27.84	\$ 5,568	Total project cost incurred between 2019 through 2021 when project became Used and Useful.
Pelham Main Replacement/Addition	Replace 1600 LF of 3 inch PE with 12 in C-900 and add 775 LF of 12 in C-900 on Monticello, Mt. Vernon and Lane Road - Finish Paving	2105634	\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	\$ 40,000	\$ 40,000	Pelham	Yes	\$ 24.86	\$ 994	
Pelham Main Replacement/Addition	Finish Paving	2105635		CoBank		Pending Filing	CoBank	Yes	\$ -	\$ -	\$ -	Pelham	Yes	\$ 24.86	\$ -	included in WO 2105634 final paving
Pelham Main Replacement/Addition	Finish Paving	2105636		CoBank		Pending Filing	CoBank	Yes	\$ -	\$ -	\$ -	Pelham	Yes	\$ 24.86	\$ -	included in WO 2105634 final paving
Londonderry System Improvements	Tank, Transmission Main, & Booster Station	2102351	\$ 1,600,000			0.1 DSRR		No	\$ 1,600,000	\$ 100,000	\$ 100,000	Londonderry	No	\$ 24.78	\$ -	Engineering only in 2021 Project delay in permitting will require carry over into 2022
Atkinson Booster pump station design	Atkinson Booster pump station design	2102306	\$ 30,000			0.1 DSRR		No	\$ 30,000	\$ 30,000	\$ 30,000	Atkinson	No	\$ 22.84	\$ -	
Locke Lake Filter Replacement	Replace two failed (structural-collapse of screen supports) iron, manganese, & arsenic filters.	n/a	\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	\$ -	\$ 10,000	Barnstead	Yes	\$ 27.84	\$ 278	Completed in 2020
Airstrip Station Decommissioning	Abandon unused wells and Station	2101758	\$ 40,000	DW18-132	26,189	11/26/2018	SRF	Yes	\$ 40,000	\$ 78,000	\$ 78,000	Barnstead	No	\$ 27.84	\$ -	
1 x revenue investments Normal Run Rate	Per Tariff	Routine	\$ 100,000	CoBank		Pending Filing	CoBank	Yes	\$ 100,000	\$ 170,000	\$ 155,000	Various	Yes	\$ 27.23	\$ 4,220	91 New Developer Installed thru 09/30/21 projecting 20 more
Sunrise Estates	Station Replacement (design)	2102007	\$ -			0.1 DSRR		No	\$ -	\$ 8,000	\$ 8,000	Middleton	No	\$ 33.55	\$ -	Deferred - monies shown for engineering design
Londonderry Core Re-Chloramination	Re-chloramination Evaluation and Preliminary Design	2102008	\$ -			0.1 DSRR		No	\$ -	\$ 700	\$ 700	Londonderry	No	\$ 24.78	\$ -	Deferred - monies shown for engineering design
Nesenkeag Well Decommission	Nesenkeag Well Decommission	2104691	\$ -			0.1 DSRR		No	\$ -	\$ 19,600	\$ 20,000	Londonderry	No	\$ 24.78	\$ -	
Londonderry RRA and ERP	Londonderry RRA and ERP	2105486	\$ -			0.1 DSRR		No	\$ -	\$ -	\$ 26,150	Londonderry	No	\$ 24.78	\$ -	Missed in original budget. Required by NHDES under American Water Infrastructure Act
Litchfield RRA and ERP	Litchfield RRA and ERP	2105487	\$ -			0.1 DSRR		No	\$ -	\$ -	\$ 26,150	Litchfield	No	\$ 28.12	\$ -	Missed in original budget. Required by NHDES under American Water Infrastructure Act
Litchfield-Londonderry Evaluation	Litchfield-Londonderry Evaluation	2105687	\$ -			0.1 DSRR		No	\$ -	\$ -	\$ 10,000	Lond/Litchfield	No	\$ 26.45	\$ -	Requested evaluation by NHDES - Internal Engineering Staff. Ability to serve water from Nashua
Castle Reach, Replace VFD, Pump #2	Castle Reach, Replace VFD, Pump #2	2107680	\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	\$ -	\$ 1,300	Windham	Yes	\$ 23.89	\$ 31	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild	Routine	\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	\$ 30,000	\$ 25,000	Various	Yes	\$ 27.23	\$ 681	Installed/Repaired 5 pumps through 09/30/21, project 2 more
Well Pump replacements	Well Pump replacements	Routine	\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	\$ 30,000	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	Installed/Repaired 5 pumps through 09/30/21, project 2 more
Chemical Feed pump replacements	Chemical Feed pump replacements	Routine	\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	\$ 8,000	\$ 6,000	Various	Yes	\$ 27.23	\$ 163	Installed/Repaired 2 pumps through 09/30/21, project 1 more
Install/replace treatment systems in small CWS (supplemental Arsenic treatment systems)	Install/replace treatment systems in small CWS (supplemental Arsenic treatment systems)	n/a	\$ 50,000	CoBank		Pending Filing	CoBank	Yes	\$ 50,000	\$ 27,000	\$ 27,000	Various	Yes	\$ 27.23	\$ 735	
Install Poly Phosphate Sequestration System, Skyview Estates, Pelham	Install Poly Phosphate Sequestration System, Skyview Estates, Pelham	2104065				Install/Replace Treatment - See above		Yes	\$ -	\$ 3,000	\$ 3,000	Pelham	Yes	\$ 24.86	\$ 75	
Install/replace treatment systems in small CWS (supplemental Arsenic treatment systems)	Install PFAs Removal Treatment System, Harvest Village, Londonderry	2104692				Install/Replace Treatment - See above		Yes	\$ -	\$ 20,000	\$ 20,000	Londonderry	Yes	\$ 24.78	\$ 496	
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	CoBank		Pending Filing	CoBank	Yes	\$ 20,000	\$ 5,750	\$ 5,750	Various	Yes	\$ 27.23	\$ 157	
Misc. Structural Improvements	Pave Access Road to Stone Sled Station	2103983				Misc. Structural Improvements - See above		Yes	\$ -	\$ 14,250	\$ 14,250	Various	Yes	\$ 27.23	\$ 388	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	\$ 10,000	\$ 5,000	Various	Yes	\$ 27.23	\$ 136	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ -	\$ 30,000	\$ 20,000	Various	Yes	\$ 27.23	\$ -	
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	CoBank		Pending Filing	CoBank	Yes	\$ 60,000	\$ 60,000	\$ 51,610	Various	Yes	\$ 27.23	\$ 1,405	
Well Rehabilitation	Rehabilitate Well #9, Locke Lake, Barnstead	2102279	\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	\$ -	\$ 8,390	Barnstead	Yes	\$ 27.84	\$ 234	
Install web based communication equipment, 4 locations	Install web based communication equipment, 4 locations	n/a	\$ 20,000	CoBank		Pending Filing	CoBank	Yes	\$ 20,000	\$ 20,000	\$ 20,000	Various	Yes	\$ 27.23	\$ 545	
Interconnect the W&E CWS to the Town of Salem Water System.	Interconnect the W&E CWS to the Town of Salem Water System.	2004243 & 2101750	\$ -	CoBank/Grant		Pending Filing	DWGT/CoBank	Yes	\$ -	\$ 565,000	\$ 175,000	Windham	Yes	\$ 23.89	\$ 4,181	Added as part of PEU-Salem Windham Franchise exchange. MSDC charge paid for by PEU. Work will not be Used and Useful in 2020. Includes dechlorination. \$175,000 in MSDC was budgeted in 2020, missed carry over. Well #3 capacity and quality changed dramatically in 2020 changing this connection from season to year round and requiring the additional \$550,000 investment. Pipeline and Station work deferred into 2022 due to materials not being available
New Services (5)	Single Family, Owner Build, New Homes	Routine	\$ 25,000	CoBank		Pending Filing	CoBank	Yes	\$ 25,000	\$ 15,000	\$ 20,000	Various	Yes	\$ 27.23	\$ 545	Installed 3 new service through 09/30/21, projecting 1 more
Renewed Services (20)	Replacement of failed services (focus on Locke Lake Services).	Routine	\$ 110,000	CoBank		Pending Filing	CoBank	Yes	\$ 110,000	\$ 50,000	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	Renewed 5 services through 09/30/21, projecting 5 more
Hydrants (5)	Replacement of non-functional hydrants	Routine	\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	\$ 30,000	\$ 12,000	Various	Yes	\$ 27.23	\$ 327	None replaced to date. Projecting 2 more
Gates (8)	Replacement of Failed Gate Valves	Routine	\$ 32,000	CoBank		Pending Filing	CoBank	Yes	\$ 32,000	\$ 40,000	\$ 35,000	Various	Yes	\$ 27.23	\$ 953	Installed/Repaired 4 gates through 09/30/21, Projecting 1 more
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.	Routine	\$ 31,500	CoBank		Pending Filing	CoBank	Yes	\$ 31,500	\$ 27,000	\$ 20,000	Various	Yes	\$ 27.23	\$ 545	Installed/Repaired 99 radios through 09/30/21, projecting 100 more
New meters for new customers (220). Replacement of failed meters (80)	New meters for new customers (220) and replacement meters (80).	Routine	\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	\$ 50,000	\$ 38,000	Various	Yes	\$ 27.23	\$ 1,035	Installed/Repaired 172 meters through 09/30/21, projecting 100 more
Meters 5/8"-6" Lead Meter Exchange - PEU (400)	Replace High lead brass meter with new no lead brass meter.	Routine	\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	\$ -	\$ -	Various	Yes	\$ 27.23	\$ -	Included in line above
2021 Radios (1000)	Year 1 of 7 year replacement of all PEU radios (all initial radios installed in 2007).	2101627	\$ 130,000	CoBank		Pending Filing	CoBank	Yes	\$ 130,000	\$ 106,000	\$ 98,000	Various	Yes	\$ 27.23	\$ 2,668	Replaced 924 Radios through 09/30/21, projecting 80 more
Interest on CoBank FaLOC	Short term interest from 9/29/2021 - 7/31/2022		\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	\$ -	\$ 13,650	Various	No	\$ 26.45	\$ -	Anticipates closing on CoBank long term loan to pay off CoBank FaLOC on 8/1/2022.

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 2,748,500

Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment - \$ 2,718,500 \$ 1,669,000 \$ 1,171,950
 Funded with CoBank Loan¹ - \$ 2,485,647 \$ 1,436,147 \$ 939,950
 Funded with SRF Loan¹ - \$ 232,853 \$ 232,853 \$ 232,000
 Funded with 0.1 DSRR - \$ 30,000 \$ 158,300 \$ 221,000

Projected annual property tax expenses for QCPAC eligible projects - \$ 28,265

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000.
 2. The 2021 PEU Capital Expenditures Budget presented were approved by the Board in January 2021.
 3. Projected CoBank Loan Terms are 25 Years at 5.0%
 4. Projected SRF Terms for Locke Lake project are 30 Years at 2.704%

	6/30/2021 Update	9/30/2021 Update
resulting in P&I of	\$ 176,363	\$ 101,898
resulting in P&I of	\$ 11,430	\$ 11,430
	\$ 187,793	\$ 113,328
		\$ 78,080

Pennichuck East Utilities, Inc.
DW 21-022
Projected 2022 QCPAC Capital Expenditures
2/11/2021
6/30/2021 Update - Defer Atkinson Station upgrade. Add in Londonderry System Improvements
Revised 10/28/21 for DOE DRI
9/30/2021 Update

Project Name/Description	Project Description	Work Order #	2022 Approved Budgeted Amount, Revised to reflect 2020 QCPAC activity	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Source of Funding	Eligible for 2022 QCPAC Surcharge	Eligible for 2022 QCPAC Surcharge	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since Petition Filing
Wellesley Drive water main replacement4	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC.		\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Londonderry Tank and W&E
Radcliffe Drive water main replacement4	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC.		\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Londonderry Tank and W&E
Vassar Drive water main replacement4	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC.		\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Londonderry Tank and W&E
Londonderry System Improvements	Tank, Transmission Main, & Booster Station	2102351	\$ 1,500,000	CoBank		Pending Filing	CoBank	Yes	\$ 1,500,000	Londonderry	Yes	\$ 24.78	\$ 37,170	Project delay in permitting will require carry over into 2022
Interconnect the W&E CWS to the Town of Salem Water System.	Interconnect the W&E CWS to the Town of Salem Water System.		\$ 530,000	CoBank		Pending Filing	CoBank	Yes	\$ 530,000	Windham	Yes	\$ 23.89	\$ 12,662	Project bid in fall of 2021, material not available until spring 2022.
1 x revenue investments Normal Run Rate	Per Tariff		\$ 100,000	CoBank		Pending Filing	CoBank	Yes	\$ 100,000	Various	Yes	\$ 27.23	\$ 2,723	
Londonderry Mountain Homes Station Improvements	Station Expansion for and including Chemical Feed Facilities for re-chloramination.		\$ -	CoBank		Pending Filing	CoBank	Yes	\$ -	Londonderry	Yes	\$ 24.78	\$ -	Project deferred pending additional study and Potential PFOA expansion in Londonderry
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
Well Pump replacements	Well Pump replacements		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
Chemical Feed pump replacements	Chemical Feed pump replacements		\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	Various	Yes	\$ 27.23	\$ 272	
Install/replace treatment systems in small CWS.	Install/replace treatment systems in small CWS.		\$ 25,000	CoBank		Pending Filing	CoBank	Yes	\$ 25,000	Various	Yes	\$ 27.23	\$ 681	
Miscellaneous Structural Improvements	Misc. Structural Improvements		\$ 20,000	CoBank		Pending Filing	CoBank	Yes	\$ 20,000	Various	Yes	\$ 27.23	\$ 545	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	Various	Yes	\$ 27.23	\$ 272	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	
Well Rehabilitation	Well Rehabilitation		\$ 60,000	CoBank		Pending Filing	CoBank	Yes	\$ 60,000	Various	Yes	\$ 27.23	\$ 1,634	
New Services (5)	Single Family, Owner Build, New Homes		\$ 25,000	CoBank		Pending Filing	CoBank	Yes	\$ 25,000	Various	Yes	\$ 27.23	\$ 681	
Renewed Services (20)	Replacement of failed services (focus on Locke Lake System).		\$ 110,000	CoBank		Pending Filing	CoBank	Yes	\$ 110,000	Pelham	Yes	\$ 24.86	\$ 2,735	
Hydrants (5)	Replacement of non-functional hydrants.		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Pelham	Yes	\$ 24.86	\$ 746	
Gates (8)	Replacement of Failed Gate Valves.		\$ 32,000	CoBank		Pending Filing	CoBank	Yes	\$ 32,000	Pelham	Yes	\$ 24.86	\$ 796	
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.		\$ 31,500	CoBank		Pending Filing	CoBank	Yes	\$ 31,500	Various	Yes	\$ 27.23	\$ 858	
New meters for new customers (220). Replacement of failed meters (80)	New meters for new customers (220) and replacement meters (80).		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	
Meters 5/8"-6" Lead Meter Exchange - PEU (400)	Replace High lead brass meter with new no lead brass meter.		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
2022 Radios (1000)	Year 2 of 7 year replacement of all PEU radios (all initial radios installed in 2007).		\$ 130,000	CoBank		Pending Filing	CoBank	Yes	\$ 130,000	Various	Yes	\$ 27.23	\$ 3,540	
Interest on CoBank FALOC	Short term interest from 8/1/2022 - 7/31/2023		\$ 35,000	CoBank		Pending Filing	CoBank	Yes	\$ 35,000	Various	No	\$ 27.23	\$ -	Anticipates closing on CoBank long term loan to pay off CoBank FALOC on 8/1/2023.

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 2,793,500

Projected annual property tax expenses for QCPAC eligible projects - \$ 70,213

Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment - \$ 2,828,500
Funded with CoBank Loan³ - \$ 2,828,500

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The 2022 PEU Capital Expenditures Budget presented were approved by the Board in January 2021.
3. Projected CoBank Loan Terms are 25 Years at 5.0% resulting in P&I of \$ 200,689
4. The Wellesley, Radcliffe and Vassar Drive water main replacements will be completed over 2 years with water main replacement occurring in 2022 and final pavement in 2023.

Pennichuck East Utilities, Inc.
DW 21-022
Projected 2023 QCPAC Capital Expenditures
2/11/2021
Revised 6/2/2021 per Staff Tech Session DR1, Revised 10/28/21 DOE DR1
6/30/2021 Update - Add in Atkinson Booster Station replacement. Deferred from 2022
Revised 10/25/2021 for DOE DR1's
9/30/2021 Update
Updated for DOE DR2's 12/1/2021

Project Name/Description	Project Description	Work Order #	2022 Approved Budgeted Amount, Revised to reflect 2020 QCPAC activity	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	Source of Funding	Eligible for 2023 QCPAC Surcharge	Eligible for 2023 QCPAC Surcharge	Community	Taxable	Tax Rate (I)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since Petition Filing
Pelham Main Replacement	Monticello & Lane Area Phase 2		\$ 700,000	CoBank		Pending Filing	CoBank	Yes	\$ 700,000	Pelham	Yes	\$ 24.86	\$ 17,402	
Wellesley Drive water main replacement	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC (paving).		\$ 70,000	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Montecello project
Radcliffe Drive water main replacement	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC (paving).		\$ 50,000	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Montecello project
Vassar Drive water main replacement	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC (paving).		\$ 70,000	CoBank		Pending Filing	CoBank	Yes	\$ -	Pelham	Yes	\$ 24.86	\$ -	Project deferred due to available funds being used for Montecello project
Atkinson Booster Station	Replace and Upgrade Station for AS treatment and Fire flow.		\$ 600,000	CoBank		Pending Filing	CoBank	Yes	\$ 600,000	Atkinson	Yes	\$ 22.84	\$ 13,704	
Locke Lake	Circle & Emmerson Replace 2100 feet of 2 inch PE.		\$ 250,000	CoBank		Pending Filing	CoBank	Yes	\$ 250,000	Barnstead	Yes	\$ 27.84	\$ 6,960	
1 x revenue investments Normal Run Rate	Per Tariff		\$ 100,000	CoBank		Pending Filing	CoBank	Yes	\$ 100,000	Various	Yes	\$ 27.23	\$ 2,723	
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
Well Pump replacements	Well Pump replacements		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
Chemical Feed pump replacements	Chemical Feed pump replacements		\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	Various	Yes	\$ 27.23	\$ 272	
Install/replace treatment systems in small CWS.	Install/replace treatment systems in small CWS.		\$ 25,000	CoBank		Pending Filing	CoBank	Yes	\$ 25,000	Various	Yes	\$ 27.23	\$ 681	
Miscellaneous Structural Improvements	Miscellaneous Structural Improvements		\$ 20,000	CoBank		Pending Filing	CoBank	Yes	\$ 20,000	Various	Yes	\$ 27.23	\$ 545	
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		\$ 10,000	CoBank		Pending Filing	CoBank	Yes	\$ 10,000	Various	Yes	\$ 27.23	\$ 272	
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	
Well Rehabilitation	Well Rehabilitation		\$ 60,000	CoBank		Pending Filing	CoBank	Yes	\$ 60,000	Various	Yes	\$ 27.23	\$ 1,634	
New Services (5)	Single Family, Owner Build, New Homes		\$ 25,000	CoBank		Pending Filing	CoBank	Yes	\$ 25,000	Various	Yes	\$ 27.23	\$ 681	
Renewed Services (20)	Replacement of failed services (focus on Locke Lake System).		\$ 110,000	CoBank		Pending Filing	CoBank	Yes	\$ 110,000	Various	Yes	\$ 27.23	\$ 2,995	
Hydrants (5)	Replacement of non-functional hydrants.		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	
Gates (8)	Replacement of Failed Gate Valves		\$ 32,000	CoBank		Pending Filing	CoBank	Yes	\$ 32,000	Various	Yes	\$ 27.23	\$ 871	
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.		\$ 31,500	CoBank		Pending Filing	CoBank	Yes	\$ 31,500	Various	Yes	\$ 27.23	\$ 858	
New meters for new customers (220). Replacement of failed meters (80).	New meters for new customers (220)		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	Yes	\$ 27.23	\$ 817	
Meters 5/8"-6" Lead Meter Exchange - PEU (400)	Replace High lead brass meter with new no lead brass meter.		\$ 40,000	CoBank		Pending Filing	CoBank	Yes	\$ 40,000	Various	Yes	\$ 27.23	\$ 1,089	
2022 Radios (1000)	Year 3 of 7 year replacement of all PEU radios (all initial radios installed in 2007).		\$ 130,000	CoBank		Pending Filing	CoBank	Yes	\$ 130,000	Various	Yes	\$ 27.23	\$ 3,540	
Interest on CoBank FALOC	Short term interest from 8/1/2023 - 7/31/2024		\$ 30,000	CoBank		Pending Filing	CoBank	Yes	\$ 30,000	Various	No	\$ 27.23	\$ -	Anticipates closing on CoBank long term loan to pay off CoBank FALOC on 8/1/2024.
			Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget -			\$ 2,533,500							Projected annual property tax expenses for QCPAC eligible projects -	\$ 58,855
													Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment - \$ 2,343,500	
													Funded with CoBank Loan¹ - \$ 2,343,500	

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
 2. The 2022 PEU Capital Expenditures Budget presented were approved by the Board in January 2021.
 3. Projected CoBank Loan Terms are 25 Years at 5.0% resulting in P&I of \$ 166,277
 5. The Wellesley, Radcliffe and Vassar Drive water main replacements will be completed over 2 years with water main replacement occurring in 2022 and final pavement in 2023.

ATTACHMENT B

Final Audit Report - DW 21-022

June 7, 2021

STATE OF NEW HAMPSHIRE

Inter-Department Communication

DATE: June 7, 2021
AT (OFFICE): NHPUC

FROM: Sean Courtois, Utility Examiner

SUBJECT: Pennichuck East Utility, Inc.
 DW 21-022 Qualified Capital Project Adjustment Charge - QCPAC
Final Audit Report

TO: Stephen Frink, Director Gas - Water Division, NHPUC
 Jayson Laflamme, Assistant Director Gas - Water Division, NHPUC
 Karen Moran, Chief Auditor
 Anthony Leone, Utility Analyst

Introduction

On February 11, 2021, Pennichuck East Utility, Inc. (PEU or The Company) filed for their 2020 Qualified Capital Project Adjustment Charge (QCPAC) reconciliation. This reconciliation, and its associated projects, are subject to the Public Utilities Commission's review and subsequent Order granting approval, prior to eligibility for recovery through the QCPAC. Audit reviewed the 2020 plant additions, as identified on the Capital Expenditures report (CAPEX), found on Exhibit DLW-1, page 2, of the QCAPC filing.

The QCPAC was approved in docket DW 17-128 by Order 26,179 dated October 4, 2018 and requires that *“Proposed QCPAC eligible capital projects must meet three criteria: (1) the projects must be completed, in service, used, and useful during the previous year; (2) the projects must be financed by debt previously approved by the Commission, pursuant to RSA 369; and (3) the projects' costs must be associated with an annual capital budget that was previously submitted by PEU and approved by the Commission. Within its annual filing, PEU will provide: (1) its calculation of the QCPAC surcharge associated with capital investments from the previous year; (2) budget information regarding proposed capital projects for the current year; and (3) a detailed forecast of anticipated capital project expenditures for the subsequent two years, for informational purposes only. Customers will receive notice of the proposed surcharge within 30 days of the annual QCPAC filing.”*

The filing included the 2020 Capital Expenditures (CAPEX), which reported the Company's Board of Directors approved a QCPAC budgeted amount of \$4,737,000 in January of 2021. The total final project cost as of 12/31/20, per the petition filed on February 11, 2021, Docket No. DW 21-022 totaled \$5,142,555.

Audit noted the \$5,142,555 amount to be funded with the 2020 loan from CoBank totaled \$1,135,409 and \$4,007,147 funded through an NHDES SRF loan as reported on Exhibit DLW-1,

page 2 of the filing. Per the testimony of Don Ware Bates Page 004, the \$1,135,409 CoBank loan amount is projected to have a 5.0% interest rate with a term of 25 years. The loan is expected to close in late July 2021. Once the interest rate is known, the Exhibit DLW-1 will be updated to reflect the final amount borrowed and actual interest rate. The \$4,240,000 NHDES SRF loan with a 2.704% interest rate carries a term of 30 years. The closing on the loan occurred on January 9, 2019 and the Company has borrowed money from this loan on a short-term basis during the construction phase of projects. The SRF loan will convert from a short-term loan to a long-term loan in June 2021. The final loan will be \$4,240,000 of which \$4,007,147 will be for assets that were used and useful prior to December 31, 2020. The remaining \$232,853 of the loan will be used for assets that will be used and useful for January 1-May 31, 2021. The remaining SRF loan will convert from short term to long term in June 2021.

Regulatory Approval

As required by Order 26,179, to be eligible for recovery through the 2020 QCPAC, a project must meet the following standards:

- (1) Completed, in service and used and useful on or before December 31, 2020;
- (2) Financed by debt that has been approved by the Commission; and
- (3) Corresponds with a capital budget that has previously been submitted by the Company and approved by the Commission.

Bidding

Audit inquired about the Company's procedure regarding the bidding process that contractors go through when applying to build and/or manage a project. The Company explained that the bid documents used include criteria that reference a potential contractor's technical ability, their experience successfully completing projects with a similar scope of work and size, their financial stability (the ability to bond), and their references. The bidder the Company selects is determined to be the responsible bidder based on review of their application, and who offers the lowest price to complete the job. The Company stated that they typically already know the majority of contractors that bid on projects. Audit understands that there may be instances when the work that a project requires is more specialized or unique (unlike water main construction), such as well drilling and construction. In this case, the Company explained that they would prequalify the bidders to ensure potential contractors are capable of completing the type of well the Company needs.

For review, Audit requested the bid proposals for the 2020 QCPAC projects. The Company provided a Record of Bids and Proposals for 21 projects in an Excel spreadsheet, The Company indicated the lowest bidder was selected unless there was only one bidder on a project.

Review of 2020 Capital Projects

The testimony of Don Ware on Bates Page 16 indicates most of the projects related to routine items necessary for meeting customer needs for quality as well as meeting compliance requirements under the Safe Drinking Water Act Standards. The vast majority of the projects completed in 2020 were associated with complying with a corrective action plan to provide

additional water supply to Locke Lake Community Water System. The Company was also required to provide treatment of arsenic in the Airstrip well.

There were forty-four Capital Projects listed on Exhibit DLW-1, page 2 of the filing, and one amount for the PEU capitalized short-term project interest. Of the forty-four projects listed in the filing, twenty-eight of them, plus the short-term interest, had a combined final project cost totaling \$5,142,555. Twenty-six of the listed projects were put into service during 2020 and eligible for the 2021 QCPAC surcharge. Two of the projects were not placed into plant in service related to the Atkinson Booster pump replacement as they were anticipated to be completed in early 2021. The remaining sixteen projects were not completed/deferred and therefore not unitized to plant in service as of December 31, 2020. They were included in the CAPEX Budget as a placeholder.

Per Audit's request, the Company provided an explanation as to why the sixteen projects were listed on the CAPEX but did not have a final project cost. In response, the Company stated that, *"[The projects] are generally place holders in the budget for 'run rate/routine' projects. The budgets are brought into the QCPAC at the budget that was approved by the board. As the year progresses, the projects may be delayed and/or not completed based on business needs. If there is no work order listed, that means the project was not completed or not necessary."* Written in the notes on the CAPEX, Audit recognized the Company's explanation for any deletion of projects, since the petition filing.

Audit sampled 15 of the 26 projects unitized into plant in service or \$3,474,845 of the \$5,142,555. This means that Audit reviewed 67.5% of the projects unitized to plant in service during 2020.

In addition to the mains, services, and paving projects that were historically included under the WICA to be eligible for recovery through the QCPAC mechanism, a project can be related to the replacement of vehicles, network infrastructure and building improvements.

The projects reviewed consisted of Georgetown Drive main replacement, Belmont Drive in Barnstead to remove dead end piping, Lock Lake water treatment intake and treatment facility, Pelham main replacement, booster pump replacements, installation of cellular network, new services, new hydrants, new meters, replacement of gate valves, and MSDC payments of invoicing from Manchester Water Works.

The following depicts the twenty-eight Capital Projects (plus the short-term interest), as per Exhibit DLW-1, page 2, of the filing: Note: The Sunrise Estates and Londonderry Core - Re-chlorination are included on the filing but are excluded from the final December 31, 2020 plant in service recovery due to completion being delayed until early 2021.

Project Name/Description	Work Order #	12/31/2020 Final Cost	Property Tax
Airstrip Alt. Arsenic Treatment	1901642, 2000371	\$ 618,531	\$ 17,220
Georgetown Dr. Main Rep.	2000363	\$ 966,252	\$ 26,900
N. Barnstead Rd.-Elim. Deadend pipe	244214	\$ 244,214	\$ 6,799
Route 28 Replacement	2000365	\$ 69,061	\$ 1,923
Lock Lake Surface Water Treatment	1813409, 1900433, 2000369	\$ 2,109,088	\$ 58,717
Lock Lake Surface Water Treatment	1813409, 1900433, 2000369	\$ 175,334	\$ 4,881
Rolling Hills Main Replacement	2000392	\$ 27,400	\$ 718
Pelham Main Replacement	2001241	\$ 332,855	\$ 8,275
Pelham Main Replacement	2003563	\$ 182,102	\$ 4,527
Pelham Main Replacement	2003564	\$ 19,527	\$ 485
Pelham Main Replacement	2004325	\$ 60,561	\$ 1,506
1x revenue investment rate Sunrise Estates	n/a 2003613	\$ 62,949 \$ 7,805	\$ 1,714 \$ -
Londonderry Core- Rechlorination	20033760	\$ 11,820	\$ -
Booster Pump replacement	760-763 work orders	\$ 15,241	\$ 415
Well Pump replacement	760-763 work orders	\$ 14,665	\$ 399
Chemical Feed Pump Rep.	760-763 work orders	\$ 1,695	\$ 46
Misc. SCADA/Electrical	2001215	\$ 2,398	\$ 57
Misc. SCADA/Electrical	2005248	\$ 1,735	\$ 53
Misc. SCADA/Electrical	2006387	\$ 1,735	\$ 53
Install web based Comm. Equip.	2002270	\$ 2,099	\$ 57
5 New Services	720 work orders	\$ 10,586	\$ 288
10 Renewed Services	721 and 722 work orders	\$ 10,137	\$ 276
Meters 5/8"-6" Lead Meter Exchange (600)	750 work orders	\$ 25,672	\$ 699
8 Gates	712 work orders	\$ 17,872	\$ 487
300 Radios	754 work orders	\$ 24,231	\$ 660
PEU-PWW Interconnection	2007474	\$ 3,449	\$ 99
MSDC Payment to MWW	2009024	\$ 127,007	\$ -
Interest on FALOC		\$ 16,158	\$ -
Total		\$ 5,142,555	\$ 137,255

The chart below represents the 14 out of 26 projects unitized to plant in service as of December 31, 2020 or 67.5% that Audit sampled.

Project Name/Description	Work Order #	12/31/2020 Final Cost
Airstrip Alt. Arsenic Treatment	1901642, 2000371	\$ 618,531
N. Barnstead Rd.-Elim.	244214	\$ 244,214
Deadend pipe		
Lock Lake Surface Water Treatment	1813409, 1900433, 2000369	\$ 2,109,088
Lock Lake Surface Water Treatment	1813409, 1900433, 2000369	\$ 175,334
Pelham Main Replacement	2004325	\$ 60,561
Booster Pump replacement	760-763 work orders	\$ 15,241
Well Pump replacement	760-763 work orders	\$ 14,665
Install web based Comm. Equip.	2002270	\$ 2,099
5 New Services	720 work orders	\$ 10,586
10 Renewed Services	721 and 722 work orders	\$ 10,137
Meters 5/8"-6" Lead Meter Exchange (600)	750 work orders	\$ 25,672
8 Gates	712 work orders	\$ 17,872
300 Radios	754 work orders	\$ 24,231
MSDC Payment to MWW	2009024	\$ 127,007
Interest on FALOC		\$ 16,158
Total		\$ 3,471,396

Overhead Rates

The Company's overhead rates are input into Synergen, the plant accounting system, by the Senior or Staff Accountant. The system entered overhead rates are then automatically calculated and posted to the general ledger, at the same time that the work orders are posted to the general ledger, at the end of the month.

Audit requested the overhead rates that were in effect during the 2020 test year for labor, general construction, and engineering. The Company responded with the following statement:

"For 2020, the Union overhead rate was 66.20% and the general overhead rate was 2%. It is intended to capture the cost of benefits for Union employees and is derived by an analysis of the employee's benefits which is reviewed / revised annually."

The general overhead rate is calculated on the total job cost, including the union labor rate as described above, and by an analysis of the employee benefits which is reviewed/revised annually as part of the budget process. Audit verified the OH rates to the work order detail reports of each project reviewed.

Allowance for Funds Used During Construction

Audit noted that there was no charge for Accounting for Funds Used during Construction. The Commission Order 26,313, dated December 6, 2019, stated that, "*The AFUDC mechanism*

does not accurately reflect the financing costs that PEU incurs during the period of actual project construction. PEU and Staff further agreed that the actual interest expense incurred on the Company's Line of Credit during construction is a more accurate measure of costs than AFUDC." The Company reported the short-term interest on the CoBank FALOC, from July 2019 - July 2020, as totaling \$16,158 on the filing. This interest amount was a representation of interest from July 2020 through July 2021. The Company in a recently updated estimated spreadsheet indicated the interest expense was \$15,622. The final amount of capitalized interest will not be known until the day the Company closes and pays off the CoBank FALOC.

Continuing Property Records

The Company submitted the Continuing Property Records (CPR), detailing the capitalized date, disposition date, cost of removal, gross book value, depreciation expense, accumulated depreciation, and net book value. The Company also provided a Dispositions and Meter Counts report. The general ledger for the construction work in progress account (CWIP, 105222), accumulated depreciation account (108000), the cost of removal account (108001), and the plant in service subaccounts (301000 – 348000) were also provided, along with copies of the journal entries and entry report for the general journal 2019 retired assets. Audit reviewed the general ledger entries confirming the final project costs credit the CWIP account and debit the appropriate plant in service account.

Audit verified the reported cost total of \$5,126,397 + interest on the FALOC \$16,158 = \$5,142,555 to the CPR. Included within the \$5,126,397 is a total cost of removal of \$241,240. The CPR correctly lists that total within account 108001. Utilities that have rates set using "rate base" rather than the QCPAC mechanism deduct the cost of removal from the book cost. For the Pennichuck East and Pennichuck Water utilities, because the QCPAC is a mechanism designed to ensure sufficient cash-flow coverage for debt service and related increase in property taxes, evidence that the cost of removal was literally a cost paid is allowed.

Retirements

The CPR indicated there was \$101 in retirements during 2020 that related to radio meters. Audit asked why such a small dollar amount of assets was retired relative to \$5,142,555 in additions. The Company indicated the CPR \$101 was a retirement of an asset capitalized in 2020. In addition, there were 47 meters and related radios retired which had been capitalized in years prior to 2020, but retired during 2020. The total of all meters and radios retired during 2020 sums to \$11,697.88. The Company indicated the journal entries for the retirement of radios and meters are done quarterly, and provided journal entries supporting \$11,698. Audit verified the Company debited the correct 108 Accumulated Depreciation account and credited the correct 334000 meters and 334100 radios accounts correctly.

<u>JE#</u>	<u>Date</u>	<u>Meters</u>	<u>Radios</u>	<u>Total</u>
350	4/30/2020	\$1,068	\$1,370	\$2,438
351	6/30/2020	\$758	\$1,324	\$2,082
353	9/30/2020	\$970	\$2,884	\$3,854
352	12/31/2020	<u>\$1,426</u>	<u>\$1,896</u>	<u>3,322</u>
Total		\$4,223	\$7,475	\$11,698

The total retirement figure of \$1,000,800 relating to QCPAC installations during 2020, including the above meter/radio detail, was provided to Audit and demonstrates services, arsenic treatment, booster pumps, electric pumps, etc. Inclusive of the meters/radios, there was a total of 91 assets retired specifically as a result of additions identified as QCPAC.

Cost of Removal

The Company on the 2020 GL trial balance booked \$160,287 to account 108001 Accumulated Depreciation-Cost of Removal. The CPR records provided by the Company indicate the cost of removal charges during 2020 were \$241,240. This is a difference of \$80,953. The Company indicated the variance was due to the inclusion of the Georgetown Drive project that was booked in November and December 2019 on the most recent filing. Based on a review of the journal entries the Georgetown Drive cost of removal costs were debited to the 108001 A/D-Cost of Removal account and credited the plant in service account. The Company provided the journal entry details for the \$160,287 cost of removal on the trial balance booked to account 108001. Audit sampled a meter cost of removal journal entry from February 2020. The Company debited the Accumulated Depreciation-COR account for \$1,004 and credited the 334000 meters account for the same amount.

Tax Rate Calculation

The February 11, 2021 filing by the Company reported the QCPAC eligible property tax expense of \$137,255, as per Exhibit DLW-1. All the projects reviewed by Audit were part of the PEU systems of Barnstead, Pelham, Plaistow, Middleton, Londonderry, Atkinson, Windham, Raymond, and Merrimack. Audit requested the supporting schedule used to determine the QCPAC eligible property tax expense listed in the filing, as well as copies of the town property tax bills for each of the towns where the projects occurred. The Company provided the requested documentation including a schedule showing the tax rate calculation, stating that, *“The rates were calculated by taking the property tax bill from year end 2019 and adding the Statewide Utility tax rate of \$6.60/\$1000.”*

Audit verified that the QCPAC eligible property tax expense was calculated by multiplying the tax rate for the community where the project was located, by the final cost of the project/\$1,000, as per the explanation provided by the Company. Audit confirmed both the property tax rate calculation for each town, as well as the eligible property tax expense, and noted that the calculations agreed with the filed CAPEX. The following schedule represents the 2019 calculated property tax rate, based on final 2019 property tax bills, by municipality and state:

Town	Local TR	State TR	Total
Middleton	\$ 26.95	\$ 6.60	\$33.55
Barnstead	\$ 21.24	\$ 6.60	\$27.84
Plaistow	\$ 19.60	\$ 6.60	\$26.20
Pelham	\$ 18.26	\$ 6.60	\$24.86
Londonderry	\$ 18.18	\$ 6.60	\$24.78
Atkinson	\$ 16.24	\$ 6.60	\$22.84
Raymond	\$ 23.93	\$ 6.60	\$30.53
Merrimack	\$ 22.24	\$ 6.60	\$28.84
Windham	\$ 17.29	\$ 6.60	\$23.89

Depreciation

PEU submitted to Audit a detailed spreadsheet for the selected additions to utility plant. This spreadsheet indicated a total depreciation charge of \$59,248 from total selected additions of \$5,142,555. This figure represents a ½-year depreciation charge for 2020 in accordance with utility accounting standards. Audit recalculated several samples from all the plant accounts to verify the accuracy, the rates and the use of half-year convention for new additions. The Company used the straight-line method on the gross book value (after the cost of removal) and the rates used agreed with those specified in docket DW 17-128.

Review of 2020 E-22s

The Company provided an E-22 for the Pelham Main project 200000083 that was prepared in January 2020. The project was to replace 1,600 feet of mains on Monticello and Lane Roads in Pelham. The reason for the main replacement was the present 3” PVC pipe that supplies domestic flows could not support fire flows or an expansion of the distribution area. The project was budgeted for \$285,000 and was expected to be completed in late May/Early June 2020.

The Company provided an E-22 for project 2000000105 the Salem Interconnection water project. The project is located in Windham. The reason for the project was to increase system capacity between winter and summer to reduce potential shortages anticipated in the future. The project was budgeted to cost \$175,000 and expected to begin in July 2020 and be completed in November 2020.

The Company provided an E-22 for the Georgetown Drive water main improvement project. The project is part of the Locke Lake project. The project was anticipated to begin in July 2019 and be complete by the end of 2019. The estimated cost was \$540,000 million.

The Company provided an updated E-22 for the Georgetown Drive water main improvement project. The project is part of the Locke Lake project. The project was anticipated to begin in July 2019 and be complete by the end of 2019. The increased estimated cost was \$1.1 million.

The Company provided an E-22 for project 200000018 Litchfield PFOA to hookup 28 homes with service lines. The project was budgeted for \$410,028 and expected to be completed in May 2021.

The Company provided an E-22 for project 2000000111 Litchfield PFOA to install 6,800 feet of new main and 32 main to stop services along Route 3A in Litchfield. The project will bring water service to 32 parcels. The project is budgeted to cost \$1,070,060 and be completed by May 2021.

The Company provided an E-22 for project 2000000121 abandonment of 24" water main and the installation of a new 24" water main along Route 101A from Continental Boulevard to Boston Post Road in Merrimack. The project was requested by the NHDOT because of traffic and congestion in the area. The project will free up space and allow for better drainage that will not damage the water main. The project was budgeted to cost \$502,500 with a start date of the end of 2020 with a project completion date of July 2022.

The Company provide an E-22 for the purchase of water from Manchester Water Works. The budget document indicated the Company was to purchase additional 33,511 gallons of water for \$127,008. The purchase agreement complied with the \$3.79 per gallon purchase rate in the contract. The reason for the additional purchase of water was due to hot summer heat with more people at home using water.

Review of 2020 Additions

Airstrip Alternative Arsenic Treatment Peacham Rd W/O 1901642 and 2003371 \$618,531

Audit reviewed an E-22 dated March 7, 2019 that describes the project as an airstrip well to the Peacham treatment plant that was budgeted to cost \$540,000. This was also the budgeted Capital Expenditure figure on the filing. The project's actual cost was \$618,531. The Company indicated the budget figure was a preliminary number and the cost increased due to increased technical specifications such as different soil conditions encountered than the initial budgeted cost. The Company Construction Services Manager signed the E-22.

The Company received seven bids for the project and selected New England Earth Mechanics as the winner with the lowest price bid.

The Work Order Detail Reports summarize the project costs below:

W/O 1901642 Raw Water pipeline to Peacham Rd in Barnstead

ENG&ISOH	\$6,924
NH Electric Coop.	\$162
State of NH	\$200

RD Bartlett	<u>\$20,168</u>
Total	<u>\$27,454</u>

Audit reviewed an Engineering and Information System Overhead calculation for \$1,661 and verified they were using the correct overhead rates. Audit reviewed two invoices from RD Bartlett one that summed to \$10,335. The first invoice \$4,338 and the second for \$5,997 were for reviewing existing lake crossing conditions and surveying work.

W/O 2000371 Locke Lake Airstrip in Barnstead

ENG&ISOH	\$33,300
NH Brown Law	\$1,843
Geosyntec	\$8,500
Frasca	\$7,335
Wilson	\$13,900
NE Earth	<u>\$526,199</u>
Total	<u>\$591,077</u>

Total All W/O \$618,531

Audit reviewed sample transactions from New England Earth Mechanics, the main contractor for the project. Audit reviewed a progress payment from July 2020 that indicates the contract was for \$512,000. The work performed related to the airstrip well.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

<u>Work Orders 1901642, 2000371 Airstrip Alternative arsenic treatment</u>				
<u>Account</u>	<u>Description</u>	<u>Gross Plant</u>	<u>COR</u>	<u>Gross Book</u>
303240	Easments	\$ 10,695	\$ -	\$ 10,695
307100	Wells and Springs	\$ 14,928	\$ (1,492)	\$ 13,436
320200	Water Treatment Equipment	\$ 11,500	\$ (1,150)	\$ 10,350
331100	Mains 6" and Larger	\$ 466,319	\$ (46,631)	\$ 419,688
331101	Mains 4" and Larger	\$ 111,894	\$ (1,651)	\$ 110,243
331250	Gates 4" and Larger	\$ 3,200	\$ (320)	\$ 2,880
		<u>\$ 618,531</u>	<u>\$ (51,249)</u>	<u>\$ 567,282</u>

N. Barnstead Rd. Eliminate Dead End Piping W/O 2000365 \$244,214

The Company received three bids for the project that went out to bid in 2016 and went with the lowest bidder, John Lyman and Sons, Inc.

The CAPEX indicates the project is budgeted to cost \$239,000 and the final cost of the project was \$244,214. The project was to add 680 feet of 4 inch PVC piping to eliminate a dead end in the piping. The Company was also to replace 275 feet of 4 inch 40 PVC piping with 6-inch C900 PVC pipe on North Barnstead Rd. The final cost is very close to the estimated price.

The Company provided the work order report that summarizes the costs below:

John Lyman \$222,133
 ENG&ISOH \$22,081
 Total \$244,214

Audit reviewed two progress payments from John Lyman and Sons Inc. The first progress payment was part of a larger 2019 Locke Lake Water main replacement project on Georgetown Rd. in Barnstead. The entire progress payment contract was for \$1,162,521. The current amount due on the progress payment was \$99,165 that was related to the installation of mains on North Barnstead Road. The second progress payment from July 2019 revised the contract amount down to \$1,063,356. The current amount due on the progress payment was \$122,969. Audit was able to verify the entire \$222,133 on the progress payments by the sum of the current amount due on each progress payment. The work on both progress payments besides main work related to mains was police detail, excavation, dump trucks, environmental disposal, and backhoe rentals.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 2000365		N. Barnstead Eliminate Dividend Piping			
Account	Description	Gross Plant	COR	Gross Book	
	331001 Pavement-Transmission Mains	\$ 142,215	\$ -	\$ 142,215	
	331101 Mains: 4" and Under	\$ 92,824	\$ (9,282)	\$ 83,542	
	331250 Gates: 4: and Under	\$ 3,525	\$ (353)	\$ 3,172	
	333200 Renewed Services	\$ 5,650	\$ (5,650)	\$ -	
		\$ 244,214	\$ (15,290)	\$ 228,929	

Locke Lake Surface Water Treatment intake/Treatment Facility Construction W/O 1813409, 1900433, 2000369 \$2,284,422

The E-22 provided to Audit was dated May 29, 2018 and the estimated cost of the Locke Lake Treatment design was \$100,000 to be done during 2018. Audit asked the Company why the project was delayed and the significant difference as the actual project cost was unitized to plant in service for \$2,284,422. The Company indicated the E-22 was a very preliminary estimate and as more information was learned about the project the requirements/scope of the project change. The E-22 was a very rough estimate of the project costs.

The project was authorized by Commission Order 26,189 and consisted of two lines on the filing schedule. The project was budgeted as of November 2020 to cost \$2,050,000. The final project costs were \$2,284,423. The filing indicates the additional arsenic filters failed in September 2020 and had to be replaced. The Company completed more work in 2020 than anticipated.

The Company received only one bid for the treatment facility upgrades that was awarded to Scherbon Associates. The Company indicated the bid was very close to what the Company engineer priced the work to be. The Company received two bids for the facility addition portion of the project that was awarded to DBU Construction, the lowest price bidder.

The Work Order Detail Reports summarize the project costs below:

W/O 1813409

ENG&ISOH	\$13,109
RD Bartlett	\$3,341
Union Leader	\$334
Granite State/Eastern Analytical	\$27,755
Eastern Analytical	<u>\$3,455</u>
Total	\$47,994

Audit sampled a \$5,553 ENG&ISOH calculation for the Locke Lake Design project. Audit verified the calculations were done correctly.

W/O 1900433

John Lyman	\$18,020
ENG&ISOH	\$6,982
Granite State Analytical	\$7,587
Eastern Analytical	\$5,353
Blue Leaf	\$56,502
Home Depot	\$775
Hydrosorce	\$4,682
M&M Electric	\$2,857
Sol Instruments	\$500
FW Webb	\$3,500
West Tech	\$28,880
United Rentals	\$27,360
Davis Fuels	\$131,252
NE Boring	<u>\$19,478</u>
Total	\$313,638

Audit reviewed two invoices from Blue Leaf that summed to \$56,502. The first invoice was for \$19,902 that indicated the work was completed in October 2019 for optimization and performance testing of the AltaPAC system. The second invoice was for \$36,600 that indicated the work was completed in May 2019 for optimization and performance testing of the AltaPAC system.

Audit reviewed an invoice for Hydrosorce Associates for \$6,059 that was for Locke Lake test borings and sieve analysis. Audit reviewed an invoice from WestTech for \$13,000 that was for Pilot Unit Prep and Round trip freight from March 2019.

W/O 2000369

NH Brown	\$2,692
Hydrosorce	\$46,613
USA Blue Book	\$3,511
ENG&ISOH	\$125,319
DBU Construction	\$172,027
Scherbon	\$631,290
FL Merrill Const.	\$245,069
West Tech	\$69,680
Tighe & Bond	\$82,333
Eastern Propane	\$3,300
AMEX	\$3,395
Rath, Young	\$6,500
Hatch Company	\$22,290
Grainger	\$3,200
BL Weng	\$14,151
Chasco	\$1,290
NE Boring	\$2,343
Union Leader	\$500
RE Prescott	\$11,249
Eastern Analytical	\$10,557
Granite State An.	8,352
Barnstead	\$584
Steam Work	\$12,000
Wilson Cont.	\$23,850
Other vendors	<u>\$360,695</u>
Total	\$1,922,790

Total all W/O \$2,284,422

Audit sampled a \$43,994 ENG&ISOH calculation for the Locke Lake Design project. Audit verified the calculations were done correctly. Audit reviewed three invoices from Scherbon Consolidated. The invoices were all progress payments that were based on a \$690,920 contract amount. The first progress payment indicated the payment was for \$91,176. The second progress payment indicated the payment was \$174,647. The third progress payment is for \$223,127. The three-progress payments reviewed summed to \$488,950. The work included installation of pipes, valves, painting, HVAC, electrical, demolition, concrete pouring, and excavation.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Orders 1813409, 1900433,
20000369

Locke Lake Surface Treatment

Account	Description	Gross Plant	COR	Gross Book
	306000 Lakes River and Other Intakes	\$ 520,954	\$ -	\$ 47,994
	303240 Easements	\$ 8,465	\$ -	\$ 8,465
	307100 Wells and Springs	\$ 111,234	\$ (3,709)	\$ 33,390
	309200 Supply Mains-Pumping Plant	\$ 106,082	\$ -	\$ 106,082
	320000 Purification System Equipment	\$ 112,853	\$ (11,285)	\$ 101,568
	304800 WTP-Structures	\$ 145,039		
	307210 Well Pumping and Pippings	\$ 34,764		
	320200 Water Treatment Equipment	\$ 1,211,032	\$ (88)	\$ 1,210,944
	331001 Pavements-Transmission Main	\$ 34,000		
		<u>\$ 2,284,423</u>	<u>\$ (14,999)</u>	<u>\$ 2,269,424</u>

Monticello and Lane Street W/O 2004325 \$60,561

The filing indicates only the final \$60,561 work order costs for work on Monticello and Lane streets. The work order is part of the larger Pelham Main Replacement work.

The E-22 that was provided was from February 2020 for the Pelham main replacement project that the Company was going to replace 1,600 feet of 3" PVC with 12" PVC pipe and add an additional 775 feet of 12" PVC pipe for an estimated \$688,600. The overall engineering necessity of increasing the pipe dimension was not part of Audit's review.

The Work Order Detail Report summarized the project costs below:

Hudson Paving	\$58,860
Contractor	\$1,282
Pennichuck	<u>\$419</u>
Total	\$60,561

Audit reviewed the Hudson Paving and Excavation invoices. The invoices were part of a progress payment contract that summed to \$526,861 that was related to other Pelham main

replacement projects. The work performed relates to flagging, traffic control, excavation, trenching, pipe replacement, and other main replacement work.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 2004325		Monticello and Lane St main work			
Account	Description	Gross Plant	COR	Gross Book	
	108001 Accumulated Depreciation-COR	\$ 2,500	\$ (2,500)	\$ -	
	331001 Pavements-Transmission Main	\$ 713	\$ -	\$ 713	
	331100 Mains 6" and Larger	\$ 38,771	\$ (1,714)	\$ 37,057	
	331250 Gates: 4" and Under	\$ 1,960		\$ 1,960	
	331251 Gates: 6" and Under	\$ 16,616		\$ 16,616	
		\$ 60,561	\$ (4,213)	\$ 56,346	

PEU MSDC Payment to Manchester Water Works W/O \$127,007

Audit reviewed the \$127,007 December 2020 Merrimack Source Development Charge payment made to Manchester Water Works. This was for the water service installation charge for residential out of town portion. The charges were booked to account 186500 Manchester Source Development Charge. The E-22 indicated PEU purchased 33,511 gallons of water.

PEU Installation of Meters W/O 750 \$25,672

This was a routine work order to replace 600 high lead brass meters with new meters that did not contain lead. The meters were 5/8". Since project was routine the project was done internally. The routine meter change outs are given the work order type of #750.

The Company provided the work order cost detail reports for Audit to review. Audit sampled three transactions for the installation of the new meters that were changed out in Londonderry. Audit verified the inventory and labor charges were allocated correctly to the internal inventory record. The samples are in the table below.

W/O 2008443/01	\$3,464
W/O 2006839-01	\$2,191
W/O 2002319-01	<u>\$2116</u>
Total	\$7,771

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 750		Replacement Brass Lead Meters			
Account	Description	Gross Plant	COR	Gross Book	
	334000 Metering Equipment	\$ 25,672	\$ (2,208)	\$ 23,464.00	
		\$ 25,672	\$ (2,208)	\$ 23,464.00	

PEU Installation of gate vales W/O 712 \$17,872

This was a routine work order type #712 to replace eight failed gate valves. The Company changed only five gate valves that were repaired or installed through December 31, 2020. Since the project was routine the work was done internally. The gate valves were changed in Windham, Litchfield, Pelham, and Plaistow.

The Company provided the Work Order Detail Report that Audit used to sample W/O #2007475/01 that was for \$8,917. Audit reviewed the payroll records, overhead, dump truck, backhoe, and truck charges that supported the \$8,917 for the installation of the new 8" gate valves on Range Rd in Windham.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 712		Replacement of Gate Valves		
Account	Description	Gross Plant	COR	Gross Book
	331250	\$ 8,955	\$ (895)	\$ 8,060.00
	331251	\$ 8,917	\$ (892)	\$ 8,025.00
		\$ 17,872	\$ (1,787)	\$ 16,085

PEU Radio Replacements W/O 754 \$24,231

The routine work order type # 754 replaced 236 radio replacements during 2020 that was for \$24,231. The Company provided Work Order detail reports and Audit sampled one entry that was for \$3,932. The sample entry Audit reviewed included the inventory records and labor/overhead charges to hang the Neptune radios on the wall.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 754		Radio Replacements		
Account	Description	Gross Plant	COR	Gross Book
	334100 Radios for Metering	\$ 24,231	\$ -	\$ 24,231.00
		\$ 24,231	\$ -	\$ 24,231.00

PEU New Services W/O 720 \$10,586

The routine work order type # 720 included the installation of five new service lines on Nashua Rd. in Pelham and Joanne Dr. in Hooksett that was for \$10,586. Forcier Contracting did part of the project. The project did not go out to bid because of the small size of the project. Audit reviewed all the invoices that summed to \$7,950 from Forcier Contracting for the work they performed on Nashua Rd. in Pelham. The invoices indicate the work performed was service line connections to properties, traffic control, paving, installation of curb stop riser, new shutoffs, and any related work. The remaining \$2,636 in renewed service line connections were done internally. Audit reviewed the payroll records, inventory records, overhead, dump truck, backhoe, and truck charges that supported the \$2,636 for the new service line connections on Joanne Dr. in Hooksett.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 720		New Services		
Account	Description	Gross Plant	COR	Gross Book
	333100 New Services	\$ 10,586	\$ -	\$ 10,586.00
		\$ 10,586	\$ -	\$ 10,586.00

PEU Renewed Services W/O #721/722 \$10,137

The routine work order type # 721/722 included five renewed service line connections during 2020. The Work Order Detail Reports indicate the service lines were located in Litchfield, Londonderry, and Windham. Since the work order is routine in nature the work was done internally. Audit sampled one transaction that was for \$3,124 for a renewed service line connection on Seasons Lane in Londonderry. Audit reviewed the payroll records, inventory records, overhead, dump truck, backhoe, and truck charges that supported the \$3,124 for the new service line connections on Seasons Lane in Londonderry.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 721/722		Renewed Services		
Account	Description	Gross Plant	COR	Gross Book
	333200 Renewed Services	\$ 10,137	\$ (1,014)	\$ 9,123.00
		\$ 10,137	\$ (1,014)	\$ 9,123.00

Installation of Web Based Cellular Service on SCADA W/O #2002270 \$2,099

Audit reviewed the \$2,099 R.E. Prescott Co. invoice that indicated the charges were for a GS300 Remote Telemetry Unit, power supply, and the annual data plan. The SCADA service was installed in four service locations.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 2002270		SCADA Communications Equipment		
Account	Description	Gross Plant	COR	Gross Book
	346000 Communications Equipment	\$ 2,099		\$ 2,099.00
		\$ 2,099		\$ 2,099.00

PEU Well Pump Replacements W/O #760 \$14,665

The routine work order type # 760 was for four well pump replacements in 2020 in Pelham, Bow, Atkinson, and Londonderry that was for \$14,665. Audit sampled one transaction for \$5,072 for well pump replacements installed in Londonderry by Smith Pump on the Lock

Lake airstrip well project. The Company has worked with Smith Pump in the past. Audit reviewed the \$5,072 Smith Pump invoice and labor charges were correctly calculated.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 760		Well Pump Replacements		
Account	Description	Gross Plant	COR	Gross Book
	307210 Well Pumping and Piping	\$ 14,665	\$ (1,467)	\$ 13,198.00
		\$ 14,665	\$ (1,467)	\$ 13,198.00

PEU Booster Pump Replacement/Rebuild W/O #761-763 \$15,241

The routine work order type # 761-763 was for five booster pump replacements/rebuilds in 2020 in Londonderry, Bow, Pelham, and Raymond. Audit sampled one transaction that was performed by contractor Chase Electric Motors for \$4,075. The invoice indicates work was performed to disassemble, clean, and inspect the Griswold Pump. Audit verified the charges on the invoice without exception.

Audit reviewed the work order costs and any cost of removal charges to the following general ledger accounts.

Work Order 761-763		Booster Pump Replacement/Rebuild		
Account	Description	Gross Plant	COR	Gross Book
	311210 Electric Pumping Equipment	\$ 15,241	\$ (353)	\$ 14,888.00
		\$ 15,241	\$ (353)	\$ 14,888.00

Revenues

The Company will apply a recoupment charge to recover the cost of the loan and property taxes incurred, likely in late July 2021, once the Commission grants approval for recovery. Testimony given by Donald Ware, Chief Operating Officer of Pennichuck East Utility, indicates there is a projected 4.08% increase on a customer's bill. The exact impact on a customer's bill will not be known until the DW 20-156 rate case concludes. The average monthly single-family bill sought in DW 20-156 rate case is projected to be \$85.40. The projected 4.08% 2021 QCPAC will result in an increase of \$3.49 per month or a projected average monthly bill of \$88.89.

Summary

In Summary, the Company submitted projects for \$5,142,555 and an initial tax impact of \$137,255 totaling \$5,279,810. After reviewing the material submitted, the Company has shown that these projects were used and useful, booked to the appropriate plant accounts as of 12/31/2020. Support for project costs was provided in the form of the general ledger balances, journal entries, work orders, work order detail reports, E-22's, invoices and Excel spreadsheets.

