

	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)	\$ 7,306,643 (1)	\$ 109,255 (5)(11)	\$ 7,415,898	\$ (1,757) (5)(10)	\$ 7,414,141	\$ 54,325 (5)	\$ 7,468,466	\$ 49,874 (5)	\$ 7,518,340
Operating Expense Contingency	1.06 (2)		1.06		1.06		1.06		1.06
Material Operating Expense Revenue Requirement (MOERR)	7,745,042		7,860,852		7,858,989		7,916,573		7,969,440
Non Material Operating Expense Revenue Requirement (NOERR)	\$ 7,163		\$ 7,163		\$ 7,163		\$ 7,163		\$ 7,163
Debt Service Revenue Requirement (DSRR 1.0)	\$ 1,669,484 (3)	\$ 277,257 (6)(7)	\$ 1,946,742	\$ 187,793	\$ 2,134,534	\$ 154,570	\$ 2,289,104	\$ 135,058	\$ 2,424,162
Principal and Interest Coverage Requirement	1.10		1.10		1.10		1.10		1.10
Total Debt Service Revenue Requirement including the .01 DSRR	\$ 1,836,433		\$ 2,141,416		\$ 2,347,988		\$ 2,518,015		\$ 2,666,579
Revenue Requirement exclusive of NCCRS	\$ 10,514,946		\$ 10,935,739		\$ 11,140,449		\$ 11,368,060		\$ 11,569,491
Less Other Operating Revenues	\$ 30,188 (4)		\$ 30,188		\$ 30,188		\$ 30,188		\$ 30,188
Revenues required from Customer Classes exclusive of NCCRS	\$ 10,484,758		\$ 10,905,551		\$ 11,110,261		\$ 11,337,872		\$ 11,539,303
NCCRS Revenue Requirement per DW17-128	\$ 178,915		\$ 178,915		\$ 178,915		\$ 178,915		\$ 178,915
Revenues subject to QCPAC	\$ 10,305,843		\$ 10,726,636		\$ 10,931,346		\$ 11,158,957		\$ 11,360,388
Projected QCPAC Increase <sup>8</sup>			4.08%		1.99%		2.21%		1.95%
Cumulative QCPAC increase <sup>9</sup>			4.08%		6.07%		8.28%		10.23%
Cumulative QCPAC monthly increase in average single family residential bill			\$ 3.49		\$ 5.18		\$ 7.07		\$ 8.74
Average monthly single family residential bill with QCPAC			\$ 88.89		\$ 90.58		\$ 92.47		\$ 94.14

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. \$ 20.92  
(2) Material operating expense factor requested in DW20-156. \$ 5.23  
(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.	\$ 24.17	
Average Single Family Consumption (CCF)	6.50	
Consumption Charge requested in DW20-156.	\$ 9.42	per CCF
Average Single Family monthly bill with rates requested in DW20-156	\$ 85.40	

Pennichuck East Utilities, Inc.  
 DW 21-xxx  
 2020 used and useful QCP's  
 2/11/2021

Project Name/Description	Project Description	Work Order #	Board Approved 2020 Capex Budget	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order
Elevated Storage Tank in Londonderry2	Construct 1.25 MG Elevated Storage Tank.	1818349, 1901641, 2000372	\$ 1,545,000	CoBank		Pending Filing
Middleton Station Re-build	Re-build Sunrise Estates CWS Station. Existing Station is over 40 years old.	n/a	\$ -	CoBank		Pending Filing
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
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
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
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
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
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
Locke Lake Surface Water Treatment <sup>4</sup>	Intake & Treatment Facility Construction	1813409, 1900433, 2000369	\$ 835,000	DW18-132	26,189	11/26/2018
Locke Lake Surface Water Treatment <sup>4</sup>	Intake & Treatment Facility Construction	1813409, 1900433, 2000369	\$ -	CoBank		Pending Filing
Rolling Hills Water Main Replacement - Site Restoration from 2019 Project	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC.	2000392	\$ 32,000		26,189	
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	CoBank		Pending Filing
Pelham Main Replacement/Addition	Replace Lane Road.	2003563	\$ -	CoBank		Pending Filing
Pelham Main Replacement/Addition	Replace Simpson Road.	2003564	\$ -	CoBank		Pending Filing
Pelham Main Replacement/Addition	Replace Andrea Lane.	2003565	\$ -	CoBank		Pending Filing
Pelham Main Replacement/Addition	Replace Mount Vernon Drive.	2004325	\$ -	CoBank		Pending Filing
1 x revenue investments Normal Run Rate	Per Tariff	n/a	\$ 100,000	CoBank		Pending Filing
Sunrise Estates	Station Replacement (design)	2003613	\$ 40,000			0.1 DSRR
Londonderry Core Re-Chloramination	Re-chloramination Evaluation and Preliminary Design	2003760	\$ 35,000			0.1 DSRR
Atkinson Booster pump station design	Atkinson Booster pump station design	2000717	\$ 30,000			0.1 DSRR
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild	760 - 763 workorders	\$ 40,000	CoBank		Pending Filing
Well Pump replacements	Well Pump replacements	760 - 763 workorders	\$ 40,000	CoBank		Pending Filing
Chemical Feed pump replacements	Chemical Feed pump replacements	760 - 763 workorders	\$ 10,000	CoBank		Pending Filing
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS.	n/a	\$ 25,000	CoBank		Pending Filing
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	CoBank		Pending Filing
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Replace Well #1 VFD, Lamplighter Village	2001215	\$ -	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD, Liberty Tree	2005248	\$ -	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Replace Pump #1 VFD, Liberty Tree	2006387	\$ -	CoBank		Pending Filing
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	CoBank		Pending Filing
Atkinson Station Rebuild	Station cannot provide required fire flow. Hydropneumatic tank is in need of replacement.	n/a	\$ 500,000	CoBank		Pending Filing
Install web based communication equipment, 4 locations.	Install web based communication equipment, 4 locations.	n/a	\$ 20,000	CoBank		Pending Filing
Install web based communication equipment, 4 locations.	Fletcher's Corner, Install Cellular Based Communication	2002270	\$ -	CoBank		Pending Filing
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	\$ -	CoBank/Grant		Pending Filing
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 25,000	CoBank		Pending Filing
Renewed Services (10)	Replacement of failed services.	721 & 722 workorders	\$ 55,000	CoBank		Pending Filing
Hydrants (5)	Replacement of non-functional hydrants.	730 & 731 workorders	\$ 30,000	CoBank		Pending Filing
Meters 5/8"-6" Lead Meter Exchange - PEU (600)	Replace High lead brass meter with new no lead brass meter.	750 workorders	\$ 22,000	CoBank		Pending Filing
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	CoBank		Pending Filing
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.	754 workorders	\$ 32,000	CoBank		Pending Filing
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers (220).	750 workorders	\$ -	CoBank		Pending Filing
PEU-PWW Interconnection	PEU-PWW Interconnection	2007474	\$ -	CoBank		Pending Filing
MSDC Payment to Manchester Water Works	MSDC Payment to Manchester Water Works	2009024	\$ -	CoBank		Pending Filing
Interest on CoBank FaLOC	Short term interest from 11/23/2020 - 7/31/2021		\$ -	CoBank		Pending Filing

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 4,737,000

Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Invest

- Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000.
- The 2020 PEU Capital Expenditures Budget presented were approved by the Board in January 2020.
- Projected CoBank Loan Terms are 25 Years at 5.0% resulting in P&I of
- Remainder of Locke Lake Surface Water Treatment project to completed in early 2021 at a total projected cost of \$ 232,853
- Projected SRF Terms for Locke Lake project are 30 Years at 2.704% resulting in P&I of

Pennichuck East Utilities, Inc.  
 DW 21-xxx  
 Projected 2021 QCPAC Capital Expenditures  
 2/11/2021

Project Name/Description	Project Description	Work Order #	2021 Board Approved Budgeted	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order
Locke Lake Surface Water Treatment <sup>4</sup>	Intake & Treatment Facility Construction		\$ 200,000	DW18-132	26,189	11/26/2018
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 (Paving).		\$ 40,000	CoBank		Pending Filing
Londonderry System Improvements	Tank, Transmission Main, & Booster Station		\$ 1,600,000	CoBank		Pending Filing
Atkinson Booster pump station design	Atkinson Booster pump station design		\$ 30,000			0.1 DSRR
Locke Lake Filter Replacement	Replace two failed (structural-collapse of screen supports) iron, manganese, & arsenic filters.		\$ 30,000	CoBank		Pending Filing
Airstrip Station Decommissioning	Abandon unused wells and Station		\$ 40,000	DW18-132	26,189	11/6/2018
Airstrip Station Decommissioning	Abandon unused wells and Station					
1 x revenue investments Normal Run Rate	Per Tariff		\$ 100,000	DW18-133	26,197	12/3/2018
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		\$ 40,000	CoBank		Pending Filing
Well Pump replacements	Well Pump replacements		\$ 40,000	CoBank		Pending Filing
Chemical Feed pump replacements	Chemical Feed pump replacements		\$ 10,000	CoBank		Pending Filing
Install/replace treatment systems in small CWS (supplemental Arsenic treatment)	Install/replace treatment systems in small CWS (supplemental Arsenic treatment systems).		\$ 50,000	CoBank		Pending Filing
Misc. Structural Improvements	Misc. Structural Improvements		\$ 20,000	CoBank		Pending Filing
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		\$ 10,000	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		\$ 30,000			
Well Rehabilitation	Well Rehabilitation		\$ 60,000	CoBank		Pending Filing
Install web based communication equipment, 4 locations	Install web based communication equipment, 4 locations		\$ 20,000	CoBank		Pending Filing
New Services (5)	Single Family, Owner Build, New Homes		\$ 25,000	CoBank		Pending Filing
Renewed Services (20)	Replacement of failed services (focus on Locke Lake Services).		\$ 110,000	CoBank		Pending Filing
Hydrants (5)	Replacement of non-functional hydrants		\$ 30,000	CoBank		Pending Filing
Gates (8)	Replacement of Failed Gate Valves		\$ 32,000	CoBank		Pending Filing
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.		\$ 31,500	CoBank		Pending Filing
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
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
2021 Radios (1000)	Year 1 of 7 year replacement of all PEU radios (all initial radios installed in 2007).		\$ 130,000	CoBank		Pending Filing

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

Pennichuck East Utilities Projected 2020 C

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%  
 30 Years at 2.704%

resulting in P&I of \$ 176,363  
 resulting in P&I of \$ 11,430

4. Projected SRF Terms for Locke Lake project are

**Pennichuck East Utilities, Inc.**  
**DW 21-xxx**  
**Projected 2022 QCPAC Capital Expenditures**  
**2/11/2021**

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
Wellesley Drive water main replacement4	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC.		\$ 220,000	CoBank		Pending Filing
Radcliffe Drive water main replacement4	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC.		\$ 100,000	CoBank		Pending Filing
Vassar Drive water main replacement4	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC.		\$ 220,000	CoBank		Pending Filing
1 x revenue investments Normal Run Rate	Per Tariff		\$ 100,000	CoBank		Pending Filing
Atkinson Booster Station	Replace and Upgrade Station for AS treatment and Fire flow.		\$ 600,000	CoBank		Pending Filing
Londonderry Mountain Homes Station Improvements	Station Expansion for and including Chemical Feed Facilities for re-chloramination.		\$ 275,000	CoBank		Pending Filing
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		\$ 40,000	CoBank		Pending Filing
Well Pump replacements	Well Pump replacements		\$ 40,000	CoBank		Pending Filing
Chemical Feed pump replacements	Chemical Feed pump replacements		\$ 10,000	CoBank		Pending Filing
Install/replace treatment systems in small CWS.	Install/replace treatment systems in small CWS.		\$ 25,000	CoBank		Pending Filing
Miscellaneous Structural Improvements	Misc. Structural Improvements		\$ 20,000	CoBank		Pending Filing
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		\$ 10,000	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		\$ 30,000	CoBank		Pending Filing
Well Rehabilitation	Well Rehabilitation		\$ 60,000	CoBank		Pending Filing
New Services (5)	Single Family, Owner Build, New Homes		\$ 25,000	CoBank		Pending Filing
Renewed Services (20)	Replacement of failed services (focus on Locke Lake System).		\$ 110,000	CoBank		Pending Filing
Hydrants (5)	Replacement of non-functional hydrants.		\$ 30,000	CoBank		Pending Filing
Gates (8)	Replacement of Failed Gate Valves.		\$ 32,000	CoBank		Pending Filing
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.		\$ 31,500	CoBank		Pending Filing
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
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
2022 Radios (1000)	Year 2 of 7 year replacement of all PEU radios (all initial radios installed in 2007).		\$ 130,000	CoBank		Pending Filing

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 2,178,500

Pennichuck East Utilities Projected 2020 (

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 \$ 154,570
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-xxx**  
**Projected 2023 QCPAC Capital Expenditures**  
**2/11/2021**

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
Pelham Main Replacement	Monticello & Lane Area Phase 2		\$ 700,000	CoBank		Pending Filing
Wellesley Drive water main replacement	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC (paving).		\$ 70,000	CoBank		Pending Filing
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
Vassar Drive water main replacement	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC (paving).		\$ 70,000	CoBank		Pending Filing
Locke Lake	Circle & Emmerson Replace 2100 feet of 2 inch PE.		\$ 250,000	CoBank		Pending Filing
1 x revenue investments Normal Run Rate	Per Tariff		\$ 100,000	CoBank		Pending Filing
Booster Pump replacement/rebuild	Booster Pump replacement/rebuild		\$ 40,000	CoBank		Pending Filing
Well Pump replacements	Well Pump replacements		\$ 40,000	CoBank		Pending Filing
Chemical Feed pump replacements	Chemical Feed pump replacements		\$ 10,000	CoBank		Pending Filing
Install/replace treatment systems in small CWS.	Install/replace treatment systems in small CWS.		\$ 25,000	CoBank		Pending Filing
Miscellaneous Structural Improvements	Miscellaneous Structural Improvements		\$ 20,000	CoBank		Pending Filing
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects		\$ 10,000	CoBank		Pending Filing
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical		\$ 30,000	CoBank		Pending Filing
Well Rehabilitation	Well Rehabilitation		\$ 60,000	CoBank		Pending Filing
New Services (5)	Single Family, Owner Build, New Homes		\$ 25,000	CoBank		Pending Filing
Renewed Services (20)	Replacement of failed services (focus on Locke Lake System).		\$ 110,000	CoBank		Pending Filing
Hydrants (5)	Replacement of non-functional hydrants.		\$ 30,000	CoBank		Pending Filing
Gates (8)	Replacement of Failed Gate Valves		\$ 32,000	CoBank		Pending Filing
Radios (300)	New Customers (220) and replaced failed radios (80) for meter reading.		\$ 31,500	CoBank		Pending Filing
New meters for new customers (220). Replacement of failed meters (80).	New meters for new customers (220)		\$ 30,000	CoBank		Pending Filing
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
2022 Radios (1000)	Year 2 of 7 year replacement of all PEU radios (all initial radios installed in 2007).		\$ 130,000	CoBank		Pending Filing

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 1,903,500

Pennichuck East Utilities Projected 2020 (

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 \$ 135,058
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.