

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

PEU QCPAC Filing
 Exhibit DLW-1
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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	\$ 1,913,338		\$ 2,211,181		\$ 2,297,069		\$ 2,517,827		\$ 2,700,731
Revenue Requirement exclusive of NCCRS	\$ 10,160,719		\$ 10,567,817		\$ 10,681,969		\$ 10,902,941		\$ 11,144,700
Less Other Operating Revenues	\$ 30,188 (4)		\$ 30,188		\$ 30,188		\$ 30,188		\$ 30,188
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 Projected 2021 QCPAC Capital Expenditures 2/11/2021 6/30/2021 Update, Revised 10/28/21 DOE DR1 9/30/2021 Update

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Main table with columns: 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, Estimated Project Cost as of 6/30/2021, Estimated Project Cost as of 9/30/2021, Community, Taxable, Tax Rate (l), QCPAC Eligible Property Tax Expense, Explanation for Change/Addition/Deletion since Petition Filing.

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 Loan - \$ 2,485,647 \$ 1,436,147 \$ 939,950
Funded with SRF Loan - \$ 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%

Summary table with columns: 6/30/2021 Update, 9/30/2021 Update, resulting in P&I of \$ 176,363 \$ 101,898 \$ 66,692, resulting in P&I of \$ 11,430 \$ 11,430 \$ 11,388, resulting in P&I of \$ 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

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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

- Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
- The 2022 PEU Capital Expenditures Budget presented were approved by the Board in January 2021.
- Projected CoBank Loan Terms are 25 Years at 5.0% resulting in P&I of \$ 200,689
- 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

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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	
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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 Loan ¹ -	\$	2,343,500							

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 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.