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PUBLIC UTILITIES COMMISSION  
21 S. Fruit St., Suite 10  
Concord, N.H. 03301-2429

TDD Access: Relay NH  
1-800-735-2964

Tel. (603) 271-2431

FAX No. 271-3878

Website:  
[www.puc.nh.gov](http://www.puc.nh.gov)

NHPUC 20SEP'19PM3:08

September 20, 2019

Debra A. Howland  
Executive Director  
New Hampshire Public Utilities Commission  
21 South Fruit Street, Suite 10  
Concord, New Hampshire 03301-2429

Re: DW 19-035 – Pennichuck East Utility, Inc.  
2019 Qualified Capital Project Annual Adjustment Charge  
Staff Recommendation for Approval of 2019 QCPAC and  
2019 Capital Expenditure Budget

Dear Ms. Howland:

The purpose of this letter is to recommend the Commission approve an initial Qualified Capital Project Adjustment Charge (QCPAC) for Pennichuck East Utility, Inc. (PEU or Company) of 2.98% effective for service-rendered as of July 22, 2019. This would also include the collection of, over a period of 2 months, a recoupment of QCPAC revenues from the proposed effective date until the date the monthly surcharge is first billed. Staff also recommends, relative to the projects approved for recovery through the QCPAC, that PEU be granted authority to include the interest incurred on its Fixed Asset Line of Credit (FALOC) into its annual long-term debt issuance to be recovered through customer rates.<sup>1</sup> Staff further recommends that the property tax component of the 2019 QCPAC be offset by a one-time reduction in operating expenses. Lastly, Staff recommends the Commission preliminarily approve, subject to a future audit and prudence review, a 2019 capital budget of \$2,203,077, and that the Commission accept, for informational purposes, PEU's current 2020 and 2021 capital budgets.

**Background**

On February 15, 2019, PEU filed a petition for approval of a 2019 QCPAC based upon 2018 capital expenditures, as well as preliminary approval of its 2019 capital

<sup>1</sup> The Commission approved the FALOC in Order No. 26,117 (March 30, 2018) in Docket No. 17-157 to provide short-term financing for various capital projects.

budget. The Company's petition was accompanied by the direct testimonies of Donald L. Ware, PEU's Chief Operating Officer, and John J. Boisvert, Pennichuck Water Works, Inc.'s (PWW) Chief Engineer.<sup>2</sup> PEU's filing also contained various schedules and other attachments including its estimated capital budgets for 2020 and 2021, which were provided for informational purposes.

On February 26, 2019, the Office of the Consumer Advocate (OCA) filed a notice of participation in this docket in accordance with RSA 363:28. There are no other intervenors in this case.

PEU's filing was made in accordance with the QCPAC mechanism approved by Order No. 26,179 (October 4, 2018) in Docket No. DW 17-128, the Company's most recent permanent rate proceeding. In accordance with that Order, PEU filed an interim QCPAC petition on November 15, 2018, filed as Docket No. DW 18-174. In that Docket, the Commission issued Order No. 26,228 (March 21, 2019) approving a preliminary 2018 capital budget of \$5,181,688.

Subsequent to the receipt of PEU's instant filing and in accordance with the procedures approved by Order No. 26,179, Staff filed a proposed procedural schedule on March 6, 2019, that was approved by Secretarial Letter on March 19, 2019. Staff propounded three sets of discovery to which the Company provided responses. On June 6, 2019, PEU, Staff, and the OCA met in a technical session, which resulted in an additional round of discovery from Staff to which PEU also responded. PEU's technical session discovery responses also included updates to its projected 2019, 2020, and 2021 capital budgets that resulted in a fourth round of data requests from Staff to which the Company also responded.

During the course of discovery, the Commission Audit Staff (Audit) conducted a review of the Company's 2018 capital expenditures, which resulted in the issuance of a Final Audit Report (Audit Report) dated April 18, 2019. Subsequent to the issuance of that Audit Report, an Addendum was issued by Audit on June 4, 2019. The findings contained in the Audit Report and the Addendum are addressed later in this recommendation. In addition, Joseph Vercellotti, Utility Engineer in the Commission's Safety Division, reviewed PEU's filing and submitted a report containing his findings and recommendations relative to the engineering aspects of the 2018 capital projects completed and in-service and the 2019 capital projects proposed by PEU. Copies of the Audit Report (Attachment A), Addendum (Attachment B), Mr. Vercellotti's report (Attachment C) and PEU's discovery responses (Attachment D) are attached to this recommendation.

### **2019 QCPAC**

PEU's petition requested approval of a 3.29% QCPAC on customer bills in order to recover \$272,201 in additional annual revenues based on \$5,109,427 in completed

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<sup>2</sup> PWW is an affiliate of PEU and provides various services to the Company.

2018 capital projects. The QCPAC consists of two components: the annual principal and interest payments for the approved projects' debt multiplied by 1.1 (debt service); and the incremental property tax increase associated with the approved projects. In the instant docket, PEU requested \$308,979 of additional debt service<sup>3</sup> and \$143,722 of additional property taxes. Additionally, PEU requested to include an anticipated decrease in purchased water expense of \$180,500 ( $\$308,979 + \$143,722 - \$180,500 = \$272,201$ ).

Through discovery, the QCPAC was reduced to 2.98% in order to collect \$246,359 in additional annual revenues based on \$5,023,146 in completed 2018 capital projects. The proposed adjusted annual revenues consists of \$287,225<sup>4</sup> in debt service \$139,634 of incremental property taxes, and the anticipated decrease in purchased water expense of \$180,500 ( $\$287,225 + \$139,634 - \$180,500 = \$246,359$ ).

The capital additions were financed by \$4,367,389 in long-term debt, a \$600,000 grant from the Drinking Water and Ground Water Trust Fund (DWGTF) administered by the NH Department of Environmental Services (NHDES), and \$55,757 in reserve funds. PEU's proposed 2018 eligible capital projects are summarized as follows:

	<u>DW 18-174</u>	<u>DW 19-035</u>		<u>Δ between</u>
<u>Description</u>	<u>Approved Interim Budget</u>	<u>Filed Plant Additions</u>	<u>Adjusted Plant Additions</u>	<u>Approved Budget and Adj Actual</u>
Water Main Replacements	\$ 838,000	\$ 873,843	\$ 873,843	\$ 35,843
PEU/PWW Interconnection	3,889,775	3,809,695	3,708,867	(180,908)
Booster/ Treatment/ Wells	105,200	92,476	92,476	(12,724)
Miscellaneous/ SCADA	13,741	13,787	13,787	46
Services/ Hydrants/ Meters	334,972	319,626	294,626	(40,346)
Short-Term Interest	0	0	39,547	39,547
<b>Total</b>	<b>\$5,181,688</b>	<b>\$5,109,427</b>	<b>\$5,023,146</b>	<b>\$ (158,542)</b>

#### 2018 Capital Project Adjustments

During discovery, the filed amount of \$5,109,427 was reduced by \$86,281 resulting in a new total of \$5,023,146. Following are explanations of the adjustments:

- Elimination of AFUDC from PEU-PWW Interconnection Project \$(95,807) - According to PEU's policy, projects that exceeded \$50,000 and require more than 3 months to complete, qualify for inclusion of AFUDC. The only project PEU submitted for recovery through the 2019 QCPAC that met those requirements was the PEU-PWW Interconnection resulting in a recorded AFUDC amount of \$95,807. PEU and Staff, however, agreed that the recording of AFUDC is no

<sup>3</sup> Actual principal and interest of \$280,890 x 1.1 coverage requirement = \$308,979 debt service.

<sup>4</sup> Actual principal and interest of \$261,114 x 1.1 coverage requirement = \$287,225 debt service.

longer applicable under PEU's new ratemaking methodology approved by Order No. 26,179.

- Inclusion of actual FALOC interest incurred for 2018 capital projects \$39,547 - In place of AFUDC, PEU and Staff agreed to include the actual interest incurred on the Company's FALOC from the Interconnection Project of \$39,547. This reduces the 2018 capital project total by a net amount of \$56,260 (\$39,547 - \$95,807) and more accurately reflects the financing costs incurred by PEU during project construction.
- Elimination of Legal expenses in PEU-PWW Interconnection Project \$(5,021) - As explained in the Addendum to the Audit Report, Staff and the Company agreed to the elimination of \$5,021 in legal fees incurred relative to obtaining Commission approval of a wholesale water contract related to this project.<sup>5</sup> Staff believes this type of expense is already recovered through the Company's operating expense revenue requirement (OERR) and therefore not eligible for additional recovery through the QCPAC.
- Elimination of cost incurred on Londonderry Insertion Valve \$(25,000) - PEU explained that Manchester Water Works (MWW) intended to turn off MWW's 24-inch water main feeding a limited number of MWW residential customers and all of PEU's residential, commercial, industrial and municipal customers in Londonderry in order to make a repair. MWW and PEU eventually agreed to share in the cost of installation of an insertion valve in order to affect a more limited water supply shut-off area. PEU's contribution towards this installation was \$25,000. Since the insertion valve is the property of MWW, however, Staff questioned the appropriateness of including PEU's share of the expense in the QCPAC recovery amount. PEU eliminated this cost from its proposed 2018 capital projects recovered through the QCPAC.

The PUC Audit Staff conducted a review relative to the 2018 capital projects proposed by PEU. The exceptions indicated in that report as well as the follow-up report addendum were ultimately included into the updated 2018 capital budget presented in the amount of \$5,023,146. Further, Staff Engineer, Joseph Vercelloti, indicated in his report that, in his judgement, the Company's 2018 capital projects appear to be prudent, used, and useful.

#### Debt Service on 2018 Capital Projects

Exhibit DLW-1 of PEU's original schedules indicated the debt service component of the 2019 QCPAC would be \$308,979 (\$280,890 x 1.1). This amount was based on the

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<sup>5</sup> *Pennichuck Water Works, Inc.*, Order No. 26,049 (August 24, 2017).



debt service associated with a long-term loan from commercial lender CoBank ACB (CoBank)<sup>6</sup>, and State Revolving Fund (SRF) loans<sup>7</sup>.

At the time PEU filed its petition, however, the terms of the CoBank loan were not yet finalized, and therefore the debt service associated with that loan was estimated at an interest rate of 5.5%. Further, based upon a revised total for 2018 capital projects of \$5,023,146, PEU anticipated securing the CoBank loan for \$1,208,757. PEU, however, secured the CoBank loan on July 22, 2019 in an amount of \$1,153,000 at an interest rate of 4.38%. PEU explained the \$55,757 difference would be covered through its 0.1 Debt Service Revenue Requirement (0.1 DSRR) reserve account. The various financing sources of PEU's 2018 capital expenditures are summarized as follows:

<u>Financing Source</u>	<u>Amount</u>	<u>Annual P&amp;I</u>	<u>Loan Closed</u>
CoBank Term Loan	\$ 1,153,000	\$ 76,800	July 22, 2019
SRF-Brady Ave	\$ 570,000	\$ 23,215	Jan. 16, 2019
SRF-PEU/PWW Interconnection	\$ 2,400,000	\$146,210	Jan. 16, 2019
SRF-Hillcrest	\$ 244,389	\$ 14,889	Jan. 09, 2019
Total Long-term Debt	<b>\$ 4,367,389</b>	<b>\$261,114</b>	
0.1 DSRR Reserve Fund	\$ 55,757		
DWGTF (Grant)	<u>\$ 600,000</u>		
Total 2018 Capital Project Cost	<b>\$ 5,023,146</b>		

As a result, the debt service component associated with the proposed 2019 QCPAC has been revised to an amount of \$287,225 (\$261,114 x 1.1).

#### Property Tax Increase from 2018 Projects

Relative to the incremental property tax component associated with the 2018 capital additions, PEU originally submitted \$143,722. In Staff Data Request 1-5, PEU indicated it used an incorrect municipal tax rate. In addition, the incremental property taxes were further reduced after reductions to the total eligible capital expenditures. As such, the incremental property tax component associated with the 2018 capital additions was reduced by \$4,088 to \$139,634.

#### Operating Expense Revenue Requirement (OERR) Reduction to Property Tax Component

While Order No. 26,179 specifically lists increases to the OERR as a result of the incremental property taxes from approved projects, as part of the QCPAC calculation, anticipated reductions to the OERR from those same QCPAC projects are not listed. Staff

<sup>6</sup> Pennichuck East Utility, Inc., Order No. 26,253 (May 22, 2019).

<sup>7</sup> Pennichuck East Utility, Inc., Order No. 26,006 (April 19, 2017).

and the Company, however, believe it to be prudent that an exception be granted to allow the 2019 QCPAC to include the financial impact of reductions in operating expenses directly resulting from the completion of approved capital projects only. Staff recommendation of Commission approval of certain capital projects contemplated for recovery through the QCPAC were based, in part, upon the significant annual savings PEU, and its ratepayers, are expected to receive by completion of such projects<sup>8</sup>. As such, these specific, known and historically measured reductions in operating expenses should be included as part of the QCPAC when the corresponding capital project is petitioned for recovery. These reductions are different from estimated and unknown future expense increases that, when measured over time, are captured and petitioned for inclusion into rates within a general rate proceeding.

As a result of the new ratemaking methodology approved by Order No. 26,179, these reductions are reflected alongside the incremental property tax increase as part of the overall change to the proposed revenue requirement. Staff believes including these reductions results in just and reasonable rates pursuant to RSA 374 and RSA 378.

Relative to the Company's estimated reduction in its OERR, Exhibit DLW-1 of PEU's filing indicated it was projecting to save approximately \$180,500 annually from reduced water purchases as a result of the completion of the PEU-PWW Interconnection Project. Therefore, in its 2019 QCPAC calculation, PEU proposed an OERR component that reflects both the incremental property tax increase of \$139,634 and the anticipated reduction in operating expenses of \$180,500, resulting in an overall expense reduction of \$40,866 (\$180,500 - \$139,634). Staff recommends the Commission approve this one-time exception.

#### Calculation of 2019 QCPAC Surcharge

Based on the above debt service increase of \$287,225 and OERR reduction of \$40,866, the total revised annual amount PEU seeks to recover through the QCPAC mechanism for 2019 is \$246,359 (\$287,225 - \$40,866). In order to determine the appropriate QCPAC percentage to be applied to customers' bills, this amount is divided by the effected portion of the overall revenue requirement approved by Order No. 26,179 in Docket DW 17-128, PEU's last general rate case. In that proceeding, the Commission approved an overall revenue requirement for PEU of \$8,455,176 inclusive of North Country Capital Recovery Surcharge (NCCRS) revenues of \$178,915 to which the QCPAC does not apply. Thus, when the NCCRS revenues are eliminated from the approved revenue requirement, the result is \$8,276,261 (\$8,455,176 - \$178,915) which then becomes the divisor in calculating the proposed 2019 QCPAC of 2.98% ( $\$246,359 \div \$8,276,261$ ).

Based upon the information provided by PEU, for an average non-North Country single-family residential customer using 7.29 hundred cubic feet (ccf) of water per month

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<sup>8</sup> See Order No. 26,189 (November 6, 2018) in Docket No. 18-132.

and paying a base rate of \$75.45 per month, the proposed 2019 QCPAC surcharge will result in an additional monthly charge of \$2.25 ( $\$75.45 \times 2.98\%$ ).

#### Recovery of the QCPAC Surcharge

The QCPAC mechanism approved in Order No. 26,179 implicitly granted a waiver to PEU of N.H. Admin. Rules Puc. 1203.05(b), which requires all Commission ordered rate changes be implemented on a service-rendered basis commencing on or after the effective date of the change. This Commission waiver authorized recovery of the QCPAC on a bills-rendered basis back to the date of the financing for the approved projects. This was originally proposed by the Company as a means to simplify its billing process and reduce customer confusion, especially with regard to the initial bills issued subsequent to an authorized rate increase. PEU made a similar proposal relative to its general rate increase, and subsequent step adjustment, approved by Order No. 26,179. As a result, however, the Company argued it experienced a loss in authorized revenues of approximately \$50,000. Based on that experience, in its instant filing, PEU requested to align the QCPAC recoupment process with Puc. 1203.05(b), and implement the rate change on a service-rendered basis.

In order to collect the necessary revenues to meet the payments on the long-term loans used to pay for the capital projects, Order No. 26,179 authorized PEU recovery commencing after the date of closing the long-term financing for those projects, or approximately April 1 of each year. The CoBank term loan however, did not close until July 22, 2019, therefore PEU and Staff agreed the effective date of the 2019 QCPAC should be for service-rendered as of July 22, 2019. Thus, the Company would be eligible for a recoupment of revenues from that date until the date on which the QCPAC is actually implemented on customer bills.

As an example, assuming that Commission approval of the 2019 QCPAC occurs by the end of September 2019 along with a 30-day cure period for the Commission's order, customers will be assessed the surcharge commencing with PEU's November billings, resulting in an approximate 3-month recoupment period. As such, an average non-North Country single-family residential customer would be subject to a revenue recoupment of approximately \$7.75 ( $\$2.25 \times 3$  months). PEU, however, has agreed to recover that customer recoupment amount over a two-month period. Thus, per the present example, in addition to monthly base rate charges and the monthly QCPAC surcharge, an average non-North Country residential customer would be assessed an additional QCPAC recoupment charge of \$3.89 ( $\$7.75 \div 2$  months) in November and December of this year.

Staff recommends approval to adjust the QCPAC recovery process, from bills-rendered to service-rendered. That adjustment is compliant with the Commission's rules and allows the Company to be made whole by avoiding lost revenues possibly experienced using the bills-rendered method from the date of financing. Staff furthermore notes that Order No. 26,179 allows for a "one-time annual recoupment charge" covering that period. At 12. Staff, and the Company agrees, that PEU should be allowed a one-time adjustment to Order No. 26,179 and bill the recoupment charge over a two month period. Staff supports this recommendation as it will mitigate the rate shock of a larger, one month surcharge.

### Fixed Asset Line of Credit (FALOC) Interest

In its petition, PEU requested approval to incorporate the interest incurred on its FALOC into the Company's annual CoBank Term Loan that, currently, only pays off the principal portion of the FALOC. The purpose of the FALOC was to provide short-term financing for capital projects. The FALOC has a term of three years and is set to expire on September 30, 2020. Presently, PEU meets the monthly interest payments on its FALOC borrowings using its 0.1 DSRP reserve account.<sup>9</sup>

The Company argued that having the ability to "roll" the FALOC interest amounts into its annual term loan financing, instead of relying on its 0.1 DSRP reserve account, would facilitate greater financial flexibility. Specifically, the funds remaining in the 0.1 DSRP reserve account, by not having to be used to pay short-term interest, would further enable the Company to prefund its annual capital projects or replenish its other rate stabilization funds. This would save the Company from having to borrow additional funds for these items. The Company further maintained this would ultimately benefit its customers through a realized reduction in debt payments recovered through future QCPAC and base rate adjustments.

If approved, the Company's proposed inclusion of FALOC interest would continue to be included in subsequent QCPAC filings beyond the 2019 QCPAC proposed in the instant docket. As explained previously, the substitution of AFUDC for the Company's annual FALOC interest would result in a reduction in PEU's annual QCPAC and more accurately reflect PEU's actual financing costs during construction.

Staff recommends that considering the purpose of the FALOC and the reduced cost associated with it, the Commission authorize PEU to include the FALOC interest in its annual long-term financings, and as such, in its annual QCPAC filings for proposed recovery through customer rates. By allowing this, PEU recovers the actual cost of the funds used at a lower rate, which is ultimately a cost saving measure, resulting in rates that are just and reasonable, pursuant to RSA 374:2 and 378:7.

### 2019 Capital Budget

In its original filing, PEU proposed a 2019 capital budget of \$2,391,500 eligible for recovery through the 2020 QCPAC. Subsequently, PEU updated its 2019 capital budget to \$2,203,077, as follows:

<u>Description</u>	<u>Original</u>	<u>Updated</u>	<u>Change</u>
Locke Lake Improvement Projects	\$1,512,500	\$1,181,911	\$ (330,589)
Other Water Main Replacements	\$ 260,000	\$ 335,000	\$ 75,000
Booster/ Treatment/ Wells	\$ 185,000	\$ 293,286	\$ 108,286
Miscellaneous/ SCADA	\$ 231,000	\$ 189,880	\$ (41,120)
Services/ Hydrants/ Meters	\$ 203,000	\$ 203,000	\$ 0
<b>Total</b>	<b>\$2,391,500</b>	<b>\$2,203,077</b>	<b>\$ (188,423)</b>

<sup>9</sup> See Staff 3-6

Staff propounded discovery regarding PEU's proposed 2019 capital budget and the variance from the Board Approved budget, to which PEU responded. Additionally, Staff Engineer Joseph Vercellotti also reviewed the engineering aspects of PEU's proposed additions. Mr. Vercellotti's report indicated that during 2019, PEU planned to replace or add approximately 12,500 linear feet of water main, and that of this total approximately 11,800 is in the area of Barnstead and Locke Lake. Mr. Vercellotti's report concluded that the Company's 2019 projects and estimated costs appear to be appropriate and that he supports preliminary approval of PEU's budget.

PEU anticipates that its 2019 capital additions that will be used and useful by December 31, 2019 and eligible for QCPAC recovery in 2020 to be \$2,203,077. The projected QCPAC percentage point increase from those 2019 projects is estimated to be 2.84% for a cumulative total QCPAC of 5.82% (2.98% + 2.84%) in 2020. Such an increase will result in a total QCPAC of approximately \$4.39 (\$2.25 + \$2.14) on the monthly bill of an average residential non-North Country residential customer using 7.29 ccf of water per month, resulting in an overall monthly bill of approximately \$79.84 (\$75.45 x 1.0582 or \$75.45 + \$4.39)

Staff reviewed the Company's proposed 2019 capital budget as filed and updated and recommends the Commission find the updated 2019 capital budget in the amount of \$2,203,077 appropriate. The projects listed appear to fulfill the objectives of the QCPAC program by enabling PEU to effectively maintain its capital improvements program and maintain the necessary cash flows to pay the debt and tax obligations associated with these projects. With the understanding that the actual project costs incurred by PEU during 2019 will be fully investigated as part of the Company's 2020 QCPAC proceeding. Staff recommends that the Commission approve the updated 2019 capital budget of \$2,203,077 on a preliminary basis, but withhold the required prudence determinations pursuant to RSA 378:28, until PEU's 2020 QCPAC filing.

### **2020 and 2021 Capital Budgets**

In its original filing, PEU provided capital budgets for the years 2020 and 2021 in the amounts of \$4,770,580 and \$1,750,760, respectively. Through the course of discovery, the Company revised its 2020 and 2021 capital budgets for projects eligible for QCPAC recovery to \$2,470,580 and \$3,328,000, respectively.<sup>10</sup> Staff recommends the Commission accept PEU's revised budgets for the years 2020 and 2021, for informational purposes.

### **Overall Summary and Conclusion**

In conclusion, based on review of the Company's filing, Staff discovery, the PUC Audit Report and Addendum, and the PUC Engineering Report, Staff recommends the Commission approve recovery of \$246,349 in additional revenues through a monthly

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<sup>10</sup> Staff notes the amount of money expected to be spent in 2020 is \$3,630,580 with approximately \$2,400,000 spent on a multi-year project and therefore is not eligible for recovery until the 2022 QCPAC surcharge.



QCPAC on customer bills of 2.98% effective on a service-rendered basis as of July 22, 2019. This includes Staff's recommendation for recovery, over a 2-month period, of QCPAC revenues earned from July 22, 2019 until the date on which PEU implements the QCPAC in customer billings. Staff further recommends that the property tax component of the 2019 QCPAC be offset by a one-time reduction in operating expenses. In addition, Staff recommends the Commission allow PEU to include the interest incurred on its FALOC in its annual long-term debt financings recovered through the annual QCPAC. Staff also recommends that the Commission find that this surcharge is just and reasonable pursuant to RSA 374:2 and RSA 378:7.

Staff also recommends, based on its investigation and review, and in conjunction with Staff Engineer Joe Vercelotti's report and the Staff Audit Report, that the Commission find that the 2018 QCPAC projects are prudent, and used and useful pursuant to RSA 378:28.

Staff further recommends the Commission approve a 2019 capital budget of \$2,203,077, on a preliminary basis, and subject to the Commission's prudence review in PEU's 2020 QCPAC docket. Finally, Staff recommends that the Commission accept, for informational purposes, PEU's updated QCPAC budgets for the years 2020 and 2021.

Before filing this letter with the Commission, Staff provided the OCA and the Company with a draft copy for their review. The Company concurred with Staff's recommendations but OCA did not respond.

Thank you for your attention and assistance with this matter. If you have any further questions, please do not hesitate to contact me.

Sincerely,



Anthony J. Leone  
Utility Analyst, Gas-Water Division

Attachments: A) Audit Report of Staff Utility Examiner, Jim Schuler  
B) Addendum to Audit Report of Staff Utility Examiner, Jim Schuler  
C) Staff Report of Staff Utility Engineer, Joseph M. Vercelotti  
D) PEU Discovery Responses

cc: Service List



# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** April 18, 2019  
**AT (OFFICE):** NHPUC

**FROM:** James Schuler, Utility Examiner

**SUBJECT:** Pennichuck East Utility, Inc.  
DW 19-035 Qualified Capital Project Adjustment Charge - QCPAC  
FINAL Audit Report

**TO:** Steve Frink, Director Gas - Water Division, NHPUC  
Jayson Laflamme, Asst. Director Gas - Water Division, NHPUC

### **Introduction**

In Docket DW 17-128, Order No. 26,179, the Commission approved a Qualified Capital Project Adjustment Charge (QCPAC) mechanism to compensate PEU for necessary capital investments between rate cases and to promote the Company's ability to maintain adequate cash flows.

On March 21, 2019 in Docket DW 18-174, Order No. 26,228, PEU filed the final 2018 QCPAC reconciliation. This reconciliation, and the associated projects, subject to a Commission Audit and subsequent Order, would then be eligible for recovery through the QCPAC.

### **Regulatory Approval**

As required by Order 26,179, to be eligible for recovery through the 2018 QCPAC, a project must meet the following standards:

- (1) Completed, in service and used and useful on or before December 31, 2018;
- (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.

### **2018 Projects**

In January of 2018, the Company's board approved a 2018 QCPAC budgeted amount of \$4,826,100 of which \$4,726,100 would be QCPAC eligible per the interim petition of PEU. The project cost per the interim estimated project cost filed on March 21, 2019 per Order No. 26,228 totaled \$5,181,688. The final unaudited project cost shown on the CAPEX was revised on March 22, 2019 to \$5,109,427 and an unaudited property tax expense of \$142,445.

## **Review of Selected Projects**

The following table shows the projects that were selected for review, a dollar total of those projects and the annual property tax impact if applicable. In addition to the mains, services, and paving projects that were historically included under the WICA, to be eligible for recovery through the QCPAC a project can be related to replacement of vehicles, network infrastructure and building improvements.

<b>Project Name/ Description</b>	<b>Work Order # Project #</b>	<b>Cost 12/31/18</b>	<b>Property Tax Expense</b>
Brady Avenue Main Replacement-Derry	1807069	\$ 371,348	\$ 11,360
Hillcrest Road Main Replacement-Litchfield	1807072	\$ 254,860	\$ 6,840
PEU - PWW Interconnection	1807155	\$ 2,979,915	\$ 95,793
PEU - PWW Interconnection-Booster Station	1813395	\$ 339,864	\$ 9,829
Insertion Valve Installation	1824544	\$ 25,000	\$ -
Replace Pump #4 VFD at Castle Reach	1819462	\$ 3,944	\$ 109
Replace Pump #2 VFD at W&E	1816163	\$ 3,013	\$ 84
Replace Pump #5 VFD at Castle Reach	1807058	\$ 4,145	\$ 115
Replace Pump #13 VFD at Locke Lake	1818296	\$ 2,684	\$ 74
		<b>\$ 3,984,773</b>	<b>\$ 124,204</b>

### **Brady Avenue Main Replacement, Derry - \$371,348**

The E-22 form, Capital Improvements/Company Expenditures Authorization dated June 6, 2017, states that the project consists of replacing 4,000 linear feet of existing 1.5" water main with new 8" diameter ductile iron water main. Work order #1807069 totaled \$371,348 for the replacement of aging main that has experienced approximately 41 main and water service breaks since 1998.

The Record of Bids and Proposals shows two companies bid for the project with the lower bidder, American Excavating Corporation getting the contract. American Excavation Corporation furnished and installed approximately 4,000 feet of water main ranging from \$64 per foot for 8" DIPCL pipe and \$55 per foot for 40 feet of 4" DI pipe. Temporary main totaled \$21,000. Audit reviewed the requisitions and other vendor invoices with no exceptions noted.

American Excavating Corp.	\$360,025
Engineering & ISOH	\$ 11,224
Misc. Materials/Supplies	\$ 99
Total W/O #1807069	\$371,348

Audit traced the Acquisition COR to the Accumulated Depreciation – Cost of Removal, account #108001. The additions were posted to the general ledger on August 1, 2018 to the plant accounts shown below:

Work Order #1807069 - Brady Avenue Main Replacement

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 34,322	\$ (34,322)	\$ -
331002	Pavements: Dist. Mains	\$ 22,667	\$ -	\$ 22,667
331100	Mains: 6" & Larger	\$ 270,605	\$ (27,061)	\$ 243,545
331251	Gates: 6" & Larger	\$ 10,040	\$ (1,004)	\$ 9,036
333200	Renewed Services	\$ 33,715	\$ (3,372)	\$ 30,344
		\$ 371,348	\$ (65,758)	\$ 305,591

The CAPEX shows that this project was in the approved budget and was estimated to cost \$598,000 as of October 31, 2018. The original contract was for \$606,130 and the final project totaled \$618,983. The reason for the cost overrun was due to a change order for installing an under-drain system in the amount of \$25,546.

The Town of Derry's tax rate of \$30.59/thousand on the total project cost of \$618,983 results in an eligible property tax expense of \$11,360 for the work order. The total project eligible tax expense was \$18,935 per the CAPEX.

Hillcrest Road Main Replacement, Litchfield - \$254,860

Two work orders, #'s 1707188 and 1807072 consisted of installing approximately 800 feet of directionally drilled, 12" HDPE water main at \$213 per liner foot however, the contractor's authorization for payment shows that 14" water main was installed. The Company explained that HDPE pipe has a greater wall thickness than ductile iron pipe therefore 14" HDPE has the same inner diameter as 12" ductile iron water main. The E-22 filed by the Company indicated that the existing main was in poor condition due to the adjacent wetlands causing corrosion. The costs by vendor are broken out below:

DBU Construction	\$240,788
Engineering & IS Overhead	\$ 12,636
Nashua Telegraph	\$ 655
Union Leader	\$ 601
IMTEK Reprographics	\$ 180
Total W/O #1707188/1807072	\$254,860

DBU Construction charged \$20,248 for a mobilization and demobilization activities, temporary trench restoration and temporary paving, butterfly valves and a flagger. PWV's paving contribution was \$48,017. Engineering and IS Overhead totaled \$723 with inspection and licensing fees from RWC Enterprises totaling \$1,000. Audit recalculated several line items with no exceptions noted. The Company booked the cost of the project as seen in the accounts below:

Work Order #1707188/1807072 - Hillcrest Road Main Replacement, Litchfield

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 5,052	\$ -	\$ 5,052
331100	Mains: 6" & Larger	\$ 237,908	\$ (23,791)	\$ 214,117
332251	Gates: 6" & Larger	\$ 11,900	\$ (1,190)	\$ 10,710
		\$ 254,860	\$ (24,981)	\$ 229,879

The CAPEX shows that this project was in the approved budget and was estimated to cost \$240,000 as of October 31, 2018. The final work order cost totaled \$254,860. The Town of Litchfield's tax rate of \$26.84/thousand results in an eligible property tax expense of \$6,840.

PEU – PWW Interconnection - \$3,435,906

In Docket DW 17-071, Order No. 26,049 dated August 23, 2017, PWW entered into a contract with PEU to provide wholesale water service to PEU for a period of twenty years. This is due to a substantial increase in customers in the Town of Litchfield as a result of the PFOA contamination in the groundwater and other system expansion. PEU received four bids for the project with Cairns & Sons, the low bidder, getting the contract. The work order was posted to the general ledger on December 3, 2018 and closed January 24, 2019 per the work order.

The project consisted of four work orders totaling \$3,435,906 as of December 31, 2018. Audit reviewed one work order totaling \$2,979,915. The costs by vendor are broken out below:

Cairns & Sons, Inc.	\$2,660,354
Tighe & Bond	\$ 137,309
AFUDC	\$ 83,544
Engineering & IS Overhead	\$ 48,255
Substructure	\$ 35,000
WSP USA, Inc.	\$ 14,047
Nashua Telegraph	\$ 530
Marshall Signs, Inc.	\$ 450
Union Leader	\$ 367
Unishipper	\$ 45
Hudson True Value	\$ 12
Miscellaneous	\$ 2
Total W/O #1807155	\$2,979,915

The contract with George Cairns & Sons was originally for \$2,728,302 including net change orders of \$12,854 for installing approximately 5,900 feet of 12" ductile iron pipe on both sides of the Merrimack River and 650 feet of 16" bell & socket iron pipe beneath the Merrimack River. The final contractor cost from Cairns was \$2,660,354. These are new assets with no retirement of old assets. The contractor submitted seven applications for payment documents detailing the progress payments due from and paid by PEU. Audit recalculated the seventh and last application which rolled up the entire work performed and tallied the final costs with no exceptions noted.

Tighe & Bond charged a total of \$137,309 for engineering and environmental work. Seven invoices were provided which consisted of charges from the Senior Project Manager, Staff engineers, and administrative support. Audit reviewed and recalculated several of the attached time sheets and expense reports with no exceptions noted.

Two invoices totaling \$35,000 from Substructure, Inc., out of Portsmouth, NH consisted of designing building and installing a multi-beam bow mount. WSP USA charged \$14,407 for

residential inspection support. Audit reviewed and recalculated several of the attached time sheets and expense reports with no exceptions noted.

Accounting for Funds Used During Construction (AFUDC) totaled \$83,544 using the rate of 3.69% and calculated using the beginning monthly balance of unfinished construction in compliance with the Uniform System of Accounts for water Utilities.

Work Order #1807155 - PEU - PWW Interconnection

Account	Description	Gross Plant	COR	Gross Book
108001	Acquisition Costs	\$ 33,719	\$ (33,719)	\$ -
331002	Pavements: Dist. Mains	\$ 134,313	\$ -	\$ 134,313
331100	Mains: 6" & Larger	\$ 2,755,420	\$ -	\$ 2,755,420
331250	Gates: 4: & Under	\$ 30,590	\$ -	\$ 30,590
335000	Hydrants	\$ 25,873	\$ -	\$ 2,920,323
		\$ 2,979,915	\$ (33,719)	\$ 2,946,196

The CAPEX shows that this project was in the approved budget and was estimated to cost \$3,515,850 as of October 31, 2018 with the final work order totaling \$2,979,915. The Company used the average of the Town of Litchfield's tax rate of \$26.84 and the Town of Merrimack's tax rate of \$28.92 resulting in a rate of \$27.88/thousand. This results in an eligible property tax expense of \$83,080 for the work order.

PEU – PWW Interconnection, Booster Station - \$339,864

The costs in work order #1813395 are part of the PEU/PWW Merrimack River Water Main Crossing and consist of the booster station being revitalized in order to accommodate the increased volume demand in Litchfield and the Town of Hudson.

The Company received six bids from various firms with the PRB Construction, the low bidder, getting the contract. Audit reviewed the work order detail, invoices, and other charges without exception.

PRB Construction, Inc.	\$290,000
Engineering & IS Overhead	\$ 18,862
Electrical Installations, Inc.	\$ 17,104
TI Sales	\$ 7,954
Accurate Instrument Services	\$ 4,346
Nashua Telegraph	\$ 842
Union Leader	\$ 509
IMTEK Reprographics	\$ 208
Unishipper	\$ 39
Total W/O #1813395	\$339,864

The Company states that because the booster station was part of the interconnection project and was a new asset with no other related items or excavations, there is no cost of removal posted to the work order.

The station was posted to the general ledger on December 3, 2018 to the accounts shown below:

Work Order #1813395 - PEU - PWW Interconnection, Booster Station

Account	Description	Gross Plant	COR	Gross Book
304210	Structures/Improvements	\$ 9,044	\$ -	\$ 9,044
304550	Booster Stations	\$ 220,791	\$ -	\$ 220,791
311200	Electric Pumping Equip.	\$ 31,922	\$ -	\$ 31,922
331100	Mains: 6" & Larger	\$ 25,537	\$ -	\$ 25,537
334000	Metering Equipment	\$ 6,761	\$ -	\$ 6,761
334100	Radios for Metering	\$ 1,703	\$ -	\$ 1,703
346000	Communication Equip.	\$ 44,105	\$ -	\$ 44,105
		\$ 339,864	\$ -	\$ 339,864

The CAPEX shows that this project was not in the approved budget but was estimated to cost \$340,000 as of October 31, 2018. The final work order cost totaled \$339,864. The Town of Merrimack's tax rate of \$28.92/thousand results in an eligible property tax expense of \$9,829.

Insertion Valve Installation, Londonderry - \$25,000

The costs in work order #1824544 was for the installation of an insertion valve on Manchester Water Work's (MWW) 16" water main which will allow MWW to complete repairs without compromising fire flows and residential services to the Londonderry system. MWW provides water service to a portion of Londonderry through an interconnection between the two systems. Audit reviewed the invoice and the work order with no exceptions noted. The asset was posted to the general ledger on October 1, 2018.

Underground Testing & Services, LLC. \$25,000

The Company booked the cost of the project as seen in the accounts below. Audit submitted a request for an explanation as to why the valve was posted to the land account. The Company stated that the valve is part of the pipeline that is owned by MWW. PEU hired Underground Testing & Services, LLC., to supply and install the valve which is also owned by MWW. MWW also paid for excavation, backfill and other road construction costs associated with the valve insertion. PEU also states that the asset should be treated as a regulatory asset and amortized over the life of the asset. **(Audit Issue #1)**

Work Order #1824544 - Insertion Valve Installation

Account	Description	Gross Plant	COR	Gross Book
303600	Dist. Sys. Land and ROW	\$ 25,000	\$ -	\$ 25,000
		\$ 25,000	\$ -	\$ 25,000

The CAPEX shows that this project was not in the approved budget and was estimated to cost \$25,000 as of October 31, 2018. The CAPEX also shows that this project was not eligible for property tax expense recovery. After reviewing the work order, Audit found no exceptions or inconsistencies.



Replace Pump #4 VFD at Castle Reach Station, Windham - \$3,944

The Company filed the E-22 in August of 2018 stating that work order #1819462 was for the replacement of a new variable frequency drive pump for the Castle Reach system in Windham, NH. The existing pump failed and could not be repaired per the Company's E-22 filing. Because the dollar amount was less than \$10,000, bidding for the project was not required. The total vendor cost is shown below:

GALCO Industrial Electronics	\$3,906
Freight Out Charges	\$ 38
Total W/O #1819462	\$3,944

The Company booked the cost of the project as seen in the accounts below. The COR that PWW takes is 10% of the gross cost.

Work Order #1819462 - Replace Pump #4 VFD at Castle Reach

Account	Description	Gross Plant	COR	Gross Book
311200	Electric Pumping Equipment	\$ 3,944	\$ (394)	\$ 3,550
		\$ 3,944	\$ (394)	\$ 3,550

The CAPEX shows that this project was originally approved in the budget and was part of several planned pump replacements to cost \$30,000 in total. Audit traced the cost of removal to account 108001 – Accumulated Depreciation, Cost of Removal.

Windham's tax rate of \$27.72/thousand results in an eligible property tax expense of \$109. After reviewing the work order, Audit found no exceptions or inconsistencies.

Replace Pump #2 VFD at W&E, Windham - \$3,013

Work order #1816163 was for the replacement of pump #2 which was destroyed by a squirrel per the Company's E-22 filed with the commission on June 4, 2018.

The total costs are broken out by vendor below:

GALCO Industrial Electronics	\$2,938
Freight Out Charges	\$ 31
Late Payment Finance Charge ( <b>Immaterial</b> )	\$ 44
Total W/O #1816163	\$3,013

The Company booked the cost of the project as seen in the accounts below. Audit traced the COR to the Accumulated Depreciation – Cost of Removal, account #108001.

Work Order #1819462 - Replace Pump #2 VFD at W&E

Account	Description	Gross Plant	COR	Gross Book
311200	Electric Pumping Equipment	\$ 3,013	\$ (301)	\$ 2,712
		\$ 3,013	\$ (301)	\$ 2,712

The CAPEX shows that this project was originally approved in the budget and was part of several planned pump replacements to cost \$30,000 in total. Audit traced the cost of removal to account 108001 – Accumulated Depreciation, Cost of Removal.

Windham's tax rate of \$27.72/thousand results in an eligible property tax expense of \$84. After reviewing the work order, Audit found no exceptions or inconsistencies.

Replace Pump #5 VFD at Castle Reach Station, Windham - \$4,145

The Company filed the E-22 in March of 2018 stating that work order #1807058 was to replace a failed pump that could not be repaired with a variable frequency drive pump at the Castle Reach station in Windham, NH. The total cost is shown below:

GALCO Industrial Electronics	\$4,111
Freight Out Charges	<u>\$ 34</u>
Total W/O #1807058	\$4,145

The general ledger shows the asset posting date of April 1, 2018. The cost of removal was applied at 10% of the project cost totaling \$415. After reviewing the work order, Audit found no exceptions or inconsistencies. Audit reviewed the invoice with no exceptions noted.

Work Order #1807058 - Replace Pump #5 VFD at Castle Reach

Account	Description	Gross Plant	COR	Gross Book
311200	Electric Pumping Equipment	\$ 4,145	\$ (415)	\$ 3,730
		\$ 4,145	\$ (415)	\$ 3,730

The CAPEX shows that this project was originally approved in the budget and was part of several planned pump replacements to cost \$30,000 in total. Audit traced the cost of removal to account 108001 – Accumulated Depreciation, Cost of Removal.

Windham's tax rate of \$27.72/thousand results in an eligible property tax expense of \$115. After reviewing the work order, Audit found no exceptions or inconsistencies.

Replace Pump #13 VFD at Locke Lake - \$2,684

The Company filed the E-22 in June of 2018 stating that work order #1818296 was for the purchase of a new variable frequency drive pump for the Locke Lake BRW 13 well in Barnstead, NH. Because the dollar amount was less than \$10,000, bidding for the project was not required. The total vendor cost is shown below:

R.E. Prescott Co., Inc.	\$2,684
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This was a new asset therefore no cost of removal was applied to the asset. The pump was posted to the general ledger on July 1, 2018 and the project closed in September, 2018 per the work order. Audit reviewed the invoice with no exceptions noted.

Work Order #1818296 - New Well Pump #13 VFD at Locke Lake

<b>Account</b>	<b>Description</b>	<b>Gross Plant</b>	<b>COR</b>	<b>Gross Book</b>
311200	Electric Pumping Equipment	\$ 2,684	\$ -	\$ 2,684
		\$ 2,684	\$ -	\$ 2,684

The CAPEX shows that this project was originally approved in the budget and was part of several planned pump replacements to cost \$30,000 in total.

Barnstead's 2018 tax rate of \$27.72/thousand results in an eligible property tax expense of \$74. After reviewing the work order, Audit found no exceptions or inconsistencies.

### **Overhead Rates**

Overhead rates are input into Synergen, the plant accounting system, by the Senior or Staff Accountant and are automatically calculated and posted to the general ledger when the work orders are posted to the general ledger at the end of the month.

For 2018 the Union overhead rate decreased from 67.96 to 66.78%. This rate is calculated on the total Union labor hours for a specific job and is intended to capture the cost of benefits for Union employees while the general overhead rate remained at 2%. The general OH rate is calculated on the total job cost including the union labor rate as described above. The general OH rate is determined 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.

### **Cost of Removal**

The Company submitted a detailed spreadsheet showing the cost of removal for the selected projects totaling \$125,568 on the gross investment of \$3,984,773 in 2018. Where the project was a new project, the Company correctly indicated and booked no cost of removal. Audit noted that several projects were new assets with no cost of removal.

### **Retirements**

Audit requested the list of retired assets and documentation that those assets had been taken off the books and records of PEU associated with the specific projects chosen, and PEU produced a spreadsheet that listed those retirements. Audit reviewed the Asset Disposition List referencing specific general ledger account numbers and amounts that were also found on the general ledger. The Company stated, and Audit verified, that Brady Avenue, the interconnection, the booster station and the insertion valve were all new assets with no related retirements. Also, the Hillcrest Road and the four pumps were not included in the retirements for 2019 but will be retired in the March of 2019 close.

### **Depreciation**

PEU submitted to Audit a detailed spreadsheet for the selected additions to utility plant. This spreadsheet indicated a total depreciation charge of \$36,970 from total selected additions of \$3,984,773. This figure represents a ½ year depreciation charge for 2018 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 16-806.

### **Bid Summary**

Audit requested and was provided with a record of bid proposals for the 2018 projects. The bid summary Excel spreadsheet was listed by work order and included up to the top 4 bidders per work order. Every work order indicated the lowest bidder was the winning bidder. There was one instance that did not contain multiple bidders however, and the Company indicated there was only one vendor who was able to provide the service and therefore no other bidders were included.

### **Taxes**

The March 21 filing by the Company indicated an estimated property tax impact of \$142,445. The work orders Audit reviewed showed the total eligible property tax expense of \$124,204. All the projects reviewed were part of the PEU systems of Barnstead, Derry, Litchfield, Merrimack, and Windham. The Company provided the 2018 tax rates for each town along with actual town property bills which agreed with the CAPEX.

### **Revenues**

PEU will apply a one-time recoupment charge to recover the cost of the debt service and property taxes incurred during the period between the bond issuance date and the date on which the 2018 QCPAC was implemented.

### **Summary**

In Summary, the Company submitted projects in the amount of \$5,109,427 and an initial tax impact of \$142,445 totaling \$5,251,872. After reviewing the material submitted, the Company has shown that these projects were used and useful and except for Audit issue #1, booked to the appropriate plant accounts as of 12/31/2018. 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.

## **Audit Issue #1**

### **General Ledger Posting**

#### **Background**

A 16" insertion valve was paid for by PEU and installed on a pipeline owned by the Manchester Water Works. The company posted the valve to account 303600 – Distribution System Land & Rights of Way. PEU states that the asset should be treated as a regulatory asset and amortized over the life of the asset.

#### **Issue**

The Company states that Manchester Water Works also owns the valve, however the cost is shown on PEU's general ledger.

#### **Recommendation**

The Company will need Commission approval before it can be accounted for as a regulatory asset and amortized. In addition, the capitalization of the cost of the valve should be taken up in the PEU's QCPAC proceedings by Staff.

#### **Company's Comment**

Account 303600, Distribution System Land Rights & Right of Way is not a regulatory asset and was stated so in error on 4/2/19. It is a non-depreciating land account paid for by Pennichuck East. PEU does not own the valve. The valve is similar to other Land Rights assets. Examples of this are the interconnections in Londonderry (PEU), Derry and Milford (PWW) where Pennichuck invested in water mains owned by other parties to meet the operating needs of various Pennichuck water systems.

#### **Audit Comment**

The general ledger shows the asset in the amount of \$25,000 posted to the Land & Rights of Way account on October 10, 2018. It would appear that the loan proceeds which financed the interconnection projects have been used to finance assets not owned by PEU and/or PWW. Audit believes that the assets should not be on the general ledger of either utility.

# STATE OF NEW HAMPSHIRE

## Inter-Department Communication

**DATE:** June 4, 2019  
**AT (OFFICE):** NHPUC

**FROM:** James Schuler, Utility Examiner

**SUBJECT:** Pennichuck East Utility, Inc.  
DW 19-035 Qualified Capital Project Adjustment Charge - QCPAC  
Addendum to the FINAL Audit Report

**TO:** Steve Frink, Director Gas - Water Division, NHPUC  
Jayson Laflamme, Asst. Director Gas - Water Division, NHPUC  
Karen Moran, Director of Audit

### **Introduction**

In Docket DW 17-128, Order No. 26,179, the Commission approved a Qualified Capital Project Adjustment Charge (QCPAC) mechanism to compensate PEU for necessary capital investments between rate cases and to promote the Company's ability to maintain adequate cash flows.

On April 18, 2019, Audit Staff filed a Final Audit Report for the 2018 PEU QCPAC Additions in Docket DW 19-035. Subsequently, the Water Division Staff has requested Audit to review the Brady Avenue project and the PEU-PWW Interconnection project in their entirety.

### **Regulatory Approval**

As required by Order 26,179, to be eligible for recovery through the 2018 QCPAC, a project must meet the following standards:

- (1) Completed, in service and used and useful on or before December 31, 2018;
- (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.

### **Review of Selected Projects**

The following table shows the projects that were selected for review, a dollar total of those projects and the annual property tax impact if applicable. In addition to the mains, services, and paving projects that were historically included under the WICA, to be eligible for recovery through the QCPAC a project can be related to replacement of vehicles, network infrastructure and building improvements.



Project Name/ Description	Work Order # Project #	Cost 12/31/18	Property Tax Expense
Brady Avenue Water Main Improvements-Derry	1703684	\$ 247,635	\$ 7,575
PEU - PWW Interconnection Design Evaluation	1608938	\$ 63,460	\$ -
PEU - PWW Interconnection Design Evaluation	1701879	\$ 338,762	\$ -
PEU - PWW Interconnection Design Evaluation	1807362	\$ 53,769	\$ -
		\$ 703,626	\$ 7,575

Brady Avenue Water Main Improvements, Derry - \$247,635

The E-22 form, Capital Improvements/Company Expenditures Authorization dated June 6, 2017 states that the project consists of replacing 4,000 linear feet of existing 1.5" water main with new 8" diameter ductile iron water main.

Audit has previously reviewed work order #1807069 for \$371,348. This review will consist of reviewing work order #1703684 for the replacement of aging main that has experienced approximately 41 main and water service breaks since 1998.

Work Order #1703684	\$247,635
Work Order #1807069	<u>\$371,348</u>
Total Project as of 12/31/18	\$618,983

Audit reviewed the requisitions and other vendor invoices with no exceptions noted:

American Excavating Corp.	\$ 230,074
Engineering & IS Overhead	\$ 15,529
Nashua Telegraph	\$ 686
Labor	\$ 358
IMTEK Reprographics	\$ 264
Labor Overhead	\$ 243
Unishipper	\$ 197
Marshall Signs	\$ 115
Misc. Vehicles	\$ 88
County Fees	<u>\$ 81</u>
Total W/O #1703484	\$ 247,635

American Excavating Corporation charged \$230,074 for approximately 4,000 linear feet of 8" diameter water main. In the Final Report dated April 18, Audit reviewed the second of two work orders that comprise the total project. This first work order, #1703684 is shown as 48% complete per the Application and Certificate of Payment. Other costs include temporary main, mobilization, trench and gravel restoration and traffic control.

Audit traced the Cost of Removal (COR) to the Accumulated Depreciation – Cost of Removal, account #108001. The additions were posted to the general ledger on November 1, 2017 to the plant accounts shown below:

Work Order #1703684 - Brady Avenue Water Main Improvement, Derry

Account	Description	Gross Plant	COR	Gross Book
331002	Pavements: Dist. Mains	\$ 16,471	\$ -	\$ 16,471
331100	Mains: 6" & Larger	\$ 200,904	\$ (20,090)	\$ 180,814
333200	Renewed Services	\$ 5,020	\$ -	\$ 5,020
335000	Hydrants	\$ 25,240	\$ (2,524)	\$ 22,716
		\$ 247,635	\$ (22,614)	\$ 225,021

The Town of Derry's tax rate of \$30.59/thousand on the total project cost of \$618,983 results in an eligible property tax expense of \$18,935 per the report on Capital Expenditures (CAPEX).

PEU – PWW Interconnection - \$3,435,906

The project consisted of four work orders totaling \$3,435,906 as of December 31, 2018. Audit has previously reviewed work order #1807155 for \$2,979,915. This report will consist of reviewing the three other work orders that comprise the entire project.

Work Order #1608938	\$ 63,460
Work Order #1701879	\$ 338,762
Work Order #1807155	\$2,979,915
Work Order #1807362	\$ 53,769
Total Project as of 12/31/18	\$3,435,906
CAPEX	\$3,435,906
Variance	\$ -0-

PEU – PWW Interconnection Design Evaluation - \$63,460

Five monthly invoices from Tighe & Bond were charged to the work order #1608938 from August 2016 through December 2016. The work order consisted of charges for design, engineering and environmental work from the Senior Project Manager, Staff engineers, and administrative support. Audit reviewed and recalculated several of the attached time sheets and expense reports with no exceptions noted. The costs by vendor are broken out below:

Tighe & Bond	\$ 53,860
PEU Engineering & IS Overhead	\$ 9,600
Total W/O #1608938	\$ 63,460

The work order was posted to the general ledger on December 3, 2018 to the accounts shown below:

Work Order #1608938 - PWW-PEU Interconnection Design Evaluation

Account	Description	Gross Plant	COR	Gross Book
331100	Mains: 6" & Larger	\$ 63,460	\$ -	\$ 63,460

PEU – PWW Interconnection Design Evaluation - \$338,762

Eleven monthly invoices from Tighe & Bond were charged to the work order #1701879 from January 2017 through December 2017. All the work consisted of charges for design, engineering and environmental work from the Senior Project Manager, Staff engineers, and administrative support.

The Company made a payment in the amount of \$22,628 to the U.S. Fish and Wildlife Service for a right-of-way license. This included a temporary construction permit and a 50-year pipeline right-of-way at the Atlantic Salmon Smolt Release facility in Litchfield.

Other costs included legal services from Brown Law for licensing, contracts and the Docket filing DW 17-036 PEU River Crossing. Five invoices were for charges related directly to the PEU-PWW Interconnection, however one invoice was for a wholesale water supply contract which Audit believes should not be capitalized. **Audit Issue #1.**

Tighe & Bond	\$ 253,842
PEU Engineering & IS Overhead	\$ 27,641
NH Brown Law	\$ 12,182
BCM Environmental	\$ 2,679
Doucet Survey	\$ 1,629
Freneau Appraisal	\$ 3,000
Frasca & Frasca	\$ 475
AFUDC	\$ 8,732
Union Leader	\$ 473
NH Treasury	\$ 2,000
US Fish & Wildlife Service	\$ 22,628
Springfield Railroad Co.	\$ 3,000
Materials & Supplies	\$ 443
Unishipper	\$ 39
Total W/O #1701879	\$ 338,762

The work order was posted to the general ledger on December 3, 2018 to the accounts shown below:

Work Order #1701879 - PWW-PEU Interconnection Design Evaluation

Account	Description	Gross Plant	COR	Gross Book
303240	Easements	\$ 7,783	\$ -	\$ 7,783
331100	Mains: 6" & Larger	\$ 330,536	\$ -	\$ 330,536
333100	New Services	\$ 443	\$ -	\$ 443
		\$ 338,762	\$ -	\$ 338,762

PEU – PWW Interconnection Design Evaluation - \$53,769

The costs in work order #1807362 consists of obtaining easements, engineering, design and permitting for the Merrimack River Water Main Crossing. Audit reviewed the work order

detail, invoices, and other charges without exception for the vendors and the AFUDC calculations:

Tighe & Bond	\$ 35,992
PEU Engineering & IS Overhead	\$ 6,223
Boston & Maine Corporation	\$ 8,000
AFUDC	\$ 3,531
BCM Environmental	\$ 23
Total W/O #1807362	\$ 53,769

The Company stated previously that the interconnection project were new assets with no other related items or excavations and therefore there is no cost of removal posted to the work order.

The work order was posted to the general ledger on December 3, 2018 to the accounts shown below:

Work Order #1807362 - PWW-PEU Interconnection Design Evaluation

Account	Description	Gross Plant	COR	Gross Book
303240	Easements	\$ 8,030	\$ -	\$ 8,030
331100	Mains: 6" & Larger	\$ 45,739	\$ -	\$ 45,739
		\$ 53,769	\$ -	\$ 53,769

The CAPEX shows that the final project cost totaled \$3,435,906. The Town of Merrimack's tax rate of \$28.92/thousand results in an eligible property tax expense of \$95,793.

### **Overhead Rates**

Overhead (OH) rates are input into Synergen, the plant accounting system, by the Senior or Staff Accountant and are automatically calculated and posted to the general ledger when the work orders are posted to the general ledger at the end of the month.

For the year 2017, the Union overhead rate was 67.96%. For 2018, the Union overhead rate decreased to 66.78%. This rate is calculated on the total Union labor hours for a specific job and is intended to capture the cost of benefits for Union employees while the general overhead rate remained at 2%. The general OH rate is calculated on the total job cost including the union labor rate as described above. The general OH rate is determined 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.

### **Retirements/ Cost of Removal**

The retirements and cost of removal in this review were limited to the Brady Avenue project. The Company submitted a detailed spreadsheet showing the cost of removal for the selected projects totaling \$22,614. The general ledger shows account 331, third quarter

retirements totaling \$3,177. The interconnection being a new project, no cost of removal was posted.

### **Bid Summary**

Refer to the Final Audit Report dated April 18, 2019 for the discussion on the Record of Bids and Proposals.

### **Taxes**

The work orders Audit reviewed in this addendum showed the total eligible property tax expense of \$7,575. This was the Brady Avenue main improvements in Derry, which has a tax rate of \$30.59 per thousand on the total work order amount of \$247,635. The interconnection is owned by PWV, therefore no tax was paid by PEU.

### **Summary**

In Summary, Audit reviewed a total of \$703,626 and an initial tax impact of \$7,575. After reviewing the material submitted, the Company has shown that these projects were used and useful and booked to the appropriate plant accounts as of 12/31/2018. Support for project costs was provided in the form of the general ledger balances, journal entries, work orders, work order detail reports, E-22 reports, invoices and Excel spreadsheets. Below is the adjusted filing amount to reflect the unallowable special contract invoice:

Work Order #1608938	\$ 63,460
Work Order #1701879	\$ 338,762
Less: Unallowable Invoice	\$ (4,883)
Work Order #1807155	\$2,979,915
Work Order #1807362	<u>\$ 53,769</u>
Adjusted Total Project as of 12/31/18	\$3,431,023

## **Audit Issue #1**

### **Interconnection Legal Costs**

#### **Background**

Legal services from Brown Law totaled \$12,182 for licensing, contracts and the docket filing DW 17-036 PEU River Crossing. Five invoices were for charges related directly to the PEU-PWW Interconnection, however one invoice was for a wholesale water supply contract.

#### **Issue**

The invoices were charged to the plant account #331100, Mains: 6" & Larger. Per the Uniform System of Accounts for Water Utilities, costs for municipal inspections and/or permits can be charged to the account, however the contract for water supply is outside the realm of construction and should not be included in the account.

#### **Recommendation**

Work order #1701879 should be reduced from \$338,762 to \$333,879 to reflect the invoice amount of \$4,883 for the special contract.

#### **Company's Comment**

The Company agrees that this should be taken out of plant account #331100, however, the Company believes that this should be treated as a regulatory asset with a 20 year amortization period which matches the life of the special contract.

#### **Audit Comment**

Following Staff's and Commission's approval, Audit agrees with the Company's accounting treatment of the contract charges.



# STATE OF NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

## Inter-Department Communication

**DATE:** August 29, 2019  
**AT (OFFICE):** NHPUC

**FROM:** Joseph M. Vercellotti, P.E.  
Utility Engineer

**SUBJECT:** Pennichuck East Utility, Inc.  
DW 19-035 Qualified Capital Project Annual Adjustment Charge (QCPAC)

**TO:** Steve Frink, Director Gas-Water Division, NHPUC  
Jayson Laflamme, Asst. Director Gas-Water Division, NHPUC  
Anthony Leone, Utility Analyst, NHPUC

### **Introduction**

Pursuant to Order No. 26,179 (October 4, 2018) in Docket No. DW 17-128 Pennichuck East Utility, Inc. (PEU) petitioned the Commission for interim approval of the Company's 2018 capital projects as eligible for the Qualified Capital Project Annual Adjustment Charge (QCPAC) and for informational purposes only, the Company's forecast of capital project expenditures for 2019 and 2020. This petition and related testimony were filed in Docket No. DW 18-174. On February 15, 2019 PEU filed its first QCPAC Filing, Docket No. DW 19-035, seeking the following:

- Approval of PEU's 2018 capital projects as used and useful and authorize PEU to recover the additional revenue requirement for those projects through the 2019 QCPAC surcharge beginning with bills rendered after the date for which the debt is incurred to finance those specific projects;
- Preliminary approval of PEU's 2019 capital projects;
- Provide PEU's proposed 2020 and 2021 projects for informational purposes only.

### **2018 Projects**

On June 17, 2019, PEU provided the following comparison of actual 2018 capital expenditures to the approved budget in Order No. 26,006 (April 19, 2017) in Docket No. DW 17-055.

<b>Description</b>	<b>DW 18-174</b>	<b>DW 19-035</b>	<b>Variance</b>
Brady Ave. Main Replacement	\$ 598,000	\$618,983	\$20,983
Hillcrest Rd Main Replacement	240,000	254,860	14,860
PEU-PWW Interconnection	3,889,775	3,708,867	(180,908)
Miscellaneous Equip and Projects	453,913	440,436	(13,477)
<b>Total</b>	<b><u>\$5,181,688</u></b>	<b><u>\$5,023,146</u></b>	<b><u>(\$158,542)</u></b>

The Company stated that the variances were due to several projects being deferred or shifted to coordinate with municipal sewer or drainage projects. PEU provided the following information relative to specific projects completed in 2018.

#### Brady Avenue Derry

PEU completed the second and final phase of the Brady Avenue project by finishing the replacement of 2,400 linear feet (LF) of existing 1 inch and 1.5 inch thin wall high density polyethylene (HDPE) water main with new 8 inch ductile iron water main. The project was coordinated with a sewer installation, drainage improvements and road reconstruction by the Town of Derry. PEU received a \$570,000 loan from the NH State Revolving Fund (SRF) approved in Order No. 26,006.

#### Hillcrest Road Litchfield

PEU replaced approximately 1,200 LF of existing 12 inch thin wall ductile iron water main with a high break history with 12 inch HDPE water main. The existing main was observed to have severe external corrosion due to the corrosive soils and a relatively shallow groundwater table, the effects of a nearby swamp, and a previously closed landfill. The Company financed this project with a loan from the NH SRF that was approved in Order No 26,006.

#### PEU-PWW Pipeline Interconnection

The PEU-PWW Interconnection was completed to address water supply requirements east of the Merrimack River in the towns of Litchfield, Pelham, and Windham as well as indirectly in the town of Hudson. The expansion of the Litchfield distribution system was required to supply residents where wells have been contaminated with PFAS compounds and to supplement declining water supply well yields in Hudson. PEU determined a second crossing of the Merrimack River was required to ensure water supply to its customers east of the Merrimack River. The pipeline crossing directly links the Pennichuck Water Works (PWW) system on the west side of the Merrimack River to the PEU system on the east. This movement of water directly from PWW to PEU required a cost of service study to determine if the connection was in the best interest of existing customers and it was determined that PEU could purchase water directly from PWW at a lower cost than from Hudson. PEU was offered a NH SRF loan of \$2,400,000 that was approved in Commission Order No. 26,006. Nearly a year later, the Company received a \$600,000 grant from the NH Drinking Water and Groundwater Trust Fund (DWGTF) to help defray some of the cost of the project due to the importance the project played in supporting the expansion of the Litchfield distribution system to homes with contaminated wells. Remaining project costs, if any, were to be funded through a term loan with CoBank. The project included the installation of approximately 4,400 LF of 12 inch diameter ductile iron concrete lined (DICL) main east and west of the Merrimack River and 650 LF of 20 inch diameter HDPE water main below the river bottom and on top of the river bottom. The Commission approved the license to cross the Merrimack River in Order No. 26,026 (June 16, 2017) in Docket No. DW 17-036. The project also required a pipe sleeve under an active

railway. Although broken out as a separate project, the PWW-PEU Interconnection Booster Station was integral to the project. PEU modified an existing building to construct a 700 gallon per minute pumping station to convey water from PWW to PEU via the PEU-PWW Interconnection. The station was needed to overcome head (pressure) losses in the distribution system to allow water to reach its intended destination. The pipeline was completed for about \$3,500,000 and the booster station went into service at a cost of just over \$340,000.

Based on my review of the available information, the capital projects totaling \$5,023,146 appear to be in service, prudent, used, and useful.

### **Proposed 2019 Projects**

This review also pertains to the assessment of the engineering and operational aspects of the proposed 2019 capital projects. Staff reviewed the petition and testimony submitted as part of Docket No. DW 19-035 including PEU's responses to multiple sets of data requests and project information discussed in the June 6, 2019 technical session. For 2019, PEU initially proposed a budget of \$3,396,500 of which \$2,391,500 of those capital projects are expected to be used and useful by December 31, 2019. PEU updated the budget on August 22, 2019 to capital expenditures of \$3,774,285 of which \$2,203,077 is estimated to be used and useful by December 31, 2019. Specific projects are highlighted below:

- Bradford Lane, Barnstead: Replace 1,825 LF of 4 inch schedule 40 polyvinyl chloride (PVC) main with 6 inch C-900 PVC main;
- Georgetown Drive, Barnstead: Construct Raw Water Transmission line to take advantage of Peacham Road Treatment Facility over on-site treatment, and replace approximately 4,600 LF along Georgetown Drive;
- Locke Lake, Barnstead: Continue work on a new, permanent, Surface Water Supply project (multi-year). Funding for three Locke Lake projects provided by a NH SRF loan of \$4,240,000 by Order No. 26,189 (November 6, 2018) in Docket No. DW 18-132.
- N. Barnstead Road, Barnstead: Eliminate dead-end piping by adding 680 LF of 4 inch C-900 PVC main, and replace 275 LF of 4 inch schedule 40 PVC with 6 inch C-900 PVC;
- Belmont Drive, Barnstead: Replace 500 LF of 4 inch schedule 40 PVC main with 6 inch C-900 PVC main;
- Storage Tank, Londonderry: Begin construction of 1 million gallon storage tank for Woodmont Commons and Londonderry Core (multi-year project);
- Rolling Hills, Plaistow: Replace 700 LF of substandard 2 inch diameter pipe with 4 inch C-900 PVC. The replacement will abandon existing main on private property that extends under a porch structure off Lower Road. The estimated cost of the project is \$150,000 and will be funded with a loan from CoBank.

### **Conclusion**

Based on my assessment of the information provided by PEU, the Company's 2018 water infrastructure projects appear to be in service, prudent, used, and useful. Concerning the proposed 2019 capital projects, the engineering and operational aspects described in the petition, testimony, data requests and the June 6, 2019 technical session appear to be appropriate and as such, I support preliminary approval of the company's 2019 capital budget of \$3,774,285. Please let me know if you need anything further in this regard.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19  
Request No. Staff 1-1

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Pre-Filed Direct Testimony of Donald L. Ware, Bates 19, Line 3**

Please provide the status of the CoBank financing for \$1,297,380 that is mentioned as being filed in parallel with this QCPAC Petition. When does the Company anticipate actually filing for approval of this financing?

**RESPONSE:**

The Company plans to submit the financing petition for the proposed CoBank loan on or before March 29, 2019.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-2

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Pre-Filed Direct Testimony of Donald L. Ware, Bates 24, Line 5**

Does the Company anticipate any customer confusion regarding the request to recoup the QCPAC on a service rendered basis? If so, how does the Company anticipate addressing that situation if it arises?

**RESPONSE:**

Past experience indicates that some Customers will call and ask what the recoupment line on their bill is and how that line is calculated. Where the recoupment is being proposed on a service rendered basis it will involve the proration of the bill that straddles the recoupment start date. Company staff will be trained to walk customers through the proration calculation for their bill. The calculation is unique to each bill. The Company will also send out an explanation of what the QCPAC recoupment is, in the form of a bill stuffer, with the first bill issued to collect the QCPAC recoupment. The bill stuffer will provide a generic description of how the recoupment amount is calculated.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19  
Request No. Staff 1-3

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Pre-Filed Direct Testimony of Donald L. Ware, Bates 24, Line 19**

- a) In what way(s) does the Company feel a one-time recoupment of the estimated \$14.89 produces a justifiable and reasonable rate from a customer impact standpoint given that it is approximately 20% of the current average monthly single family bill of \$75.45? Please explain.
- b) What other options has the Company considered and willing to consider?

**RESPONSE:**

- a) The Company is seeking to collect the recoupment as quickly as possible as that cash is needed to pay the monthly principal and interest payments on the CoBank loan that will begin the month after the Company has closed on the CoBank loan. The Company will derive the cash to make these principal and interest payments on the CoBank loan from its DSRR 1.0 RSF account, or if necessary by borrowing money from Pennichuck Corporation's working capital line of credit until the QCPAC surcharge has been approved and the cash is being collected from customer's payment of the surcharge to pay the monthly principal and interest payments. Following approval of the QCPAC surcharge and recoupment, payments from customers would then be used to refund money drawn from the DSRR 1.0 RSF and to pay principal and interest payments going forward. Assuming an order approving the requested QCPAC surcharge is issued in late September to early October, the Company expects the QCPAC and any approved recoupment will appear on customer's November 2019 bills resulting in the first cash flow to pay principal and interest payments beginning to flow in late November to mid-December. The Company is open to a dialogue regarding the appropriate time frame over which to collect the QCPAC recoupment.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 1

Date Request Received: 3/14/19  
Request No. Staff 1-4

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Attachment A**

When and by what method does the Company intend to inform its customers regarding the proposed one-time 6-month recoupment to be charged in approximately September of this year?

**RESPONSE:**

The Company intends to use two ways to inform its customers regarding the proposed 6-month recoupment of the QCPAC:

1. Via a bill stuffer to be included with the first bill containing the recoupment charge.
2. Via a notice placed on the bill once the QCPAC order has been issued pointing the Company's customers to its website for an explanation of both the QCPAC surcharge which will be showing up on a future bill, as well as an explanation of the QCPAC recoupment that will be showing up on their bills.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-5

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Exhibit DLW-1, page 2: 2018 QCPAC Additions**

Please provide a breakdown of the individual rates, ie, municipal, county, local school, state school, etc, that make up the overall Property Tax rates listed for each Community.

**RESPONSE:**

During review of the tax rates it was discovered that the state education tax rate was included in the total tax rates for the towns of Londonderry, Windham, and Derry. The state education tax rate has now been removed from each of the three tax rates. Please see the attached spreadsheet for a breakdown of the individual rates, ie, municipal, county, local school, state school, etc, that make up the overall Property Tax rates listed for each Community. A copy of a December 2018 tax bill from each community is attached for verification of the provided rates. Also attached is an updated copy of Exhibit one, pages one and two with the updated property tax rate for Londonderry, Windham, and Derry.





# Town of Londonderry

268B Mammoth Rd.  
Londonderry, NH 03053  
TEL (603) 432-1100 x 196  
FAX (603) 421-9617  
www.londonderrynh.org

## PROPERTY TAX BILL FOR TAX YEAR 2018

Invoice No: 2018P02102605  
Mailing Date: 10/15/2018  
Due Date: 12/3/2018

**Property Details**  
Map-Lot: 81-5-0  
Location: WATER UTILITY

### TAX RATE INFORMATION

Town	4.99
School	13.56
County	1.00
State Ed	0.00

**Total 19.55**

TAX RATE PER 1,000 OF  
NET ASSESSED VALUE



8784 34 32 \*\*\*\*\*AUTO\*\*ALL FOR AADC 030  
PENNICHUCK EAST UTILITY, INC  
25 Manchester St  
PO Box 1947  
Merrimack NH 03054-1947

**Make checks payable to: Town of Londonderry**

Unpaid balances accrue interest at 12% per annum after due date

### ASSESSED VALUE AND EXEMPTIONS

Building 10,663,300.00

#### Exemptions

Net Assessed Value: 10,663,300.00

### PROPERTY TAX AND CREDITS

Total Tax 208,468.00  
First Bill 103,434.00

**Due by: 12/3/2018 105,034.00**

**Mail payment with lower portion. For a receipt, please enclose a self-addressed, stamped envelope.**

**Town of Londonderry**  
268B Mammoth Rd.  
Londonderry, NH 03053

PENNICHUCK EAST UTILITY, INC  
25 Manchester St  
PO Box 1947  
Merrimack NH 03054-1947

Invoice Number: 2018P02102605  
Map-Lot: 81-5-0  
Property: WATER UTILITY

**CURRENT AMOUNT DUE BY 12/3/2018: \$105,034.00**

**TOTAL DUE: \$105,034.00**



Tax Collector (603) 432-7731

SECOND BILL

**TOWN OF WINDHAM, NH**  
**TAX COLLECTOR**  
**3 N LOWELL ROAD**  
**WINDHAM NH 03087**  
**PROPERTY TAX BILL**

OFFICE HOURS  
MONDAY-FRIDAY  
8:00 AM - 1:00 PM  
MONDAY EVENINGS  
4:00PM-7:00 PM NOV-JUNE  
EXTENDED HOURS ON THE DUE DATE  
8:00AM-7:00 PM

TAX YEAR	BILL NUMBER	BILLING DATE	INTEREST RATE	DUE DATE
2018	4501	11/9/2018	12%	12/10/2018
MAP/PARCEL	BOOK/PAGE	LOCATION OF PROPERTY	AREA	
00F-00000-02489	2428/555	0 RIGHTS OF WAY		
OWNER OF RECORD		TAX CALCULATION		
PENNICHUCK EAST UTILITY, INC. PO BOX 1947 MERRIMACK NH 03054-1947		TOTAL TAX \$ 65,747.00 PAYMENTS \$ -21,779.00  BALANCE DUE \$ 43,968.00		
TAX RATES / \$1,000		ASSESSED VALUATION		
Town 3.39 County 1.08 Local Ed 16.50 State Ed 0.00	Building Value 3,135,300 Land Value 0 Exemptions 0			
<b>TOTAL</b> 20.97	<b>NET VALUE</b> 3,135,300	<b>PAY THIS AMOUNT \$ 43,968.00</b>		
INFORMATION TO TAXPAYERS		PAYMENT POLICIES		
All property owners shall be billed semi-annually. The Property Assessment year is April 1-March 31. Any bill not paid by the due date is considered delinquent. Interest is calculated at the designated APR on any delinquent bill.  The Taxpayer may, by March 1st following the date of the notice of tax and not afterwards, apply in writing to the Selectmen or Assessor(s) for a Tax abatement or deferral.  If you are elderly, disabled, blind, a veteran or veteran's spouse, or are unable to pay taxes due to poverty or other good cause, you may be eligible for a tax exemption, credit, abatement or deferral. For details, application information and deadlines and any questions regarding your assessment contact the Assessing Department, not the Tax Collector at (603)434-7530. APPLICATIONS FOR EXEMPTIONS AND/OR CREDITS MUST BE FILED ON OR BEFORE APRIL 15TH EACH YEAR. IF YOU HAVE SOLD THIS PROPERTY, PLEASE SEND THIS BILL TO NEW OWNERS IMMEDIATELY. IF YOUR MAILING ADDRESS HAS CHANGES PLEASE NOTIFY THE ASSESSOR'S OFFICE AT (603)434-7530		Make Check payable to TOWN OF WINDHAM, NH, and return bottom portion in envelope provided. Mail to:  TOWN OF WINDHAM NH TAX COLLECTOR'S OFFICE 3 N LOWELL ROAD WINDHAM NH 03087-1605  FOR RECEIPT INCLUDE ENTIRE BILL AND SELF ADDRESSED STAMPED ENVELOPE. When paying in person please bring the entire bill. If this bill is paid by check or money order it is not considered paid until the check or money order has cleared. A \$25.00 fee plus all additional delinquency penalties and collection costs will be charged for any check returned by the bank for any reason. If your bank or mortgage company pays your taxes, please review and forward your bill to them. Payment of this bill does not prevent the collection of previous unpaid taxes, nor does an error in the name of the person(s) taxed prevent collection. Please keep top portion for your records.		
DETACH HERE		DETACH HERE		

TOWN OF WINDHAM, NH - TAX COLLECTOR  
3 N LOWELL ROAD  
WINDHAM NH 03087-1605

TOWN OF WINDHAM, NH  
PROPERTY TAX BILL

2018

MAP/PARCEL	LOCATION OF PROPERTY	BILL NUMBER	DUE DATE
00F-00000-02489	0 RIGHTS OF WAY	4501	12/10/2018

First Bill Interest begins on 7/3/2018.

Second Bill Interest begins on 12/11/2018.

**PAY THIS AMOUNT \$ 43,968.00**



PENNICHUCK EAST UTILITY, INC.  
PO BOX 1947  
MERRIMACK NH 03054-1947



# Town of Derry Real Estate Tax Bill

14 Manning Street, Derry, NH 03038

## Second Bill

12.00% APR Interest Charged After the Due Date

TAX YEAR	BILL NUMBER	BILLING DATE	INTEREST DATE	DUE DATE
2018	1808620	11/06/2018	12/18/2018	12/17/2018
PARCEL ID		LOCATION OF PROPERTY		
05-038-A		1 CABOT DR		
OWNER OF RECORD			TAX CALCULATION	

PENNICHUCK EAST UTILITY INC  
25 MANCHESTER ST  
PO BOX 1947  
MERRIMACK, NH 03054-1947

Gross Tax \$2,007.96  
Less Credits \$0.00

Less Tax Payments \$-1,114.47  
Interest

**Amount Due \$893.49**

12/17/2018

ASSESSED VALUATION		TAX DOLLARS BY RATE		%	TAX RATE PER \$1000		INSTALLMENTS	
Buildings	\$43,700	Municipal	\$636.12	32	Municipal	\$7.600	First Bill	\$1,114.47
Land Value	\$40,000	School	\$1,291.49	64	School	\$15.430	Second Bill	\$893.49
Exemptions	\$	ED. Tax		0	ED. Tax	\$2.040		
		County	\$80.35	4	County	\$0.960		
<b>NET VALUE</b>	<b>\$83,700</b>	<b>TOTAL</b>	<b>\$2,007.96</b>		<b>TOTAL</b>	<b>\$26.030</b>		

## INFORMATION FOR TAXPAYER

The Taxpayer has the right to apply in writing, by March 1st after the notice of the tax, to the selectmen or assessor(s) for an abatement or deferral of the assessed tax as provided under RSA's 76:16 and 72:38-a.

For more information please see the reverse side of this bill.

## Tax Collector Information

(603) 432-6106  
Monday, Wednesday, Thursday, Friday, 7am to 4pm  
Tuesday, 10am to 7pm

Please make checks payable to:  
And mail to:

**Tax Collector - Derry**  
P.O. Box 9673  
Manchester, NH 03108-9673

Please detach and return with your payment

## Town of Derry Real Estate Tax Bill

14 Manning Street, Derry, NH 03038

## Second Bill

TAX YEAR	BILL NUMBER	BILLING DATE	INTEREST DATE	DUE DATE
2018	1808620	11/06/2018	12/18/2018	12/17/2018
PARCEL ID	LOCATION OF PROPERTY		CURRENT AMOUNT DUE	
05-038-A	1 CABOT DR		\$893.49	
OWNER OF RECORD				

PENNICHUCK EAST UTILITY INC  
25 MANCHESTER ST  
PO BOX 1947  
MERRIMACK, NH 03054-1947

Please write your parcel number  
on your check and enclose this  
portion of the bill with your  
payment.

Make checks payable to:  
**Tax Collector - Derry**

00002082018001808620700000893495

Town of Merrimack  
Town Clerk/Tax Collector  
6 Baboosic Lake Road  
Merrimack, NH 03054



**PENNICHUCK WATER WORKS, INC**  
**PO BOX 1947 - 25 MANCHESTER ST**  
**MERRIMACK, NH 03054-1947**

**2018 MERRIMACK PROPERTY TAX -- BILL 2 OF 2**

Invoice: 2018P02115903  
Billing Date: 10/29/2018  
Payment Due Date: 12/07/2018  
Amount Due: \$ 53,376.00

**12% APR Charged After 12/07/2018**

Property Owner			
Owner: PENNICHUCK WATER WORKS, INC			
Tax Rates		Assessments	
County:	\$ 1.21	Taxable Land:	0
School:	\$ 15.66	Buildings:	4,629,300
Town:	\$ 5.10	Total:	4,629,300
Hydrant:	\$ 0.35		
<hr/>			
Total Tax Rate:	\$ 22.32	Net Value:	4,629,300

Property Description		
Map: 00002D	Lot: 000000	Sub: 000000
Location: VARIOUS Acres: 0.000		
Summary Of Taxes		
Total Tax:		\$ 103,326.00
- First Bill:		\$ 49,950.00
- Abated/Paid:		\$ 0.00
- Veteran Credits:		\$ 0.00

**Amount Due By 12/07/2018: \$ 53,376.00**

Mailed To:  
PENNICHUCK WATER WORKS, INC  
PO BOX 1947 - 25 MANCHESTER ST  
MERRIMACK, NH 03054-1947

**2018 MERRIMACK PROPERTY TAX -- BILL 2 OF 2**

Town of Merrimack  
Monday - Friday 9:00 am - 4:30 pm  
www.merrimacknh.gov  
(603) 424-3651  
Tax Collector: Diane Trippett  
Owner: PENNICHUCK WATER WORKS, INC

Location: VARIOUS  
Map: 00002D Lot: 000000 Sub: 000000  
Invoice: 2018P02115903

**Amount Due By 12/07/2018: \$ 53,376.00**

**RETURN THIS PORTION WITH PAYMENT**  
Please see back of bill for payment instructions. To insure proper credit, remit bottom portion with payment. (If you use a "bill payment" program through your banking institution, payment should be directed to the Merrimack address and not the PO Box in Manchester)

Visit [www.merrimacknh.gov](http://www.merrimacknh.gov) and click on "Property Taxes Review/Pay On-line" to make an on-line payment or check payment status.

018P02000000PR011590300000012071800053376007

Town of Barnstead  
108 S. Barnstead Rd  
PO BOX 11  
Center Barnstead, NH 03225

**PENNICHUCK EAST UTILITY INC**  
**25 MANCHESTER ST**  
**MERRIMACK, NH 03054**

**2018 BARNSTEAD PROPERTY TAX -- BILL 2 OF 2**

Invoice: 2018P02035606  
Billing Date: 10/31/2018  
Payment Due Date: 12/05/2018  
Amount Due: \$ 177.00

**12% APR Charged After 12/05/2018**

Per RSA 76:11-a If you are elderly, disabled, blind, a veteran, or veteran's spouse, or are unable to pay taxes due to poverty or other good cause, you may be eligible for a tax exemption, credit, abatement, or deferral. For details and application information, contact the Assessor's or Selectmen's office.

Property Owner		Property Description	
Owner: PENNICHUCK EAST UTILITY INC		Map: 000046	Lot: 000007 Sub: 000000
		Location: 2 MONROE DRIVE Acres: 0.450	
Tax Rates		Summary Of Taxes	
		Total Tax:	\$ 379.00
		- First Bill:	\$ 202.00
		- Abated/Paid:	\$ 0.00
		- Veteran Credits:	\$ 0.00
		<b>Amount Due By 12/05/2018: \$ 177.00</b>	
Assessments			
County: \$ 1.18	Taxable Land: 18,500		
School: \$ 14.42	Buildings: 0		
Town: \$ 4.90	Total: 18,500		
<b>Total Tax Rate: \$ 20.50</b>		<b>Net Value: 18,500</b>	

**Mailed To:**  
PENNICHUCK EAST UTILITY INC  
25 MANCHESTER ST  
MERRIMACK, NH 03054

**2018 BARNSTEAD PROPERTY TAX -- BILL 2 OF 2**

Town of Barnstead  
Mon, Wed, Thurs, Fri 8:30am - 4:30pm  
Tue 11:30am-7:00pm  
(603) 269-4631  
Tax Collector: Mary Clarke

Owner: PENNICHUCK EAST UTILITY INC

Location: 2 MONROE DRIVE  
Map: 000046 Lot: 000007 Sub: 000000  
Invoice: 2018P02035606

**Amount Due By 12/05/2018: \$ 177.00**

**Remit To:**  
Town of Barnstead  
108 S. Barnstead Rd  
PO BOX 11  
Center Barnstead, NH 03225

**PAY ONLINE AT: [barnstead.nhtaxkiosk.com](http://barnstead.nhtaxkiosk.com)**

**RETURN THIS PORTION WITH PAYMENT**

**REMITTED AMOUNT: \_\_\_\_\_**

# **TOWN OF LITCHFIELD**

Tax Collector's Office  
Theresa L. Briand, Tax Collector  
2 Liberty Way, Suite #3  
Litchfield, NH 03052-2345  
(603) 424-4045

**Hours:** Mon 10:00 AM - 6 PM; Tues-Fri 7:30 AM - 3 PM  
**Owner of Record:**

2966 5 5 \*\*\*\*\*AUTO\*\*ALL FOR AADC 030  
**PENNICHUCK EAST UTILITY INC**  
**PO BOX 1947**  
**MERRIMACK NH 03054-1947**

## **2018 SEMI-ANNUAL PROPERTY TAX BILL - FIRST INSTALLMENT**

12.00% APR Interest Charged After 7/2/18

Bill Date: 5/22/2018

Tax Year: 2018

### **Property**

Map-Parcel:	000011 - 000035 - 00000B	
Location:	39 WREN STREET	
Acres:	0	
Tax Rate Per \$1000		Tax Dollars By Rate
Municipal	\$2.16	\$29.16
Local School	\$7.33	\$98.96
State School	\$0.00	\$0.00
County	\$0.63	\$8.51
Total Tax Rate		\$10.12

### **ASSESSED VALUE AND EXEMPTIONS**

Building \$13,500.00  
Land Value \$0.00  
Current Use Credits \$0.00

### **Exemptions**

**Net Assessed Value** **\$13,500.00**

Total Tax: \$137.00  
Veteran's Credit: \$0.00  
**Net Property Tax: \$137.00**  
First Installment Bill: \$0.00  
Abated/Prepaid: \$0.00  
**Due By: 7/2/2018** **\$137.00**  
**Other Amount Due: \$0.00**

"Other Due Amount(s)" indicates additional balance(s) are existing on this property. Please call for the proper payment amounts.

### **PAYMENT POLICIES**

- Post-dated checks cannot be accepted, and will be returned to taxpayer.
- A \$25.00 fee plus all additional delinquency penalties and collection costs will be charged for any check returned by the bank for any reason.
- Payment of this bill does not prevent the collection of previous unpaid taxes, nor does an error in the name of the person(s) taxes prevent collection.
- If you are not the present owner of this property, please forward to the proper owner. The Tax Collector is not responsible for payment on the wrong tax bill.
- If this bill is paid by check or money order, it is not considered paid until the check or money order is cleared by the bank.
- When paying in person, bring entire bill.

Please make check payable to TOWN OF LITCHFIELD

### **INFORMATION TO TAXPAYERS**

- If you are a full time resident and elderly, disabled, blind, a veteran or veteran's spouse, or unable to pay taxes due to poverty or other good cause, you may be eligible for a tax exemption, credit, or deferral. For details, application information and deadlines, contact the assessing department at (603) 424-4025.
- Real estate tax payments will be applied first to the oldest delinquent real estate's taxes (if any) for the indicated property.
- Taxpayers desiring any information regarding assessments or abatements should contact the assessing department at (603) 424-4045.
- All taxes are assessed on April 1st of each year, tax bills are mailed to the last known address

**Online Payment Option: [www.litchfieldnh.gov](http://www.litchfieldnh.gov)**

### **2018 SEMI-ANNUAL PROPERTY TAX BILL**

**Owner of Record:**  
**PENNICHUCK EAST UTILITY INC**  
**PO BOX 1947**  
**MERRIMACK NH 03054-1947**

**FOR RECEIPT:**  
**Send entire bill & self-addressed stamped envelope**

### **FIRST INSTALLMENT**

Bill Number:	2018P01035306
Billing Date:	5/22/2018
Map-Parcel:	000011 - 000035 - 00000B
Location:	39 WREN STREET
Due Date:	7/2/2018
<b>PAY THIS AMOUNT:</b>	<b>\$137.00</b>
<b>AMOUNT ENCLOSED:</b>	
<b>OTHER AMOUNT DUE:</b>	<b>\$0.00</b>

<b>Remit To</b>		<b>2018 ATKINSON, NH PROPERTY TAX - BILL 2 OF 2</b>	
ATKINSON, NH TAX COLLECTOR PO BOX 1206 ATKINSON, NH 03811		<b>PENNICHUCK EAST UTILITY</b>	
<b>Map</b>	<b>Lot</b>	<b>Sub</b>	<b>Net Value</b>
000001	000023	000000	\$ 83,100
<b>Parcel Location</b>			<b>Acres</b>
UTILITIES - WATER			0.000
<b>12% APR Charged After 12/17/2018</b>		<b>Invoice</b>	<b>Summary of Taxes</b>
CKS PAYBLE TO ATK TAX COLLECTOR ADD MAP & LOT # & PHONE # TO CK***CK FOR OTHER AMT DUE		2018P02033003	<b>Total Tax:</b> \$ 1,309.00
<b>Billed To</b>		<b>Billing Date</b>	<b>- 1st Bill:</b> \$ 475.00
PENNICHUCK EAST UTILITY PO BOX 1947 MERRIMACK, NH 03054-1947		11/16/2018	<b>- Abated/Paid:</b> \$ 0.00
		<b>Payment Due Date</b>	<b>- Vet. Credits:</b> \$ 0.00
		12/17/2018	
		<b>Amount Due:</b>	<b>\$ 834.00</b>
		<b>Amount Enclosed:</b>	

Please return top copy with your payment.

<b>Tax Collector Office Hours</b>		<b>2018 ATKINSON, NH PROPERTY TAX - BILL 2 OF 2</b>	
ATKINSON, NH Mon 5:00 PM - 8:00 PM Tues, Wed, Thurs, 9:00 AM - 3:00 PM (603) 362-5357 Tax Collector: DEBRA L DESIMONE CKS PAYBLE TO ATK TAX COLLECTOR ADD MAP & LOT # & PHONE # TO CK***CK FOR OTHER AMT DUE		<b>PENNICHUCK EAST UTILITY</b>	
<b>Map</b>	<b>Lot</b>	<b>Sub</b>	<b>Pg-Line</b>
000001	000023	000000	0330-03
<b>Parcel Location</b>			<b>Acres</b>
UTILITIES - WATER			0.000
<b>Tax Rates</b>	<b>Assessments</b>	<b>Invoice</b>	<b>Summary Of Taxes</b>
County: <b>\$ 1.00</b>	Taxable Land: 0	2018P02033003	<b>Total Tax:</b> \$ 1,309.00
School: <b>\$ 11.79</b>	Buildings: 83,100	<b>Billing Date</b>	<b>- 1st Bill:</b> \$ 475.00
Town: <b>\$ 2.96</b>	Total: 83,100	11/16/2018	<b>- Abated/Paid:</b> \$ 0.00
		<b>Payment Due Date</b>	<b>- Vet. Credits:</b> \$ 0.00
		12/17/2018	
		<b>Interest Rate</b>	<b>Amount Due:</b> <b>\$ 834.00</b>
		12% APR After 12/17/2018	

<b>Total Tax Rates:</b>	<b>\$ 15.75</b>	<b>Net Value:</b>	<b>83,100</b>
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Keep this copy for your records

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-6

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Exhibit DLW-1, page 1 & 2: 2018 QCPAC Additions**

- a) Please explain how the Company intends to reflect the principal forgiveness on the \$570,000 SRF loan into the projected Principal & Interest (P&I) QCPAC component.
- b) Please explain why this is the most appropriate method.;
- c) Please explain how the Company anticipates reflecting the subsequent principal forgiveness' in future QCPAC calculations.
- d) Please include any and all SRF Loan documents that would support the Company's conclusions.

**RESPONSE:**

- a) The Company reduced it's 2018 QCPAC request by \$2,095, which is the principal forgiven by the NHDES each year of the loan (Please see Exh DLW-1, Page 2, and the calculation of the P&I requested for the Brady Ave. SRF loan. Also please see NHDES Brady Ave loan payment schedule with monthly principal forgiveness of \$174.60 per month, Schedule A to loan documents).
- b) The method selected results in the QCPAC surcharge not including the "principal that can be forgiven" each year by the NHDES. In the event, the principal is not forgiven the Company would pay for the unforgiven portion of the SRF principal that was not collected via the QCPAC from the 0.1 coverage on this loan that is part of the QCPAC surcharge.
- c) When the Company has a loan with principal forgiveness it will not request recovery of that projected forgiven principal in either the QCPAC or in a future rate case where the SRF loan is incorporated in the base rates.
- d) A copy of the Brady Avenue (\$570,000 SRF loan) closing documents and loan payment schedule is attached to this data request which supports the \$2,095 reduction in principal and interest payments sought by the Company for this loan.



**ALLONGE TO  
PROMISSORY NOTE AND AMENDMENT OF LOAN DOCUMENTS  
(Pennichuck East Utility, Inc. – Maple Hills 0612020-01)**

Allonge and Amendment made this 31<sup>st</sup> day of January, 2019, between Pennichuck East Utility, Inc., a New Hampshire corporation with principal place of business at 25 Manchester Street, P.O. Box 1947, Merrimack, New Hampshire 03054-1947 (the "Maker"), and the State of New Hampshire with an address of c/o Department of Environmental Services, P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095 (the "Payee").

**RECITALS**

A. Pursuant to a Loan Agreement dated June 8, 2017 between the Payee and the Maker (as amended, the "Loan Agreement"), the Payee agreed to lend to the Maker up to \$570,000 to finance the water system improvements which loan is evidenced by the promissory note from the Maker to the Payee dated June 8, 2017 in the principal amount of \$570,000 (as amended, the "Note");

B. The Payee has advanced \$570,000 to the Maker pursuant to the Loan Agreement required for the construction of the Improvements (as defined in the Note), and the Improvements have been substantially completed; no further advances of loan funds are necessary;

C. The parties desire to clarify the respective rights and obligations of the Payee and the Maker regarding repayment by amending the Note and all documents executed in connection with the Note (the "Loan Documents") pursuant to the terms of this allonge;

NOW THEREFORE, the parties agree as follows:

1. The Note is hereby amended as follows:

- (a) to provide that the Applicable Interest Rate as defined in the ninth through fourteenth lines of the initial paragraph of the Note is 1.96 percent; and
- (b) Section 1 of the Note is hereby amended by striking the section in its entirety and replacing it with the following:

"1. Payments.

- a. Commencing February 1, 2019 interest only shall be paid in six (6) consecutive monthly installments on the first day of each month and (the first such payment shall include all previously accrued interest), and


Allonge to Promissory Note and Amendment of Loan Documents  
0612020-01 PEU-Maple Hills  
Page 2 of 3

- b. Commencing August, 1, 2019, the interest and principal of this Note shall be paid in Three Hundred and Sixty (360) consecutive monthly payments in the amounts provided in the column entitled "Total Payment" in the amortization schedule attached hereto as Schedule A upon the dates set forth therein opposite each payment (for each due date in Schedule A the amounts shown in the column captioned "Total Payment" is the sum of the amount in the column captioned "Principal Payment" plus the amount in the column captioned "Interest Payment"), and
- c. The loan evidenced by the Note qualifies for \$62,856.57 debt forgiveness under regulations of the State of New Hampshire, Department of Environmental Services. Schedule A provides for a portion of the principal amount of the Note to be forgiven at the time each monthly payment is paid. Each amount scheduled to be forgiven shall nevertheless remain part of the principal amount of the Note that shall be repaid unless and until the monthly payment of interest is timely paid in accordance with Schedule A. If the remaining balance of the Note is prepaid or required to be prepaid for any reason, including without limitation upon acceleration after a default as provided in Section 4 of the Note, the full remaining amount of principal, without regard to amounts scheduled to be forgiven in connection with monthly payments not yet paid, whether otherwise due or not, together with accrued interest and other charges, shall be due and payable, and


Allonge to Promissory Note and Amendment of Loan Documents  
0612020-01 PEU-Maple Hills  
Page 3 of 3

- d. On July 1, 2049, all remaining unpaid principal together with accrued interest and any other unpaid charges shall be due and payable, and
  - e. All payments shall be applied first to accrued interest and then principal.
- (c) Each of the Loan Documents other than the Note is hereby amended to change all references to the Note therein to include the Note as hereby amended and by any future amendments of the Note.
- (d) All terms of the Note and the Loan Documents that are not amended hereby shall remain in full force and effect.

Executed as of the day and year first above written.

  
Witness

**PENNICHUCK EAST UTILITY, INC.**

By:   
Donald Ware  
Chief Operating Officer  
Duly Authorized

  
Witness


**THE STATE OF NEW HAMPSHIRE**

By:   
for Robert R. Scott  
Commissioner  
Department of Environmental Services

The undersigned Pennichuck Corporation, guarantor of the above-described Note, hereby consent to the foregoing Allonge.

**PENNICHUCK CORPORATION**

Date: 1/18/19

By:   
Donald Ware  
Chief Operating Officer

Schedule A  
New Hampshire Department of Environmental Services  
Drinking Water SRF Loan Schedule

Date Prepared: 1/18/19

Borrower: Pennichuck East Utility, Inc. -Maple Hills

Project #: 0612020-01

Total Disbursed: \$570,000

Term: 30 yrs

Interest Rate: 1.980%

Pmt #	Payment Date	Beginning Balance	Principal Payment	Principal Forgiven	Interest Payment	Total Payment	Ending Balance
1	2/1/2010	\$570,000.00	\$0.00	\$0.00	\$5,982.37	\$5,982.37	\$570,000.00
2	3/1/2010	\$570,000.00	\$0.00	\$0.00	\$931.00	\$931.00	\$570,000.00
3	4/1/2010	\$570,000.00	\$0.00	\$0.00	\$931.00	\$931.00	\$570,000.00
4	5/1/2010	\$570,000.00	\$0.00	\$0.00	\$931.00	\$931.00	\$570,000.00
5	6/1/2010	\$570,000.00	\$0.00	\$0.00	\$931.00	\$931.00	\$570,000.00
6	7/1/2010	\$570,000.00	\$0.00	\$0.00	\$931.00	\$931.00	\$570,000.00
7	8/1/2010	\$570,000.00	\$933.37	\$174.60	\$931.00	\$1,864.37	\$569,892.03
8	9/1/2010	\$569,892.03	\$935.50	\$174.60	\$929.19	\$1,864.75	\$567,781.87
9	10/1/2010	\$567,781.87	\$937.75	\$174.00	\$927.38	\$1,865.13	\$565,669.52
10	11/1/2010	\$565,669.52	\$939.95	\$174.00	\$925.56	\$1,865.51	\$563,554.97
11	12/1/2010	\$563,554.97	\$942.14	\$174.00	\$923.74	\$1,865.88	\$561,438.23
12	1/1/2011	\$561,438.23	\$944.34	\$174.00	\$921.92	\$1,866.26	\$559,319.29
13	2/1/2011	\$559,319.29	\$946.55	\$174.00	\$920.09	\$1,866.64	\$557,198.14
14	3/1/2011	\$557,198.14	\$948.75	\$174.00	\$918.26	\$1,867.01	\$555,074.79
15	4/1/2011	\$555,074.79	\$950.97	\$174.00	\$916.42	\$1,867.39	\$552,949.22
16	5/1/2011	\$552,949.22	\$953.19	\$174.00	\$914.58	\$1,867.77	\$550,821.43
17	6/1/2011	\$550,821.43	\$955.40	\$174.00	\$912.74	\$1,868.14	\$548,691.43
18	7/1/2011	\$548,691.43	\$957.62	\$174.00	\$910.90	\$1,868.52	\$546,559.21
19	8/1/2011	\$546,559.21	\$959.84	\$174.00	\$909.05	\$1,868.89	\$544,424.77
20	9/1/2011	\$544,424.77	\$962.08	\$174.00	\$907.19	\$1,869.27	\$542,288.09
21	10/1/2011	\$542,288.09	\$964.30	\$174.00	\$905.34	\$1,869.64	\$540,149.19
22	11/1/2011	\$540,149.19	\$966.54	\$174.00	\$903.48	\$1,870.02	\$538,008.05
23	12/1/2011	\$538,008.05	\$968.78	\$174.00	\$901.61	\$1,870.39	\$535,864.67
24	1/1/2012	\$535,864.67	\$971.01	\$174.00	\$899.75	\$1,870.76	\$533,719.06
25	2/1/2012	\$533,719.06	\$973.27	\$174.00	\$897.87	\$1,871.14	\$531,571.19
26	3/1/2012	\$531,571.19	\$975.51	\$174.00	\$896.00	\$1,871.51	\$529,421.06
27	4/1/2012	\$529,421.06	\$977.76	\$174.00	\$894.12	\$1,871.88	\$527,268.72
28	5/1/2012	\$527,268.72	\$980.02	\$174.00	\$892.24	\$1,872.26	\$525,114.10
29	6/1/2012	\$525,114.10	\$982.28	\$174.00	\$890.35	\$1,872.63	\$522,957.22
30	7/1/2012	\$522,957.22	\$984.54	\$174.00	\$888.46	\$1,873.00	\$520,798.08
31	8/1/2012	\$520,798.08	\$986.80	\$174.00	\$886.57	\$1,873.37	\$518,636.68
32	9/1/2012	\$518,636.68	\$989.06	\$174.00	\$884.67	\$1,873.75	\$516,473.00
33	10/1/2012	\$516,473.00	\$991.35	\$174.00	\$882.77	\$1,874.12	\$514,307.05
34	11/1/2012	\$514,307.05	\$993.62	\$174.00	\$880.87	\$1,874.49	\$512,138.83
35	12/1/2012	\$512,138.83	\$995.90	\$174.00	\$878.96	\$1,874.86	\$509,968.33
36	1/1/2013	\$509,968.33	\$998.18	\$174.00	\$877.05	\$1,875.23	\$507,795.55
37	2/1/2013	\$507,795.55	\$1,000.47	\$174.00	\$875.13	\$1,875.60	\$505,620.48
38	3/1/2013	\$505,620.48	\$1,002.76	\$174.00	\$873.21	\$1,875.97	\$503,443.12
39	4/1/2013	\$503,443.12	\$1,005.05	\$174.00	\$871.29	\$1,876.34	\$501,263.47
40	5/1/2013	\$501,263.47	\$1,007.35	\$174.00	\$869.36	\$1,876.71	\$501,081.52
41	6/1/2013	\$501,081.52	\$1,009.65	\$174.00	\$867.43	\$1,877.08	\$500,897.27
42	7/1/2013	\$500,897.27	\$1,011.95	\$174.00	\$865.50	\$1,877.45	\$500,710.72
43	8/1/2013	\$500,710.72	\$1,014.26	\$174.00	\$863.56	\$1,877.82	\$500,521.88
44	9/1/2013	\$500,521.88	\$1,016.56	\$174.00	\$861.62	\$1,878.18	\$500,330.70
45	10/1/2013	\$500,330.70	\$1,018.88	\$174.00	\$859.67	\$1,878.55	\$500,137.22
46	11/1/2013	\$500,137.22	\$1,021.20	\$174.00	\$857.72	\$1,878.92	\$500,941.42
47	12/1/2013	\$500,941.42	\$1,023.52	\$174.00	\$855.77	\$1,879.29	\$500,743.30
48	1/1/2014	\$500,743.30	\$1,025.84	\$174.00	\$853.81	\$1,879.65	\$500,542.80
49	2/1/2014	\$500,542.80	\$1,028.17	\$174.00	\$851.85	\$1,880.02	\$500,340.09
50	3/1/2014	\$500,340.09	\$1,030.50	\$174.00	\$849.89	\$1,880.39	\$500,134.99
51	4/1/2014	\$500,134.99	\$1,032.83	\$174.00	\$847.92	\$1,880.75	\$500,927.58
52	5/1/2014	\$500,927.58	\$1,035.17	\$174.00	\$845.95	\$1,881.12	\$500,717.79
53	6/1/2014	\$500,717.79	\$1,037.52	\$174.00	\$843.97	\$1,881.49	\$500,506.67
54	7/1/2014	\$500,506.67	\$1,039.85	\$174.00	\$841.99	\$1,881.85	\$500,291.21
55	8/1/2014	\$500,291.21	\$1,042.21	\$174.00	\$840.01	\$1,882.22	\$500,074.40
56	9/1/2014	\$500,074.40	\$1,044.56	\$174.00	\$838.02	\$1,882.58	\$500,855.24
57	10/1/2014	\$500,855.24	\$1,046.92	\$174.00	\$836.03	\$1,882.95	\$500,633.72
58	11/1/2014	\$500,633.72	\$1,049.27	\$174.00	\$834.04	\$1,883.31	\$500,409.85
59	12/1/2014	\$500,409.85	\$1,051.64	\$174.00	\$832.04	\$1,883.68	\$500,183.61
60	1/1/2015	\$500,183.61	\$1,054.01	\$174.00	\$830.03	\$1,884.04	\$500,955.00
61	2/1/2015	\$500,955.00	\$1,056.37	\$174.00	\$828.03	\$1,884.40	\$500,724.03
62	3/1/2015	\$500,724.03	\$1,058.75	\$174.00	\$826.02	\$1,884.77	\$500,490.68
63	4/1/2015	\$500,490.68	\$1,061.13	\$174.00	\$824.00	\$1,885.13	\$500,254.95
64	5/1/2015	\$500,254.95	\$1,063.51	\$174.00	\$821.98	\$1,885.49	\$500,018.84
65	6/1/2015	\$500,018.84	\$1,065.90	\$174.00	\$819.95	\$1,885.85	\$500,776.34
66	7/1/2015	\$500,776.34	\$1,068.28	\$174.00	\$817.93	\$1,886.22	\$500,533.45
67	8/1/2015	\$500,533.45	\$1,070.68	\$174.00	\$815.90	\$1,886.58	\$500,288.17
68	9/1/2015	\$500,288.17	\$1,073.07	\$174.00	\$813.87	\$1,886.94	\$500,040.50
69	10/1/2015	\$500,040.50	\$1,075.47	\$174.00	\$811.83	\$1,887.30	\$500,790.43
70	11/1/2015	\$500,790.43	\$1,077.86	\$174.00	\$809.79	\$1,887.67	\$500,537.95
71	12/1/2015	\$500,537.95	\$1,080.28	\$174.00	\$807.75	\$1,888.03	\$500,283.07
72	1/1/2016	\$500,283.07	\$1,082.69	\$174.00	\$805.70	\$1,888.39	\$500,025.78
73	2/1/2016	\$500,025.78	\$1,085.11	\$174.00	\$803.64	\$1,888.75	\$500,768.07
74	3/1/2016	\$500,768.07	\$1,087.53	\$174.00	\$801.58	\$1,889.11	\$500,503.94
75	4/1/2016	\$500,503.94	\$1,089.95	\$174.00	\$799.52	\$1,889.47	\$500,239.39
76	5/1/2016	\$500,239.39	\$1,092.37	\$174.00	\$797.40	\$1,889.83	\$500,972.42
77	6/1/2016	\$500,972.42	\$1,094.80	\$174.00	\$795.39	\$1,890.19	\$500,703.02
78	7/1/2016	\$500,703.02	\$1,097.24	\$174.00	\$793.31	\$1,890.55	\$500,431.18
79	8/1/2016	\$500,431.18	\$1,099.67	\$174.00	\$791.24	\$1,890.91	\$500,156.01
80	9/1/2016	\$500,156.01	\$1,102.11	\$174.00	\$789.16	\$1,891.27	\$500,880.20
81	10/1/2016	\$500,880.20	\$1,104.55	\$174.00	\$787.07	\$1,891.62	\$500,601.05
82	11/1/2016	\$500,601.05	\$1,107.00	\$174.00	\$784.99	\$1,891.98	\$500,319.45
83	12/1/2016	\$500,319.45	\$1,109.45	\$174.00	\$782.89	\$1,892.34	\$500,035.40
84	1/1/2017	\$500,035.40	\$1,111.91	\$174.00	\$780.79	\$1,892.70	\$500,748.89
85	2/1/2017	\$500,748.89	\$1,114.36	\$174.00	\$778.69	\$1,893.05	\$500,459.93

66	2/1/2026	\$475,459.93	\$1,116.63	\$174.60	\$776.58	\$1,893.41	\$474,166.50
67	4/1/2026	\$474,166.50	\$1,119.29	\$174.60	\$774.48	\$1,893.77	\$472,874.61
68	6/1/2026	\$472,874.61	\$1,121.77	\$174.60	\$772.39	\$1,894.13	\$471,578.24
69	8/1/2026	\$471,578.24	\$1,124.24	\$174.60	\$770.24	\$1,894.48	\$470,279.40
70	10/1/2026	\$470,279.40	\$1,126.72	\$174.60	\$768.12	\$1,894.84	\$468,978.08
71	12/1/2026	\$468,978.08	\$1,129.19	\$174.60	\$766.00	\$1,895.19	\$467,674.29
72	2/1/2027	\$467,674.29	\$1,131.66	\$174.60	\$763.87	\$1,895.55	\$466,368.01
73	4/1/2027	\$466,368.01	\$1,134.17	\$174.60	\$761.73	\$1,895.90	\$465,059.24
74	6/1/2027	\$465,059.24	\$1,136.66	\$174.60	\$759.60	\$1,896.26	\$463,747.98
75	8/1/2027	\$463,747.98	\$1,139.15	\$174.60	\$757.46	\$1,896.61	\$462,434.23
76	10/1/2027	\$462,434.23	\$1,141.66	\$174.60	\$755.31	\$1,896.97	\$461,117.97
77	12/1/2027	\$461,117.97	\$1,144.16	\$174.60	\$753.16	\$1,897.32	\$459,799.21
78	2/1/2028	\$459,799.21	\$1,146.67	\$174.60	\$751.01	\$1,897.68	\$458,477.84
79	4/1/2028	\$458,477.84	\$1,149.18	\$174.60	\$748.86	\$1,898.03	\$457,154.16
80	6/1/2028	\$457,154.16	\$1,151.69	\$174.60	\$746.69	\$1,898.38	\$455,827.67
81	8/1/2028	\$455,827.67	\$1,154.22	\$174.60	\$744.52	\$1,898.74	\$454,499.05
82	10/1/2028	\$454,499.05	\$1,156.74	\$174.60	\$742.35	\$1,899.09	\$453,167.71
83	12/1/2028	\$453,167.71	\$1,159.27	\$174.60	\$740.17	\$1,899.44	\$451,833.84
84	2/1/2029	\$451,833.84	\$1,161.79	\$174.60	\$738.00	\$1,899.79	\$450,497.45
85	4/1/2029	\$450,497.45	\$1,164.34	\$174.60	\$735.81	\$1,900.15	\$449,158.51
86	6/1/2029	\$449,158.51	\$1,166.87	\$174.60	\$733.63	\$1,900.50	\$447,817.04
87	8/1/2029	\$447,817.04	\$1,169.42	\$174.60	\$731.43	\$1,900.85	\$446,473.02
88	10/1/2029	\$446,473.02	\$1,171.96	\$174.60	\$729.24	\$1,901.20	\$445,126.48
89	12/1/2029	\$445,126.48	\$1,174.51	\$174.60	\$727.04	\$1,901.55	\$443,777.35
90	2/1/2030	\$443,777.35	\$1,177.06	\$174.60	\$724.84	\$1,901.90	\$442,425.69
91	4/1/2030	\$442,425.69	\$1,179.62	\$174.60	\$722.63	\$1,902.25	\$441,071.47
92	6/1/2030	\$441,071.47	\$1,182.18	\$174.60	\$720.42	\$1,902.60	\$439,714.09
93	8/1/2030	\$439,714.09	\$1,184.76	\$174.60	\$718.20	\$1,902.95	\$438,355.34
94	10/1/2030	\$438,355.34	\$1,187.32	\$174.60	\$715.98	\$1,903.30	\$436,993.42
95	12/1/2030	\$436,993.42	\$1,189.89	\$174.60	\$713.76	\$1,903.65	\$435,628.63
96	2/1/2031	\$435,628.63	\$1,192.47	\$174.60	\$711.53	\$1,904.00	\$434,261.80
97	4/1/2031	\$434,261.80	\$1,195.06	\$174.60	\$709.29	\$1,904.35	\$432,892.20
98	6/1/2031	\$432,892.20	\$1,197.64	\$174.60	\$707.06	\$1,904.70	\$431,519.60
99	8/1/2031	\$431,519.60	\$1,200.23	\$174.60	\$704.82	\$1,905.05	\$430,145.13
100	10/1/2031	\$430,145.13	\$1,202.83	\$174.60	\$702.67	\$1,905.40	\$428,767.70
101	12/1/2031	\$428,767.70	\$1,205.43	\$174.60	\$700.52	\$1,905.75	\$427,387.67
102	2/1/2032	\$427,387.67	\$1,208.02	\$174.60	\$698.37	\$1,906.09	\$426,005.05
103	4/1/2032	\$426,005.05	\$1,210.63	\$174.60	\$696.21	\$1,906.44	\$424,619.82
104	6/1/2032	\$424,619.82	\$1,213.24	\$174.60	\$694.05	\$1,906.79	\$423,231.98
105	8/1/2032	\$423,231.98	\$1,215.85	\$174.60	\$691.88	\$1,907.13	\$421,841.53
106	10/1/2032	\$421,841.53	\$1,218.47	\$174.60	\$689.71	\$1,907.48	\$420,448.46
107	12/1/2032	\$420,448.46	\$1,221.10	\$174.60	\$687.53	\$1,907.83	\$419,052.76
108	2/1/2033	\$419,052.76	\$1,223.72	\$174.60	\$685.35	\$1,908.17	\$417,654.44
109	4/1/2033	\$417,654.44	\$1,226.35	\$174.60	\$683.17	\$1,908.52	\$416,253.49
110	6/1/2033	\$416,253.49	\$1,228.98	\$174.60	\$680.98	\$1,908.87	\$414,849.60
111	8/1/2033	\$414,849.60	\$1,231.62	\$174.60	\$678.79	\$1,909.21	\$413,443.68
112	10/1/2033	\$413,443.68	\$1,234.27	\$174.60	\$676.59	\$1,909.56	\$412,034.61
113	12/1/2033	\$412,034.61	\$1,236.91	\$174.60	\$674.39	\$1,909.90	\$410,623.30
114	2/1/2034	\$410,623.30	\$1,239.57	\$174.60	\$672.19	\$1,910.25	\$409,209.13
115	4/1/2034	\$409,209.13	\$1,242.22	\$174.60	\$669.98	\$1,910.59	\$407,792.31
116	6/1/2034	\$407,792.31	\$1,244.87	\$174.60	\$667.76	\$1,910.93	\$406,372.84
117	8/1/2034	\$406,372.84	\$1,247.54	\$174.60	\$665.54	\$1,911.28	\$404,950.70
118	10/1/2034	\$404,950.70	\$1,250.20	\$174.60	\$663.32	\$1,911.62	\$403,525.60
119	12/1/2034	\$403,525.60	\$1,252.87	\$174.60	\$661.09	\$1,911.96	\$402,098.43
120	2/1/2035	\$402,098.43	\$1,255.55	\$174.60	\$658.86	\$1,912.31	\$400,668.28
121	4/1/2035	\$400,668.28	\$1,258.23	\$174.60	\$656.62	\$1,912.65	\$399,235.45
122	6/1/2035	\$399,235.45	\$1,260.91	\$174.60	\$654.38	\$1,912.99	\$397,799.94
123	8/1/2035	\$397,799.94	\$1,263.59	\$174.60	\$652.14	\$1,913.33	\$396,361.75
124	10/1/2035	\$396,361.75	\$1,266.29	\$174.60	\$649.89	\$1,913.68	\$394,920.08
125	12/1/2035	\$394,920.08	\$1,268.98	\$174.60	\$647.64	\$1,914.02	\$393,477.29
126	2/1/2036	\$393,477.29	\$1,271.68	\$174.60	\$645.39	\$1,914.36	\$392,031.00
127	4/1/2036	\$392,031.00	\$1,274.38	\$174.60	\$643.14	\$1,914.70	\$390,582.02
128	6/1/2036	\$390,582.02	\$1,277.09	\$174.60	\$640.89	\$1,915.04	\$389,130.33
129	8/1/2036	\$389,130.33	\$1,279.80	\$174.60	\$638.64	\$1,915.38	\$387,675.93
130	10/1/2036	\$387,675.93	\$1,282.52	\$174.60	\$636.39	\$1,915.72	\$386,218.81
131	12/1/2036	\$386,218.81	\$1,285.24	\$174.60	\$634.14	\$1,916.06	\$384,758.97
132	2/1/2037	\$384,758.97	\$1,287.96	\$174.60	\$631.89	\$1,916.40	\$383,296.41
133	4/1/2037	\$383,296.41	\$1,290.69	\$174.60	\$629.64	\$1,916.74	\$381,831.13
134	6/1/2037	\$381,831.13	\$1,293.42	\$174.60	\$627.39	\$1,917.08	\$380,363.10
135	8/1/2037	\$380,363.10	\$1,296.16	\$174.60	\$625.14	\$1,917.42	\$378,892.34
136	10/1/2037	\$378,892.34	\$1,298.90	\$174.60	\$622.89	\$1,917.76	\$377,418.84
137	12/1/2037	\$377,418.84	\$1,301.65	\$174.60	\$620.64	\$1,918.10	\$375,942.59
138	2/1/2038	\$375,942.59	\$1,304.40	\$174.60	\$618.39	\$1,918.44	\$374,463.50
139	4/1/2038	\$374,463.50	\$1,307.16	\$174.60	\$616.14	\$1,918.78	\$372,981.63
140	6/1/2038	\$372,981.63	\$1,309.91	\$174.60	\$613.89	\$1,919.11	\$371,497.32
141	8/1/2038	\$371,497.32	\$1,312.67	\$174.60	\$611.64	\$1,919.45	\$370,010.05
142	10/1/2038	\$370,010.05	\$1,315.44	\$174.60	\$609.39	\$1,919.79	\$368,520.01
143	12/1/2038	\$368,520.01	\$1,318.21	\$174.60	\$607.14	\$1,920.13	\$367,027.20
144	2/1/2039	\$367,027.20	\$1,320.98	\$174.60	\$604.89	\$1,920.46	\$365,531.62
145	4/1/2039	\$365,531.62	\$1,323.77	\$174.60	\$602.64	\$1,920.80	\$364,033.25
146	6/1/2039	\$364,033.25	\$1,326.55	\$174.60	\$600.39	\$1,921.14	\$362,532.10
147	8/1/2039	\$362,532.10	\$1,329.33	\$174.60	\$598.14	\$1,921.47	\$361,028.17
148	10/1/2039	\$361,028.17	\$1,332.13	\$174.60	\$595.89	\$1,921.81	\$359,521.44
149	12/1/2039	\$359,521.44	\$1,334.93	\$174.60	\$593.64	\$1,922.15	\$358,011.91
150	2/1/2040	\$358,011.91	\$1,337.73	\$174.60	\$591.39	\$1,922.48	\$356,499.58
151	4/1/2040	\$356,499.58	\$1,340.54	\$174.60	\$589.14	\$1,922.82	\$354,984.44
152	6/1/2040	\$354,984.44	\$1,343.34	\$174.60	\$586.89	\$1,923.15	\$353,466.50
153	8/1/2040	\$353,466.50	\$1,346.16	\$174.60	\$584.64	\$1,923.49	\$351,945.74
154	10/1/2040	\$351,945.74	\$1,348.98	\$174.60	\$582.39	\$1,923.82	\$350,422.16
155	12/1/2040	\$350,422.16	\$1,351.79	\$174.60	\$580.14	\$1,924.15	\$348,895.77
156	2/1/2041	\$348,895.77	\$1,354.63	\$174.60	\$577.89	\$1,924.49	\$347,366.54
157	4/1/2041	\$347,366.54	\$1,357.45	\$174.60	\$575.64	\$1,924.82	\$345,834.49
158	6/1/2041	\$345,834.49	\$1,360.30	\$174.60	\$573.39	\$1,925.16	\$344,299.50

179	12/1/2033	\$344,269.59	\$1,363.13	\$174.00	\$562.36	\$1,025.48	\$342,761.66
180	1/1/2034	\$342,761.66	\$1,365.60	\$174.00	\$559.84	\$1,025.82	\$341,231.26
181	2/1/2034	\$341,231.26	\$1,368.62	\$174.00	\$557.33	\$1,026.15	\$339,677.60
182	3/1/2034	\$339,677.60	\$1,371.68	\$174.00	\$554.81	\$1,026.49	\$338,131.56
183	4/1/2034	\$338,131.56	\$1,374.54	\$174.00	\$552.28	\$1,026.82	\$336,582.44
184	5/1/2034	\$336,582.44	\$1,377.40	\$174.00	\$549.75	\$1,027.15	\$335,030.44
185	6/1/2034	\$335,030.44	\$1,380.26	\$174.00	\$547.22	\$1,027.48	\$333,475.68
186	7/1/2034	\$333,475.68	\$1,383.13	\$174.00	\$544.68	\$1,027.81	\$331,917.85
187	8/1/2034	\$331,917.85	\$1,386.01	\$174.00	\$542.13	\$1,028.14	\$330,357.24
188	9/1/2034	\$330,357.24	\$1,388.90	\$174.00	\$539.58	\$1,028.48	\$328,793.74
189	10/1/2034	\$328,793.74	\$1,391.78	\$174.00	\$537.03	\$1,028.81	\$327,227.36
190	11/1/2034	\$327,227.36	\$1,394.67	\$174.00	\$534.47	\$1,029.14	\$325,658.09
191	12/1/2034	\$325,658.09	\$1,397.56	\$174.00	\$531.91	\$1,029.47	\$324,086.93
192	1/1/2035	\$324,086.93	\$1,400.40	\$174.00	\$529.34	\$1,029.80	\$322,510.67
193	2/1/2035	\$322,510.67	\$1,403.30	\$174.00	\$526.77	\$1,030.13	\$320,932.91
194	3/1/2035	\$320,932.91	\$1,406.27	\$174.00	\$524.19	\$1,030.46	\$319,352.04
195	4/1/2035	\$319,352.04	\$1,409.18	\$174.00	\$521.61	\$1,030.79	\$317,768.26
196	5/1/2035	\$317,768.26	\$1,412.09	\$174.00	\$519.02	\$1,031.11	\$316,181.67
197	6/1/2035	\$316,181.67	\$1,415.01	\$174.00	\$516.43	\$1,031.44	\$314,591.90
198	7/1/2035	\$314,591.90	\$1,417.94	\$174.00	\$513.83	\$1,031.77	\$312,999.42
199	8/1/2035	\$312,999.42	\$1,420.87	\$174.00	\$511.23	\$1,032.10	\$311,403.95
200	9/1/2035	\$311,403.95	\$1,423.80	\$174.00	\$508.63	\$1,032.43	\$309,805.65
201	10/1/2035	\$309,805.65	\$1,426.74	\$174.00	\$506.02	\$1,032.76	\$308,204.21
202	11/1/2035	\$308,204.21	\$1,429.68	\$174.00	\$503.40	\$1,033.09	\$306,599.93
203	12/1/2035	\$306,599.93	\$1,432.63	\$174.00	\$500.78	\$1,033.41	\$304,992.70
204	1/1/2036	\$304,992.70	\$1,435.59	\$174.00	\$498.15	\$1,033.74	\$303,382.51
205	2/1/2036	\$303,382.51	\$1,438.54	\$174.00	\$495.52	\$1,034.06	\$301,769.37
206	3/1/2036	\$301,769.37	\$1,441.50	\$174.00	\$492.89	\$1,034.39	\$300,153.27
207	4/1/2036	\$300,153.27	\$1,444.47	\$174.00	\$490.25	\$1,034.72	\$298,534.20
208	5/1/2036	\$298,534.20	\$1,447.43	\$174.00	\$487.61	\$1,035.04	\$296,912.17
209	6/1/2036	\$296,912.17	\$1,450.41	\$174.00	\$484.96	\$1,035.37	\$295,287.16
210	7/1/2036	\$295,287.16	\$1,453.40	\$174.00	\$482.30	\$1,035.70	\$293,659.16
211	8/1/2036	\$293,659.16	\$1,456.38	\$174.00	\$479.64	\$1,036.02	\$292,029.18
212	9/1/2036	\$292,029.18	\$1,459.37	\$174.00	\$476.98	\$1,036.35	\$290,394.21
213	10/1/2036	\$290,394.21	\$1,462.36	\$174.00	\$474.31	\$1,036.67	\$288,757.25
214	11/1/2036	\$288,757.25	\$1,465.36	\$174.00	\$471.64	\$1,037.00	\$287,117.29
215	12/1/2036	\$287,117.29	\$1,468.36	\$174.00	\$468.96	\$1,037.32	\$285,474.33
216	1/1/2037	\$285,474.33	\$1,471.37	\$174.00	\$466.27	\$1,037.64	\$283,828.38
217	2/1/2037	\$283,828.38	\$1,474.38	\$174.00	\$463.59	\$1,037.97	\$282,179.38
218	3/1/2037	\$282,179.38	\$1,477.40	\$174.00	\$460.89	\$1,038.29	\$280,527.38
219	4/1/2037	\$280,527.38	\$1,480.42	\$174.00	\$458.19	\$1,038.61	\$278,873.36
220	5/1/2037	\$278,873.36	\$1,483.45	\$174.00	\$455.49	\$1,038.94	\$277,214.31
221	6/1/2037	\$277,214.31	\$1,486.48	\$174.00	\$452.78	\$1,039.26	\$275,553.23
222	7/1/2037	\$275,553.23	\$1,489.51	\$174.00	\$450.07	\$1,039.58	\$273,889.12
223	8/1/2037	\$273,889.12	\$1,492.56	\$174.00	\$447.35	\$1,039.91	\$272,221.96
224	9/1/2037	\$272,221.96	\$1,495.60	\$174.00	\$444.63	\$1,040.23	\$270,551.76
225	10/1/2037	\$270,551.76	\$1,498.65	\$174.00	\$441.90	\$1,040.55	\$268,878.61
226	11/1/2037	\$268,878.61	\$1,501.70	\$174.00	\$439.17	\$1,040.87	\$267,202.21
227	12/1/2037	\$267,202.21	\$1,504.76	\$174.00	\$436.43	\$1,041.19	\$265,522.65
228	1/1/2038	\$265,522.65	\$1,507.83	\$174.00	\$433.69	\$1,041.52	\$263,840.42
229	2/1/2038	\$263,840.42	\$1,510.90	\$174.00	\$430.94	\$1,041.84	\$262,154.92
230	3/1/2038	\$262,154.92	\$1,513.97	\$174.00	\$428.19	\$1,042.16	\$260,466.35
231	4/1/2038	\$260,466.35	\$1,517.05	\$174.00	\$425.43	\$1,042.48	\$258,774.70
232	5/1/2038	\$258,774.70	\$1,520.13	\$174.00	\$422.67	\$1,042.80	\$257,079.67
233	6/1/2038	\$257,079.67	\$1,523.22	\$174.00	\$419.90	\$1,043.12	\$255,382.15
234	7/1/2038	\$255,382.15	\$1,526.32	\$174.00	\$417.12	\$1,043.44	\$253,681.23
235	8/1/2038	\$253,681.23	\$1,529.41	\$174.00	\$414.35	\$1,043.76	\$251,977.22
236	9/1/2038	\$251,977.22	\$1,532.52	\$174.00	\$411.56	\$1,044.08	\$250,270.10
237	10/1/2038	\$250,270.10	\$1,535.63	\$174.00	\$408.77	\$1,044.40	\$248,559.87
238	11/1/2038	\$248,559.87	\$1,538.74	\$174.00	\$405.98	\$1,044.72	\$246,846.53
239	12/1/2038	\$246,846.53	\$1,541.85	\$174.00	\$403.18	\$1,045.03	\$245,130.08
240	1/1/2039	\$245,130.08	\$1,544.97	\$174.00	\$400.39	\$1,045.35	\$243,410.51
241	2/1/2039	\$243,410.51	\$1,548.10	\$174.00	\$397.57	\$1,045.67	\$241,687.61
242	3/1/2039	\$241,687.61	\$1,551.23	\$174.00	\$394.76	\$1,045.99	\$239,961.90
243	4/1/2039	\$239,961.90	\$1,554.37	\$174.00	\$391.94	\$1,046.31	\$238,233.01
244	5/1/2039	\$238,233.01	\$1,557.51	\$174.00	\$389.11	\$1,046.62	\$236,500.90
245	6/1/2039	\$236,500.90	\$1,560.66	\$174.00	\$386.28	\$1,046.94	\$234,765.64
246	7/1/2039	\$234,765.64	\$1,563.81	\$174.00	\$383.45	\$1,047.26	\$233,027.23
247	8/1/2039	\$233,027.23	\$1,566.97	\$174.00	\$380.61	\$1,047.58	\$231,285.66
248	9/1/2039	\$231,285.66	\$1,570.12	\$174.00	\$377.77	\$1,047.89	\$229,540.94
249	10/1/2039	\$229,540.94	\$1,573.20	\$174.00	\$374.92	\$1,048.21	\$227,793.05
250	11/1/2039	\$227,793.05	\$1,576.48	\$174.00	\$372.06	\$1,048.52	\$226,041.99
251	12/1/2039	\$226,041.99	\$1,579.64	\$174.00	\$369.20	\$1,048.84	\$224,287.75
252	1/1/2040	\$224,287.75	\$1,582.82	\$174.00	\$366.34	\$1,049.16	\$222,530.33
253	2/1/2040	\$222,530.33	\$1,586.00	\$174.00	\$363.47	\$1,049.47	\$220,769.73
254	3/1/2040	\$220,769.73	\$1,589.20	\$174.00	\$360.59	\$1,049.79	\$219,005.93
255	4/1/2040	\$219,005.93	\$1,592.39	\$174.00	\$357.71	\$1,050.10	\$217,238.94
256	5/1/2040	\$217,238.94	\$1,595.60	\$174.00	\$354.82	\$1,050.42	\$215,468.74
257	6/1/2040	\$215,468.74	\$1,598.80	\$174.00	\$351.93	\$1,050.73	\$213,695.34
258	7/1/2040	\$213,695.34	\$1,602.01	\$174.00	\$349.04	\$1,051.05	\$211,918.73
259	8/1/2040	\$211,918.73	\$1,605.23	\$174.00	\$346.13	\$1,051.36	\$210,138.90
260	9/1/2040	\$210,138.90	\$1,608.44	\$174.00	\$343.23	\$1,051.67	\$208,355.96
261	10/1/2040	\$208,355.96	\$1,611.68	\$174.00	\$340.31	\$1,051.99	\$206,569.58
262	11/1/2040	\$206,569.58	\$1,614.90	\$174.00	\$337.40	\$1,052.30	\$204,780.08
263	12/1/2040	\$204,780.08	\$1,618.15	\$174.00	\$334.47	\$1,052.62	\$202,987.33
264	1/1/2041	\$202,987.33	\$1,621.38	\$174.00	\$331.55	\$1,052.93	\$201,191.35
265	2/1/2041	\$201,191.35	\$1,624.63	\$174.00	\$328.61	\$1,053.24	\$199,392.12
266	3/1/2041	\$199,392.12	\$1,627.88	\$174.00	\$325.67	\$1,053.55	\$197,589.64
267	4/1/2041	\$197,589.64	\$1,631.14	\$174.00	\$322.73	\$1,053.87	\$195,783.90
268	5/1/2041	\$195,783.90	\$1,634.40	\$174.00	\$319.78	\$1,054.18	\$193,974.90
269	6/1/2041	\$193,974.90	\$1,637.69	\$174.00	\$316.83	\$1,054.49	\$192,162.64
270	7/1/2041	\$192,162.64	\$1,640.93	\$174.00	\$313.87	\$1,054.80	\$190,347.11
271	8/1/2041	\$190,347.11	\$1,644.21	\$174.00	\$310.90	\$1,055.11	\$188,526.30



272	9/1/2041	\$188,528.30	\$1,847.50	\$174.60	\$307.93	\$1,955.43	\$166,706.20
273	10/1/2041	\$186,706.20	\$1,660.79	\$174.60	\$304.95	\$1,955.74	\$164,880.81
274	11/1/2041	\$184,880.81	\$1,654.08	\$174.60	\$301.97	\$1,956.05	\$163,055.13
275	12/1/2041	\$183,052.13	\$1,657.37	\$174.60	\$298.99	\$1,956.36	\$161,220.16
276	1/1/2042	\$181,220.16	\$1,660.08	\$174.60	\$296.98	\$1,956.67	\$179,384.68
277	2/1/2042	\$179,384.68	\$1,663.98	\$174.60	\$293.00	\$1,956.98	\$177,548.30
278	3/1/2042	\$177,548.30	\$1,667.30	\$174.60	\$289.99	\$1,957.29	\$175,704.49
279	4/1/2042	\$175,704.49	\$1,670.02	\$174.60	\$286.98	\$1,957.60	\$173,859.18
280	5/1/2042	\$173,859.18	\$1,673.94	\$174.60	\$283.97	\$1,957.91	\$172,010.64
281	6/1/2042	\$172,010.64	\$1,677.27	\$174.60	\$280.95	\$1,958.22	\$170,166.77
282	7/1/2042	\$170,166.77	\$1,680.60	\$174.60	\$277.93	\$1,958.53	\$168,303.67
283	8/1/2042	\$168,303.67	\$1,683.94	\$174.60	\$274.90	\$1,958.84	\$166,446.03
284	9/1/2042	\$166,445.03	\$1,687.29	\$174.60	\$271.88	\$1,959.15	\$164,583.14
285	10/1/2042	\$164,583.14	\$1,690.63	\$174.60	\$268.82	\$1,959.45	\$162,717.91
286	11/1/2042	\$162,717.91	\$1,693.99	\$174.60	\$265.72	\$1,959.76	\$160,849.32
287	12/1/2042	\$160,849.32	\$1,697.35	\$174.60	\$262.72	\$1,960.07	\$158,977.37
288	1/1/2043	\$158,977.37	\$1,700.72	\$174.60	\$259.66	\$1,960.38	\$157,102.05
289	2/1/2043	\$157,102.05	\$1,704.09	\$174.60	\$256.60	\$1,960.69	\$155,223.36
290	3/1/2043	\$155,223.36	\$1,707.48	\$174.60	\$253.53	\$1,960.99	\$153,341.30
291	4/1/2043	\$153,341.30	\$1,710.84	\$174.60	\$250.46	\$1,961.30	\$151,455.66
292	5/1/2043	\$151,455.66	\$1,714.23	\$174.60	\$247.38	\$1,961.61	\$149,567.03
293	6/1/2043	\$149,567.03	\$1,717.63	\$174.60	\$244.29	\$1,961.92	\$147,674.80
294	7/1/2043	\$147,674.80	\$1,721.02	\$174.60	\$241.20	\$1,962.23	\$145,779.18
295	8/1/2043	\$145,779.18	\$1,724.42	\$174.60	\$238.11	\$1,962.53	\$143,880.16
296	9/1/2043	\$143,880.16	\$1,727.84	\$174.60	\$235.00	\$1,962.84	\$141,977.72
297	10/1/2043	\$141,977.72	\$1,731.24	\$174.60	\$231.90	\$1,963.14	\$140,071.88
298	11/1/2043	\$140,071.88	\$1,734.67	\$174.60	\$228.78	\$1,963.45	\$138,162.61
299	12/1/2043	\$138,162.61	\$1,738.08	\$174.60	\$225.67	\$1,963.75	\$136,249.93
300	1/1/2044	\$136,249.93	\$1,741.52	\$174.60	\$222.54	\$1,964.06	\$134,333.81
301	2/1/2044	\$134,333.81	\$1,744.96	\$174.60	\$219.41	\$1,964.37	\$132,414.25
302	3/1/2044	\$132,414.25	\$1,748.39	\$174.60	\$216.28	\$1,964.67	\$130,491.26
303	4/1/2044	\$130,491.26	\$1,751.84	\$174.60	\$213.14	\$1,964.98	\$128,564.82
304	5/1/2044	\$128,564.82	\$1,755.29	\$174.60	\$209.99	\$1,965.28	\$126,634.93
305	6/1/2044	\$126,634.93	\$1,758.75	\$174.60	\$206.84	\$1,965.58	\$124,701.58
306	7/1/2044	\$124,701.58	\$1,762.21	\$174.60	\$203.68	\$1,965.89	\$122,764.77
307	8/1/2044	\$122,764.77	\$1,765.66	\$174.60	\$200.52	\$1,966.20	\$120,824.49
308	9/1/2044	\$120,824.49	\$1,769.15	\$174.60	\$197.35	\$1,966.50	\$118,880.74
309	10/1/2044	\$118,880.74	\$1,772.64	\$174.60	\$194.17	\$1,966.81	\$116,933.50
310	11/1/2044	\$116,933.50	\$1,776.12	\$174.60	\$190.99	\$1,967.11	\$114,982.78
311	12/1/2044	\$114,982.78	\$1,779.60	\$174.60	\$187.81	\$1,967.41	\$113,028.58
312	1/1/2045	\$113,028.58	\$1,783.11	\$174.60	\$184.61	\$1,967.72	\$111,070.07
313	2/1/2045	\$111,070.07	\$1,786.60	\$174.60	\$181.42	\$1,968.02	\$109,109.67
314	3/1/2045	\$109,109.67	\$1,790.11	\$174.60	\$178.21	\$1,968.32	\$107,144.98
315	4/1/2045	\$107,144.98	\$1,793.63	\$174.60	\$175.00	\$1,968.63	\$105,176.73
316	5/1/2045	\$105,176.73	\$1,797.14	\$174.60	\$171.79	\$1,968.93	\$103,204.99
317	6/1/2045	\$103,204.99	\$1,800.66	\$174.60	\$168.57	\$1,969.23	\$101,229.73
318	7/1/2045	\$101,229.73	\$1,804.20	\$174.60	\$165.34	\$1,969.54	\$99,250.93
319	8/1/2045	\$99,250.93	\$1,807.73	\$174.60	\$162.11	\$1,969.84	\$97,268.60
320	9/1/2045	\$97,268.60	\$1,811.27	\$174.60	\$158.87	\$1,970.14	\$95,282.73
321	10/1/2045	\$95,282.73	\$1,814.82	\$174.60	\$155.63	\$1,970.45	\$93,293.31
322	11/1/2045	\$93,293.31	\$1,818.37	\$174.60	\$152.38	\$1,970.75	\$91,300.94
323	12/1/2045	\$91,300.94	\$1,821.93	\$174.60	\$149.12	\$1,971.05	\$89,303.81
324	1/1/2046	\$89,303.81	\$1,825.49	\$174.60	\$145.96	\$1,971.35	\$87,303.72
325	2/1/2046	\$87,303.72	\$1,829.06	\$174.60	\$142.69	\$1,971.66	\$85,300.00
326	3/1/2046	\$85,300.00	\$1,832.64	\$174.60	\$139.32	\$1,971.96	\$83,292.82
327	4/1/2046	\$83,292.82	\$1,836.22	\$174.60	\$136.04	\$1,972.26	\$81,282.00
328	5/1/2046	\$81,282.00	\$1,839.80	\$174.60	\$132.76	\$1,972.56	\$79,267.60
329	6/1/2046	\$79,267.60	\$1,843.39	\$174.60	\$129.47	\$1,972.86	\$77,249.61
330	7/1/2046	\$77,249.61	\$1,847.00	\$174.60	\$126.17	\$1,973.17	\$75,228.01
331	8/1/2046	\$75,228.01	\$1,850.60	\$174.60	\$122.87	\$1,973.47	\$73,202.81
332	9/1/2046	\$73,202.81	\$1,854.21	\$174.60	\$119.56	\$1,973.77	\$71,174.00
333	10/1/2046	\$71,174.00	\$1,857.82	\$174.60	\$116.25	\$1,974.07	\$69,141.58
334	11/1/2046	\$69,141.58	\$1,861.44	\$174.60	\$112.93	\$1,974.37	\$67,105.54
335	12/1/2046	\$67,105.54	\$1,865.07	\$174.60	\$109.61	\$1,974.68	\$65,065.87
336	1/1/2047	\$65,065.87	\$1,868.71	\$174.60	\$106.27	\$1,974.98	\$63,022.58
337	2/1/2047	\$63,022.58	\$1,872.34	\$174.60	\$102.94	\$1,975.28	\$60,975.62
338	3/1/2047	\$60,975.62	\$1,875.99	\$174.60	\$99.59	\$1,975.58	\$58,925.03
339	4/1/2047	\$58,925.03	\$1,879.65	\$174.60	\$96.24	\$1,975.89	\$56,870.78
340	5/1/2047	\$56,870.78	\$1,883.30	\$174.60	\$92.89	\$1,976.19	\$54,812.88
341	6/1/2047	\$54,812.88	\$1,886.96	\$174.60	\$89.53	\$1,976.49	\$52,751.32
342	7/1/2047	\$52,751.32	\$1,890.63	\$174.60	\$86.16	\$1,976.79	\$50,686.09
343	8/1/2047	\$50,686.09	\$1,894.31	\$174.60	\$82.79	\$1,977.10	\$48,617.18
344	9/1/2047	\$48,617.18	\$1,897.99	\$174.60	\$79.41	\$1,977.40	\$46,544.59
345	10/1/2047	\$46,544.59	\$1,901.68	\$174.60	\$76.02	\$1,977.70	\$44,468.31
346	11/1/2047	\$44,468.31	\$1,905.38	\$174.60	\$72.63	\$1,978.01	\$42,388.33
347	12/1/2047	\$42,388.33	\$1,909.08	\$174.60	\$69.23	\$1,978.31	\$40,304.65
348	1/1/2048	\$40,304.65	\$1,912.79	\$174.60	\$65.83	\$1,978.62	\$38,217.29
349	2/1/2048	\$38,217.29	\$1,916.60	\$174.60	\$62.42	\$1,978.92	\$36,126.16
350	3/1/2048	\$36,126.16	\$1,920.22	\$174.60	\$59.01	\$1,979.23	\$34,031.34
351	4/1/2048	\$34,031.34	\$1,923.96	\$174.60	\$55.58	\$1,979.54	\$31,932.76
352	5/1/2048	\$31,932.76	\$1,927.69	\$174.60	\$52.16	\$1,979.85	\$29,830.46
353	6/1/2048	\$29,830.46	\$1,931.44	\$174.60	\$48.72	\$1,980.16	\$27,724.46
354	7/1/2048	\$27,724.46	\$1,935.19	\$174.60	\$45.28	\$1,980.47	\$25,614.68
355	8/1/2048	\$25,614.68	\$1,938.94	\$174.60	\$41.84	\$1,980.78	\$23,501.12
356	9/1/2048	\$23,501.12	\$1,942.70	\$174.60	\$38.39	\$1,981.09	\$21,383.62
357	10/1/2048	\$21,383.62	\$1,946.48	\$174.60	\$34.93	\$1,981.41	\$19,262.74
358	11/1/2048	\$19,262.74	\$1,950.27	\$174.60	\$31.46	\$1,981.73	\$17,137.67
359	12/1/2048	\$17,137.67	\$1,954.06	\$174.60	\$27.99	\$1,982.05	\$15,009.21
360	1/1/2049	\$15,009.21	\$1,957.86	\$174.60	\$24.52	\$1,982.38	\$12,876.75
361	2/1/2049	\$12,876.75	\$1,961.69	\$174.60	\$21.03	\$1,982.72	\$10,740.46
362	3/1/2049	\$10,740.46	\$1,965.52	\$174.60	\$17.54	\$1,983.06	\$8,600.34
363	4/1/2049	\$8,600.34	\$1,969.37	\$174.60	\$14.05	\$1,983.42	\$6,456.37
364	5/1/2049	\$6,456.37	\$1,973.25	\$174.60	\$10.55	\$1,983.80	\$4,308.62

355	6/1/2049	\$4,308.52	\$1,977.10	\$174.80	\$7.04	\$1,984.23	\$2,156.73
360	7/1/2049	\$2,156.73	\$1,981.55	\$179.17	\$3.52	\$1,985.08	\$0.00
<b>TOTAL</b>			<b>\$507,143.43</b>	<b>\$62,856.57</b>	<b>\$197,101.14</b>	<b>\$704,244.57</b>	



**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-7

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Don Ware Testimony, page 29**

Regarding the FALOC interest, please address the following:

- a) When is the current FALOC interest payment due?
- b) Please provide the accounting entries associated with the current FALOC interest payment.
- c) If the Company uses the 0.1 DSRR money to pay the FALOC interest, how long does the Company estimate the time remaining before the account balance is unable to cover debt service coverage payments due? Please provide support documentation.
- d) Is the FALOC proposal included in the current QCPAC calculations? If so, please explain. If not, does the Company propose to change the QCPAC calculation in future filings?

**RESPONSE:**

- (a) FALOC interest is assessed on a monthly basis, based upon the amount drawn on the facility throughout the year.
- (b) The Company does not have a separate journal entry it can provide that would contain just the current FALOC interest payment. The entry for the FALOC interest is a subset of all of the monthly cash transaction entries posted from the Company's bank accounts and cash transactions. Each month when we are assessed the interest on the monthly account statement, we debit interest expense and credit cash.
- (c) Currently, we are including the interest expense incurred from the FALOC draws, as being funded out of the DSRR 1.0 bank account. If we were to fully utilize the \$3.0 million available on the FALOC in a year, and assuming it is drawn down ratably throughout the year, in essence having an average drawn balance in the year of \$1.5 million, at a rate (which does float monthly) of approximately 4.7%, the annual amount drawn for payment of FALOC interest would be approximately \$70,500. This amount, would essentially consume more than 50% the DSRR 0.1 funds in a given year, based

upon the allocation schedule included in the Company's most recent rate case at the level of approximately \$136,000 per year of the allowed revenues.

- (d) The inclusion of QCPAC interest is not included in the current calculations, as it was not specifically identified and authorized in the most recent rate case. We would propose to include it in the QCPAC going forward and surrender our ability to earn AFUDC on selected projects, as that only provides for capitalized interest on a small portion of the Company's debt funded projects, whereas all of the Company's non-SRF/DWGTF funded projects are funded with FALOC draws, which convert to long term repayment debt annually. For SRF/DWGTF debt, a 1% interest is charge/accrued on those projects, and the underlying debt instruments, as they are being constructed and until they are allonged into repayment mode. The repayment of that overall debt, including this accrued project interest is then included in the debt service on those loans, and is a part of our QCPAC and DSRR revenues in the next promulgated rate case.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-8

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Exhibit DLW-1, page 2: 2018 QCPAC Additions**

Regarding the \$25,000 spent on installing an insertion valve on the 16" main which connects the Londonderry system to Manchester Water Works, please further describe any discussions of alternatives and if there were discussions regarding cost sharing.

**RESPONSE:**

The Company was contacted on a Monday that Manchester Water Works (MWW) had a broken hydrant lateral located on the 24" transmission main that provided water to the Town of Londonderry. The repair of the lateral was going to require that flow to the Town of Londonderry be shut down while the repair was being made. Manchester informed the Company that they planned to shut down their water system, and the flow to the Town of Londonderry, on Wednesday of that week (with the caveat that they would shut down earlier if the leak got worse) to complete the repair. MWW was holding off on the required repair to allow the Company to notify the Town of Londonderry that it would be without water from a 8 to 12 hour time frame Wednesday during the daytime. Whereas the Londonderry core system has no gravity storage and all flow into the system is pumped, the proposed shutdown was going to result in every customer, residential, commercial, industrial, municipal and total loss of both private and public fire protection. The Company evaluated options for providing an emergency water feed to the Town of Londonderry with temporary pumping from the Town of Derry water system. The temporary water feed from the Town of Derry water system could provide sufficient domestic water for Londonderry but not sufficient fire protection flows. If the planned shutdown occurred (even with the temporary water feed from the Town of Derry) it would have required Londonderry's High School, Middle and Elementary Schools to close for the day due to insufficient fire protection. It would also have required the closing of any commercial or industrial facility in the Londonderry core water system with private fire protection. As such the Company requested that MWW consider a night time shut down to limit the impact on

businesses and the Town. MWW informed us that a night time shutdown was not possible for various reasons. In reviewing the planned shut down with MWW it became evident that the installation of a main line 24" valve would allow for MWW to complete the required hydrant lateral repair but not to have to shut down the feed to the Londonderry core water system. MWW and the Company neogiated an arrangement where MWW would perform the excavation, backfill and surface restoration of the excavation required to install a 24" insertion valve. The Company for its part provided the parts and crew to complete the valve insertion. The final costs of the project were shared as described above.

**Pennichuck East Utilities, Inc.**

**DW 19-035**

**2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 1**

Date Request Received: 3/14/19  
Request No. Staff 1-9

Date of Response: 3/27/19  
Witness: Donald L. Ware

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**REQUEST: Exhibit DLW-1, page 3: 2019 QCPAC Additions**

Are all of the "Barnstead" projects indicated on this schedule to be financed by the SRF Loan approved in Commission Order No. 26,819. Please explain and provide any applicable supporting documentation.

**RESPONSE:**

Yes. The "Barnstead" projects delineated on this exhibit were detailed and discussed at part of DW18-132. The Company signed the closing documents on February 12, 2019 for three loans, totaling the \$4.24 million loan approved in Commission Order No. 26,819. A copy of Exhibits A, B and C from the closing documents for these loans is attached to this data request. These exhibits clearly detail the financing of the Barnstead projects with this SRF funding.

## **EXHIBIT A: DESCRIPTION OF THE PREMISES**

Pennichuck East Utility  
Locke Lake Water System  
SRF

- Airstrip Well Raw Water Pipeline
- Georgetown Drive Area Water Main Replacement
- New Surface Water Source and Treatment

All facilities are in Center Barnstead, New Hampshire

### Airstrip Well Raw Water Pipeline

Raw (untreated) water pipeline will be installed along South Shore Drive, North Barnstead Road, Georgetown Drive to a point where the pipeline will be installed under Locke Lake by horizontal directional drilling to existing raw water piping on Varney Road.

### Georgetown Area Water Main Replacement

Water main replacement and customer services will occur on/within the following public streets in the Town of Barnstead, New Hampshire:

- Georgetown Drive
- Bradford Lane
- North Barnstead Road
- Belmont Drive

### New Surface Water Source and Treatment

The project will result in the following:

- A new surface water intake structure/screen upstream of the Locke Lake Dam on Basin Drive.
- A raw water pumping station downstream of the existing Locke Lake Dam on Basin Drive
- Raw water pipeline along Basin Drive and Peacham Road to the existing Peacham Road Treatment Facility.
- Modifications and a limited expansion of the Peacham Road facility to accommodate surface water treatment equipment and support systems.
- New treatment equipment and appurtenances at the Peacham Road facility.

EXHIBIT - B COST ESTIMATE PEU Locke Lake				
Airstrip Well Raw Water Pipeline	Quantity	Unit	Unit Cost	Extension
2" HDPE Pipe (Open Cut)	2900	Feet	\$ 100.00	\$ 290,000.00
2" HDPE Pipe (HDD Under Locke Lake)	1200	Feet	\$ 120.00	\$ 144,000.00
Airstrip Station Abandonment	1	Lump Sum	\$ 56,000.00	\$ 56,000.00
			Construction Sub-Total:	\$ 490,000
			Contingency 10%:	\$ 49,000
			Total:	\$ 539,000.00
<b>Georgetown Drive Area Main Replacement</b>				
Georgetown Drive 6 inch C-900 PVC	4600	Feet	\$ 130.00	\$ 598,000.00
Bradford Lane 6 inch C-900 PVC	1825	Feet	\$ 125.00	\$ 228,125.00
North Barnstead Road 6 inch C-900 PVC	275	Feet	\$ 125.00	\$ 34,375.00
North Barnstead Road 4 inch C-900 PVC	680	Feet	\$ 110.00	\$ 74,800.00
Belmont Drive 6 inch C-900 PVC	500	Feet	\$ 125.00	\$ 62,500.00
			Construction Sub-Total:	\$ 997,800.00
			Contingency 10%:	\$ 99,780.00
			Total:	\$ 1,097,580.00
<b>New Surface Water Source and Treatment</b>				
Preliminary Planning & Preliminary Design	1	Lump Sum	\$ 100,000.00	\$ 100,000.00
Pilot Testing	1	Lump Sum	\$ 150,000.00	\$ 150,000.00
Permitting	1	Lump Sum	\$ 124,000.00	\$ 124,000.00
Final Design	1	Lump Sum	\$ 50,000.00	\$ 50,000.00
Intake	1	Lump Sum	\$ 300,000.00	\$ 300,000.00
Raw Water Pumping Station	1	Lump Sum	\$ 250,000.00	\$ 250,000.00
Raw Water Pipeline 6 inch HDPE	1600	Feet	\$ 120.00	\$ 192,000.00
Peacham Rad Treatment Facility Modifications	1	Lump Sum	\$ 400,000.00	\$ 400,000.00
Treatment Equipment	1	Lump Sum	\$ 800,000.00	\$ 800,000.00
			Construction Sub-Total:	\$ 2,366,000.00
			Contingency 10%:	\$ 236,600.00
			Total:	\$ 2,602,600.00
			Project Total:	\$ 4,239,180.00

**EXHIBIT C**  
**PROMISSORY NOTE**

\$1,100,000  
(Locke Lake 0142010-07A Water Main Replacement)

Concord, New Hampshire  
February 12, 2019

FOR VALUE RECEIVED, Pennichuck East Utility, Inc., a New Hampshire corporation with a principal place of business at 25 Manchester Street, P.O. Box 1947, Merrimack, New Hampshire 03054-1947 (the "Maker"), promises to pay to the State of New Hampshire with an address of c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095, or its order (the "Payee"), the sum of One Million One Hundred Thousand Dollars (\$1,100,000) or such lesser amount as shall be disbursed to the Maker by the Payee pursuant to a Loan Agreement of near or even date by and between the Maker and the Payee (the "Loan Agreement"), in lawful money of the United States, together with interest thereon at the annual rate of one percent (1%) until the earlier of (i) the date of substantial completion of the Improvements (as defined in the Loan Agreement) as determined by the State or (ii) July 1, 2021 (such earlier date being the "Interest Rate Change Date") and commencing on the Interest Rate Change Date at the lower of (A) the annual rate of 2.704% or (B) eighty percent (80%) of the established market rate as determined in Env-Dw 1106.03 and 1106.04. (the interest rate at any given time, the "Applicable Interest Rate"). Capitalized terms used but not defined herein have the meaning given to them in the Loan Agreement.

1. Payments. The interest and principal of this Note shall be paid as follows:

(a) Commencing on the first day of the seventh month after the Interest Rate Change Date, interest only shall be paid in six (6) consecutive monthly installments on the first day of each month.

(b) Commencing with the first day of the thirteenth month after the Interest Rate Change Date, the principal and interest of the Note shall be paid in Three Hundred and Sixty (360) consecutive equal monthly installments of principal and interest on the first day of each month with the installment amount calculated to amortize the principal balance of the Note over the 360 month period at the Applicable Interest Rate; provided, however, that the Maker shall have the option to elect prior to the first installment payment under paragraph 1(a) to have the interest accruing prior to the Interest Rate Change Date be capitalized and added to the principal amount of the Note rather than paid in the first installment of interest to be paid pursuant to paragraph 1(a); so long as the sum of the principal balance of the Note plus interest accruing prior to the Interest Rate Change Date (such sum being the "Capitalized Amortization Amount") shall not exceed \$1,100,000, and if the sum of unpaid principal plus interest accruing prior to the Interest Rate Change Date exceeds \$1,100,000, such excess amount of interest shall be due and payable with the first payment of interest pursuant to paragraph 1(a) above. If the Maker elects to have such interest capitalized, then the Capitalized Amortization Amount shall be paid in Three Hundred Sixty (360) consecutive equal monthly installments of principal on the first day of each month, commencing with the first day of the thirteenth month after the Interest Rate Change Date, with interest with the installments calculated to amortize the Capitalized Amortization Amount over such 360 month Period at the Applicable Interest Rate. Notwithstanding the foregoing, the repayment of principal and interest pursuant to this Note is

subject to Section 12 of the Loan Agreement.

2. Prepayment. The Maker shall have the right to prepay any or all sums due under this Note without penalty. Prepayments shall be applied first to accrued interest and then to principal. Partial prepayments of principal shall be applied against the outstanding principal balance; provided, however, that the Maker shall continue to make principal payments in the amounts specified above and on the dates specified above, with interest on the outstanding principal balance recomputed accordingly, until the Maker's obligations under this Note are satisfied in full.

3. Due Date; Late Payment. All payments of principal and interest shall be due on or before the due date specified above; provided, however, that the Maker shall not be deemed in default hereunder if payment is received by the Payee on or before 4:00 p.m. of the seventh day following the due date. The Maker agrees to pay a late charge of five percent (5%) of the amount of any payment due under this Note that is not paid within seven (7) days of its due date.

4. Applicable Interest. The Maker expressly agrees that the Applicable Interest Rate specified in this Note shall be the applicable interest rate due (i) on amounts outstanding during the term hereof and (ii) with respect to any amount outstanding on and after the maturity date hereof.

5. Default; Acceleration. The Maker shall be in default of this Note, and all principal and accrued interest thereon shall immediately become due and payable, without notice or demand, upon the occurrence of any of the following events: (a) failure to make prompt payment of any principal or interest installment due hereunder (or within such grace period as may be provided herein), (b) the failure of the Maker to observe or perform any of the other obligations to the Payee under this Note, and the same remains unremedied for a period of thirty (30) days after the date of notice thereof to the Maker by the Payee, (c) the occurrence of an Event of Default under the Loan Agreement or a default under the Guaranty of even date of Pennichuck Corporation (the "Guaranty") or (d) a default in any other obligation of the Maker to the Payee, whether now existing or hereinafter incurred.

If the Maker shall file a petition under any section of the Bankruptcy Code, shall make an assignment for the benefit of creditors, shall have a receiver appointed over its affairs who shall not be discharged within sixty (60) days from the date of appointment, or shall have filed against it a petition under a section of the Bankruptcy Code, or any debtor-creditor act, which petition shall not be dismissed within sixty (60) days of the date of filing of the same, then the balance of principal and interest remaining unpaid on this Note shall become due and payable forthwith without demand or notice.

6. Costs of Collection. If this Note is not paid in full when it becomes due, or if any payment required hereunder shall not be paid when due, or within such grace period as may be expressly provided herein, the Maker agrees to pay all costs and expenses of collection, including attorneys' fees, regardless of whether legal proceedings have been formally



commenced.

7. Waiver of Presentment. The Maker hereby waives presentment, demand for payment, notice of dishonor, and all other notices or demands in connection with the delivery, acceptance, performance, default, or endorsement of this Note.

8. Non-Forfeiture of Rights. It is agreed and understood that the waiver by the Payee of any particular default in the terms of this Note shall not constitute waiver of any further default and that acceptance of any payment after it is due shall not be deemed a waiver of the right to require prompt payment when due on all other sums and that acceptance of any payment after default shall not cure said default or operate as a waiver of any rights of the Payee hereunder unless otherwise agreed in writing.

9. Payments, Notices. All payments due under this Note, and any notice required to be made hereunder shall be directed to the Payee or to the Maker, as the case may be, at the addresses above specified, or such other address as the Payee and the Maker may hereafter direct, in writing.

10. Binding on Successors, Etc. The obligation of this Note shall be binding upon the heirs, successors and assigns of the Maker herein and shall inure to the benefit of the successors or assigns of the Payee herein or any holder hereof. Notwithstanding the preceding sentence, the Maker shall not assign this Note without the prior written consent of the Payee.

11. Gender. Whenever the content so requires, reference herein to the neuter gender shall include the masculine and/or feminine gender, and the singular number shall include the plural.

12. References. All references herein to the Loan Agreement and the Guaranty shall be construed to refer to such instruments as they may be amended from time to time.

13. Governing Law. The Note has been made in the State of New Hampshire, and the provisions hereof shall be governed by and construed in accordance with the laws of the State of New Hampshire (excluding the laws applicable to conflicts or choice of laws).

14. Jurisdiction. The Maker hereby consents to the jurisdiction of all state and local courts of the State of New Hampshire and the United States District Court of the District of New Hampshire in connection with any suit to enforce any rights of the Payee under this Note.

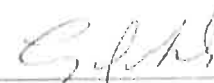
15. Guaranty. The Maker's obligations hereunder are guaranteed pursuant to the Guaranty.

16. Sovereign Immunity. Nothing contained in this Note, the Loan Agreement, or any guaranty guarantying this Note shall be deemed to constitute a waiver of the sovereign immunity of the Payee, which immunity is hereby reserved to the Payee.

EXECUTED as of the day and year first above written.

**PENNICHUCK EAST UTILITY, INC.**

  
Witness

By:   
Larry D. Goodhue  
Chief Executive Officer

**EXHIBIT C**  
**PROMISSORY NOTE**

\$540,000  
(Locke Lake 0142010-07B Airstrip Well Interconnection & Treatment)

Concord, New Hampshire  
February 12, 2019

FOR VALUE RECEIVED, Pennichuck East Utility, Inc., a New Hampshire corporation with a principal place of business at 25 Manchester Street, P.O. Box 1947, Merrimack, New Hampshire 03054-1947 (the "Maker"), promises to pay to the State of New Hampshire with an address of c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095, or its order (the "Payee"), the sum of Five Hundred Forty Thousand Dollars (\$540,000) or such lesser amount as shall be disbursed to the Maker by the Payee pursuant to a Loan Agreement of near or even date by and between the Maker and the Payee (the "Loan Agreement"), in lawful money of the United States, together with interest thereon at the annual rate of one percent (1%) until the earlier of (i) the date of substantial completion of the Improvements (as defined in the Loan Agreement) as determined by the State or (ii) July 1, 2021 (such earlier date being the "Interest Rate Change Date") and commencing on the Interest Rate Change Date at the lower of (A) the annual rate of 2.704% or (B) eighty percent (80%) of the established market rate as determined in Env-Dw 1106.03 and 1106.04. (the interest rate at any given time, the "Applicable Interest Rate"). Capitalized terms used but not defined herein have the meaning given to them in the Loan Agreement.

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(b) Commencing with the first day of the thirteenth month after the Interest Rate Change Date, the principal and interest of the Note shall be paid in Three Hundred and Sixty (360) consecutive equal monthly installments of principal and interest on the first day of each month with the installment amount calculated to amortize the principal balance of the Note over the 360 month period at the Applicable Interest Rate; provided, however, that the Maker shall have the option to elect prior to the first installment payment under paragraph 1(a) to have the interest accruing prior to the Interest Rate Change Date be capitalized and added to the principal amount of the Note rather than paid in the first installment of interest to be paid pursuant to paragraph 1(a); so long as the sum of the principal balance of the Note plus interest accruing prior to the Interest Rate Change Date (such sum being the "Capitalized Amortization Amount") shall not exceed \$540,000, and if the sum of unpaid principal plus interest accruing prior to the Interest Rate Change Date exceeds \$540,000, such excess amount of interest shall be due and payable with the first payment of interest pursuant to paragraph 1(a) above. If the Maker elects to have such interest capitalized, then the Capitalized Amortization Amount shall be paid in Three Hundred Sixty (360) consecutive equal monthly installments of principal on the first day of each month, commencing with the first day of the thirteenth month after the Interest Rate Change Date, with interest with the installments calculated to amortize the Capitalized Amortization Amount over such 360 month Period at the Applicable Interest Rate. Notwithstanding the foregoing, the repayment of principal and interest pursuant to this Note is

subject to Section 12 of the Loan Agreement.

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4. Applicable Interest. The Maker expressly agrees that the Applicable Interest Rate specified in this Note shall be the applicable interest rate due (i) on amounts outstanding during the term hereof and (ii) with respect to any amount outstanding on and after the maturity date hereof.

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If the Maker shall file a petition under any section of the Bankruptcy Code, shall make an assignment for the benefit of creditors, shall have a receiver appointed over its affairs who shall not be discharged within sixty (60) days from the date of appointment, or shall have filed against it a petition under a section of the Bankruptcy Code, or any debtor-creditor act, which petition shall not be dismissed within sixty (60) days of the date of filing of the same, then the balance of principal and interest remaining unpaid on this Note shall become due and payable forthwith without demand or notice.

6. Costs of Collection. If this Note is not paid in full when it becomes due, or if any payment required hereunder shall not be paid when due, or within such grace period as may be expressly provided herein, the Maker agrees to pay all costs and expenses of collection, including attorneys' fees, regardless of whether legal proceedings have been formally

commenced.

7. Waiver of Presentment. The Maker hereby waives presentment, demand for payment, notice of dishonor, and all other notices or demands in connection with the delivery, acceptance, performance, default, or endorsement of this Note.

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EXECUTED as of the day and year first above written.

**PENNICHUCK EAST UTILITY, INC.**

  
Witness

By:   
Larry D. Goodhue  
Chief Executive Officer

**EXHIBIT C**  
**PROMISSORY NOTE**

\$2,600,000  
(Locke Lake 0142010-07C Surface Water Supply Development)

Concord, New Hampshire  
February 12, 2019

FOR VALUE RECEIVED, Pennichuck East Utility, Inc., a New Hampshire corporation with a principal place of business at 25 Manchester Street, P.O. Box 1947, Merrimack, New Hampshire 03054-1947 (the "Maker"), promises to pay to the State of New Hampshire with an address of c/o Department of Environmental Services, 29 Hazen Drive, P.O. Box 95, Concord, New Hampshire 03302-0095, or its order (the "Payee"), the sum of Two Million Six Hundred Thousand Dollars (\$2,600,000) or such lesser amount as shall be disbursed to the Maker by the Payee pursuant to a Loan Agreement of near or even date by and between the Maker and the Payee (the "Loan Agreement"), in lawful money of the United States, together with interest thereon at the annual rate of one percent (1%) until the earlier of (i) the date of substantial completion of the Improvements (as defined in the Loan Agreement) as determined by the State or (ii) July 1, 2021 (such earlier date being the "Interest Rate Change Date") and commencing on the Interest Rate Change Date at the lower of (A) the annual rate of 2.704% or (B) eighty percent (80%) of the established market rate as determined in Env-Dw 1106.03 and 1106.04. (the interest rate at any given time, the "Applicable Interest Rate"). Capitalized terms used but not defined herein have the meaning given to them in the Loan Agreement.

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5. Default; Acceleration. The Maker shall be in default of this Note, and all principal and accrued interest thereon shall immediately become due and payable, without notice or demand, upon the occurrence of any of the following events: (a) failure to make prompt payment of any principal or interest installment due hereunder (or within such grace period as may be provided herein), (b) the failure of the Maker to observe or perform any of the other obligations to the Payee under this Note, and the same remains unremedied for a period of thirty (30) days after the date of notice thereof to the Maker by the Payee, (c) the occurrence of an Event of Default under the Loan Agreement or a default under the Guaranty of even date of Pennichuck Corporation (the "Guaranty") or (d) a default in any other obligation of the Maker to the Payee, whether now existing or hereinafter incurred.

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7. Waiver of Presentment. The Maker hereby waives presentment, demand for payment, notice of dishonor, and all other notices or demands in connection with the delivery, acceptance, performance, default, or endorsement of this Note.

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EXECUTED as of the day and year first above written.

**PENNICHUCK EAST UTILITY, INC.**

  
Witness

By:   
Larry D. Goodhue  
Chief Executive Officer

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-1

Date of Response: 4/23/19  
Witness: Donald L. Ware

---

**REQUEST: Ref. 1-2**

Please provide an example of the QCPAC calculation being applied to an average residential customer bill.

**RESPONSE:**

The average single-family residential customer uses 7.29 CCF of water a month. The QCPAC calculation would be applied as follows:

Monthly Meter Charge	- \$ 20.70
Consumption Charge of \$7.51/CCF x 7.29 CCF	- <u>\$ 54.75</u>
Total monthly bill before QCPAC	- \$ 75.45
QCPAC @ 3.29% applied to Total monthly bill	- <u>\$ 2.48</u>
Monthly bill with QCPAC	- \$ 77.93

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-2

Date of Response: 4/23/19  
Witness: Donald L. Ware

---

**REQUEST: Ref. Staff 1-3**

Please provide a financial analysis, including the impact to cash flow, if PEU were to collect the one-time estimated recoupment of \$14.89 over 2 months rather than 1 month.

**RESPONSE:**

Assuming that PEU closes on the CoBank loan in May of 2019 it will need to make its first monthly principal and interest rate payment on July 20, 2019. Please see the attached spreadsheet detailing the financial impact of PEU collecting the one-time estimated recoupment of \$14.89 over 1 month, 2 months and 3 months. Please note that this analysis assumes a QCPAC order in late September which would be perfected in late October which in turn would allow for the QCPAC recoupment to be billed on the November Customer bills. The cash flow created by the customer billings lags the issuance of the bills by about 30 days. As noted in the analysis there is really very little difference in accrued short term interest costs between billing the recoupment in one month, two months and three months. In Docket DW 17-128, PEU was authorized to use the cash accumulated in its 0.1 DSRF fund to pay the short-term debt costs (interest cost incurred on its Fixed Asset Line of Credit). If PEU uses the 0.1 DSRF funds to counter regulatory lag, it believes that the most palatable option to its rate payers would be to spread the recoupment over three months as opposed to 1 month.

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Staff DR2-2  
4/17/2019

Projected Monthly P&I Payments - \$23,407.52 based on 2018 QCPAC PEU Additions

**Short Term Debt interest incurred when collecting recoupment in one month**

	Monthly P&I payments made the 20th of each month	Cumulative Short term Debt as of the 20th of each month	STD Interest Expense incurred as of the 20th of the following month <sup>1</sup>	Cumulative Short Term Interest Cost	Outstanding Short Term Debt as of the 20th of each month	QCPAC and QCPAC Recoupment from previous months billing
July 2019 P&I -	\$ 23,407.52	\$ 23,407.52	\$ -	\$ -		
August 2019 P&I -	\$ 23,407.52	\$ 46,815.04	\$ 92.65	\$ 92.65	\$ 46,907.69	
September 2019 P&I -	\$ 23,407.52	\$ 70,222.56	\$ 185.68	\$ 278.33	\$ 70,500.89	
October 2019 P&I -	\$ 23,407.52	\$ 93,630.08	\$ 279.07	\$ 557.40	\$ 94,187.48	
November 2019 P&I -	\$ 23,407.52	\$ 117,037.60	\$ 372.83	\$ 930.22	\$ 117,967.82	
December 2019 P&I -	\$ 23,407.52	\$ 140,445.12	\$ 466.96	\$ 1,397.18	\$ 141,842.30	\$ 117,037.60
January 2020 P&I -	\$ 23,407.52	\$ 48,212.22	\$ 5.53	\$ 1,402.71	\$ 49,614.93	\$ 23,407.52

Cash from 100% recoupment of July through Oct QCPAC plus Nov. 2019 QCPAC  
Cash from December 2020 QCPAC

**Short Term Debt interest incurred when collecting recoupment in two months**

	Monthly P&I payments made the 20th of each month	Cumulative Short term Debt as of the 20th of each month	STD Interest Expense incurred as of the 20th of the following month <sup>1</sup>	Cumulative Short Term Interest Cost	Outstanding Total Short Term Debt incurred until QCPAC Recoupment collected as of	QCPAC and QCPAC Recoupment from previous months billing
July 2019 P&I -	\$ 23,407.52	\$ 23,407.52	\$ -	\$ -		
August 2019 P&I -	\$ 23,407.52	\$ 46,815.04	\$ 92.65	\$ 92.65	\$ 46,907.69	
September 2019 P&I -	\$ 23,407.52	\$ 70,222.56	\$ 185.68	\$ 278.33	\$ 70,500.89	
October 2019 P&I -	\$ 23,407.52	\$ 93,630.08	\$ 279.07	\$ 557.40	\$ 94,187.48	
November 2019 P&I -	\$ 23,407.52	\$ 117,037.60	\$ 372.83	\$ 930.22	\$ 117,967.82	
December 2019 P&I -	\$ 23,407.52	\$ 140,445.12	\$ 466.96	\$ 1,397.18	\$ 141,842.30	\$ 70,222.56
January 2020 P&I -	\$ 23,407.52	\$ 95,027.26	\$ 283.49	\$ 1,680.67	\$ 96,707.93	\$ 70,222.56
February 2020 P&I -	\$ 23,407.52	\$ 49,892.89	\$ 6.65	\$ 1,687.33	\$ 51,580.22	\$ 23,407.52

Cash from 50% recoupment of July through Oct QCPAC plus Nov. 2019 QCPAC  
Cash from 50% recoupment of July through Oct QCPAC plus December 2019 QCPAC  
Cash from January 2020 QCPAC

Difference in carrying cost between collecting QCPAC Recoupment over 1 month vs. 2 months - \$ 284.62

**Short Term Debt interest incurred when collecting recoupment in three months**

	Monthly P&I payments made the 20th of each month	Cumulative Short term Debt as of the 20th of each month	STD Interest Expense incurred as of the 20th of the following month <sup>1</sup>	Cumulative Short Term Interest Cost	Total Short Term Debt incurred until QCPAC Recoupment collected as of the 20th of the	QCPAC and QCPAC Recoupment from previous months billing
July 2019 P&I -	\$ 23,407.52	\$ 23,407.52	\$ -	\$ -		
August 2019 P&I -	\$ 23,407.52	\$ 46,815.04	\$ 92.65	\$ 92.65	\$ 46,907.69	
September 2019 P&I -	\$ 23,407.52	\$ 70,222.56	\$ 185.68	\$ 278.33	\$ 70,500.89	
October 2019 P&I -	\$ 23,407.52	\$ 93,630.08	\$ 279.07	\$ 557.40	\$ 94,187.48	
November 2019 P&I -	\$ 23,407.52	\$ 117,037.60	\$ 372.83	\$ 930.22	\$ 117,967.82	
December 2019 P&I -	\$ 23,407.52	\$ 140,445.12	\$ 466.96	\$ 1,397.18	\$ 141,842.30	\$ 54,617.55
January 2020 P&I -	\$ 23,407.52	\$ 109,235.09	\$ 345.26	\$ 1,742.44	\$ 110,977.54	\$ 54,617.55
February 2020 P&I -	\$ 23,407.52	\$ 79,767.51	\$ 223.09	\$ 1,965.53	\$ 81,733.04	\$ 54,617.55
March 2020 P&I -	\$ 23,407.52	\$ 50,523.02	\$ 7.78	\$ 1,973.31	\$ 52,496.33	\$ 23,407.52

Cash from 33% recoupment of July through Oct QCPAC plus Dec. 2019 QCPAC  
Cash from 33% recoupment of July through Oct QCPAC plus January 2020 QCPAC  
Cash from 33% recoupment of July through Oct QCPAC plus February 2020 QCPAC  
Cash from March 2020 QCPAC

Difference in carrying cost between collecting QCPAC Recoupment over 1 month vs. 2 months - \$ 570.61

1. Short term interest on funds borrowed from Corporate line of credit to pay monthly principal and interest costs based on an annual percentage rate of 4.75%

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 2**

Date Request Received: 4/11/19  
Request No. Staff 2-3

Date of Response: 4/23/19  
Witness: John J. Boisvert

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**REQUEST: Pre-filed testimony of J. Boisvert, Bates 43, lines 9 and 10:**

Please explain this statement in light of the 2020 CAPEX budget provided in DW 18-174 and the 2020 CAPEX budget included as part of DW 19-035.

RESPONSE: In the 2020 Capex budget, the major projects include the Londonderry (Woodmont Commons) storage tank and the Locke Lake treatment facility. No pipeline replacement projects are anticipated or planned for 2020

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-4

Date of Response: 4/23/19  
Witness: John J. Boisvert

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**REQUEST: Ref. Commission Order No. 26,189 in DW 18-132**

The original estimated, and approved, cost of the raw water transmission line at Locke Lake was \$400,000. The 2019 CAPEX list in DLW-1 of DW 19-035 states the Company is now estimating \$440,000. Please explain the 10% increase in projected cost.

**RESPONSE:** Further evaluation of the pipeline route requires that an additional 400 feet of pipe to be installed than was in the original estimate.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-5

Date of Response: 4/23/19  
Witness: Donald L. Ware

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**REQUEST: Ref. Commission Order No. 26,189 in DW 18-132**

The addition of the raw water transmission line and the subsequent termination of treatment at the well site is estimated to save the Company approximately \$7,000 in annual arsenic treatment costs. Please indicate whether, and how, these savings are reflected in the running Operating Expense Revenue Requirement (OERR) total in Exhibit DLW-1, page 1.

**RESPONSE:**

With the pending change in the Arsenic rules (currently in process under the NHDES rulemaking regulatory process) resulting in the standard for Arsenic in drinking water dropping from 10 parts per billion (10 ppb) to 5 ppb the expected difference in treatment costs between the adsorptive media used for treating arsenic, as compared to the coprecipitation process used at the Peacham Road facility, is expected to result in an annual treatment cost savings of about \$28,000 per year. This savings in the material operating expense revenue requirement has been incorporated into the revised Exhibit DLW, page 1 attached to this data request.



Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
Revised 4/18/2019 Per Staff DR 2-5  
2/15/2019

Exhibit DLW-1  
Page 1

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(38,053)	(4)(8)	\$	5,813,527	\$	47,354	(4)	\$	5,860,882	\$	76,011	(10)	\$	5,988,668
Annual Principal and Interest Payments		\$1,362,154	(2)	\$	280,890	(5)(6)	\$	1,643,045	\$	178,285	(6)	\$	1,821,329	\$	329,997		\$	2,151,326
Principal and Interest Coverage Requirement		1.10	(3)				1.10					1.10						
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,807,349			\$	2,003,462			\$	2,366,459			\$	2,366,459	
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,547,186			\$	8,790,653			\$	9,229,661			\$	9,281,435	
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952			\$	7,620,876			\$	7,864,344			\$	8,303,352	
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309			\$	926,309			\$	926,309			\$	926,309	
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261			\$	8,547,186			\$	8,790,653			\$	9,229,661	
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915			\$	178,915			\$	178,915			\$	178,915	
Proposed New Revenue Requirement	\$	8,455,176		\$	8,726,100			\$	8,969,568			\$	9,408,575			\$	9,460,350	
Projected QCPAC Increase <sup>7</sup>					3.27%				2.85%			4.99%					0.56%	
Cumulative QCPAC increase <sup>9</sup>					3.27%				6.22%			11.52%					12.15%	
Cumulative QCPAC monthly increase in average single family residential bill				\$	2.47			\$	4.69			\$	8.69			\$	9.16	
Average monthly single family residential bill with QCPAC				\$	77.92			\$	80.14			\$	84.14			\$	84.61	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128
- (2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128
- (3) Principal and interest coverage of 1.10 is as approved in DW17-128
- (4) QCPAC operating expense proformas are based on the property taxes for plant added during the year. 2019 Proforma expenses are reduced by \$ 28,000 to reflect a reduction in arsenic treatment costs in Locke Lake associated with the Airport well interconnection.
- (5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"
- (6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 5.5% that was not recovered in DW17-128
- (7) QCPAC percent revenue surcharges based on increase in revenues from the previous year, inclusive of the QCPAC surcharges
- (8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWW-PEU Interconnection in the amount of \$ 180,500
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128
- (10) QCPAC operating expense proforma associated by property taxes is reduced by \$ 70,000 to reflect reduction in purchased water costs associated with the completion of the Londonderry Storage Tank

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$	20.70
Average Single Family Consumption (CCF) -		7.29
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$	7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$	75.45

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
2018 Capital Expenditures  
Revised 3/22/2019 Per Staff DR 1-5

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPLUC Order No.	Date of NHPLUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project Cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue <sup>2</sup>	Replace 5400 linear feet of existing 12" then wall HDPE water main with new 16" diameter ductile iron water main	1701084 & 1807569	DW17-055	26,006	4/10/2017	\$ 379,600	\$ 398,000	\$ 618,943	Derry	Yes	Yes	\$ 26.99	\$ 18,035	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" then wall ductile iron water main with high break history through swamp with 12" HDPE.	1701088 & 1807572	DW17-055	26,006	4/10/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU/PWU Interconnection	Interconnect PEU to PWU under Maybrook Run	See Below	DW17-055/Pending Filing <sup>7</sup>	26,006	4/10/2017	\$ 3,300,000	See Below		Merriam/Litchfield	Yes	Yes	\$ 27.88		
PEU/PWU Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608928, 1701789	See above	See above	See above	\$5 Included above	\$ 3,315,850	\$ 3,435,906	Merriam/Litchfield	Yes	Yes	\$ 27.88	\$ 95,793	
PEU Contribution toward PWU water main upgrade: PEU/PWU Interconnection Station Building & Construction	Interconnecting Water Main - Owned by PWU (50% PEU paid portion)	1807188	See above	See above	See above	\$5 Included above	\$ 33,925	\$ 33,925	Merriam/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWU asset. PEU contribution to the PWU asset per NHPLUC Order #36,049 in DW17-073.
	Destroy Station, including purchase of building and assets from PWU	1811705					\$ 340,000	\$ 339,864	Merriam	Yes	Yes	\$ 28.02	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Corrective Action Plan	1811409	DW18-112			\$ 100,000	\$ -		Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge.
Alamogordo Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing <sup>7</sup>			\$ 330,000	\$ -		Alamogordo	Yes	Yes	\$ 22.35	\$ -	Project deferred due to Engineering resources being devoted to design (Hillcrest/Litchfield PEU's facilities)
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (pri. rate) (2)	765-723 workorders	Pending Filing <sup>7</sup>			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace failed CWS treatment systems. Install new CWS treatment system if water quality or standards requires it.	n/a	Pending Filing <sup>7</sup>			\$ 25,000	\$ 5,000		Various	Yes	Yes	\$ 27.72	\$ -	
Max. Structural Improvements	Repair/replace aging/faded station structures as needed	n/a	Pending Filing <sup>7</sup>			\$ 20,000	\$ -		Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Painting and Security projects	Install (structure security) facilities as needed	n/a	Pending Filing <sup>7</sup>			\$ 10,000	\$ -		Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing <sup>7</sup>			\$ 30,000	See Below		Various	Yes	Yes	\$ 27.72	\$ -	2 minor VFD failures are corrected through year end.
Miscellaneous SCADA/Electrical	Replace Pump #1 VFD at Cardle Reach	1819462	Pending Filing <sup>7</sup>			\$ 3,944	\$ 3,944	\$ 3,944	Various	Yes	Yes	\$ 27.72	\$ 109	
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&E	1816365	Pending Filing <sup>7</sup>			\$ 3,013	\$ 3,013	\$ 3,013	Various	Yes	Yes	\$ 27.72	\$ 84	
Miscellaneous SCADA/Electrical	Replace Pump #3 VFD at Cardle Reach	1817058	Pending Filing <sup>7</sup>			\$ 4,145	\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818256	Pending Filing <sup>7</sup>			\$ 2,439	\$ 2,439	\$ 2,439	Various	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Rehab wells as necessary to restore efficiency as needed	n/a	Pending Filing <sup>7</sup>			\$ 60,000	\$ 15,000		Various	Yes	Yes	\$ 27.72	\$ -	Only one reported well rehab to complete 2018 vs. 4 in budget.
1 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing <sup>7</sup>			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing <sup>7</sup>			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	8 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing <sup>7</sup>			\$ 10,000	\$ 10,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing <sup>7</sup>			\$ 30,000	\$ 12,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
75 New Meters (gas/well) 5/8" - 2"	New meters for new customers	750 workorders	Pending Filing <sup>7</sup>			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,953	331 replacements through December 31, 2018 inclusive of new and replacement meters
710 New Meters for Lead Meter exchanges 5/8" - 6"	Replace High Lead Meter (meter with new no lead brass meter)	750 workorders	Pending Filing <sup>7</sup>			\$ 144,000	\$ 143,400		Various	Yes	Yes	\$ 27.72	\$ -	
Radio Reads	New and replace radio for meter reading (125)	754 workorders	Pending Filing <sup>7</sup>			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	240 Radio replacements were completed through December 31, 2018
Investment in Developer Installed Services	One time revenue (unified amount) (\$7)	n/a	Pending Filing <sup>7</sup>			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,336	Repaired by T&E. Not in 2018 Budget approved Budget
Insertion Valve Install	Installation of Insertion Valve on 16" Main MWU	1825441	Pending Filing <sup>7</sup>			\$ -	\$ 25,000	\$ 25,000	Londonderry	Yes	No	\$ 26.15	\$ -	MWU was going to shut service off for all at Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry
Olderose Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drums contained in smaller transportable containers	1817322	Pending Filing <sup>7</sup>			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701077	Pending Filing <sup>7</sup>			\$ -	\$ 6,285	\$ 6,285	Weymouth	Yes	Yes	\$ 27.57	\$ 173	
Locke Lake, Various Ref Apps	Locke Lake, Various Ref Apps - Cleanup and final Paving	1701078, 1800536, 1817280	Pending Filing <sup>7</sup>			\$ -	\$ 94,050	\$ 94,050	Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1700701	Pending Filing <sup>7</sup>			\$ -	\$ 6,636	\$ 6,636	Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Total 2018 Board Approved PEU Capital Expenditures						\$ 4,824,100	\$ 5,179,004	\$ 5,199,427					\$ 142,446	
							PEU-QCPAC	\$ 5,179,004						

Amount to be funded with 2019 Loan from CoBank<sup>1,3</sup> - \$ 1,297,380  
Amount to be funded SRF loan for Brady Avenue watermain replacements<sup>4</sup> - \$ 570,000  
Amount to be funded SRF loan for PWU/PEU Interconnections<sup>5</sup> - \$ 2,400,000  
Amount to be funded SRF loan for Hillcrest Road watermain replacements<sup>6</sup> - \$ 242,047  
Amount to be funded with Drinking Water and Groundwater Trust Fund Grants - \$ 600,000  
Total Projected 2018 QCPAC P&L - \$ 280,190

Projected Annual P&L  
Payments  
\$ 96,719  
\$ 23,215  
\$ 146,210  
\$ 147,46  
\$ -  
\$ 280,190

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000  
2. Projected CoBank Loan Terms are 25 Years at 5.5%

3. Projected Brady Ave. SRF Terms are 30 Years at 1.06% with 10% Principal forgiveness  
4. Projected PWU/PEU Interconnections SRF Terms are 30 Years at 1.06%

5. Projected Hillcrest Road SRF Terms are 30 Years at 1.06%  
6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total project budget estimated at \$ 570,000 exclusive of initial engineering costs

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fund Asset Line of Credit (FALOC) approved at DW17-137. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.

Pennichuck East Utilities, Inc.

DW 19-xxx

2019 QCPAC Filing

Board Approved 2019 Capital Expenditures<sup>3</sup>

2/15/2019

Exhibit DLW-1

Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Replace Gilcrest Road PRV Pit	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 26.15	\$ 2,877
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Atkinson Booster pump station design	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.57	\$ 276
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500 Projected annual property tax expenses for QCPAC eligible projects - \$ 75,354

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment - \$ 2,391,500

Funded with SRF Funds - \$ 1,512,500

Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 879,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are

25 Years at 5.5%

5. Projected SRF Terms for Locke Lake project are

20 Years at 2.704%

Pennichuck East Utilities, Inc.  
DW 19-xxx  
2019 QCPAC Filing  
Board Approved 2020 Capital Expenditures<sup>3</sup>  
2/15/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 26.15
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment	Intake & Treatment Facility construction	\$ 2,400,000	\$ 2,800,000	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 3,670,580 \$ 4,770,580  
Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -  
Funded with CoBank Loan - \$ 1,970,580  
Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are  
25 Years at 5.5%
5. Projected SRF Terms for Locke Lake project are  
20 Years at 2.704%

Pennichuck East Utilities, Inc.  
DW 19-xxx  
2019 QCPAC Filing  
Board Approved 2021 Capital Expenditures<sup>3</sup>  
2/15/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ 251,680	\$ 251,680	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ 102,960	\$ 102,960	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ 248,820	\$ 248,820	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ 619,300	\$ 619,300	Plaistow	Yes	\$ 30.00
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 1,750,760  
 Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment -  
 Funded with CoBank Loan - \$ 1,750,760

Projected Property Tax Expense associated with  
 QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-6

Date of Response: 4/23/19  
Witness: Donald L. Ware

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**REQUEST: Ref. Commission Order No. 26,189 in DW 18-132**

The original estimated, and approved, cost of replacing the Georgetown main was 7,800 linear feet at \$975,000. In the 2019 CAPEX list in DLW-1, the Company is now estimating the Georgetown main project cost to be \$619,300. Please explain this difference in cost and please provide an updated estimated total for the main replacement in the Georgetown area, if available.

**RESPONSE:** Replacement of water main in the Georgetown Drive area includes main replacement on Georgetown Drive, Bradford Lane, North Barnstead Road, and Belmont Drive. Each are identified separately in DLW-1. The original estimate for main replacement in the Georgetown Drive area was \$975,000 and included the streets listed above. Additional evaluation after Order No. 26,189 by the Company now estimates the water main replacement in the Georgetown Drive area to be \$1,072,500 consistent with DLW-1.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 2

Date Request Received: 4/11/19  
Request No. Staff 2-7

Date of Response: 4/23/19  
Witness: Donald L. Ware

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**REQUEST: Ref. Commission Order No. 26,189 in DW 18-132**

The original estimated, and approved, cost of the Locke Lake Surface Water Project was \$2,865,000. Please indicate whether the Company is on track to meet this cost estimate. If not, please provide an updated estimate for this project, if available.

**RESPONSE:** Engineering analysis and the pending results of the treatability study (pilot testing) soon to be completed indicate that the current estimate of \$2,865,000 remains reasonable pending future permitting and final design.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-1

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Exhibit DLW-1, Page 1 – Per Staff 2-5 – QCPAC Revenue Requirement Calculations:** Based on the Company's computations, it appears that from 2019 to 2020 the projected cumulative QCPAC percentage approximately doubles from 3.27% to 6.22%. It also appears that between 2020 and 2021 the Company is projecting another relatively substantial increase in the cumulative QCPAC percentage from 6.22% to 11.52%. Please discuss how the Company might mitigate these projected increases in the cumulative QCPAC percentage that are anticipated to occur in 2020 and 2021.

**RESPONSE:**

Unfortunately, the largest portion of each of the next three year's QCPAC are related to regulatory compliance as follows:

2018 Capex – Total of \$5,179,004 of which \$3,809,695 was associated with the PWW to PEU interconnection under the Merrimack River to meet the required source of supply requirements for Litchfield. Without the need to complete this interconnection the projected QCPAC increase would have been about 0.84% vs. 3.27%

2019 Capex – Total of \$2,391,500 of which \$1,083,500 is associated with the replacement of substandard leaking watermain at Locke Lake and \$440,000 is associated with the installation of the raw water line from the Airport Station to the Peacham Treatment plant. The \$1,083,500 invested in water main replacement is necessary to get the unaccounted for water to less than 15% in this water system. The water main being replaced is Schedule 40 PVC water main with glued joints. This water main was installed by the original developer in the 1970's and is not approved by the American Water Works Association for use as water main. The existing water main is meant for use as drain/waste/vent piping inside a home. Due to the shortage of water supply in this water system it is essential that the water lost from this type of water main is recovered in order to limit the amount of additional supply that the Company must develop to comply with the Corrective Action Plan that the NHDES has imposed on this water system. With the completion of the 2019 planned water main replacements the Company will have replaced a total of about 70,100 LF of a total of 94,000 LF of substandard water main.

Regarding the \$440,000 projected for the interconnection of the Airport well to the Peacham Plant this investment is driven by the pending change in the Arsenic Standard from 10 parts per billion to 5 parts per billion. In late 2018 the Company had to increase the frequency of the media changeouts at Locke Lake from 4 times per year to 12 times per year. Each change out



costs about \$5,250. The change in the frequency of changeouts will result in an additional arsenic treatment expense of about \$42,000 per year over the 2018 expense of about \$21,000. The annual treatment expense of \$63,000 for 2019 will be replaced with a treatment expense of about \$5,000 per year at the Peacham treatment plant plus 1.1 times the principal and interest expense associated with borrowing \$440,000 to complete this project. The \$31,649 of principal and interest expense (includes the 10% over cover) will result in a total expense of \$36,649 or an annual expense savings of about \$26,000 per year.

The remaining \$879,000 of proposed work in 2019 is mostly maintenance capital that can not be deferred. Of the remaining projects, the Rolling Hills water main replacement and the radio replacement are the only projects that could possibly be deferred. The Company would not recommend deferring the replacement of the Rolling Hills water main as a recent repair of this water main puts this water main under the deck of an existing home and in close proximity to the foundation of that home. A water main break in the vicinity of this home could create substantial damage to the home. The Company plans to defer about \$47,000 of the proposed radio replacement program in this budget.

If the Locke Lake water main replacement work (not including the Air strip alternative arsenic treatment main) were not included, the projected QCPAC increase would have been about 1.40% vs. 2.85%

2020 Capex – Total of \$4,770,580 of which \$1,393,580 is associated with the Company's share of the construction of the Londonderry Tank and \$2,800,000 is associated with the new source of supply and treatment of that supply for Locke Lake. The first project is a contractual upgrade necessary to meet the supply needs of Londonderry. The second project is required by the NHDES as part of a Corrective Action Plan.

The remaining \$577,000 of the proposed work in 2020 is mostly maintenance capital that can not be deferred. The Company could defer about \$47,000 of the proposed radio replacement program in this budget.

2021 Capex – Total of \$1,750,760 of which \$603,460 is allocated to the replacement of 4,300 LF of 2" substandard HDPE water main in Gage Hill. This water main has broken 43 times over the past 7 years. There is also \$619,300 of water main replacement work associated with the replacement of water main in Rolling Hills. There have been 14 main breaks on the Rolling Hills water main over the past 7 years. The Rolling Hills water main replacement project could be deferred for a number of years if necessary.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**

**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-2

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Exhibit DLW-1, Page 2 – 2018 Capital Expenditures:** With regard to the financings associated with the 2018 Capital Expenditures, ie, 2019 CoBank Loan, Brady Avenue SRF Loan, PWV/PEU Interconnection SRF Loan, Hillcrest Road SRF Loan, please provide the respective repayment terms for each loan specifically with regard to repayment frequency and level of principal and interest payments.

**RESPONSE:**

2019 CoBank Loan has not yet been finalized. Expected terms are 25 years @ 5.5%. Payments are monthly. Projected monthly payment of \$8,059.90.  
Brady Ave. SRF Loan. Terms are 30 years @ 1.96% with 10% principal forgiveness. Payments are monthly. Projected monthly payment of \$1,934.62 after principal forgiveness.  
PWV/PEU SRF Loan. Terms are 20 years @ 1.96%. Payments are monthly. Projected monthly payment of \$12,184.18.  
Hillcrest Road SRF Loan. Terms are 20 years @ 20 years @ 1.96%. Payments are monthly. Projected monthly payment of \$1,228.81.

**Pennichuck East Utilities, Inc.**

**DW 19-035**

**2019 QCPAC - Qualified Capital Project Adjustment Charge**

**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-3

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Exhibit DLW-1, Page 3 – 2019 QCPAC Additions; Rolling Hills Water Main Replacement Project - \$150,000:** The estimated cost per linear foot for the Rolling Hills main replacement project appears to be \$214/LF ( $\$150,000 \div 700 \text{ LF}^*$ ). The estimated costs per linear foot of other 2019 main replacement projects are as follows: Georgetown Drive - \$135/LF; Bradford Lane - \$139/LF; North Barnstead Road - \$138/LF; Belmont Drive - \$136/LF. Please provide a detailed explanation as to why the estimated cost per linear foot for the Rolling Hills main replacement project is higher than that of the other anticipated 2019 main replacement projects. (\*700 LF was obtained from Page 43, Line 3 of Mr. Boisvert's testimony)

**RESPONSE:**

The unit costs cited above are estimates. The Company applies historical bid values and adjust them for the current bidding climate as necessary and then considers other unique/specific factors associated with the project and adjust the estimate accordingly. The request compares streets combined into a relatively large project at the Locke Lake water system in Barnstead to a relatively small project in the Rolling Hills water system in Plaistow. The Company anticipates lower per foot contractor mobilization costs for the larger project and higher unit price estimates costs for the smaller project. In addition, there are two other factors to consider. The Rolling Hills water main will be replaced under pavement where the Locke Lake water main is within a gravel road resulting in higher restoration costs. The other consideration is that some of the existing water main to be replaced is outside of the roadway on private property. The Company discovered this situation while investigating a potential leak and discovering the leak under a customer's porch/deck. The records provided by the previous owner of the Rolling Hill water system are lacking enough information to accurately locate the existing small diameter water main. There will need to be a considerable exploratory effort during construction to ensure that the water main on private property is replace to within the roadway and house services are reconnected. This is a time-consuming process for the contractor. Thus, unit price estimates are higher for the Rolling Hills project than Locke Lake because of this as well.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-4

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Mr. Boisvert's Testimony; Page 45; Line 18:** Mr. Boisvert indicates that the estimated cost of the Gilcrest Road PRV Pit in 2019 is \$150,000. However, Exhibit DLW-1, Page 3 indicates an estimated cost for this project of \$110,000; a difference of \$40,000. Please provide a detailed explanation regarding the reason for this difference.

**RESPONSE:**

The \$150,000 value was incorrectly pulled from the next budget line down. The correct value is \$110,000.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-5

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Page 5 of NHPUC Audit Report issued on April 18, 2019:** With regard to the PEU-PWW Interconnection Project and Work Order # 1807155 in the amount of \$2,979,915, it is indicated that this amount includes \$83,544 in AFUDC based on a rate of 3.69%.

- a) Please provide a detailed explanation with regard to the reasoning behind including AFUDC in the cost of this project.
- b) Please provide a detailed explanation regarding the basis for the 3.69% rate upon which the AFUDC amount was derived.
- c) Does the Company intend to adjust the debt service payment associated with this project relative to the amount of AFUDC included in the project cost? Please explain.
- d) Please indicate any other projects and/or workorders relative to the Company's proposed 2018 capital projects which include AFUDC. Please provide the specific AFUDC amounts as well as the percentage rate(s) upon which they were derived.

**RESPONSE:**

- a) AFUDC is needed to pay for the short-term interest on the funds borrowed from its Fixed Asset Line of Credit (FALOC) to complete a project that takes an extended period of time to complete. The Company has always calculated AFUDC on projects that were going to cost more than \$50,000 and take more than 3 months to complete. The purpose of AFUDC is to provide a return on funds invested in a project prior until the project becomes used and useful and is incorporated into rate base. The AFUDC process is a holdover from the old rate making methodology and the Company believes its calculation should be replaced with actual short-term interest incurred during a project.
- b) The rate used for AFUDC has always been the last found rate of return for the Company based on its most recent rate case. The AFUDC rate of 3.69% matches the Company Rate of return found in DW17-128.
- c) It would be the Company's intent to fund the AFUDC via the CoBank loan.
- d) No other projects completed in 2018 met the criteria for including AFUDC. The Company believes that it would be more appropriate for the Company to pay for the short term interest incurred on its FALOC and the SRF loans in lieu of including the AFUDC as the interest expense incurred on these short term interest vehicles that are used to fund long term capital projects has a lower cost than AFUDC and reflects the actual expenses incurred by the Company (see response to Staff 3-6 below). The Company proposes to fund the short-term interest expense associated with its capital expenditures via one of two methods:

- a. Pay for the short-term interest incurred with the 0.1 DSRR funds.
- b. Capitalize the interest incurred on the FALOC and SRF loans into the long-term bond issued to pay off the FALOC.

Please note that the Company's rate structure's only free cash flow is from the 0.1 DSRR. There is no other source of cash to pay the short-term debt associated with FALOC which is used to fund capital projects until they are complete and can be bonded for.

The AFDUC calculated on the PWW/PEU interconnect is \$95,807. As the QCPAC is presently structured, the \$95,807 of AFUDC is included in the proposed CoBank loan of \$1,297,380. If the Company was allowed to cover the short-term interest costs associated with the FALOC and SRF loans (estimated to be about \$63,426), the amount of the CoBank loan would be reduced by \$32,381 to \$1,264,999.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-6

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: Company's response to Staff Data Request 1-7:** For purposes of illustration, please provide the projected impact on the Company's proposed 2019 QCPAC under a scenario that provides for the inclusion of the capitalized interest incurred under the FALOC for the Company's 2018 QCP's. Please detail all relevant calculations.

**RESPONSE:**

The Company has borrowed a total of \$1,297,380 to fund capital improvements that were completed and used and useful in 2018. The interest incurred on that loan amount to date is about \$16,472 (through 3/31/2018). The interest on the FALOC will continue to accumulate until the 2019 CoBank loan sought in DW19-069 is approved and that note can be closed on and the cash used to paydown the FALOC. Interest on this outstanding short-term debt continues to accrue at a rate of about \$4,525 per month. Assuming a June closing on the CoBank long term note, the interest expense on the CoBank FALOC will be about \$43,622. Additionally the Company paid a total of \$19,803 in short term interest to the NHDES on the Brady Ave., Hillcrest Ave. and PWW/PEU SRF loans. If the Company was able to capitalize this interest and include it in the CoBank loan, it would mean borrowing about an additional \$63,425 for 20 years (assumes a June loan closing) at an estimated rate of 5.5% (rate will not be known until the loan closing). This would result in an additional annual principal and interest expense of about \$5,307 with a resultant additional revenue requirement of \$5,838 per year (based on 1.1 multiplier). This additional revenue requirement would be offset by the elimination of the AFDUC of \$95,807 from the proposed CoBank loan which would result in a reduced revenue requirement on that debt of about \$8,819 resulting in a revenue reduction of about \$2,981.

Please note that at this stage the Company does not have the regulatory authority to capitalize this interest or the ability to borrow these additional funds in the CoBank financing. The interest incurred on the 2018 Capital Expenditures through the FALOC borrowings will be paid for with the 0.1 Debt Service Reserve funds collected during 2019 (the new rate structure with 0.1 DSRR did not go into effect until November of 2018). The projected 0.1 DSRR funds expected to be collected during 2019 will be about \$141,000.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-7

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Staff 1-8 and Staff Audit Report dated April 18, 2019**

Please justify why it is just and reasonable that PEU's ratepayers should bear the cost of \$25,000 related to the installation of an insertion valve in the PEU Londonderry Core and Manchester Water Works (MWW) connection, which MWW will ultimately own?

**RESPONSE:**

I have attached the response to Staff 1-8 as part of this response:

"The Company was contacted on a Monday that Manchester Water Works (MWW) had a broken hydrant lateral located on the 24" transmission main that provided water to the Town of Londonderry. The repair of the lateral was going to require that flow to the Town of Londonderry be shut down while the repair was being made. Manchester informed the Company that they planned to shut down their water system, and the flow to the Town of Londonderry, on Wednesday of that week (with the caveat that they would shut down earlier if the leak got worse) to complete the repair. MWW was holding off on the required repair to allow the Company to notify the Town of Londonderry that it would be without water from an 8 to 12-hour time frame Wednesday during the daytime. Whereas the Londonderry core system has no gravity storage and all flow into the system is pumped, the proposed shutdown was going to result in every customer, residential, commercial, industrial, municipal and total loss of both private and public fire protection. The Company evaluated options for providing an emergency water feed to the Town of Londonderry with temporary pumping from the Town of Derry water system. The temporary water feed from the Town of Derry water system could provide sufficient domestic water for Londonderry but not sufficient fire protection flows. If the planned shutdown occurred (even with the temporary water feed from the Town of Derry), it would have required Londonderry's High School, Middle and Elementary Schools to close for the day due to insufficient fire protection. It would also have required the closing of any commercial or industrial facility in the Londonderry core water system with private fire protection. As such, the Company requested that MWW consider a night time shut down to limit the impact on businesses and the Town. MWW informed us that a night time shutdown was not possible for various reasons. In reviewing the planned shutdown with MWW, it became evident that the installation of a main line 24" valve would allow for MWW to complete the required hydrant lateral repair but not to have to shut down the feed to the Londonderry core water system. MWW and the Company negotiated an arrangement where MWW would perform the excavation, backfill and surface restoration of the excavation required to install a 24" insertion



valve. The Company, for its part, provided the parts and crew to complete the valve insertion. The final costs of the project were shared as described above.”

If the Company had not been willing to contribute to the valve in the MWW system, then MWW would have performed the shutdown as planned which would have resulted in school and business closures. MWW’s only direct customers impacted were residential customers which MWW had no problem shutting down for an 8 to 12-hour time frame. MWW’s position was that it was the Company’s problem to deal with the loss of service to the Company’s Londonderry customers. Per the response to Staff 1-8, the Company determined that the best way to provide service to the Town of Londonderry was partnering with MWW to install a valve in MWW’s system that would allow the MWW shutdown to occur without impacting the Company’s Londonderry customers.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-8

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: 2018 Budget for Capital Projects Approved by Order No. 26,228**  
Please explain further the variance in the meter costs, both new and replacement, from that approved in the above-mentioned Order and the instant filing.

**RESPONSE:**

The Company budgeted a total of \$166,599 for new/replaced meters. The Company ended up investing a total of \$70,429 in 2018 in new and replacement meters. The Company fell 263 meters short of its budgeted new/replacement meter goal. This difference in meter count accounted for about \$50,000 of the difference between actual expenses incurred in 2018 and the budgeted dollars. The remaining difference between actual and budgeted expenses is because the labor associated with the meter replacements/exchanges was capitalized in the budget when it should have not been. The labor associated with the meter replacements/exchanges was expensed, not capitalized during 2018, which accounts for the remainder of the difference between the actual dollars budgeted in 2018 versus the actual dollars the Company is seeking to recover for capital investments.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC - Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 3

Date Request Received: 5/9/19  
Request No. Staff 3-9

Date of Response: 5/21/19  
Witness: Donald L. Ware

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**REQUEST: Re: 2018 Budget for Capital Projects Approved by Order No. 26,228**  
Please explain further the addition of 3 projects to the instant filing; Hardwood New Source, Locke Lake Varney Road Paving, and Locke Lake Well #14 VFD. Those projects total \$108,944 and were not included in the list of projects approved by Order No. 26,228.

**RESPONSE:**

The following is the reason for the 3 additional projects:

1. Hardwood New Source – This was a project which begun in 2016 and was used and useful and completed in late 2017. A total of \$164,949 of investment in this project was recovered in the Step increase granted in DW17-128. A bill from the electrician for this project in the amount of \$6,285 was received in late 2017 and was not incorporated into the step increase for recovery. The \$6,285 expense was paid for in 2018. This carry over expense was missed as a carryover expense in the 2018 capital budget. In the QCPAC filing preparation, these uncovered capital expenses were discovered during the work order review process and included for recovery in the 2018 QCPAC.
2. The Locke Lake Varney Road was a project which begun in 2016 and became used and useful in 2016 and the costs associated with this project were recovered as part of the permanent rate increase granted in DW17-128. A portion of the project was a payment to the Town of Barnstead as contribution to the paving of Varney Road by the Town in the amount of \$94,050. This amount was not recovered through the SRF loan that funded this project. In the QCPAC filing preparation, these uncovered capital expenses were discovered during the work order review process and included for recovery in the 2018 QCPAC.
3. The \$8,608 invested in the Lock Lake Well #14 VFD project occurred in the fall of 2018. This project was not anticipated in the Winter of 2017/18 when the Board of Director's approved the 2018 Capital Budget. This project allows for water to be drawn from Well #14 at varying rates based on the well draw down which allows for the maximum amount of water to be withdrawn from this well. Maximizing the water withdrawal from this well is essential for this water system to have sufficient water supply for domestic usage.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 3**

Date Request Received: 5/9/19  
Request No. Staff 3-10

Date of Response: 5/21/19  
Witness: Donald L. Ware

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REQUEST: Pursuant to *Pennichuck Water Works, Inc.*, Order No. 26,070 at 9, n. 4 (November 7, 2017), “[t]he evaluation of prudence of the individual projects takes place in the following year’s QCPAC proceeding.” (referring to the year subsequent to budget approval). Staff contends that the prudence review for previously completed projects that the proposed current-year’s QCPAC charge is based upon requires more than Audit Staff’s verification that the costs associated with the projects were prudent. That is supported by inclusion of and Staff’s reliance on engineering reports in past dockets, verifying the project’s prudence. *See* Staff Recommendation of February 15, 2018, (Docket No. DW 17-179) at 16-19.

In the interest of supplementing the record, please explain the Company’s position on the prudence of the 2018 capital projects which the 2019 QCPAC surcharge is based upon. While assumed, please verify that the Company argues all of the projects completed in 2018 were prudent and provide a specific argument justifying that position.

RESPONSE:

The Company verifies that all projects that were completed in 2018 were prudent. In referring to the 2018 QCPAC, PEU additions tab known as Exhibit DLW-1, Page 2 the Company’s position on the prudence of each project, in order, is as follows:

1. Brady Ave. watermain replacement project – This project resulted in the replacement of about 2,400 lineal feet of undersized, non AWWA standard HDPE watermain that averaged about 2 leaks per year. This project was completed in conjunction with the Town’s rebuilding of Brady Ave. Failure to complete this project would have resulted in numerous expensive repairs of a newly constructed road. Additionally, this project was funded with NHDES SRF loan funds meaning that it met the NHDES’ criteria for funding.
2. Hillcrest Road watermain replacement project – This project resulted in the replacement of a section of thin wall ductile iron water main installed in “hot” soils. Several repairs were completed on the replaced section of water main over the past years. Each repair showed progressive levels of outside pitting on the water main. The size and spread of the pitting was indicative of increasing risk of large scale, catastrophic failure of this water main. Additionally, this project was funded with NHDES SRF loan funds meaning that it met the NHDES’ criteria for funding.
3. PWV-PEU interconnection project – The project need was documented in detail in DW17-071, the special contract for PWV-PEU Wholesale water. Additionally, this

project was funded with NHDES SRF loan funds meaning that it met the NHDES' criteria for funding as well as a grant from the State Drinking Water and Groundwater Trust Fund.

4. Booster/Well/Chem Feed pump replacements – replaced 21 failed pumps. When a pump fails, it must be replaced. The Company runs all of its small pumps to failure and only replaces on an as needed basis. If the failed pumps were not replaced, proper water pressure, water flow and water quality would not be maintained to our customers.
5. Replace failed Variable Frequency Drives (VFD's) on pump #4 and #5 at Castle Reach and pump #2 at W&E. We run all small pump VFD's to failure and only replace on an as needed basis. If the failed pump VFD's were not replaced, proper water pressure and flows would not be maintained to our customers.
6. Replace failed well pump #13 at Locke Lake. We run all small well pumps to failure and only replace on an as needed basis. If the failed well pump was not replaced, it would result in insufficient water being available to meet customer water supply needs.
7. New Service, main to stop installed to Single Family, Owner built, residential homes – This type of service installation is required by the Company's tariff per "First Revised Page 28, Para. 19.B.1.a.".
8. Renewed Services – This is the renewal of the main to stop portion of a customer service which is owned by the Company. The Company renews failing services as needed to eliminate leakage and insure continuity of service to its customers.
9. New Meters – The Company's tariff, per "Original Page 30, Para. 22.C.2", is required to provide and install water meters for its new customers.
10. New Meters for Lead Meter Exchanges – The Company is required to pull and test meters by NHPUC rule and regulation. Per EPA regulations, when a meter with brass that has a high lead content (all meters manufactured prior to 2002) is taken out of service, it must be replaced with a new lead-free brass meter. The majority of meters pulled for testing in 2018 were mostly brass with high lead content which meant those meters had to be pulled from service and replaced with new lead-free brass meters.
11. New and replacement Radio Meter interface units – These units are required to read the Company's meters. The Company must provide these units with each new meter install as well as replacing radio units that have failed during the year.
12. One-times annual revenue investment in new water main installations. This investment is required by the Company's tariff per "First Revised Page 36, Para. 33.B.2 through Para. 33.B.4.".
13. Insertion valve – The prudence and necessity of this valve installation is detailed in the response to Staff DR 3-7 above.
14. Harwood New Source – This water system had insufficient raw water supply to meet the customers needs. The existing wells had lost capacity gradually over several decades. The new well restored the total well capacity at this system back to its original level. Without this new well, this water system would have had insufficient supply to meet the needs of the existing customers.
15. Locke Lake Varney Road paving – This paving work was required by the Town of Barnstead as part of the Road Opening permit issued by the Town to allow the Company to replace the water main along Varney Road.
16. Lock Lake Well #14 VFD - This project allowed for water to be drawn from Well #14 at varying rates based on the well draw down allowing the maximum water to be withdrawn

from this well. Maximizing the maximum withdrawal from this well is essential for this water system to have sufficient water supply for domestic usage.

In closing, one of the Company's best arguments for prudence is that there is not benefit gained by the Company for overinvesting or investing poorly. With no equity investment there is no profit and no incentive to create a bottom line by accelerating capital investment or making poor investments. The Company does not issue any bonuses or pay any dividends that would incentivize employees to make recommendations for investment in capital that:

1. Does not provide the water quality, water quantity and water pressure required by rule, regulation and customer expectations.
2. Does not Provide for timely and good customer service.
3. Is not designed to replace aging infrastructure in a timely fashion.
4. Is not selected through a bid or proposal process where the lowest responsible bidder is awarded the work.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-1

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing Staff Tech-1 2<sup>nd</sup> Supplemental Response dated August 12, 2019**  
Will the Company, as part of the 2020 QCPAC surcharge, or any other concurrent or future docket before the Commission, request to “reimburse” the .1 DSRR for the \$55,757 in any way?

**RESPONSE:** No. The Company will not be seeking to reimburse the 0.1 DSRR account for those monies at any point in the future. Those monies were used from that fund as payment towards project costs not being funded from the QCPAC, as is allowed under the current rate structure from that fund.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-2

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**  
Please explain the increase in cost of the Airstrip Well Raw Water Transmission Pipeline that was indicated as Board Approved at \$440,000 and is now estimated to cost \$540,000.

**RESPONSE:** The current estimated cost for the Airstrip Well Raw Water Transmission pipeline is \$595,088. The additional \$155,088 reflects the following:

1. \$55,088 – This project's estimated share of 2018 engineering and surveying costs, as well as projected inspection costs further detailed in the response to Staff 4-3.
2. \$100,000 – Increase in engineer's estimated project cost resulting from completion of the detailed plans.

This project will be going to bid in the early fall and will be constructed during the winter of 2019/2020. The project will not be used and useful in 2019. The estimate of the final project cost will be reassessed and "trued up" once the bids for this project are opened.

The 2019 PEU QCPAC 6-30-19 update spreadsheet has been updated and attached to reflect the most current knowledge regarding this project.



**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
2019 QCPAC – Qualified Capital Project Adjustment Charge  
Responses to Staff Data Requests – Set 4

Date Request Received: 8/16/19  
Request No. Staff 4-3

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**

- a) Please provide further explanation regarding the \$164,500 in additional costs allocated to the following 2019 main replacement projects: Georgetown Drive, Bradford Lane, N. Barnstead Road, Belmont Drive.
- b) Please explain why it appears that SRF funding will not be financing these project increases.

**RESPONSE:**

- a) The \$164,500 were funds expended for the 2019 watermain replacement projects, inclusive of the Airstrip Alternative arsenic treatment project is broken down as follows:
  - i. Survey work – \$30,000
  - ii. Design Engineering – \$50,000
  - iii. Projected Engineering Inspection – \$84,500

Please note that these funds need to be further divided between the 2019 Water main projects and the Airstrip alternative arsenic treatment project. The final assignment and allocation of these shared expenditures between the four water main replacement projects and the airstrip alternative arsenic treatment project will occur at year end. Any expenses allocated to the Airstrip project will not be recoverable in the 2020 QCAPC charge because that project will not be used and useful in 2019.

- b) The total SRF loan of \$4,240,000 was divided into three separate tranches as follows:
  - i. Locke Lake Watermain Replacement project - \$1,100,000
  - ii. Locke Lake Airstrip project - \$540,000
  - iii. Locke Lake New Source Development project - \$2,600,000

At present, it is expected construction costs for the Locke Lake water main replacement project will exceed \$1,100,000. To the extent that the SRF loan allows for an amendment to reallocate the overall approved SRF loan amount between the three tranches, the excess costs for the Locke Lake water main project will be covered by the SRF loan. However, if that is not allowable under the terms of that SRF loan,

the additional expenses will need to be funded through the usage of the Company's FALOC with CoBank, and subsequently refinanced with the annual term loan with CoBank (that is entered into annually to repay the FALOC drawdowns).

The 2019 PEU QCPAC 6-30-19 update has been corrected to reflect borrowing the full \$1,100,000 in SRF loans. The update has also allocated projected \$164,500 of additional expenses ratably between the four Locke Lake watermain replacement projects and the Airstrip alternative arsenic treatment project.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-4

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**  
In Staff DR 3-4, PEU specifically corrected the cost of the Gilcrest Road PRV from \$150,000 to \$110,000. The project is now estimated at \$140,000. Please explain.

**RESPONSE:** In Staff DR 3-4 the Company responded that the \$150,000 referenced by John Boisvert in his testimony was incorrect and the correct budgeted amount for this project was \$110,000. Since the initial budget was approved in early 2019 detailed design work was completed on this project in preparation of seeking bids and the engineering estimate was changed to \$140,000 to reflect the most current view of what this project will cost. The final cost estimate for this project will be updated based upon the bids that are received.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-5

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**  
There is no work order for Michells Way PRV Pit. Please provide an explanation for the addition of the project and if it was Board approved.

**RESPONSE:**

The Michells Way PRV pit has no work order as the pit was installed by a developer as part of a main extension project. The pit was not required for the developer's project, but the developer installed the pit at Pennichuck's request. Pennichuck sought to have the PRV pit installed to provide a secondary path for water from the Londonderry High Service pressure zone into the Londonderry Low Service pressure area. The pit was installed to eliminate the risk and vulnerability of a single point of connection between the High and Low pressure zones which currently exists through the Gilcrest PRV pit. The location of the two PRV pits (existing Gilcrest PRV and Michells Way) will result in hydraulic transients that will cause the pressure in the area to vary rapidly at various times of the day resulting in the South Station Booster pumps turning on and off. The work in this pit includes the installation of a PRV, a motorized over pressure valve and SCADA communications which will allow the Michells Way PRV pit to operate in tandem with the Gilcrest PRV pit and the South Road station in a way that will eliminate the hydraulic transients that have been creating operational problems. This connection between the High and Low pressure zones was not anticipated at the beginning of the year and hence it was not budgeted. Developer buildout made this connection possible.

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-6

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**  
Please explain how the 1x Revenue Investments Normal Run Rate in Litchfield corresponds to the QCPAC? Where is authority for this located in PEU's tariff? Please provide citation.

**RESPONSE:** Please note that the full description for this investment in the PEU QCPAC exhibit reads "1x revenue investments Normal Run Rate with two months of PFOA in Litchfield". This budget item relates to Pennichuck investing 1x annual revenue into developer installed main extensions in accordance with its tariff as detailed in Para. 33.B.2 of the tariff. The Normal Run Rate relates to the average number of services activated on developer installed water main extensions each year based on history. The "with two months of PFOA in Litchfield" refers to services being activated in Litchfield associated with the extension of water mains being paid for by Saint-Gobain to mitigate private well contamination with PFOA. The run rate for new services was estimated at 75 per year with an additional 31 services being installed in the PFOA response or a total of 106 new services at 1x annual revenue of about \$905 per customer for a total projected investment of \$96,000.

**Pennichuck East Utilities, Inc.**

**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-7

Date of Response: 8/22/19  
Witness: Donald L. Ware

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**REQUEST: Referencing QCPAC Filing Schedule dated August 12, 2019 – 2019 Additions**  
Please provide further explanation regarding the addition of the Weinstein/Dame Station Upgrades in the amount of \$108,286. By what requirement is PEU obligated to pay 15% of the cost? if this project is Board Approved? If not, please explain.

**RESPONSE:**

The Town of Hudson needed to replace the Weinstein well. The Town began work on this replacement in 2015. The Town completed the replacement in early May of 2019. The Weinstein well is owned by the Town of Hudson. Pennichuck has a right to 15% of the water delivered from this well at the variable cost of water (electricity and chemicals) per the attached purchase water agreement between the Town of Hudson and Pennichuck dated November 5, 1997, see page 4, para. 2. Per the attached agreement and per Para. 9 found on pages 7 and 8 of this contract, Pennichuck is responsible for “the cost of major repair or replacement of facilities having reached the end of useful life or having suffered a catastrophic accident or loss shall be shared by the Town and Pennichuck in proportion to the benefit each will accrue from the repair or replacement”. Since Pennichuck has a right to 15% of the water produced from the Weinstein well, it has a responsibility to pay for 15% of the replacement well. The Board approved this project as part of its 2015, 2016 (15% share of engineering design and permitting) and 2017 (15% of construction) Capital Expenditure Budgets. The Company could not seek recovery of the dollars paid to the Town of Hudson until the well became used and useful in the Spring of 2019.

**Pennichuck East Utilities, Inc.**

## WATER SUPPLY AND TRANSMISSION AGREEMENT

Agreement made and entered into this 5th day of November, 1997 ("Agreement"), by and between the Pennichuck Corporation, a New Hampshire corporation, and the Town of Hudson, a New Hampshire municipal corporation.

### I. RECITALS

1. The Town of Hudson ("Town") is purchasing the assets of the Consumers New Hampshire Water Company ("CNHWC") in order to provide a long term supply of potable water to its residents and businesses at stable and economical rates.
2. The Town has agreed to sell the CNHWC assets it is acquiring which are outside its corporate limits, except for the Wells (defined below) and the Old Derry Road main, to the Pennichuck Corporation or its assigns ("Pennichuck").
3. The Wells supply water to the Town and to customers in portions of Litchfield, Londonderry and Pelham which will be served by Pennichuck. Pennichuck will also obtain water from the Manchester Water Works ("MWW"), the Derry Water Works ("DWW") and other sources to serve the balance of its customers.
4. As an inducement to purchase the assets above, the Town will sell water from the Wells to Pennichuck to meet its immediate and medium term growth needs at a price equal to the Town's Variable Cost (defined below) of producing the water.
5. Pennichuck is party to a Special Water Supply Contract dated June 10, 1991, with Southern New Hampshire Water Company, Inc., predecessor to CNHWC, governing the emergency supply of water from Pennichuck to the Town, which contract will be acquired by the Town in the CNHWC asset sale.
6. The Town and Pennichuck will share the use of certain water storage and transmission lines to the benefit of each other. The parties further recognize the benefits of mutual support of each other's systems and the potential for the shared future use of facilities from present and future interconnections. The water storage installed in the Interconnected System (defined below) consists of a 2.0 mg tank on

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

Marsh Road and a .95 mg tank on Gordon Street.

7. It is the intention of the Town to conduct the financial operation its water facilities through a special revenue fund which recognizes principal payments of debt service as a cost instead of depreciation. This shall not limit the ability of the Town to conduct such financial operations through an enterprise fund in which interest and depreciation, but not principal payments, are recognized as expenses.
8. This being a long term agreement, the parties agree that generally accepted successor agencies and standards will be used when appropriate.
9. This agreement shall be submitted to the New Hampshire Public Utilities Commission for its approval and the parties agree to submit disputes regarding its interpretation to the Commission for arbitration, if necessary.

IN CONSIDERATION OF THE CIRCUMSTANCES ABOVE and for the mutual benefit of the customers of the Town and Pennichuck systems, the following is agreed:

II. DEFINITIONS

1. "Average Daily Flow" means the annual average daily volume of water delivered to the Interconnected System.
2. "Embedded Cost" is defined in the section titled COST CALCULATIONS.
3. "Interconnected System" means the mains, pumping stations, wells and other sources of water served by the Wells and supplemented by water from Pennichuck's Nashua system. It describes the system as it will exist at the time the asset sales between Hudson, CNHWC and Pennichuck are consummated together with additions to that system served by the same sources of water.
4. "Lines" or "Mains" shall mean the pipes used to carry water through streets, rights of way and easements to the point where service is rendered to an individual customer. Such pipes are generally four-inches in diameter or larger and do not include branches



Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

of pipes intended to carry water to large structures solely for fire protection purposes.

5. "Maximum Daily Flow" means the maximum volume of water delivered to the Interconnected System in a single day. Maximum daily flow in the Town and Pennichuck portions of the Interconnected System is obtained by allocating the total flow by the average flow in the month in which the maximum flow occurred.
6. "NHPUC" means the New Hampshire Public Utilities Commission or its successor regulatory body.
7. "Variable Cost" is defined in the section titled COST CALCULATIONS.
8. "Wells" means the Dame, Ducharme and Weinstein well fields and equipment located in the Town of Litchfield to be acquired by the Town from CNHWC and used to supply water to both the Town and Pennichuck.

### III. GENERAL CONDITIONS

#### 1. DETERMINATION OF WATER USE

The amount of water used by Pennichuck and the Town from the Wells shall be determined from the sum of the readings of the meters supplying water within the Interconnected System and adding a percentage for lost or unaccounted water, which percentage shall be determined by comparing the total metered delivery of water to the total output of the Wells plus the amount of water received from Pennichuck.

Pennichuck and the Town agree to take the maximum efforts practical to measure all water used in the Interconnected System. In addition to water to customers, this includes water used for fire fighting, flushing mains and hydrants, testing flows and newly constructed pipe, donations to any organization and any other reasonably measurable use. The parties agree to maintain leak detection programs in accordance with accepted water industry standards and to promptly repair all significant leaks detected.

In the event lost or unaccounted water exceeds 15% annually, the parties agree to meet to

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

determine if a course of action is required to reduce such loss.

The parties agree to consider alternative methods of determining both the total amount of water used and the amount of lost or unaccounted water if and when appropriate.

The Town shall have the right at its own expense to place meters at all the points where water passes to and from itself and Pennichuck and thereafter use the readings of these meters as the basis for determining the use of water by the parties. If installed, such meters shall be utility grade meters, including the meters measuring the discharge of the Wells, appropriately sized to measure the flows and arranged so as not to cause the diminishment of flow through the main to the extent that existing fire flows in a line would be diminished to below levels established as appropriate by the Insurance Services Office (ISO). Meters will be tested and calibrated based upon American Water Works Association ("AWWA") standards and specifications.

## 2. SALE OF WELL WATER

The Town will sell water from the Wells to Pennichuck for Pennichuck's further use/resale as provided herein.

The present maximum safe yield of the Wells is 3.1 million gallons per day ("mgd"). The current average daily use by the Town is estimated to be 1.4 mgd and the use within the Pennichuck systems served by the Wells is estimated to be 0.2 mgd.

Pennichuck shall have the right to an average daily use of up to 15% of the maximum safe yield of the Wells not to exceed 0.4 mgd at a price equal to Variable Cost.

## 3. WATER QUALITY

The Town agrees to operate the Wells so as to supply water meeting the drinking water quality criteria established from time to time by the U.S. Environmental Protection Agency and the N.H. Department of Environmental Services.

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

4. BILLING AND PAYMENT

The Town and Pennichuck agree to read all customer meters within their respective systems on a regular basis, at least monthly, and to promptly interchange metered consumption information in formats agreeable to each. Meter readings and consumption records of either party shall be available for inspection by the other at any time.

Individual customer history and payment records shall be treated as confidential by the parties and not revealed to third parties except as required by the statutes of the State of New Hampshire.

Each party shall render invoices to the other on a monthly basis for services rendered under this agreement. Payment of invoices shall be due on presentation and bills unpaid after thirty (30) days shall be subject to one and one-half (1-1/2%) percent interest per month on the unpaid balance from the original due date.

5. TOWN TRANSMISSION RIGHTS

The Town shall have the right to transmit water to the Town distribution system for its use through the 12" and 16" mains in the Town of Litchfield ("Litchfield Mains") provided for that purpose, following the time of the purchase of the Litchfield Mains by Pennichuck (indirectly from CNHWC), to a maximum of 2.5 mgd without charge. Should the Town wish to transmit larger amounts of water through the Litchfield Mains, it shall pay Pennichuck a wheeling charge for the excess transmission based on Pennichuck's Embedded Cost.

6. PENNICHUCK TRANSMISSION RIGHTS

Pennichuck shall have the right to use the installed elevated storage and to transmit water through the Town Mains to all lots in the Pelham Industrial Park ("PIK") without charge provided no PIK customer utilizes water for purposes of manufacturing. Pennichuck shall have the right to transmit water through the Town Mains to Pelham and other

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

adjacent non-Hudson service area customers in excess of the requirements of the existing Pelham Industrial Park for a wheeling charge to be based on the Town's Embedded Cost. The Town, at its discretion, may accept payment in service (such as the provision of storage) in lieu of payment in cash for such wheeling.

The Town shall not be required to transmit water, other than to the Pelham Industrial Park, if such transmission would degrade the service to Town customers below generally accepted utility standards or would cause the diminishment of flow through the Mains to the extent that existing fire flows would fall below levels established as appropriate by the Insurance Services Office, Inc. (ISO). If the Town decides to upgrade its Mains and transmission lines to achieve accepted standards, the Town will allow Pennichuck to make such improvements on a mutually agreeable basis which the Town will not unreasonably withhold.

Pennichuck shall not introduce water into the Town for the purposes of wheeling such water unless the water meets or exceeds the standard set forth in Section III, 3.

#### 7. INTERCONNECTIONS TO MWW AND DWW

Nothing in this agreement shall prevent Pennichuck from constructing or allowing the construction of interconnections between its portion of the Interconnected System and the Manchester Water Works ("MWW") or the Derry Water Works ("DWW") or other sources of supply; provided, however, the Town shall not be liable for any fees or charges associated with such connection without its prior, formal agreement to pay such charges.

Pennichuck shall not introduce water into the Interconnected System from an interconnection unless the water meets or exceeds the standard set forth in Section III, 3.

#### 8. SHARED WATER STORAGE

The two existing water tanks in Hudson currently provide acceptable storage and fire flows for itself and the remainder of the system served by the Wells. The Town agrees to

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

make such storage available to Pennichuck. At such time as the use of water from the Wells by Pennichuck increases, or when use in the northern part of the Town grows, in each case to the point where adequate reserve is not provided, the parties will negotiate the terms for the construction of additional storage or for a storage charge based on Embedded Cost to be paid to the Town by Pennichuck.

If Pennichuck elects to construct additional storage in Litchfield, the parties shall determine the impact on the joint systems and what, if any, charges between the parties is appropriate.

#### 9. COST CALCULATIONS

Costs as used in this agreement shall be termed Variable or Embedded depending on provisions for the recovery of capital.

Variable Cost shall be variable cost of production or operation associated with the system as a whole or any of its components. It shall include power, chemicals, routine repair parts, labor, water quality testing, parts and labor for routine servicing and preventative maintenance and all other costs normally incurred over the course of a year. Maintenance shall be considered routine if it would be normally be planned to be performed at least every two years or more often.

Embedded Cost includes Variable Costs and also the cost of capital such as debt service (construed as annual interest costs and amortization of any debt issuance costs) or depreciation.

The cost of major repair or replacement of facilities or the construction of new facilities required to support the customers of both parties due to such facilities having reached the end of useful life or having suffered a catastrophic accident or loss shall be shared by the Town and Pennichuck in proportion to the benefit each will accrue from the repair or replacement. Repairs, replacements or new construction providing no substantial benefit

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

to both parties shall be constructed at the expense of the benefiting party.

The Town will maintain accounts of its expenses in sufficient detail to calculate the cost of water and Pennichuck shall have the right to review these costs on reasonable notice. The Town shall propose the cost of water annually to Pennichuck based on its previous history and increases or decreases in those costs.

10. EMERGENCY INTERCONNECTION

The Town acknowledges the assumption of CNHWC's Special Water Supply Contract with Pennichuck for the provision of water to the Town as an emergency supply. The parties agree to negotiate a modification to this agreement to recognize the potential use of the Interconnected System to provide emergency service by Pennichuck to its own customers. The parties also agree to negotiate an agreement for the supply of "base load" water to the Town to compensate for any future water requirements beyond the capacity of the Town's share of the Wells provided hereby.

11. EMERGENCY RESTRICTIONS ON USE

In the event the Town imposes voluntary or mandatory restrictions on water use by its customers (e.g. sprinkling lawns or washing cars) in order to conserve water for the Interconnected System, Pennichuck shall impose the same restrictions on its Interconnected System customers within a reasonable period of time.

12. CONTRACT TERM

This agreement shall have an initial term of twenty (20) years from the date hereof and shall be renewed automatically for additional five (5) year periods thereafter unless either party gives notice to the other of its intent to terminate. Notice of intent must be given at least three years prior to the anniversary month and date on which the contract expires. The intention of the notice requirement is to allow the parties adequate time to obtain alternate sources of water, storage and/or transmission.

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

A material breach of any part of this agreement by either party shall be grounds for its termination prior to the date above subject to a declaration by the terminating party of its intention at least three years prior to the date of termination.

Nothing in this agreement shall be interpreted as depriving any party of the right to be made whole for any losses as the result of a breach of this agreement or to deprive either party of any remedy except as provided herein.

13. AMENDMENTS, ASSIGNMENT, GOVERNING LAW

This agreement may be amended upon the mutual agreement of the parties with the approval of the NHPUC. This Agreement may be assigned by Pennichuck to a wholly owned subsidiary without the prior consent of the Town; this Agreement shall be binding upon and inure to the benefit of the respective successors and legal representatives of the parties. This Agreement is to be governed and construed under the laws of the State of New Hampshire.

14. HOLD HARMLESS

The parties shall indemnify and hold each other harmless from damages or other losses arising out of or connected with the performance of this agreement when caused by a party's negligent or intentional acts. The parties will provide evidence of identifying each other as additional named insured on such liability insurance or self insurance as each normally carries.

15. ARBITRATION

Disagreements between the parties over the terms of this agreement shall be submitted to the NHPUC, or its successor, for resolution.

Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly  
executed as of the day and year first above written.

THE TOWN OF HUDSON  
BOARD OF SELECTMEN

E. Lawrence Madison

Shawn Gasser

[Signature]

Terrence Ides

Ann Sealbury

ATTEST:

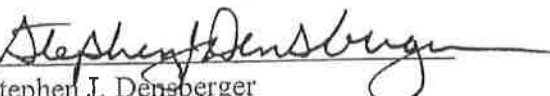
Cecile Nichols

Town Clerk

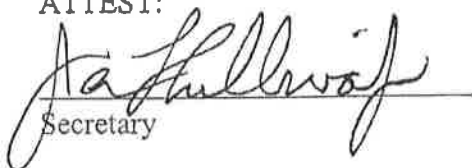


Town of Hudson/Pennichuck Corporation Water Supply and Transmission Agreement

PENNICHUCK CORPORATION

By   
Stephen J. Densberger  
Executive Vice President

ATTEST:

  
Secretary

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**DW 19-035**  
**2019 QCPAC - Qualified Capital Project Adjustment Charge**  
**Responses to Staff Data Requests – Set 4**

Date Request Received: 8/16/19  
Request No. Staff 4-8

Date of Response: 8/22/19  
Witness: Donald L. Ware

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REQUEST: In light of the CoBank Term Loan closing in late July rather than by May 1, 2019, and the extension of the Filing deadline of a Staff Recommendation, please explain the Company's new plan to implement the 2019 QCPAC monthly surcharge, as well as the impact to the one-time recoupment.

RESPONSE:

The Company proposes that the 2019 QCPAC surcharge be implemented on a service rendered basis effective July 22, 2019 (the date of the closing on the CoBank term loan). If it is assumed that the 2019 QCPAC surcharge is approved by the end of September and there is a 30-day cure period on the PEU QCPAC order, it would mean that the Company would begin to bill customers for the QCPAC surcharge beginning with their November bills which would result in about 3 months of recoupment. Based on the fact that the usage during August through October averages about 25% more than the annual average usage it is projected that the recoupment from an average single-family residence will be about \$2.81 per month, resulting in a projected recoupment of about \$8.43. The Company would propose collecting the QCPAC recoupment over two months or about \$4.22 per month.

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019, Revised 6/25/2019 per Staff tech DR's, Revised 7/25/2019, Revised for Staff DR 4-3 8/20/2019  
Updated for June 30, 2019 update

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(40,866)	(4)(8)	\$	5,810,716	\$	65,676	(4)	\$	5,876,393	\$	68,782	(10)(11)	\$	5,945,174
Annual Principal and Interest Payments	\$	1,362,154	(2)	\$	261,114	(5)(6)	\$	1,623,268	\$	154,162	(12)	\$	1,777,430	\$	179,234	(12)	\$	1,956,664
Principal and Interest Coverage Requirement		1.10	(3)				1.10				1.10						1.10	
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,785,595		\$	1,955,173	\$	1,955,173		\$	2,152,331	\$	2,152,331		\$	2,397,029
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,522,620		\$	8,757,875	\$	8,757,875		\$	9,023,814	\$	9,023,814		\$	9,283,635
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952		\$	7,596,311	\$	7,596,311		\$	7,831,566	\$	7,831,566		\$	8,097,505
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309		\$	926,309	\$	926,309		\$	926,309	\$	926,309		\$	926,309
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261		\$	8,522,620	\$	8,522,620		\$	8,757,875	\$	8,757,875		\$	9,023,814
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915		\$	178,915	\$	178,915		\$	178,915	\$	178,915		\$	178,915
Proposed New Revenue Requirement	\$	8,455,176		\$	8,701,535		\$	8,936,790	\$	8,936,790		\$	9,202,729	\$	9,202,729		\$	9,462,349
Projected QCPAC Increase <sup>7</sup>					2.98%				2.84%				3.21%					3.14%
Cumulative QCPAC increase <sup>9</sup>					2.98%				5.82%				9.03%					12.17%
Cumulative QCPAC monthly increase in average single family residential bill				\$	2.25	\$	2.81	\$	4.39	\$	6.81	\$	9.18	\$	11.85	\$	14.52	17.19
Average monthly single family residential bill with QCPAC				\$	77.69			\$	79.84			\$	82.36			\$	84.63	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128
- (2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128
- (3) Principal and interest coverage of 1.10 is as approved in DW17-128
- (4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.
- (5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"
- (6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 4.38% that was not recovered in DW17-128
- (7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges.
- (8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWW-PEU Interconnection in the amount of \$ 180,500
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128
- (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
- (12) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant 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 5.50% that was not recovered in DW17-128

Impact on PEU Single Family Residential Homes:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$	20.70	
Average Single Family Consumption (CCF) -		7.29	
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$	7.51	per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$	75.45	

Pennichuck East Utilities, Inc.

DW 19-035

2019 QCPAC Filing

2018 Capital Expenditures

2/15/2019, Revised 6/17/19 to reflect elimination of AFDUC and funding of FALOC and SRF short term interest expense via CoBank term loan, Revised 7/25/2019

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project Cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue	Replace 2400 linear feet of existing 15" dia wall HDPE water main with new 18" diameter ductile iron water main	1703564 & 1807069	DW17-055	26,006	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,983	Derry	Yes	Yes	\$ 30.59	\$ 18,935	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" dia wall ductile iron water main with high break history through swapout with 12" HDPE	1707188 & 1807072	DW17-055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 36.84	\$ 6,840	
PEU/PWW Interconnection	Interconnect PEU to PWW under Merrimack River	See Below	DW17-055/Pending Filing	26,006	4/19/2017	\$ 3,200,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU/PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608938, 1701789	See above	See above	See above	\$ \$ Included above	\$ 3,515,850	\$ 3,335,078	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Construction toward PWW water main repairs	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148				\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWW asset. PEU contribution to this project deferred due to Engineering resources being diverted to design
PEU/PWW Interconnection Station Relocation & Construction	Transfer Station, including construction of buildings and water lines PWW	1813395				\$ -	\$ 340,000	\$ 339,864	Merrimack	Yes	Yes	\$ 28.92	\$ 9,820	Revised Litchfield PFOA actions
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Corrective Action Plan	1813409	DW18-132			\$ 100,000			Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and not eligible for QCPAC Surcharge
Atkinson Commerce Park Station Imp	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing			\$ 330,000			Atkinson	Yes	Yes	\$ 22.38	\$ -	Project deferred due to Engineering resources being diverted to design
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (run out) (21)	760 - 763 workorders	Pending Filing			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	Revised Litchfield PFOA actions
Install/replace treatment systems in small CWS	Replace failed CWS treatment systems. Install new CWS treatment system if water quality or standards requires it.	n/a	Pending Filing			\$ 25,000	\$ 5,000		Various	Yes	Yes	\$ 27.72	\$ -	24 through December 31, 2018
Misc. Structural Improvements	Repair/replace aging/wilded station structures as needed	n/a	Pending Filing			\$ 20,000			Various	Yes	Yes	\$ 27.72	\$ -	
Microbiological Monitoring and Security projects	Install/upgrade/replace systems as needed	n/a	Pending Filing			\$ 10,000			Various	Yes	Yes	\$ 27.72	\$ -	
Macboreau SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing			\$ 50,000	See Below		Various	Yes	Yes	\$ 27.72	\$ -	2 issues VFD failures are projected through year end.
Macboreau SCADA/Electrical	Replace Pump #4 VFD at Castle Beach	1819462	Pending Filing			\$ -	\$ 3,544	\$ 3,944	Warren	Yes	Yes	\$ 27.72	\$ 109	
Macboreau SCADA/Electrical	Replace Pump #2 VFD at W&E	1818463	Pending Filing			\$ \$ for these projects from annual run rate budget above	\$ 3,015	\$ 3,015	Warren	Yes	Yes	\$ 27.72	\$ 84	
Macboreau SCADA/Electrical	Replace Pump #5 VFD at Castle Beach	1807058	Pending Filing				\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Macboreau SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818296	Pending Filing				\$ 2,630	\$ 2,684	Warren	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Relub wells as necessary to restore efficiency as needed	n/a	Pending Filing			\$ 60,000	\$ 15,000		Various	Yes	Yes	\$ 27.72	\$ -	Only one completed well to date as of 2018 vs. 4 in budget.
3 New Services	Single Family/Owner Build, New Homes	720 workorders	Pending Filing			\$ 23,000	\$ 32,800	\$ 27,588	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	9 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing			\$ 10,000	\$ 10,000		Various	Yes	Yes	\$ 27.72	\$ -	None Replaced in 2018.
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing			\$ 30,000	\$ 12,000		Various	Yes	Yes	\$ 27.72	\$ -	None Replaced in 2018.
78 New Meters (growth) 5/8" - 2"	New meters for new customers	750 workorders	Pending Filing			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,052	531 workorders through December 31, 2018 volume of new and replacement meters
728 New Meters for Lead Meter exchanges 5/8" - 6"	Replace High lead brass meter with new no lead brass meter	750 workorders	Pending Filing			\$ 144,000	\$ 143,400		Various	Yes	Yes	\$ 27.72	\$ -	240 Meter replacements were completed through December 31, 2018
Radios Ready	New and replaced radios for meter reading (123)	754 workorders	Pending Filing			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	240 Radios replacements were completed through December 31, 2018
Investment in Developer Installed Services	One times revenue tariffed amount (\$7)	n/a	Pending Filing			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,236	Investment in Tariffs. Not in 2018 Board Approved Budget
Insertion Valve Install	Installation of Insertion Valve on 16" Main MWSE	1824544	Pending Filing			\$ -	\$ 25,000		Londonderry	Yes	No	\$ 26.15	\$ -	MWSE was going to shut service off for all of Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry. Not included in QCPAC as this will be funded with 61 FWER cash.
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drum containers to smaller transportable containers.	1817332	Pending Filing			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing				\$ 6,285		Windham	Yes	Yes	\$ 27.88	\$ 173	
Locke Lake, Varner Rd Area	Locke Lake, Varner Rd Area - Clean up and final Review	1817280	Pending Filing				\$ 94,050		Barnstead	Yes	Yes	\$ 27.88	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1900391	Pending Filing				\$ 8,608		Barnstead	Yes	Yes	\$ 27.88	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex						\$ 36,547						\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,826,100	\$ 5,179,004	\$ 5,023,146					\$ 139,854	
PEU QCPAC							\$ 5,179,004							

Amount to be funded with 2019 Loan from CoBank <sup>47</sup> -	\$ 1,153,000	\$ 76,800
Amount to be funded SRF loan for Brady Avenue watermain replacements <sup>48</sup> -	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection <sup>49</sup> -	\$ 2,460,000	\$ 146,210
Amount to be funded SRF loan for Hillcrest Road watermain replacements <sup>50</sup> -	\$ 244,399	\$ 14,888
Amount to be funded with Drinking Water and Groundwater Trust Fund Grant <sup>51</sup> -	\$ 600,000	\$ -
<b>Total Projected 2018 QCPAC P&amp;L -</b>		<b>\$ 261,114</b>

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000  
2. Final CoBank Loan Terms are 25 Years at 4.38%

3. Projected Brady Ave. SRF Terms are: 30 Years at 1.96% with 10% Principal forgiveness  
4. Projected PWW/PEU Interconnection SRF Terms are: 30 Years at 1.96%

5. Projected Hillcrest Road SRF Terms are: 30 Years at 1.96%  
6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total project budget estimated at \$ 254,860 of which \$ 16,471 is internal engineering that can not be funded with SRF funds

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.  
8. Eliminate AFDUC on PWW/PEU Interconnect Project in the amount of \$ 95,807

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>1</sup>  
2/15/2019, Revised 8/14/2019, Corrected for Bradford Lane keypunch error, Revised for Staff DR 4-3 8/21/2019  
June 30, 2019 Update

\$ 106.67 95930

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	1818349, 1901641	\$ 700,000	No	\$ -	\$ 700,000
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip will to Prichard Road WTP	1901642	\$ 440,000	No	\$ -	\$ 505,088
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	combined with below	\$ 200,000	No	\$ -	\$ 200,000
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	1813409, 1900455	\$ 75,000	No	\$ -	\$ 75,000
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901644	\$ 619,300	Yes	\$ 619,300	\$ 682,478
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901645	\$ 255,000	Yes	\$ 255,000	\$ 278,810
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	1901646	\$ 132,000	Yes	\$ 132,000	\$ 145,466
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901647	\$ 68,200	Yes	\$ 68,200	\$ 75,157
Replace Gilcrest Road PRV Pit	Replace failing piping and underground structure	1813928, 1906952	\$ 110,000	Yes	\$ 110,000	\$ 140,000
Upgrade Michels Way PRV Pit	Add additional pit with power and motor control valve to work with dist. System.		\$ -	Yes	\$ -	\$ 45,000
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	1825265, 1901649	\$ 150,000	Yes	\$ 150,000	\$ 150,000
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	n/a	\$ 96,000	Yes	\$ 96,000	\$ 94,880
Alexander Road, Water Main Upgrading	Alexander Road, Water Main Upgrading	1908374		No		\$ 1,120
Wenstein/Dame Station Upgrades	Wenstein/Dame Station Upgrades	1506139, 1603114, 1703756, 1813249, 1907079		Yes		\$ 108,286
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	760 - 765 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Well Pump replacements	Replace well pumps as they fail (run rate)	760 - 765 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	760 - 765 workorders	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	Yes	\$ 30,000	\$ 30,000
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	Yes	\$ 60,000	\$ 60,000
Aikinson Booster pump station design	Aikinson Booster pump station design	n/a	\$ 30,000	No	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	1901650	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Add communication between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 23,000	Yes	\$ 23,000	\$ 23,000
Renewed Services (14)	Replacement of failed services	721 & 722 workorders	\$ 46,000	Yes	\$ 46,000	\$ 46,000
Hydrants (5)	Replacement of non functional hydrants	730 & 731 workorders	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	Yes	\$ 32,000	\$ 32,000
Radios (350)	New and replaced radios for meter reading	754 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000
Meters (Growth) 5/8"-2" PEI (220)	New meters for new customers	750 workorders	\$ 22,000	Yes	\$ 22,000	\$ 22,000
Meters 5/8"-6" Lead Meter Exchange - PEI (550)	Replace High lead brass meter with new no lead brass meter	750 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500 3,774,288  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) - \$ 1,951,500 adjusted for project el  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update - \$ 2,203,077  
Funded with SRF Funds - \$ 1,072,500 \$ 1,000,000  
Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 879,000 \$ 1,103,077

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

resulting in Annual P&I of \$ 82,234  
resulting in Annual P&I of \$ 71,929

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>1</sup>  
2/15/2019, Revised 6/17/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Burdorf Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Replace Gilcrest Road PRV Pit	Replace failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
1x re-venue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Atkinson Booster pump station design	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Hydants (5)	Replacement of non functional hydants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Rad os (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) - \$ 2,391,500  
Projected annual property tax expenses for QCPAC eligible projects - \$ 75,665

Funded with SRF Funds - \$ 1,512,500  
Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 879,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are  
25 Years at 5.50%
5. Projected SRF Terms for Locke Lake project are  
20 Years at 2.704%

Pennichuck East Utilities, Inc.

DW 19-035

2019 QCPAC Filing

Board Approved 2020 Capital Expenditures<sup>3</sup>

2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment

Revised 8/6/2019 to reflect Airstrip alternative arsenic treatment being used and useful in 2020 instead of 2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ -	\$ 540,000	Barnstead	Yes	\$ 33.23
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64
Projected Property Tax Expense associated with						
Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget -		\$ 3,630,580	\$ 2,470,580	QCPAC projects -		
Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -						
Funded with CoBank Loan -		\$	1,930,580			
Funded with SRF Loan -		\$	540,000			

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 143,923 per year

5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 35,310 per year

6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00

Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSRR

Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2021 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (I)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Projected Property Tax Expense associated with  
QCPAC projects -

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000  
Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000  
Funded with CoBank Loan - \$ 528,000  
Funded with SRF Loan - \$ 2,800,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 39,362 per year
5. Projects moved out of 2021 Capex
6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR  
Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 183,091 per year



**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-1

Date of Response: 06-17-19  
Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the final terms of the CoBank term loan authorized by the Commission in Docket No. 19-069, Order No. 26,253 (May 22, 2019). Also, please provide an updated Exhibit 1 reflecting the actual interest rate on the recently approved CoBank term loan.

**RESPONSE:**

The company has not yet closed on this loan, and as such, the final terms are not yet available. CoBank is completing their final annual credit review and contemplated adjustments to the financial covenants in support of the loan. As soon as the loan is closed, the Company will provide this data to the Commission and parties. It is anticipated that the credit review and covenant enhancements modifications and approvals will be completed in the next week to ten days, and then the Company can go to closing on this loan within another week or so. A closing on the loan on or about June 30 is anticipated.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19

Date of Response: 06-17-19

Updated Response: 07-25-19

Request No. Staff Tech-1

Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the final terms of the CoBank term loan authorized by the Commission in Docket No. 19-069, Order No. 26,253 (May 22, 2019). Also, please provide an updated Exhibit 1 reflecting the actual interest rate on the recently approved CoBank term loan.

**RESPONSE:**

The company has not yet closed on this loan, and as such, the final terms are not yet available. CoBank is completing their final annual credit review and contemplated adjustments to the financial covenants in support of the loan. As soon as the loan is closed, the Company will provide this data to the Commission and parties. It is anticipated that the credit review and covenant enhancements modifications and approvals will be completed in the next week to ten days, and then the Company can go to closing on this loan within another week or so. A closing on the loan on or about June 30 is anticipated.

7/25/19 Supplemental Response

Please see attached revised 2018 schedule to reference actual terms of the CoBank loan (25 years, 4.38% interest).

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-2

Date of Response: 06-17-19  
Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the specific funds that have been used to pay off the interest on the FALOC in 2018 and 2019.

**RESPONSE:**

For both 2018 and 2019, the interest on the FALOC drawdowns has been paid out of the DSRR 1.0 bank account, in conjunction with the principal and interest payments due monthly on the other long-term loan obligations with CoBank, from their monthly billing of all amounts due for those obligations (inclusive of the interest due monthly on the outstanding balance on the FALOC facility).

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-3

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's response to Staff 3-5:** With regard to Allowance for Funds Used During Construction (AFUDC) in the amount of \$95,807 included in the PWW/PEU Interconnection project, please provide:

- (a) The Commission rule or order requiring AFUDC to be booked by the Company.
- (b) A complete accounting of AFUDC included in the Company's completed 2018 capital projects and the effect of such on the proposed 2019 QCPAC.
- (c) The Company's proposed alternative accounting treatment to the recording of AFUDC and justification as to why such treatment more accurately reflects PEU's cost of funds utilized during the construction of assets.

**RESPONSE:**

- (a) The Uniform System of Accounts for Water Utilities includes the following regarding AFUDC - "Allowance for funds used during construction" (AFUDC) includes the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate upon the utility's own funds when so used. No allowance for funds used during construction shall be included in these accounts upon expenditures for construction projects which have been abandoned. **Note:** — a. AFUDC, if charged, shall be charged each month upon the balance at the beginning of the month in Unfinished Construction. The period for which interest charges may be capitalized shall be limited to the duration of the construction work and shall not extend beyond the time when the property becomes ready for service. In case construction work is suspended, interest charges may not be capitalized for more than six months thereafter, except under order of the Commission."

Please note that the calculation of AFUDC was in use at Pennichuck when I took over responsibility for the regulated utilities in 2006 and was included in rate base as part of any project that met the criteria for the calculation of AFDUC. The rate used to calculate the AFDUC was the rate of return from the most recent rate case for the Utility.

- (b) Please see the spreadsheet attached to this data request used by Pennichuck's accounting staff to track and calculate AFDUC on the PWW/PEU interconnection project.

- (c) The Company would propose eliminating the \$93,807 of AFDUC from the project costs where it was calculated. The Company proposes replacing the AFDUC with the Short-term interest incurred on the SRF loans associated with these projects as well as the short-term interest incurred on the CoBank FALOC, amounting to \$39,547 resulting in a decrease in the funds that the Company proposes to borrow from CoBank by \$54,260. I have attached a revised PEU QCPAC schedule reflecting these proposed changes. As discussed at the Tech Session the Company does not believe that the calculation of AFUDC is applicable to the Company's existing utility structure. The Company needs to generate the cash required to pay the short-term interest incurred to finance CWIP in some form as the Company's current rate making model does not provide a way to generate this cash. The Company believes that capitalizing the short term interest incurred to fund used and useful assets into the long term loan entered into to pay for those assets is the best way to recover the cash paid to cover the short term interest.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-4

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's responses to Staff 1-8 and 3-7, and Staff Audit Issue # 1 in the Audit Report dated April 18, 2019:** Staff does not believe that the \$25,000 cost related to the installation of an insertion valve in the PEU Londonderry Core and Manchester Water Works (MWW) Connection, which ultimately MWW owns, should be included in PEU's fixed assets. Rather, Staff believes that this cost should be reclassified as a regulatory asset and amortized over the life of the loan used to pay for the asset which will be 20-25 years. Please, provide further information regarding how this asset will be adjusted by the Company.

**RESPONSE:**

The Company concurs with the Staff that the \$25,000 should not be booked to the Company's fixed asset account 303.60. The problem with booking this expense as a regulatory asset is that while the Company will get a return of its \$25,000 investment, it will not get a return on the unamortized portion of the \$25,000 investment based on its current rate making structure. Without a return on the unamortized portion of a regulatory asset, the result is that no cash is generated to pay the interest expense associated with this investment if the Company borrows money to fund the regulatory asset. The only way to avoid this cash shortfall is for the Company not to borrow money to pay for a regulatory asset, but instead to pay for its regulatory assets with 0.1 DSRR funds, eliminating the need to borrow these funds. The Company does not currently have regulatory approval to use the 0.1 DSRR funds for this purpose. I have removed the \$25,000 invested in MWW valve from the QCPAC spreadsheet attached to these data responses.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-5

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Audit Issue #1 in the Audit Report Addendum dated 6/4/19:** Legal services from Brown Law totaling \$12,182, consisting of five invoices, were included in the Company's proposed PWW/PEU Interconnection project. Three invoices totaling \$7,161 related to charges for Docket No. DW 17-036, PEU River Crossing License. The other two invoices totaling \$5,021 pertain to obtaining approval for the wholesale water supply contract between PWW and PEU in Docket No. DW 17-071. The invoices were charged to the plant account #331100, Mains: 6" & Larger. Please provide:

- (a) The precedent used that determined the costs should be capitalized instead of expensed and why these costs fit into that category.
- (b) An explanation of why it is appropriate to capitalize these legal fees for recovery under the QCPAC mechanism instead of treating them as operating expenses whose recovery is encompassed in previously approved base rates.
- (c) A description of how the Company plans to account for similar costs in the future.

**RESPONSE:**

- (a) The Company has had a practice that Legal and Consultant expenses associated with special contracts or studies with a value in excess of \$1,000 and a life in excess of 3 years are treated as regulatory assets.
- (b) The referenced legal fees should not be capitalized as they are regulatory asset and should be recovered as an amortization expense. The \$5,021 in fees have been removed from the PWW-PEU interconnection project costs and the attached QCPAC schedules have been adjusted accordingly.
- (c) The Company is reviewing its policy regarding the treatment of Legal and Consultant expenses associated with special contracts and studies. The problem with amortizing these expenses is as described in Tech Response 4 above, which is that the current

ratemaking methodology allows for a return of, but not a return on the regulatory asset. The Company has not determined how it will handle these expenses in the future. The cash needed to provide for, or pay for, regulatory assets cannot be borrowed and recovered via a long-term loan. Therefore, either these types of expenses will need to be paid for with 0.1 DSRR cash (if available) or continue to be charged to Outside Services, as a component of the Company's OERR expenses.



**Pennichuck East Utility, Inc.**

**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-6

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's Response to Staff 3-1:** Based on the Company's computations, it appears that from 2019 to 2020 the projected cumulative QCPAC percentage approximately doubles from 3.27% to 6.22%. It also appears that between 2020 and 2021 the Company is projecting another relatively substantial increase in the cumulative QCPAC percentage from 6.22% to 11.52%. Based on the discussion conducted during the Technical Session, please provide:

- A) further comments regarding how the Company might mitigate these projected increases in the cumulative QCPAC percentage that are anticipated to occur in 2020 and 2021; and
- B) Why the resulting rates would be just and reasonable.

**RESPONSE:**

- (a) The Company has made some adjustments to each of the four years Capex detailed on the Attached QCPAC schedules to try to mitigate the level of rate impacts as follows:
  - 1. In 2018 the Company is removing the \$25,000 expended to install the MWW 24" valve from its QCPAC request. This expenditure will be paid for with 0.1 DSRR cash collected via rates during 2018 and 2019.
  - 2. In 2018 the Company is proposing to remove AFDUC from the PWW-PEU Interconnection, Brady Avenue and Hillcrest Road project expenses and replacing it with short term interest incurred on the various short-term financings used to fund the 2018 capital expenditures. This change is described in the response to Tech 3 above.
  - 3. The recovery of the principal and interest associated with the estimated \$2,800,000 in capital expenditures for the Locke Lake Surface Water Treatment project expected to be completed in late 2020 has been moved from recovery in the 2021 QCPAC filing to recovery in the 2022 QCPAC filing. This change will require the Company to cover about \$183,000 in principal and interest payments associated with the SRF loan that is financing this project which will go into repayment mode around May of 2021. The Company proposes to fund these

principal and interest expenses with cash from its 0.1 DSRR cash collected in 2021 and 2022.

4. The Rolling Hills and Gage Hill water main replacement projects planned for in 2021 have been removed from the proposed capital expenditures in 2021.
5. Radio replacement program delayed for two years (2019 and 2020) resulting in a run rate replacement of failed and new radios of 150 radios per year instead of 550 radios resulting in a projected savings of \$40,000 per year.

The impact of these changes on the QCPAC's sought to fund the Company's capital expenditures in 2018, 2019, 2020 and 2021 when compared against those in the original amounts sought with this petition are as follows:

	<u>Original</u>	<u>Proposed</u>
2018	3.29%	3.17%
2019	6.57%	6.40%
2020	11.93%	9.50%
2021	14.29%	12.64%

Please note the original QCPAC schedule submitted with this petition had an error in the calculation of the 2021 cumulative percentage increase sought. That error, when corrected, resulting the cumulative QCPAC sought in 2022 for capital expenditures placed in service during 2021 should be 14.29% as opposed to the 12.55% in the original spreadsheet.

- (b) The resulting rates are considered to be just and reasonable, because they are created by capital expenditures that are necessary to keep the Company in compliance with State and Federal regulations as well as to insure continued and uninterrupted service to its customers. Not making the investments detailed would impact the Company's compliance and ability to serve. Regarding reasonableness, the proposed average per year increase over the next four years is 3.02%. The projected monthly bill, without consideration for what may happen to operational expense, will be about \$85 per month for the average single-family residential customer. While higher than most water rates throughout the State, this monthly charge is required to provide Safe Drinking water and is less than what customers pay on a monthly basis for discretionary services such as cable, internet and cell phone services.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-7

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

Please provide updated Exhibits 1 and 2 that include adjustments 1) discussed during the Technical Session, 2) identified in the Company's previous data responses, and 3) that have not been previously identified but have become currently known. For capex budget year 2019, please provide a detailed narrative regarding the changes made. For capex budget years 2020 and 2021, please provide a brief narrative summarizing the changes made.

**RESPONSE:**

The QCPAC schedule exhibits have been adjusted as discussed in Tech session DR 3(1)a. above.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Supplemental Request Received: 6-24-19

Date of Supplemental  
Response: 07-01-19

Supplemental Request Staff Tech 8

Witness: Donald L. Ware

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**SUPPLEMENTAL REQUEST:**

a. Note #4 from the Revenue Requirement Tab is missing the \$28,000 reduction in operating expenses due to decreased expenses from treating water at Peacham rather than on-site with absorptive material. It should be included in the 2019 Additions Column.

b. The 2018 Additions Tab- The tax rates for Derry, Londonderry and Windham also reverted to the older/ incorrect rates.

c. The 2018 Additions Tab- Note #5, The amount of SRF funds that were used for the Hillcrest Road Project decreased from \$242,047 of \$254,860 to \$10,471 of \$254,860.

**SUPPLEMENTAL RESPONSE:**

a. An earlier draft of the workbook was inadvertently submitted with the Company's response. This has been corrected on the attached workbook.

b. An earlier draft of the workbook was inadvertently submitted with the Company's response. This has been corrected on the attached workbook.

c. The total project cost was \$254,860 of which \$244,389 could be funded with the SRF funds and the remaining \$10,471 of project costs needed to be funded with the CoBank loan.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19

Date of Response: 06-17-19

Updated Response: 07-25-19

**2<sup>nd</sup> Updated Response: 08-12-19**

Request No. Staff Tech-1

Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the final terms of the CoBank term loan authorized by the Commission in Docket No. 19-069, Order No. 26,253 (May 22, 2019). Also, please provide an updated Exhibit 1 reflecting the actual interest rate on the recently approved CoBank term loan.

**RESPONSE:**

The company has not yet closed on this loan, and as such, the final terms are not yet available. CoBank is completing their final annual credit review and contemplated adjustments to the financial covenants in support of the loan. As soon as the loan is closed, the Company will provide this data to the Commission and parties. It is anticipated that the credit review and covenant enhancements modifications and approvals will be completed in the next week to ten days, and then the Company can go to closing on this loan within another week or so. A closing on the loan on or about June 30 is anticipated.

**7/25/19 Supplemental Response**

Please see attached revised 2018 schedule to reference actual terms of the CoBank loan (25 years, 4.38% interest).

**8/7/19 2<sup>nd</sup> Supplemental Response:**

**The final amount borrowed from CoBank was \$1,153,000 for 25 years at a rate of 4.38%. The difference of \$55,757 between the \$1,208,757 detailed on the July 25, 2019 Exhibit 1 update and the \$1,153,000 borrowed from CoBank related to the Company's accounting staff reducing the \$1,208,757 to \$1,153,000 by removing \$55,757 from the final requested CoBank financing. Accounting had this amount removed from the financing request because the accounting staff believed that these funds (which were associated with the Lock**

**Lake Treatment Design which was not used and useful and therefore not eligible for the proposed QCPAC) were included in the \$1,208,757 detailed in the revised Exhibit 1. Upon review of the revised Exhibit 1 the 1,208,757 did not include any funds for projects that were not used and useful. The result was that the \$1,153,000 loan from CoBank did not fully reimburse the Company for cash invested in used and useful 2018 projects. The Company will use the cash from its 0.1 DSRR account to pay down the CoBank FALOC for the \$55,757 it did not acquire in the CoBank loan that was just closed on.**

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-2

Date of Response: 06-17-19  
Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the specific funds that have been used to pay off the interest on the FALOC in 2018 and 2019.

**RESPONSE:**

For both 2018 and 2019, the interest on the FALOC drawdowns has been paid out of the DSRR 1.0 bank account, in conjunction with the principal and interest payments due monthly on the other long-term loan obligations with CoBank, from their monthly billing of all amounts due for those obligations (inclusive of the interest due monthly on the outstanding balance on the FALOC facility).

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-2

Date of Response: 06-17-19  
Witness: Larry D. Goodhue

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**REQUEST:**

Please provide the specific funds that have been used to pay off the interest on the FALOC in 2018 and 2019.

**RESPONSE:**

For both 2018 and 2019, the interest on the FALOC drawdowns has been paid out of the DSRR 1.0 bank account, in conjunction with the principal and interest payments due monthly on the other long-term loan obligations with CoBank, from their monthly billing of all amounts due for those obligations (inclusive of the interest due monthly on the outstanding balance on the FALOC facility).



**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-3

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's response to Staff 3-5:** With regard to Allowance for Funds Used During Construction (AFUDC) in the amount of \$95,807 included in the PWW/PEU Interconnection project, please provide:

- (a) The Commission rule or order requiring AFUDC to be booked by the Company.
- (b) A complete accounting of AFUDC included in the Company's completed 2018 capital projects and the effect of such on the proposed 2019 QCPAC.
- (c) The Company's proposed alternative accounting treatment to the recording of AFUDC and justification as to why such treatment more accurately reflects PEU's cost of funds utilized during the construction of assets.

**RESPONSE:**

- (a) The Uniform System of Accounts for Water Utilities includes the following regarding AFUDC - "Allowance for funds used during construction" (AFUDC) includes the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate upon the utility's own funds when so used. No allowance for funds used during construction shall be included in these accounts upon expenditures for construction projects which have been abandoned. **Note:** — a. AFUDC, if charged, shall be charged each month upon the balance at the beginning of the month in Unfinished Construction. The period for which interest charges may be capitalized shall be limited to the duration of the construction work and shall not extend beyond the time when the property becomes ready for service. In case construction work is suspended, interest charges may not be capitalized for more than six months thereafter, except under order of the Commission."

Please note that the calculation of AFUDC was in use at Pennichuck when I took over responsibility for the regulated utilities in 2006 and was included in rate base as part of any project that met the criteria for the calculation of AFDUC. The rate used to calculate the AFDUC was the rate of return from the most recent rate case for the Utility.

- (b) Please see the spreadsheet attached to this data request used by Pennichuck's accounting staff to track and calculate AFDUC on the PWW/PEU interconnection project.

- (c) The Company would propose eliminating the \$93,807 of AFDUC from the project costs where it was calculated. The Company proposes replacing the AFDUC with the Short-term interest incurred on the SRF loans associated with these projects as well as the short-term interest incurred on the CoBank FALOC, amounting to \$39,547 resulting in a decrease in the funds that the Company proposes to borrow from CoBank by \$54,260. I have attached a revised PEU QCPAC schedule reflecting these proposed changes. As discussed at the Tech Session the Company does not believe that the calculation of AFUDC is applicable to the Company's existing utility structure. The Company needs to generate the cash required to pay the short-term interest incurred to finance CWIP in some form as the Company's current rate making model does not provide a way to generate this cash. The Company believes that capitalizing the short term interest incurred to fund used and useful assets into the long term loan entered into to pay for those assets is the best way to recover the cash paid to cover the short term interest.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-3

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's response to Staff 3-5:** With regard to Allowance for Funds Used During Construction (AFUDC) in the amount of \$95,807 included in the PWW/PEU Interconnection project, please provide:

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- (b) A complete accounting of AFUDC included in the Company's completed 2018 capital projects and the effect of such on the proposed 2019 QCPAC.
- (c) The Company's proposed alternative accounting treatment to the recording of AFUDC and justification as to why such treatment more accurately reflects PEU's cost of funds utilized during the construction of assets.

**RESPONSE:**

- (a) The Uniform System of Accounts for Water Utilities includes the following regarding AFUDC - "Allowance for funds used during construction" (AFUDC) includes the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate upon the utility's own funds when so used. No allowance for funds used during construction shall be included in these accounts upon expenditures for construction projects which have been abandoned. **Note:** — a. AFUDC, if charged, shall be charged each month upon the balance at the beginning of the month in Unfinished Construction. The period for which interest charges may be capitalized shall be limited to the duration of the construction work and shall not extend beyond the time when the property becomes ready for service. In case construction work is suspended, interest charges may not be capitalized for more than six months thereafter, except under order of the Commission."

Please note that the calculation of AFUDC was in use at Pennichuck when I took over responsibility for the regulated utilities in 2006 and was included in rate base as part of any project that met the criteria for the calculation of AFDUC. The rate used to calculate the AFDUC was the rate of return from the most recent rate case for the Utility.

- (b) Please see the spreadsheet attached to this data request used by Pennichuck's accounting staff to track and calculate AFDUC on the PWW/PEU interconnection project.

- (c) The Company would propose eliminating the \$93,807 of AFDUC from the project costs where it was calculated. The Company proposes replacing the AFDUC with the Short-term interest incurred on the SRF loans associated with these projects as well as the short-term interest incurred on the CoBank FALOC, amounting to \$39,547 resulting in a decrease in the funds that the Company proposes to borrow from CoBank by \$54,260. I have attached a revised PEU QCPAC schedule reflecting these proposed changes. As discussed at the Tech Session the Company does not believe that the calculation of AFUDC is applicable to the Company's existing utility structure. The Company needs to generate the cash required to pay the short-term interest incurred to finance CWIP in some form as the Company's current rate making model does not provide a way to generate this cash. The Company believes that capitalizing the short term interest incurred to fund used and useful assets into the long term loan entered into to pay for those assets is the best way to recover the cash paid to cover the short term interest.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-3

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's response to Staff 3-5:** With regard to Allowance for Funds Used During Construction (AFUDC) in the amount of \$95,807 included in the PWW/PEU Interconnection project, please provide:

- (a) The Commission rule or order requiring AFUDC to be booked by the Company.
- (b) A complete accounting of AFUDC included in the Company's completed 2018 capital projects and the effect of such on the proposed 2019 QCPAC.
- (c) The Company's proposed alternative accounting treatment to the recording of AFUDC and justification as to why such treatment more accurately reflects PEU's cost of funds utilized during the construction of assets.

**RESPONSE:**

- (a) The Uniform System of Accounts for Water Utilities includes the following regarding AFUDC - "Allowance for funds used during construction" (AFUDC) includes the net cost for the period of construction of borrowed funds used for construction purposes and a reasonable rate upon the utility's own funds when so used. No allowance for funds used during construction shall be included in these accounts upon expenditures for construction projects which have been abandoned. **Note:** — a. AFUDC, if charged, shall be charged each month upon the balance at the beginning of the month in Unfinished Construction. The period for which interest charges may be capitalized shall be limited to the duration of the construction work and shall not extend beyond the time when the property becomes ready for service. In case construction work is suspended, interest charges may not be capitalized for more than six months thereafter, except under order of the Commission."

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- (b) Please see the spreadsheet attached to this data request used by Pennichuck's accounting staff to track and calculate AFDUC on the PWW/PEU interconnection project.

- (c) The Company would propose eliminating the \$93,807 of AFDUC from the project costs where it was calculated. The Company proposes replacing the AFDUC with the Short-term interest incurred on the SRF loans associated with these projects as well as the short-term interest incurred on the CoBank FALOC, amounting to \$39,547 resulting in a decrease in the funds that the Company proposes to borrow from CoBank by \$54,260. I have attached a revised PEU QCPAC schedule reflecting these proposed changes. As discussed at the Tech Session the Company does not believe that the calculation of AFUDC is applicable to the Company's existing utility structure. The Company needs to generate the cash required to pay the short-term interest incurred to finance CWIP in some form as the Company's current rate making model does not provide a way to generate this cash. The Company believes that capitalizing the short term interest incurred to fund used and useful assets into the long term loan entered into to pay for those assets is the best way to recover the cash paid to cover the short term interest.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-4

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's responses to Staff 1-8 and 3-7, and Staff Audit Issue # 1 in the Audit Report dated April 18, 2019:** Staff does not believe that the \$25,000 cost related to the installation of an insertion valve in the PEU Londonderry Core and Manchester Water Works (MWW) Connection, which ultimately MWW owns, should be included in PEU's fixed assets. Rather, Staff believes that this cost should be reclassified as a regulatory asset and amortized over the life of the loan used to pay for the asset which will be 20-25 years. Please, provide further information regarding how this asset will be adjusted by the Company.

**RESPONSE:**

The Company concurs with the Staff that the \$25,000 should not be booked to the Company's fixed asset account 303.60. The problem with booking this expense as a regulatory asset is that while the Company will get a return of its \$25,000 investment, it will not get a return on the unamortized portion of the \$25,000 investment based on its current rate making structure. Without a return on the unamortized portion of a regulatory asset, the result is that no cash is generated to pay the interest expense associated with this investment if the Company borrows money to fund the regulatory asset. The only way to avoid this cash shortfall is for the Company not to borrow money to pay for a regulatory asset, but instead to pay for its regulatory assets with 0.1 DSRR funds, eliminating the need to borrow these funds. The Company does not currently have regulatory approval to use the 0.1 DSRR funds for this purpose. I have removed the \$25,000 invested in MWW valve from the QCPAC spreadsheet attached to these data responses.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-4

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's responses to Staff 1-8 and 3-7, and Staff Audit Issue # 1 in the Audit Report dated April 18, 2019:** Staff does not believe that the \$25,000 cost related to the installation of an insertion valve in the PEU Londonderry Core and Manchester Water Works (MWW) Connection, which ultimately MWW owns, should be included in PEU's fixed assets. Rather, Staff believes that this cost should be reclassified as a regulatory asset and amortized over the life of the loan used to pay for the asset which will be 20-25 years. Please, provide further information regarding how this asset will be adjusted by the Company.

**RESPONSE:**

The Company concurs with the Staff that the \$25,000 should not be booked to the Company's fixed asset account 303.60. The problem with booking this expense as a regulatory asset is that while the Company will get a return of its \$25,000 investment, it will not get a return on the unamortized portion of the \$25,000 investment based on its current rate making structure. Without a return on the unamortized portion of a regulatory asset, the result is that no cash is generated to pay the interest expense associated with this investment if the Company borrows money to fund the regulatory asset. The only way to avoid this cash shortfall is for the Company not to borrow money to pay for a regulatory asset, but instead to pay for its regulatory assets with 0.1 DSRR funds, eliminating the need to borrow these funds. The Company does not currently have regulatory approval to use the 0.1 DSRR funds for this purpose. I have removed the \$25,000 invested in MWW valve from the QCPAC spreadsheet attached to these data responses.



**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-5

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Audit Issue #1 in the Audit Report Addendum dated 6/4/19:** Legal services from Brown Law totaling \$12,182, consisting of five invoices, were included in the Company's proposed PWW/PEU Interconnection project. Three invoices totaling \$7,161 related to charges for Docket No. DW 17-036, PEU River Crossing License. The other two invoices totaling \$5,021 pertain to obtaining approval for the wholesale water supply contract between PWW and PEU in Docket No. DW 17-071. The invoices were charged to the plant account #331100, Mains: 6" & Larger. Please provide:

- (a) The precedent used that determined the costs should be capitalized instead of expensed and why these costs fit into that category.
- (b) An explanation of why it is appropriate to capitalize these legal fees for recovery under the QCPAC mechanism instead of treating them as operating expenses whose recovery is encompassed in previously approved base rates.
- (c) A description of how the Company plans to account for similar costs in the future.

**RESPONSE:**

- (a) The Company has had a practice that Legal and Consultant expenses associated with special contracts or studies with a value in excess of \$1,000 and a life in excess of 3 years are treated as regulatory assets.
- (b) The referenced legal fees should not be capitalized as they are regulatory asset and should be recovered as an amortization expense. The \$5,021 in fees have been removed from the PWW-PEU interconnection project costs and the attached QCPAC schedules have been adjusted accordingly.
- (c) The Company is reviewing its policy regarding the treatment of Legal and Consultant expenses associated with special contracts and studies. The problem with amortizing these expenses is as described in Tech Response 4 above, which is that the current

ratemaking methodology allows for a return of, but not a return on the regulatory asset. The Company has not determined how it will handle these expenses in the future. The cash needed to provide for, or pay for, regulatory assets cannot be borrowed and recovered via a long-term loan. Therefore, either these types of expenses will need to be paid for with 0.1 DSRR cash (if available) or continue to be charged to Outside Services, as a component of the Company's OERR expenses.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-5

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Audit Issue #1 in the Audit Report Addendum dated 6/4/19:** Legal services from Brown Law totaling \$12,182, consisting of five invoices, were included in the Company's proposed PWW/PEU Interconnection project. Three invoices totaling \$7,161 related to charges for Docket No. DW 17-036, PEU River Crossing License. The other two invoices totaling \$5,021 pertain to obtaining approval for the wholesale water supply contract between PWW and PEU in Docket No. DW 17-071. The invoices were charged to the plant account #331100, Mains: 6" & Larger. Please provide:

- (a) The precedent used that determined the costs should be capitalized instead of expensed and why these costs fit into that category.
- (b) An explanation of why it is appropriate to capitalize these legal fees for recovery under the QCPAC mechanism instead of treating them as operating expenses whose recovery is encompassed in previously approved base rates.
- (c) A description of how the Company plans to account for similar costs in the future.

**RESPONSE:**

- (a) The Company has had a practice that Legal and Consultant expenses associated with special contracts or studies with a value in excess of \$1,000 and a life in excess of 3 years are treated as regulatory assets.
- (b) The referenced legal fees should not be capitalized as they are regulatory asset and should be recovered as an amortization expense. The \$5,021 in fees have been removed from the PWW-PEU interconnection project costs and the attached QCPAC schedules have been adjusted accordingly.
- (c) The Company is reviewing its policy regarding the treatment of Legal and Consultant expenses associated with special contracts and studies. The problem with amortizing these expenses is as described in Tech Response 4 above, which is that the current

ratemaking methodology allows for a return of, but not a return on the regulatory asset. The Company has not determined how it will handle these expenses in the future. The cash needed to provide for, or pay for, regulatory assets cannot be borrowed and recovered via a long-term loan. Therefore, either these types of expenses will need to be paid for with 0.1 DSRR cash (if available) or continue to be charged to Outside Services, as a component of the Company's OERR expenses.

**Pennichuck East Utility, Inc.**

**DW 19-035**  
**2019 QCPAC**  
**Responses to Staff Tech Session Data Requests**

Date Request Received: 6-6-19  
Request No. Staff Tech-6

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's Response to Staff 3-1:** Based on the Company's computations, it appears that from 2019 to 2020 the projected cumulative QCPAC percentage approximately doubles from 3.27% to 6.22%. It also appears that between 2020 and 2021 the Company is projecting another relatively substantial increase in the cumulative QCPAC percentage from 6.22% to 11.52%. Based on the discussion conducted during the Technical Session, please provide:

- A) further comments regarding how the Company might mitigate these projected increases in the cumulative QCPAC percentage that are anticipated to occur in 2020 and 2021; and
- B) Why the resulting rates would be just and reasonable.

**RESPONSE:**

- (a) The Company has made some adjustments to each of the four years Capex detailed on the Attached QCPAC schedules to try to mitigate the level of rate impacts as follows:
  - 1. In 2018 the Company is removing the \$25,000 expended to install the MWW 24" valve from its QCPAC request. This expenditure will be paid for with 0.1 DSRR cash collected via rates during 2018 and 2019.
  - 2. In 2018 the Company is proposing to remove AFDUC from the PWW-PEU Interconnection, Brady Avenue and Hillcrest Road project expenses and replacing it with short term interest incurred on the various short-term financings used to fund the 2018 capital expenditures. This change is described in the response to Tech 3 above.
  - 3. The recovery of the principal and interest associated with the estimated \$2,800,000 in capital expenditures for the Locke Lake Surface Water Treatment project expected to be completed in late 2020 has been moved from recovery in the 2021 QCPAC filing to recovery in the 2022 QCPAC filing. This change will require the Company to cover about \$183,000 in principal and interest payments associated with the SRF loan that is financing this project which will go into repayment mode around May of 2021. The Company proposes to fund these

principal and interest expenses with cash from its 0.1 DSRR cash collected in 2021 and 2022.

4. The Rolling Hills and Gage Hill water main replacement projects planned for in 2021 have been removed from the proposed capital expenditures in 2021.
5. Radio replacement program delayed for two years (2019 and 2020) resulting in a run rate replacement of failed and new radios of 150 radios per year instead of 550 radios resulting in a projected savings of \$40,000 per year.

The impact of these changes on the QCPAC's sought to fund the Company's capital expenditures in 2018, 2019, 2020 and 2021 when compared against those in the original amounts sought with this petition are as follows:

	<u>Original</u>	<u>Proposed</u>
2018	3.29%	3.17%
2019	6.57%	6.40%
2020	11.93%	9.50%
2021	14.29%	12.64%

Please note the original QCPAC schedule submitted with this petition had an error in the calculation of the 2021 cumulative percentage increase sought. That error, when corrected, resulting the cumulative QCPAC sought in 2022 for capital expenditures placed in service during 2021 should be 14.29% as opposed to the 12.55% in the original spreadsheet.

- (b) The resulting rates are considered to be just and reasonable, because they are created by capital expenditures that are necessary to keep the Company in compliance with State and Federal regulations as well as to insure continued and uninterrupted service to its customers. Not making the investments detailed would impact the Company's compliance and ability to serve. Regarding reasonableness, the proposed average per year increase over the next four years is 3.02%. The projected monthly bill, without consideration for what may happen to operational expense, will be about \$85 per month for the average single-family residential customer. While higher than most water rates throughout the State, this monthly charge is required to provide Safe Drinking water and is less than what customers pay on a monthly basis for discretionary services such as cable, internet and cell phone services.

**Pennichuck East Utility, Inc.**

**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-6

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

**Re: Company's Response to Staff 3-1:** Based on the Company's computations, it appears that from 2019 to 2020 the projected cumulative QCPAC percentage approximately doubles from 3.27% to 6.22%. It also appears that between 2020 and 2021 the Company is projecting another relatively substantial increase in the cumulative QCPAC percentage from 6.22% to 11.52%. Based on the discussion conducted during the Technical Session, please provide:

- A) further comments regarding how the Company might mitigate these projected increases in the cumulative QCPAC percentage that are anticipated to occur in 2020 and 2021; and
- B) Why the resulting rates would be just and reasonable.

**RESPONSE:**

- (a) The Company has made some adjustments to each of the four years Capex detailed on the Attached QCPAC schedules to try to mitigate the level of rate impacts as follows:
  - 1. In 2018 the Company is removing the \$25,000 expended to install the MWW 24" valve from its QCPAC request. This expenditure will be paid for with 0.1 DSRR cash collected via rates during 2018 and 2019.
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  - 3. The recovery of the principal and interest associated with the estimated \$2,800,000 in capital expenditures for the Locke Lake Surface Water Treatment project expected to be completed in late 2020 has been moved from recovery in the 2021 QCPAC filing to recovery in the 2022 QCPAC filing. This change will require the Company to cover about \$183,000 in principal and interest payments associated with the SRF loan that is financing this project which will go into repayment mode around May of 2021. The Company proposes to fund these

principal and interest expenses with cash from its 0.1 DSRR cash collected in 2021 and 2022.

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5. Radio replacement program delayed for two years (2019 and 2020) resulting in a run rate replacement of failed and new radios of 150 radios per year instead of 550 radios resulting in a projected savings of \$40,000 per year.

The impact of these changes on the QCPAC's sought to fund the Company's capital expenditures in 2018, 2019, 2020 and 2021 when compared against those in the original amounts sought with this petition are as follows:

	<u>Original</u>	<u>Proposed</u>
2018	3.29%	3.17%
2019	6.57%	6.40%
2020	11.93%	9.50%
2021	14.29%	12.64%

Please note the original QCPAC schedule submitted with this petition had an error in the calculation of the 2021 cumulative percentage increase sought. That error, when corrected, resulting the cumulative QCPAC sought in 2022 for capital expenditures placed in service during 2021 should be 14.29% as opposed to the 12.55% in the original spreadsheet.

- (b) The resulting rates are considered to be just and reasonable, because they are created by capital expenditures that are necessary to keep the Company in compliance with State and Federal regulations as well as to insure continued and uninterrupted service to its customers. Not making the investments detailed would impact the Company's compliance and ability to serve. Regarding reasonableness, the proposed average per year increase over the next four years is 3.02%. The projected monthly bill, without consideration for what may happen to operational expense, will be about \$85 per month for the average single-family residential customer. While higher than most water rates throughout the State, this monthly charge is required to provide Safe Drinking water and is less than what customers pay on a monthly basis for discretionary services such as cable, internet and cell phone services.



**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-7

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

Please provide updated Exhibits 1 and 2 that include adjustments 1) discussed during the Technical Session, 2) identified in the Company's previous data responses, and 3) that have not been previously identified but have become currently known. For capex budget year 2019, please provide a detailed narrative regarding the changes made. For capex budget years 2020 and 2021, please provide a brief narrative summarizing the changes made.

**RESPONSE:**

The QCPAC schedule exhibits have been adjusted as discussed in Tech session DR 3(1)a. above.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Request Received: 6-6-19  
Request No. Staff Tech-7

Date of Response: 06-17-19  
Witness: Donald L. Ware

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**REQUEST:**

Please provide updated Exhibits 1 and 2 that include adjustments 1) discussed during the Technical Session, 2) identified in the Company's previous data responses, and 3) that have not been previously identified but have become currently known. For capex budget year 2019, please provide a detailed narrative regarding the changes made. For capex budget years 2020 and 2021, please provide a brief narrative summarizing the changes made.

**RESPONSE:**

The QCPAC schedule exhibits have been adjusted as discussed in Tech session DR 3(1)a. above.

**Pennichuck East Utility, Inc.**  
**DW 19-035**  
**2019 QCPAC**  
Responses to Staff Tech Session Data Requests

Date Supplemental Request Received: 6-24-19

Date of Supplemental  
Response: 07-01-19

Supplemental Request Staff Tech 8

Witness: Donald L. Ware

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**SUPPLEMENTAL REQUEST:**

a. Note #4 from the Revenue Requirement Tab is missing the \$28,000 reduction in operating expenses due to decreased expenses from treating water at Peacham rather than on on-site with absorptive material. It should be included in the 2019 Additions Column.

b. The 2018 Additions Tab- The tax rates for Derry, Londonderry and Windham also reverted to the older/ incorrect rates.

c. The 2018 Additions Tab- Note #5, The amount of SRF funds that were used for the Hillcrest Road Project decreased from \$242,047 of \$254,860 to \$10,471 of \$254,860.

**SUPPLEMENTAL RESPONSE:**

a. An earlier draft of the workbook was inadvertently submitted with the Company's response. This has been corrected on the attached workbook.

b. An earlier draft of the workbook was inadvertently submitted with the Company's response. This has been corrected on the attached workbook.

c. The total project cost was \$254,860 of which \$244,389 could be funded with the SRF funds and the remaining \$10,471 of project costs needed to be funded with the CoBank loan.

Pennichuck East Utilities, Inc.  
DW 19-xxx  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions		
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309		
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(39,589)	(4)(8)	\$	74,519	(4)	\$	5,886,513	\$	78,838	(10)	\$	5,965,350	\$	5,980,472	
Annual Principal and Interest Payments	\$	1,362,154	(2)	\$	274,458	(5)(6)	\$	1,636,612	\$	175,303	(6)	\$	1,811,915	\$	1,973,465	\$	222,453	\$	2,195,918
Principal and Interest Coverage Requirement		1.10	(3)				1.10				1.10				1.10				1.10
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,800,274			\$	1,993,107			\$	2,170,811			\$	2,415,510		
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,538,576			\$	8,805,928			\$	9,062,471			\$	9,322,291		
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952			\$	7,612,267			\$	7,879,619			\$	8,136,161		
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309			\$	926,309			\$	926,309			\$	926,309		
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261			\$	8,538,576			\$	8,805,928			\$	9,062,471		
Proposed Percent Revenue Increase		20.40%																	-
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915			\$	178,915			\$	178,915			\$	178,915		178,915
Proposed New Revenue Requirement	\$	8,455,176		\$	8,717,491			\$	8,984,843			\$	9,241,385			\$	9,501,206		
Projected QCPAC Increase <sup>7</sup>					3.17%				3.13%				2.91%						2.87%
Cumulative QCPAC increase <sup>9</sup>					3.17%				6.40%				9.50%						12.64%
Cumulative QCPAC monthly increase in average single family residential bill				\$	2.39			\$	4.83			\$	7.17			\$	9.54		
Average monthly single family residential bill with QCPAC				\$	77.84			\$	80.28			\$	82.62			\$	84.98		

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128  
(2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128  
(3) Principal and interest coverage of 1.10 is as approved in DW17-128  
(4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.  
(5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"  
(6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 5.5% that was not recovered in DW17-128  
(7) QCPAC percent revenue surcharges based on increase in revenues from the previous year, inclusive of the QCPAC surcharges.  
(8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWW-PEU Interconnection in the amount of \$ 180,500  
(9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128  
(10) QCPAC operating expense proforma associated by property taxes is reduced by \$ 70,000 to reflect reduction in purchased water costs associated with the completion of the Londonderry Storage Tank

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$	20.70
Average Single Family Consumption (CCF) -		7.29
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$	7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$	75.45

Pennichuck East Utilities, Inc.  
DW 19-035

2019 QCPAC Filing  
2018 Capital Expenditures  
2/15/2019, Revised 6/17/19 to reflect elimination of AFUDC and funding of FALOC and SRF short term interest expense via CoBank term loan

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue <sup>1</sup>	Replace 2,400 linear feet of existing 15" thin wall HDPE water main with new 18" diameter ductile iron water main	1703684 & 1807069	DW17-055	26,006	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,983	Derry	Yes	Yes	\$ 32.63	\$ 20,197	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" thin wall ductile iron water main with high break history through swamp with 12" HDPE	1707188 & 1807072	DW17-055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU-PWW Interconnection <sup>2</sup>	Interconnect PEU to PWW under Merrimack River	See Below	DW17-055/Pending Filing <sup>3</sup>	26,006	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU-PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807262, 1608938, 1701789	See above	See above	See above	\$ Included above	\$ 3,515,850	\$ 3,335,078	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Contribution toward PWW water main upgrade	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148	See above	See above	See above	\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88		No property tax obligation for PEU as this is a PWW asset. PEU contribution to this PWW asset per NHPUC Order #26 (MW at DW17-071)
PEU-PWW Interconnection Station Building & Construction	Booster Station, including purchase of building and meter from PWW	1813395	See above	See above	See above	\$ 340,000	\$ 330,864		Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NJDES Corrective Action Plan	1813409	DW18-132			\$ 100,000	\$ -		Barnstead	No	Yes	\$ 27.10		Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Atkinson Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmosphere Storage Tanks	Deferred	Pending Filing <sup>4</sup>			\$ 330,000	\$ -		Atkinson	Yes	Yes	\$ 22.35		Project deferred due to Engineering resources being directed to design Bedford/Litchfield PECA facilities
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (run rate) (21)	760 - 763 workorders	Pending Filing <sup>4</sup>			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace small CWS treatment systems. Install new CWS treatment system if better quality or standard than existing	n/a	Pending Filing <sup>4</sup>			\$ 25,000	\$ 5,000		Various	Yes	Yes	\$ 27.72		
Misc. Structural Improvements	Repair/replace aging/faded station structures as needed	n/a	Pending Filing <sup>4</sup>			\$ 20,000	\$ -		Various	Yes	Yes	\$ 27.72		
Miscellaneous Fixing and Security projects	Install fencing/security facilities as needed	n/a	Pending Filing <sup>4</sup>			\$ 10,000	\$ -		Various	Yes	Yes	\$ 27.72		
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing <sup>4</sup>			\$ 30,000	See Below		Various	Yes	Yes	\$ 27.72		2 new VFD failures are projected through year end.
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD at Castle Reach	1819462	Pending Filing <sup>4</sup>			\$ -	\$ 3,944	\$ 3,944	Various	Yes	Yes	\$ 27.72	\$ 109	
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&E	1816163	Pending Filing <sup>4</sup>			\$ -	\$ 3,013	\$ 3,013	Various	Yes	Yes	\$ 27.72	\$ 84	
Miscellaneous SCADA/Electrical	Replace Pump #5 VFD at Castle Reach	1807058	Pending Filing <sup>4</sup>			\$ -	\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818296	Pending Filing <sup>4</sup>			\$ -	\$ 2,639	\$ 2,684	Various	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Rehab wells as necessary to restore efficiency as needed	n/a	Pending Filing <sup>4</sup>			\$ 60,000	\$ 15,000		Various	Yes	Yes	\$ 27.72		Only one proposed well rehab to occur in 2018 vs. 4 in budget.
5 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing <sup>4</sup>			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing <sup>4</sup>			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	9 services renewed through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing <sup>4</sup>			\$ 10,000	\$ 10,000		Various	Yes	Yes	\$ 27.72		None Reported in 2018
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing <sup>4</sup>			\$ 30,000	\$ 12,000		Various	Yes	Yes	\$ 27.72		None Reported in 2018
75 New Meters (growth) 5/8" 2"	New meters for new customers	750 workorders	Pending Filing <sup>4</sup>			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,932	531 replacements through December 31, 2018 exclusive of new and replacement meters
749 New Meters for Lead Meter exchanges 5/8"-6"	Replace High lead brass meter with new no lead brass meter	750 workorders	Pending Filing <sup>4</sup>			\$ 144,000	\$ 143,400		Various	Yes	Yes	\$ 27.72		
Radio Reads	New and replaced radios for meter reading (123)	754 workorders	Pending Filing <sup>4</sup>			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 518	149 Radio replacements were completed through December 31, 2018
Investments in Developer Installed Services	One times revenue untiled amount (57)	n/a	Pending Filing <sup>4</sup>			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,328	Repaired by Tuff. Not in 2018 Board Assessment Budget
Insertion Valve Install	Installation of Insertion Valve on 16" Main MW/W	1824544	Pending Filing <sup>4</sup>			\$ -	\$ 25,000	\$ -	Londonderry	Yes	No	\$ 28.64	\$ -	MWW was going to shut service off for all of Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry. Not included in QCPAC as this will be funded with 611 DRRB cash.
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drain containers to smaller transportable containers	1817322	Pending Filing <sup>4</sup>			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing <sup>4</sup>			\$ -	\$ 6,285		Woodham	Yes	Yes	\$ 29.89	\$ 188	
Locke Lake Varnet Rd Area	Locke Lake Varnet Rd Area - Clean up and final paving	1817280	Pending Filing <sup>4</sup>			\$ -	\$ 94,050		Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1900290	Pending Filing <sup>4</sup>			\$ -	\$ 8,608		Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex						\$ 39,547	\$ -		Yes	No		\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,626,100	\$ 5,179,004	\$ 5,023,146					\$ 340,931	
PEU-QCPAC							\$ 5,179,004							

		Projected Annual P&I Payments
Amount to be funded with 2019 Loan from CoBank <sup>5,6</sup>	\$ 1,211,099	\$ 90,287
Amount to be funded SRF loan for Brady Avenue watermain replacements <sup>7</sup>	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection <sup>8</sup>	\$ 2,400,000	\$ 146,210
Amount to be funded SRF loan for Hillcrest Road watermain replacements <sup>8</sup>	\$ 242,047	\$ 14,746
Amount to be funded with Drinking Water and Groundwater Trust Fund Grant -	\$ 600,000	\$ -
Total Projected 2018 QCPAC P&I -		\$ 274,458

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000  
2. Projected CoBank Loan Terms are 25 Years at 5.5%

3. Projected Brady Ave. SRF Terms are 30 Years at 1.96% with 10% Principal forgiveness  
4. Projected PWW/PEU Interconnection SRF Terms are 20 Years at 1.96%

5. Projected Hillcrest Road SRF Terms are 20 Years at 1.96%  
6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total project budget estimated at \$ 570,000 exclusive of internal engineering costs

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.

8. Eliminate AFUDC on PWW/PEU Interconnect Project in the amount of \$ 95,807

Pennichuck East Utilities, Inc.  
DW 19-xxx  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>3</sup>  
2/15/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Replace Gilcrest Road PRV Pir	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Atkinson Booster pump station design	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64	\$ 430
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,356,500

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment - \$ 2,351,500

Projected annual property tax expenses for QCPAC eligible projects - \$ 74,519

Funded with SRF Funds - \$ 1,512,500

Amount to be funded with 2020 Loan from CoBank<sup>1</sup> - \$ 839,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

**Pennichuck East Utilities, Inc.**

**DW 19-xxx**

**2019 QCPAC Filing**

**Board Approved 2020 Capital Expenditures<sup>3</sup>**

**2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment**

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 3/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 3,630,580 \$ 1,930,580

Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -

Funded with CoBank Loan - \$ 1,930,580

Funded with SRF Loan - \$ -

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5%

5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00

Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSR

Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

**Pennichuck East Utilities, Inc.**  
**DW 19-xxx**  
**2019 QCPAC Filing**  
**Board Approved 2021 Capital Expenditures<sup>3</sup>**  
**2/15/2019**

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000

Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000

Funded with CoBank Loan - \$ 528,000

Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projects moved out of 2021 Capex
6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR  
Projected SRF Terms for Locke Lake project are 20 Years at 2.704%



Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019, Revised 6/25/2019 per Staff tech DR's

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(40,866)	(4)(8)	\$	5,810,716	\$	46,519	(4)(11)	\$	5,857,235	\$	78,838	(10)	\$	5,951,195
Annual Principal and Interest Payments	\$	1,362,154	(2)	\$	274,426	(5)(6)	\$	1,636,580	\$	175,303	(6)	\$	1,811,883	\$	161,550		\$	1,973,433
Principal and Interest Coverage Requirement		1.10	(3)				1.10				1.10							
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,800,238			\$	1,993,072			\$	2,170,776				\$	2,415,475
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,537,264			\$	8,776,616			\$	9,033,158				\$	9,292,979
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952			\$	7,610,955			\$	7,850,307				\$	8,106,849
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309			\$	926,309			\$	926,309				\$	926,309
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261			\$	8,537,264			\$	8,776,616				\$	9,033,158
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915			\$	178,915			\$	178,915				\$	178,915
Proposed New Revenue Requirement	\$	8,455,176		\$	8,716,178			\$	8,955,531			\$	9,212,073				\$	9,471,893
Projected QCPAC increase <sup>7</sup>					3.15%				2.89%				3.10%					3.14%
Cumulative QCPAC increase <sup>8</sup>					3.15%				6.05%				9.15%					12.28%
Cumulative QCPAC monthly increase in average single family residential bill				\$	2.38			\$	4.56			\$	6.90			\$	9.27	
Average monthly single family residential bill with QCPAC				\$	77.83			\$	80.01			\$	82.35			\$	84.72	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128
- (2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128
- (3) Principal and interest coverage of 1.10 is as approved in DW17-128
- (4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.
- (5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"
- (6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 5.5% that was not recovered in DW17-128
- (7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges
- (8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWW-PEU Interconnection in the amount of \$ 180,500
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128
- (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 granted in DW17-128, inclusive of Step increase =	\$	20.70
Average Single Family Consumption (CCF) =		7.29
Consumption Charge granted in DW17-128, inclusive of Step increase =	\$	7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step =	\$	75.45

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
2018 Capital Expenditures  
2/15/2019, Revised 6/17/19 to reflect elimination of AFDUC and funding of FALOC and SRF short term interest expense via CoBank term loan

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue*	Replace 2,400 linear feet of existing 1.5" thin wall HDPE water main with new 8" diameter ductile iron water main	1700684 & 1807008	DW17 055	26,006	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,983	Derry	Yes	Yes	\$ 30.90	\$ 18,935	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" thin wall ductile iron water main with high break history through swamp with 12" HDPE	1707188 & 1807072	DW17 055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU-PWW Interconnection*	Interconnect PEU to PWW under Merrimack Road	See Below	DW17 055/Pending Filing	26,006	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ -	
PEU-PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608936, 1701789	See above	See above	See above	\$ Included above	\$ 3,515,850	\$ 3,335,076	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ -	
PEU Contribution toward PWW water main upgrade	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148	See above	See above	See above	\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWW asset. PEU contribution to this PWW asset per NHPUC Order #26,006 on DW17-071.
PEU-PWW Interconnection Station Building & Construction	Booster Station, including purchase of building and water from PWW	1813195	See above	See above	See above	\$ 340,000	\$ 339,864	\$ 339,864	Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Corrective Action Plan	1813409	DW18 132			\$ 100,000			Barnstead	No	Yes	\$ 27.30	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Adkinson Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing			\$ 330,000			Adkinson	Yes	Yes	\$ 22.35	\$ -	Project deferred due to Engineering resources being diverted to design Bedford/Litchfield PFOA facilities
Booster /Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (run rate) (21)	760 - 763 workorders	Pending Filing			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace small CWS treatment systems. Install new CWS treatment system if water quality or standards require it	n/a	Pending Filing			\$ 25,000	\$ 5,000		Various	Yes	Yes	\$ 27.72	\$ -	
Misc. Structural Improvements	Repair/replace aging/faded station structures as needed	n/a	Pending Filing			\$ 20,000			Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Pumping and Sanitary projects	Install/replace/sanitary facilities as needed	n/a	Pending Filing			\$ 10,000			Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing			\$ 30,000	See Below		Various	Yes	Yes	\$ 27.72	\$ -	2 meter VFD facilities are projected through next year.
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD at Castle Reach	1819462	Pending Filing			\$ 3,944	\$ 3,944	\$ 3,944	Various	Yes	Yes	\$ 27.72	\$ 109	
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&E	1816163	Pending Filing			\$ 3,013	\$ 3,013	\$ 3,013	Various	Yes	Yes	\$ 27.72	\$ 84	
Miscellaneous SCADA/Electrical	Replace Pump #3 VFD at Castle Reach	1807058	Pending Filing			\$ 4,145	\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818296	Pending Filing			\$ 2,639	\$ 2,684		Various	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Rehab wells as necessary to restore efficiency as needed	n/a	Pending Filing			\$ 60,000	\$ 15,000		Various	Yes	Yes	\$ 27.72	\$ -	Only one projected well rehab to occur in 2018 vs. 4 in budget.
9 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewal Services	Replacement of failed services	721 & 722 workorders	Pending Filing			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	7 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing			\$ 10,000	\$ 10,000		Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing			\$ 30,000	\$ 12,000		Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
75 New Meters (grossed) 5/8", 2"	New meters for new customers	750 workorders	Pending Filing			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,952	131 replacements through December 31, 2018 exclusive of new well replacement projects
719 New Meters for Lead Meter exchanges 5/8", 6"	Replace High Lead brass meter with new no lead brass meter	750 workorders	Pending Filing			\$ 144,000	\$ 143,400		Various	Yes	Yes	\$ 27.72	\$ -	Requested by Twp. Not in 2018 Board Approved Budget
Radio Reads	New and replaced radios for meter reading (123)	754 workorders	Pending Filing			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	140 Radio replacements were considered through December 31, 2018
Investment in Developer Installed Services	One line revenue unitized amount (5)	n/a	Pending Filing			\$ -	\$ 42,560	\$ 47,836	Various	Yes	Yes	\$ 27.72	\$ 1,326	MWW was going to shut service off for all of Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry. Not included in QCPAC as this will be funded with 0.125% rate.
Insertion Valve Install	Installation of Insertion Valve on 16" Main MWW	1824544	Pending Filing			\$ -	\$ 25,000	\$ -	Londonderry	Yes	No	\$ 26.15	\$ -	
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drum containers to smaller transportable containers	1817322	Pending Filing			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing				\$ 6,285		Windham	Yes	Yes	\$ 27.57	\$ 173	
Locke Lake, Varny Rd Area	Locke Lake, Varny Rd Area - Clean up and final Paving	1817280	Pending Filing				\$ 94,050		Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1900391	Pending Filing				\$ 8,608		Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex						\$ 30,547			Yes	No	\$ -	\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,826,100	\$ 3,129,084	\$ 3,023,146						\$ 179,634
						PEU QCPAC	\$ 5,179,084							

Projected Annual P&I Payments		
Amount to be funded with 2019 Loan from CoBank <sup>1,2</sup> -	\$ 1,208,757	\$ 90,112
Amount to be funded SRF loan for Brady Avenue watermain replacements <sup>3</sup> -	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection <sup>4</sup> -	\$ 2,400,000	\$ 146,210
Amount to be funded SRF loan for Hillcrest Road watermain replacements <sup>5</sup> -	\$ 244,389	\$ 14,888
Amount to be funded with Drinking Water and Groundwater Trust Fund Grant -	\$ 600,000	\$ -
Total Projected 2018 QCPAC P&I -		\$ 274,425

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. Projected CoBank Loan Terms are 25 Years at 5.5% Principal forgiveness
3. Projected Brady Ave. SRF Terms are 30 Years at 1.90% with 10% Year 1 Principal Forgiveness (\$4,175,757)
4. Projected PWW/PEU Interconnection SRF Terms are 20 Years at 1.90%
5. Projected Hillcrest Road SRF Terms are 20 Years at 1.90% Projected final cost is \$ 254,860 of which \$ 10,471 is internal engineering that can not be funded with SRF funds.
6. Brady Ave was budgeted in 2 phases by the Board. Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total project budget estimated at \$ 570,000 exclusive of internal engineering costs.
7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.
8. Eliminate AFDUC on PWW/PEU Interconnect Project in the amount of \$ 95,807

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Replace Gilcrest Road PRV Pit	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Atkinson Booster pump station design	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64	\$ 430
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,356,500 Projected annual property tax expenses for QCPAC eligible projects - \$ 74,519

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment - \$ 2,351,500

Funded with SRF Funds - \$ 1,512,500

Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 839,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

**Pennichuck East Utilities, Inc.**

**DW 19-035**

**2019 QCPAC Filing**

**Board Approved 2020 Capital Expenditures<sup>1</sup>**

**2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment**

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (3)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (230)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 3,630,580 \$ 1,930,580  
 Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -  
 Funded with CoBank Loan - \$ 1,930,580  
 Funded with SRF Loan - \$ -

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%
6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00  
 Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSRP  
 Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2021 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000

Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000

Funded with CoBank Loan - \$ 528,000

Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are 25 Years at 5.5%
5. Projects moved out of 2021 Capex
6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR  
Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019, Revised 6/25/2019 per Staff tech DR's, Revised 7/25/2019

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(40,866)	(4)(8)	\$	5,810,716	\$	46,519	(4)(11)	\$	5,857,235	\$	78,838	(10)	\$	5,936,073
Annual Principal and Interest Payments	\$	1,362,154	(2)	\$	264,828	(5)(6)	\$	1,626,982	\$	175,303	(12)	\$	1,802,285	\$	161,550	(12)	\$	1,963,834
Principal and Interest Coverage Requirement		1.10	(3)				1.10					1.10						
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,789,680			\$	1,982,513			\$	2,160,218			\$	2,404,916	
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,526,706			\$	8,766,058			\$	9,022,600			\$	9,282,420	
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952			\$	7,600,396			\$	7,839,748			\$	8,096,291	
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309			\$	926,309			\$	926,309			\$	926,309	
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261			\$	8,526,706			\$	8,766,058			\$	9,022,600	
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915			\$	178,915			\$	178,915			\$	178,915	
Proposed New Revenue Requirement	\$	8,455,176		\$	8,705,620			\$	8,944,972			\$	9,201,514			\$	9,461,335	
Projected QCPAC Increase <sup>7</sup>					3.03%				2.89%			3.10%					3.14%	
Cumulative QCPAC increase <sup>9</sup>					3.03%				5.92%			9.02%					12.16%	
Cumulative QCPAC monthly increase in average single family residential bill	\$			\$	2.28			\$	4.47			\$	6.80			\$	9.17	
Average monthly single family residential bill with QCPAC	\$			\$	77.73			\$	79.91			\$	82.25			\$	84.62	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128  
(2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128  
(3) Principal and interest coverage of 1.10 is as approved in DW17-128  
(4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.  
(5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"  
(6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 4.38% that was not recovered in DW17-128  
(7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges.  
(8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWVW-PEU Interconnection in the amount of \$ 180,500  
(9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128  
(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  
(12) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant 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 5.50% that was not recovered in DW17-128

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$	20.70
Average Single Family Consumption (CCF) -		7.29
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$	7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$	75.45

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
2018 Capital Expenditures  
2/15/2019, Revised 6/17/19 to reflect elimination of AFDOC and funding of FALOC and SRF short term interest expense via CoBank term loan, Revised 7/25/2019

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project Cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue*	Replace 2,400 linear feet of existing 12" thin wall HDPE water main with new 8" diameter ductile iron water main	1703684 & 1807069	DW17-055	26,000	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,993	Deery	Yes	Yes	\$ 30.59	\$ 18,935	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" thin wall ductile iron water main with high break history through swamp with 12" HDPE	1707188 & 1807072	DW17-055	26,000	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU/PWW Interconnection*	Interconnect PEU to PWW under Merrimack River	See Below	DW17-055/Pending Filing	26,000	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU/PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608938, 1701789	See above	See above	See above	\$8 Included above	\$ 3,515,850	\$ 3,335,078	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Contribution to upgrade PWW water main upgrade	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148				\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWW asset. PEU contribution to this PWW asset per NHPUC Order #26,049 in DW17-071.
PEU/PWW Interconnection Safety Reliability & Construction	Booster Station, including purchase of building and water from PWW	1813395				\$ 340,000	\$ 339,864	\$ 339,864	Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Corrective Action Plan	1813409	DW18-132			\$ 100,000	\$ -	\$ -	Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Atkinson Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing			\$ 330,000	\$ -	\$ -	Atkinson	Yes	Yes	\$ 22.35	\$ -	Project deferred due to Engineering resources being directed to design Bedford/Litchfield PFDA tankers
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (on rate) (2)	760-763 work orders	Pending Filing			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace small CWS treatment systems. Install new CWS treatment systems if water analysis or standards requires it.	n/a	Pending Filing			\$ 25,000	\$ 5,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Misc. Structural Improvements	Repair/replace aging/failed station structures as needed	n/a	Pending Filing			\$ 20,000	\$ -	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Fencing and Security projects	Install fencing/security facilities as needed	n/a	Pending Filing			\$ 10,000	\$ -	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing			\$ 30,000	See Below	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	3 remote VFD failures are projected through new well.
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD at Castle Reach	1819462	Pending Filing			\$ 3,944	\$ 3,944	\$ 3,944	Various	Yes	Yes	\$ 27.72	\$ 109	
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&E	1816163	Pending Filing			\$ 3,013	\$ 3,013	\$ 3,013	Various	Yes	Yes	\$ 27.72	\$ 84	
Miscellaneous SCADA/Electrical	Replace Pump #5 VFD at Castle Reach	1807058	Pending Filing			\$ 4,145	\$ 4,145	\$ 4,145	Various	Yes	Yes	\$ 27.72	\$ 115	
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818296	Pending Filing			\$ 2,639	\$ 2,684	\$ 2,684	Various	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Reliab wells as necessary to restore efficiency as needed	n/a	Pending Filing			\$ 60,000	\$ 15,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	Only one potential well rehab to occur in 2018 vs. 4 in budget
5 New Services	Single Family, Owner Build, New Homes	720 work orders	Pending Filing			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 work orders	Pending Filing			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	9 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 work orders	Pending Filing			\$ 10,000	\$ 10,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018
10 Valve Replacements	Replacement of Failed Gate Valves	712 work orders	Pending Filing			\$ 30,000	\$ 12,000	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018
75 New Meters (growth) 5/8" 2"	New meters for new customers	750 work orders	Pending Filing			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,952	311 replacements through December 31, 2018 courtesy of new well replacement project
71W New Meters for Lead Meter exchanges 5/8" 6"	Replace High lead brass meters with new no lead brass meter	750 work orders	Pending Filing			\$ 144,000	\$ 143,400	\$ -	Various	Yes	Yes	\$ 27.72	\$ -	
Radio Rebuilds	New and replaced radios for meter reading (123)	754 work orders	Pending Filing			\$ -	\$ 17,100	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	249 Radio replacements were completed through December 31, 2018
Investment in Developer Installed Services	One times revenue tariffed amount (\$7)	n/a	Pending Filing			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,326	Request for Tariff. See in 2018 Board Approved Budget
Insertion Valve Install	Installation of Insertion Valve on 16" Main MWW	1824544	Pending Filing			\$ -	\$ 25,000	\$ -	Londonderry	Yes	No	\$ 26.15	\$ -	MWW was going to shut service off for all of Londonderry for a hydrant repair. Insertion valve allowed hydrant replacement without losing service to any of Londonderry. Not included in QCPAC as this will be funded with R1 DESUR cash.
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drums containers to smaller transportable containers	1817322	Pending Filing			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing			\$ -	\$ 6,285	\$ -	Windham	Yes	Yes	\$ 27.57	\$ 173	
Locke Lake, Varner Rd. Area	Locke Lake, Varner Rd. Area - Clean up and final Paving	1817280	Pending Filing			\$ -	\$ 94,050	\$ -	Barnstead	Yes	Yes	\$ 27.10	\$ 2,540	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1902991	Pending Filing			\$ -	\$ 8,808	\$ -	Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex									Yes	No		\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,920,100	\$ 5,179,004	\$ 5,023,246					\$ 139,634	
PEU QCPAC							\$ 5,179,004							

Amount to be funded with 2019 Loan from CoBank<sup>4,7</sup> - \$ 1,208,577  
Amount to be funded SRF loan for Brady Avenue watermain replacements<sup>8</sup> - \$ 570,000  
Amount to be funded SRF loan for PWW/PEU Interconnection<sup>8</sup> - \$ 2,400,000  
Amount to be funded SRF loan for Hillcrest Road watermain replacements<sup>8</sup> - \$ 244,389  
Amount to be funded with Drinking Water and Groundwater Trust Fund Grant - \$ 600,000  
Total Projected 2018 QCPAC P&L -

Projected Annual P&L Payments	
\$	80,314
\$	23,215
\$	140,210
\$	14,888
\$	-
\$	264,628

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000  
2. Actual CoBank Loan Terms are

3. Projected Brady Ave. SRF Terms are 20 Years at 1.96% with 10% Principal forgiveness  
4. Projected PWW/PEU Interconnection SRF Terms are 20 Years at 1.96%  
5. Projected Hillcrest Road SRF Terms are 20 Years at 1.96% Projected final cost is \$

6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total project budget estimated at \$ 570,000 exclusive of internal engineering costs  
7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC.  
8. Eliminate AFDOC on PWW/PEU Interconnect Project in the amount of \$ 95,807

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>1</sup>  
2/15/2019, Revised 6/17/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (1)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
	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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
N.Barnstead Road - Eliminate deadend piping	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Belmont Drive water main replacement	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Replace Gilcrest Road PRV Pit	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
Rolling Hills Water Main Replacement	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Booster Pump replacement/rebuild	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Chemical Feed pump replacements	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Install/replace treatment systems in small CWS	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Misc. Structural Improvements	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous Fencing and Security projects	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Miscellaneous SCADA/Electrical	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Well Rehabilitation	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Atkinson Booster pump station design	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Replace softener media, W and E	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Add communications between remote facility and Nashua WTP	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
New Services (3)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Renewed Services (10)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Hydrants (5)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Gates (8)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64	\$ 430
Radios (150)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters (Growth) 5/8"-2" - PEU (230)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Meters 5/8"-6" Lead Meter Exchange - PEU (550)							

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,356,500 Projected annual property tax expenses for QCPAC eligible projects - \$ 74,519

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment - \$ 2,351,500

Funded with SRF Funds - \$ 1,512,500  
Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 839,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are  
25 Years at 5.50%
5. Projected SRF Terms for Locke Lake project are  
20 Years at 2.704%



**Pennichuck East Utilities, Inc.**

DW 19-035

2019 QCPAC Filing

Board Approved 2020 Capital Expenditures<sup>3</sup>

2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (l)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 3,630,580 \$ 1,930,580

Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -

Funded with CoBank Loan - \$ 1,930,580

Funded with SRF Loan - \$ -

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5%

5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00  
Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSRR  
Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2021 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000

Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000

Funded with CoBank Loan - \$ 528,000

Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5%

5. Projects moved out of 2021 Capex

6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR

Projected SRF Terms for Locke Lake project are 20 Years at 2.704%

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019, Revised 6/25/2019 per Staff tech DR's, Revised 7/25/2019  
Updated for June 30, 2019 update

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(40,866)	(4)(8)	\$	5,810,716	\$	79,113	(4)	\$	5,889,829	\$	68,782	(10)(11)	\$	5,973,733
Annual Principal and Interest Payments	\$	51,362,154	(2)	\$	261,114	(5)(6)	\$	1,623,268	\$	184,558	(12)	\$	1,807,826	\$	179,234	(12)	\$	1,987,060
Principal and Interest Coverage Requirement		1.10	(3)				1.10				1.10						1.10	
Principal and Interest Revenue Requirement	\$	1,498,370		\$			1,785,595	\$			1,988,608	\$					2,185,766	
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$			8,522,620	\$			8,804,746	\$					9,070,686	
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$			7,349,952	\$			7,596,311	\$					7,878,437	
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$			926,309	\$			926,309	\$					926,309	
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$			8,276,261	\$			8,522,620	\$					8,804,746	
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$			178,915	\$			178,915	\$					178,915	
Proposed New Revenue Requirement	\$	8,455,176		\$			8,701,535	\$			8,983,661	\$					9,249,600	
Projected QCPAC increase <sup>7</sup>							2.98%				3.41%						3.21%	
Cumulative QCPAC increase <sup>9</sup>							2.98%				6.39%						9.60%	
Cumulative QCPAC monthly increase in average single family residential bill				\$			2.25	\$			4.82	\$					7.24	
Average monthly single family residential bill with QCPAC				\$			77.69	\$			80.27	\$					82.69	
																	</	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128
- (2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128
- (3) Principal and interest coverage of 1.10 is as approved in DW17-128
- (4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.
- (5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"
- (6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 4.38% that was not recovered in DW17-128
- (7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges.
- (8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PW-W-PEU Interconnection in the amount of \$ 180,500
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128
- (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
- (12) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant 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 5.50% that was not recovered in DW17-128

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase =	\$	20.70	
Average Single Family Consumption (CCF) =		7.29	
Consumption Charge granted in DW17-128, inclusive of Step increase =	\$	7.51	per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step =	\$	75.45	

Pennichuck East Utilities, Inc.

DW 19-035

2019 QCPAC Filing

2018 Capital Expenditures

2/15/2019, Revised 6/17/19 to reflect elimination of APDUC and funding of FALOC and SRF short term interest expense via CoBank term loan, Revised 7/25/2019

Project Name/Description	Project Description	Work Order #	Financing Docket No.	NHAPUC Order No.	Date of NHAPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue*	Replace 2,400 linear feet of existing 15" thru wall HDPE water main with new 8" diameter ductile iron water main	170284 & 1807001	DW17-055	26,006	4/19/2017	\$ 379,660	\$ 598,000	\$ 618,983	Derry	Yes	Yes	\$ 30.39	\$ 18,935	
Hillcrest Road	Replace approximately 1,200 linear feet of existing 12" thru wall ductile iron water main with high break history through swap with 12" HDPE.	170288 & 1807002	DW17-055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,960	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU/PWW Interconnection*	Interconnect PEU to PWW under Merrimack River	See Below	DW17-057/Pending, Clipse	26,006	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU/PWW Interconnection*	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608938, 1701789	See above	See above	See above	\$ 3,515,850	\$ 3,335,078		Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Contribution toward PWW water main upgrades	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148	See above	See above	See above	\$ 33,925	\$ 33,925		Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as that is a PWW asset. PEU's contribution to that PWW asset per NHAPAC Order #36(A) in DW17-071.
PEU/PWW Interconnection Return Building & Construction	Booster Station, including purchase of building and water from PWW	1813365				\$ 340,000	\$ 339,864		Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Corrective Action Plan	1813409	DW18-132			\$ 100,000			Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Arboretum Cornerette Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing			\$ 330,000			Atkinson	Yes	Yes	\$ 22.55	\$ -	Project deferred due to Engineering resources being diverted to design Bedford/Litchfield PFOA facilities
Booster Well/Chem Feed pump replacements	Replace small boosters and chemical feed pumps as they fail (two rate) (21)	760 - 763 workorders	Pending Filing			\$ 60,000	\$ 100,200	\$ 92,476	Various	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace failed CWS treatment systems. Install new CWS treatment system if water quality or standards requires it.	6/8	Pending Filing			\$ 25,000	\$ 5,000		Various	Yes	Yes	\$ 27.72	\$ -	
Misc. Structural Improvements	Repair/replace aging/failed station structures as needed	6/8	Pending Filing			\$ 20,000			Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Fencing and Security projects	Install storage/security facilities as needed	6/8	Pending Filing			\$ 10,000			Various	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing			\$ 30,000	See Below		Various	Yes	Yes	\$ 27.72	\$ -	3 main VFD failures are corrected through year end.
Miscellaneous SCADA/Electrical	Replace Pump #4 VFD at Cade Reach	1819462	Pending Filing			\$ 3,544	\$ 3,044		Various	Yes	Yes	\$ 27.72	\$ 109	One one reported well fails to report in 2018 vs. 4 in 2017.
Miscellaneous SCADA/Electrical	Replace Pump #2 VFD at W&B	1816163	Pending Filing			\$ 3,013	\$ 3,013		Various	Yes	Yes	\$ 27.72	\$ 84	4 repairs added through December
Miscellaneous SCADA/Electrical	Replace Pump #5 VFD at Cade Reach	1807058	Pending Filing			\$ 4,145	\$ 4,145		Various	Yes	Yes	\$ 27.72	\$ 115	3 repairs replaced through December
Miscellaneous SCADA/Electrical	Replace Well Pump #13 VFD at Locke Lake	1818276	Pending Filing			\$ 2,630	\$ 2,684		Various	Yes	Yes	\$ 27.72	\$ 74	None Reported in 2018.
Well Rehabilitation	Rehab well as necessary to restore efficiency as needed	n/a	Pending Filing			\$ 60,000	\$ 15,000		Various	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
5 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing			\$ 23,000	\$ 32,800	\$ 27,558	Various	Yes	Yes	\$ 27.72	\$ 764	431 replacements through December 31, 2018 exclusive of new and replacement ones.
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing			\$ 40,000	\$ 17,400	\$ 18,667	Various	Yes	Yes	\$ 27.72	\$ 517	240 Radio enclosures were completed through December 31, 2018
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing			\$ 10,000	\$ 10,000		Various	Yes	Yes	\$ 27.72	\$ -	Required for Tarric. Part of 2018 Board Approved Budget
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing			\$ 30,000	\$ 12,000		Various	Yes	Yes	\$ 27.72	\$ -	MWV was going to shut service off for all of Londonderry for a hydrant repair. Junction valve allowed hydrant replacement without losing service to any of Londonderry. Not included as QCPAC as this will be funded with 03 DERR cash.
75 New Meters (growth) 5/8" - 2"	New station for new customers	750 workorders	Pending Filing			\$ 22,500	\$ 14,500	\$ 70,429	Various	Yes	Yes	\$ 27.72	\$ 1,952	
739 New Meters for Lead Meter exchanges 5/8" - 6"	Replace High lead brass meter with new no lead brass meter	750 workorders	Pending Filing			\$ 144,000	\$ 145,400		Various	Yes	Yes	\$ 27.72	\$ 516	
Radio Reach	New and replaced radios for meter reading (123)	754 workorders	Pending Filing			\$ -	\$ 17,000	\$ 18,606	Various	Yes	Yes	\$ 27.72	\$ 516	
Investment in Developer Installed Services	One times revenue tariffed amount (\$7)	n/a	Pending Filing			\$ -	\$ 42,500	\$ 47,838	Various	Yes	Yes	\$ 27.72	\$ 1,326	
Injection Valve Install	Installation of Injection Valve on 18" Main MWV	1824544	Pending Filing			\$ -	\$ 25,000		Londonderry	Yes	No	\$ 26.15	\$ -	
Chlorine Transfer Pump for NG Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drum containers to smaller transportable containers	1817322	Pending Filing			\$ -	\$ 2,587	\$ 2,587	Various	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Source	Hardwood New Source	1701877	Pending Filing				\$ 6,285		Woolham	Yes	Yes	\$ 27.51	\$ 173	
Locke Lake Vanner Rd Area	Locke Lake Vanner Rd Area - Chain up and final Fencing	1817280	Pending Filing				\$ 94,050		Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1800911	Pending Filing				\$ 8,608		Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex					\$ 4,826,100	\$ 5,179,004	\$ 5,023,146		Yes	No		\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,826,100	\$ 5,179,004	\$ 5,023,146						\$ 335,634
						PEU QCPAC	\$ 5,179,004							

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. Final CoBank Loan Terms are

25 Years at

4.38%

3. Projected Brady Ave. SRF Terms are

30 Years at

1.96%

with

10%

Principal forgiveness

4. Projected PWW/PEU Interconnection SRF Terms are

30 Years at

1.96%

5. Projected Hillcrest Road SRF Terms are

30 Years at

1.96%

6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total

project budget estimated at

\$ 570,000 exclusive of internal engineering costs

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-157. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC

8. Eliminate APDUC on PWW/PEU Interconnect Project in the

amount of

\$ 95,807

Projected Annual P&I Payments

Amount to be funded with 2019 Loan from CoBank <sup>2,3</sup>	\$ 1,153,000	\$ 76,800
Amount to be funded SRF loan for Brady Avenue watermain replacements <sup>4</sup>	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection <sup>5</sup>	\$ 2,400,000	\$ 146,210
Amount to be funded SRF loan for Hillcrest Road watermain replacements <sup>6</sup>	\$ 244,399	\$ 14,688
Amount to be funded with Drinking Water and Groundwater Trust Fund Grants <sup>7</sup>	\$ 660,000	\$ -
Total Projected 2018 QCPAC P&I	\$ 261,114	\$ -

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>1</sup>  
2/15/2019, Revised 8/6/2019  
June 30, 2019 Update

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	1818349, 1901641	\$ 700,000	No	\$ -	\$ 700,000
Alivip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	1901642	\$ 440,000	No	\$ -	\$ 440,000
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	combined with below	\$ 200,000	No	\$ -	\$ 200,000
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	1813409, 1900433	\$ 75,000	No	\$ -	\$ 75,000
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901644	\$ 619,300	Yes	\$ 619,300	\$ 714,388
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901645	\$ 253,000	Yes	\$ 253,000	\$ 641,658
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	1901646	\$ 132,000	Yes	\$ 132,000	\$ 152,246
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901647	\$ 68,200	Yes	\$ 68,200	\$ 78,661
Replace Gilcrest Road PRV Pit	Replace failing piping and underground structure	1813928, 1906952	\$ 110,000	Yes	\$ 110,000	\$ 140,000
Upgrade Mitchell's Way PRV Pit	Add additional pit with power and motor control valve to work with dot. System.		\$ -	Yes	\$ -	\$ 45,000
Rolling Hills Water Main Replacement	Replace substantial 2 inch diameter pipe with 4 inch C900 PVC	1825265, 1901649	\$ 150,000	Yes	\$ 150,000	\$ 150,000
1+ revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	n/a	\$ 96,000	Yes	\$ 96,000	\$ 94,880
Alexander Road, Water Main Upsizing	Alexander Road, Water Main Upsizing	1908374		No		\$ 1,120
Weinstein/Dame Station Upgrades	Weinstein/Dame Station Upgrades	1506139, 1603114, 1703756, 1813249, 1907079		Yes		\$ 108,286
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Well Pump replacements	Replace well pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	760 - 763 workorders	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	Yes	\$ 30,000	\$ 30,000
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	Yes	\$ 60,000	\$ 60,000
Atkinson Booster pump station design	Atkinson Booster pump station design	n/a	\$ 30,000	No	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	1901650	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 23,000	Yes	\$ 23,000	\$ 23,000
Renewed Services (10)	Replacement of failed services	721 & 722 workorders	\$ 46,000	Yes	\$ 46,000	\$ 46,000
Hydrants (5)	Replacement of non functional hydrants	730 & 731 workorders	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	Yes	\$ 32,000	\$ 32,000
Radio (550)	New and replaced radios for meter reading	754 workorders	\$ 55,000	Yes	\$ 15,000	\$ 15,000
Meters (Growth) 5/8"-2" - PEU (230)	New meters for new customers	750 workorders	\$ 22,000	Yes	\$ 22,000	\$ 22,000
Meters 5/8"-6" Lead Meter Exchange - PEU (530)	Replace High lead brass meter with new no lead brass meter	750 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,300

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment - \$ 1,911,500

Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update - \$ 2,607,419

Funded with SRF Funds - \$ 1,072,500 \$ 1,072,500

Amount to be funded with 2020 Loan from CoBank<sup>3</sup> - \$ 839,000 \$ 1,334,919

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are

5. Projected SRF Terms for Locke Lake project are

25 Years at 5.5%  
20 Years at 2.704%

resulting in Annual P&I of \$ 114,427  
resulting in Annual P&I of \$ 70,131

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (f)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Replace Gilcrest Road PRV Pit	Replaced failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Atkinson Booster pump station design	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64	\$ 430
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Pennichuck East Utilities Board approved 2019 Capital Expenditures -		\$ 3,356,500	Projected annual property tax expenses for QCPAC eligible projects -				\$ 74,519
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment -		\$ -	2,351,500				
Funded with SRF Funds -		\$ -	1,512,500				
Amount to be funded with 2020 Loan from CoBank <sup>4</sup> -		\$ -	839,000				

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are  
25 Years at 5.50%
5. Projected SRF Terms for Locke Lake project are  
20 Years at 2.704%

**Pennichuck East Utilities, Inc.**

DW 19-035

2019 QCPAC Filing

Board Approved 2020 Capital Expenditures<sup>3</sup>

2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment

Revised 8/6/2019 to reflect Airstrip alternative arsenic treatment being used and useful in 2020 instead of 2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ -	\$ 540,000	Barnstead	Yes	\$ 33.23
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64
<b>Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget -</b>		<b>\$ 3,630,580</b>	<b>\$ 2,470,580</b>	<b>Projected Property Tax Expense associated with QCPAC projects -</b>		
<b>Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -</b>						
<b>Funded with CoBank Loan -</b>			<b>\$ 1,930,580</b>			
<b>Funded with SRF Loan -</b>			<b>\$ 540,000</b>			

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 143,923 per year

5. Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 35,310 per year

6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00

Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSR

Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

**Pennichuck East Utilities, Inc.**  
**DW 19-035**  
**2019 QCPAC Filing**  
**Board Approved 2021 Capital Expenditures<sup>3</sup>**  
**2/15/2019, Revised 6/17/2019**

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000

Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000

Funded with CoBank Loan - \$ 528,000

Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 39,362 per year

5. Projects moved out of 2021 Capex

6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR  
Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 183,091 per year



Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Schedule A - Modified Revenue Requirement per DW17-128  
Computation of Projected 2018-2021 QCPAC Surcharges  
2/15/2019, Revised 6/25/2019 per Staff tech DR's, Revised 7/25/2019  
Updated for June 30, 2019 update

Exhibit DLW-1  
Page 1

	DW17-128 Approved Step Revenue Requirements		Projected QCPAC Revenues For 2018 Capital Additions pro formas		Projected QCPAC Surcharge for 2018 Capital Additions		Projected QCPAC For 2019 Capital Additions pro formas		Projected QCPAC Surcharge for 2019 Capital Additions		Projected QCPAC For 2020 Capital Additions pro formas		Projected QCPAC Surcharge for 2020 Capital Additions		Projected QCPAC For 2021 Capital Additions pro formas		Projected QCPAC Surcharge for 2021 Capital Additions	
City Bond Fixed Revenue Requirement (CBFRR)	\$	926,309		\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	\$	-	\$	926,309	
Operating Expense Revenue Requirement	\$	5,851,582	(1)	\$	(40,866)	(4)(8)	\$	5,810,716	\$	67,507	(4)	\$	5,878,223	\$	68,782	(10)(11)	\$	5,962,127
Annual Principal and Interest Payments	\$	1,362,154	(2)	\$	261,114	(5)(6)	\$	1,623,268	\$	158,521	(12)	\$	1,781,789	\$	179,234	(12)	\$	1,961,023
Principal and Interest Coverage Requirement		1.10	(3)				1.10				1.10						1.10	
Principal and Interest Revenue Requirement	\$	1,498,370		\$	1,785,595			\$	1,959,968			\$	2,157,125			\$	2,401,824	
Proposed Revenue Requirement excluding NCCRS	\$	8,276,261		\$	8,522,620			\$	8,764,501			\$	9,030,440			\$	9,290,260	
Current Water Revenues excluding CBFRR and NCCRS	\$	5,947,707		\$	7,349,952			\$	7,596,311			\$	7,858,191			\$	8,104,130	
Add: City Bond Fixed Revenue Requirement	\$	926,309		\$	926,309			\$	926,309			\$	926,309			\$	926,309	
Current Water Revenues with CBFRR less NCCRS	\$	6,874,016		\$	8,276,261			\$	8,522,620			\$	8,764,501			\$	9,030,440	
Proposed Percent Revenue Increase		20.40%																
ADD: NC Capital Surcharge Revenue	\$	178,915		\$	178,915			\$	178,915			\$	178,915			\$	178,915	
Proposed New Revenue Requirement	\$	8,455,176		\$	8,701,535			\$	8,943,415			\$	9,209,354			\$	9,469,175	
Projected QCPAC Increase <sup>7</sup>					2.98%				2.92%				3.21%				3.14%	
Cumulative QCPAC increase <sup>9</sup>					2.98%				5.90%				9.11%				12.25%	
Cumulative QCPAC monthly increase in average single family residential bill				\$	2.25			\$	4.45			\$	6.88			\$	9.24	
Average monthly single family residential bill with QCPAC				\$	77.69			\$	79.90			\$	82.32			\$	84.69	

Notes:

- (1) Operating Expense Revenue requirement is the sum of the Total Operating Expenses, Property Tax Expense and Amortization Expense approved in DW17-128
- (2) Annual Principal and interest payments for PEU debt associated with all plant in service as approved in DW17-128
- (3) Principal and interest coverage of 1.10 is as approved in DW17-128
- (4) QCPAC operating expense proformas are based on the property taxes for plant added during the year.
- (5) See Calculation of annual principal and interest payments on spreadsheet titled "2018 QCPAC PEU Additions"
- (6) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant placed in service between 1/1/2018 and 12/31/2018 based on a 25 year term loan with an actual total all in interest rate of 4.38% that was not recovered in DW17-128
- (7) QCPAC percent revenue surcharges based on increase in revenues over the step revenues granted in DW17-128, exclusive of prior QCPAC surcharges
- (8) 2018 Proforma Operating Expenses include a reduction in purchased water expenses associated with the completion of the PWW-PEU Interconnection in the amount of \$ 180,500
- (9) Cumulative surcharge percentage is based on total surcharge revenues collected divided by the step revenues granted in DW17-128
- (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
- (12) Portion of Annual Principal and interest payments paid to CoBank for debt associated with plant 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 5.50% that was not recovered in DW17-128

Impact on PEU Single Family Residential Home:

Monthly meter charge granted in DW17-128, inclusive of Step increase -	\$	30.70
Average Single Family Consumption (CCF) -		7.29
Consumption Charge granted in DW17-128, inclusive of Step increase -	\$	7.51 per CCF
Average Single Family monthly bill with rates granted in DW17-128, inclusive of step -	\$	75.45

Pennichuck East Utilities, Inc.

DW 19-035

2019 QCPAC Filing

2018 Capital Expenditures

2/15/2019, Revised 6/17/19 to reflect elimination of AFDUC and funding of FALOC and SRF short term interest expense via CoBank term loan, Revised 7/25/2019

Project Name/Description	Project Description	Work Order #	Financing Order No.	NHPUC Order No.	Date of NHPUC Order	2018 Board Approved Budgeted Amount	Estimated Project Cost as of 10/31/2018	Final Project cost as of 12/31/2018	Community	Eligible for 2018 QCPAC Surcharge?	Taxable	Tax Rate (%)	QCPAC Eligible Property Tax Expense	Explanation for Change/Addition/Deletion since 1/30/2018
Brady Avenue <sup>2</sup>	Replace 2,400 linear feet of existing 15" then wall HDPE water main with new 8" diameter ductile iron water main	170264 & 180706	DW17-055	26,006	4/19/2017	\$ 379,600	\$ 598,000	\$ 618,993	Derry	Yes	Yes	\$ 30.59	\$ 18,935	
Hilbert Road	Replace approximately 1,300 linear feet of existing 12" then wall ductile iron water main with high break history through swamp with 12" HDPE	1707188 & 1807072	DW17-055	26,006	4/19/2017	\$ 242,000	\$ 240,000	\$ 254,860	Litchfield	Yes	Yes	\$ 26.84	\$ 6,840	
PEU-PWW Interconnection <sup>1</sup>	Interconnect PEU to PWW under Merrimack River	See Below	DW17-055/Pending Filing <sup>7</sup>	26,006	4/19/2017	\$ 3,300,000	See Below		Merrimack/Litchfield	Yes	Yes	\$ 27.88		
PEU-PWW Interconnection	Interconnecting Water Main - Owned by PEU	1807155, 1807362, 1608936, 1701789	See above	See above	See above	\$ \$ Included above	\$ 3,515,850	\$ 3,335,078	Merrimack/Litchfield	Yes	Yes	\$ 27.88	\$ 92,982	
PEU Contribution toward PWW water main upgrade	Interconnecting Water Main - Owned by PWW (50% PEU paid portion)	1807148				\$ 33,925	\$ 33,925	\$ 33,925	Merrimack/Litchfield	Yes	No	\$ 27.88	\$ -	No property tax obligation for PEU as this is a PWW asset. PEU contribution to this PWW water main per NHPUC Order #26,048 on DW17-071.
PEU PWW Interconnection Station Building & Construction	Booster Station, including purchase of building and meter drive PWW	1813395				\$ 340,000	\$ 339,864		Merrimack	Yes	Yes	\$ 28.92	\$ 9,829	
Locke Lake Treatment Design	Design treatment for new Source of Supply required by NHDES Constructive Action Plan	1813409	DW18-132			\$ 100,000			Barnstead	No	Yes	\$ 27.10	\$ -	Design work for project that is not used and useful is not eligible for QCPAC Surcharge
Atkinson Commerce Park Station Imp.	Rebuild Booster Station, Replace Atmospheric Storage Tanks	Deferred	Pending Filing <sup>7</sup>			\$ 330,000			Adrian	Yes	Yes	\$ 22.35	\$ -	Project deferred due to Engineering resources being diverted to design Bedford Litchfield PEUA facilities
Booster/Well/Chem Feed pump replacements	Replace small booster/well/chemical feed pumps as they fail (run rate) (21)	760 - 763 workorders	Pending Filing <sup>7</sup>			\$ 60,000	\$ 100,200	\$ 92,476	Vacuum	Yes	Yes	\$ 27.72	\$ 2,563	24 through December 31, 2018
Install/replace treatment systems in small CWS	Replace failed CWS treatment systems. Install new CWS treatment system if water quality or standards requires it.	n/a	Pending Filing <sup>7</sup>			\$ 25,000	\$ 5,000		Vacuum	Yes	Yes	\$ 27.72	\$ -	
Misc. Structural Improvements	Repair/replace aging utility station structures as needed	n/a	Pending Filing <sup>7</sup>			\$ 20,000			Vacuum	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous Fencing and Security projects	Install fencing/security facilities as needed	n/a	Pending Filing <sup>7</sup>			\$ 10,000			Vacuum	Yes	Yes	\$ 27.72	\$ -	
Miscellaneous SCADA/Electrical	Install/repair/replace SCADA/Electrical equipment as needed		Pending Filing <sup>7</sup>			\$ 30,000	See Below		Vacuum	Yes	Yes	\$ 27.72	\$ -	2 more VFD failures are expected through next year.
Replace Pump #4 VFD at Gable Reach	Replace Pump #4 VFD at Gable Reach	1819462	Pending Filing <sup>7</sup>			\$ 3,944	\$ 3,944	\$ 3,944	Vacuum	Yes	Yes	\$ 27.72	\$ 109	
Replace Pump #2 VFD at W&E	Replace Pump #2 VFD at W&E	1816163	Pending Filing <sup>7</sup>			\$ 3,013	\$ 3,013	\$ 3,013	Vacuum	Yes	Yes	\$ 27.72	\$ 84	
Replace Pump #5 VFD at Gable Reach	Replace Pump #5 VFD at Gable Reach	1807059	Pending Filing <sup>7</sup>			\$ 4,145	\$ 4,145	\$ 4,145	Vacuum	Yes	Yes	\$ 27.72	\$ 115	
Replace Pump #13 VFD at Locke Lake	Replace Pump #13 VFD at Locke Lake	1818256	Pending Filing <sup>7</sup>			\$ 2,639	\$ 2,639	\$ 2,639	Vacuum	Yes	Yes	\$ 27.72	\$ 74	
Well Rehabilitation	Rehab wells as necessary to restore efficiency as needed	n/a	Pending Filing <sup>7</sup>			\$ 60,000	\$ 15,000		Vacuum	Yes	Yes	\$ 27.72	\$ -	Only one potential well rehab is expected in 2018 vs. 4 in budget.
5 New Services	Single Family, Owner Build, New Homes	720 workorders	Pending Filing <sup>7</sup>			\$ 23,000	\$ 32,800	\$ 27,558	Vacuum	Yes	Yes	\$ 27.72	\$ 764	8 services added through December
10 Renewed Services	Replacement of failed services	721 & 722 workorders	Pending Filing <sup>7</sup>			\$ 40,000	\$ 17,400	\$ 18,667	Vacuum	Yes	Yes	\$ 27.72	\$ 517	7 services replaced through December
2 Hydrants	Replacement of non functional hydrants	730 & 731 workorders	Pending Filing <sup>7</sup>			\$ 10,000	\$ 10,000	\$ -	Vacuum	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
10 Valve Replacements	Replacement of Failed Gate Valves	712 workorders	Pending Filing <sup>7</sup>			\$ 30,000	\$ 12,000	\$ -	Vacuum	Yes	Yes	\$ 27.72	\$ -	None Reported in 2018.
25 New Meters (growth) 5/8"-2"	New meters for new customers	750 workorders	Pending Filing <sup>7</sup>			\$ 22,500	\$ 14,500	\$ 70,429	Vacuum	Yes	Yes	\$ 27.72	\$ 1,952	577 replacements through December 31, 2018 inclusive of new and replacement meters
779 New Meters for Lead Meter exchanges 5/8"-6"	Replace High lead brass meter with new no lead brass meter	750 workorders	Pending Filing <sup>7</sup>			\$ 144,000	\$ 143,400		Vacuum	Yes	Yes	\$ 27.72	\$ -	
Radio Ready	New and replaced radios for meter reading (125)	754 workorders	Pending Filing <sup>7</sup>			\$ -	\$ 17,100	\$ 18,606	Vacuum	Yes	Yes	\$ 27.72	\$ 516	247 Radio replacements were completed through December 31, 2018
Investment in Developer Installed Services	One time revenue tariffed amount (57)	n/a	Pending Filing <sup>7</sup>			\$ -	\$ 42,500	\$ 47,838	Vacuum	Yes	Yes	\$ 27.72	\$ 1,326	Required by Tariff. Not in 2018 Board Approved Budget
Inversion Valve Install	Installation of Inversion Valve on 16" Main MW	1824544	Pending Filing <sup>7</sup>			\$ -	\$ 25,000	\$ -	Londonderry	Yes	No	\$ 26.15	\$ -	PEU was going to shut service off the all of Londonderry for a hydrant repair. Inversion valve allowed hydrant replacement without losing service to any of customers. Not included in QCPAC as this will be funded with H1 DSHF cash.
Chlorine Transfer Pump for NC Operations	Purchase new chlorine transfer pump to transfer bleach solution from large drum containers to smaller transportable containers	1817322	Pending Filing <sup>7</sup>			\$ -	\$ 2,587	\$ 2,587	Vacuum	Yes	Yes	\$ 27.72	\$ 72	
Hardwood New Sinks	Hardwood New Sinks	1701877	Pending Filing <sup>7</sup>			\$ -	\$ 6,285	\$ 6,285	Wildham	Yes	Yes	\$ 27.57	\$ 173	
Locke Lake Vanner Rd Area	Locke Lake Vanner Rd Area - Clean up and final Paving	1817280	Pending Filing <sup>7</sup>			\$ -	\$ 94,050	\$ -	Barnstead	Yes	Yes	\$ 27.10	\$ 2,549	
Locke Lake Well 14 VFD	Locke Lake Well 14 VFD	1808945	Pending Filing <sup>7</sup>			\$ -	\$ 8,608	\$ -	Barnstead	Yes	Yes	\$ 27.10	\$ 233	
Short term interest	Short term interest on FALOC and SRF loans to fund 2018 Capex					\$ 4,826,100	\$ 5,179,064	\$ 5,025,146		Yes	No		\$ -	
Total 2018 Board Approved PEU Capital Expenditures -						\$ 4,826,100	\$ 5,179,064	\$ 5,025,146					\$ 139,834	
						PEU QCPAC	\$ 5,179,064							

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. Final CoBank Loan Terms are 25 Years at 4.38%

3. Projected Brady Ave SRF Terms are 30 Years at 1.86% with 10% Principal Forgiveness

4. Projected PWW/PEU Interconnection SRF Terms are 20 Years at 1.96%

5. Projected Hilbert Road SRF Terms are 20 Years at 1.96%

6. Brady Ave was budgeted in 2 phases by the Board, Phase I was in the 2017 Capital Budget and Phase II was in the 2018 Capital Budget with the total \$ 254,860 of which \$ 10,471 is internal engineering that can not be funded with SRF funds.

7. The cash to fund the "pending filing" projects in 2018 was borrowed from CoBank through the short term Fixed Asset Line of Credit (FALOC) approved in DW17-131. PEU will be filing for approval to borrow long term funds from CoBank in the Winter of 2019 to repay the CoBank FALOC

8. Eliminate AFDUC on PWW/PEU Interconnect Project in the amount of \$ 95,800

Projected Annual P&I  
Payments

Amount to be funded with 2019 Loan from CoBank <sup>2,7</sup> -	\$ 1,153,000	\$ 79,800
Amount to be funded SRF loan for Brady Avenue watermain replacements <sup>3</sup> -	\$ 570,000	\$ 23,215
Amount to be funded SRF loan for PWW/PEU Interconnection <sup>4</sup> -	\$ 2,400,000	\$ 146,210
Amount to be funded SRF loan for Hilbert Road watermain replacements <sup>5</sup> -	\$ 244,389	\$ 14,888
Amount to be funded with Drinking Water and Groundwater Trust Fund Grants -	\$ 600,000	\$ -
Total Projected 2018 QCPAC P&I -	\$ -	\$ 264,114

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>1</sup>  
2/15/2019, Revised 8/6/2019, Corrected for Bradford Lane keypunch error.  
June 30, 2019 Update

Project Name/Description	Project Description	Work Order #	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Eligible for 2020 QCPAC Surcharge	Estimated Project Cost as of 6/30/2019
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	1818349, 1901641	\$ 700,000	No	\$ -	\$ 700,000
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	1901642	\$ 440,000	No	\$ -	\$ 440,000
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	combined with below	\$ 200,000	No	\$ -	\$ 200,000
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	1815409, 1900433	\$ 75,000	No	\$ -	\$ 75,000
Georgetown Drive water main replacement	Replace 4000 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901644	\$ 619,300	Yes	\$ 619,300	\$ 714,388
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901645	\$ 253,000	Yes	\$ 253,000	\$ 291,805
N. Barnstead Road - Eliminate deadend piping	Add 680 LF of 4 inch C900 PVC to eliminate dead end. Replace 275 LF of 4 inch sch 40 PVC with 6 inch C900 PVC	1901646	\$ 132,000	Yes	\$ 132,000	\$ 152,246
Belmont Drive water main replacement	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	1901647	\$ 68,200	Yes	\$ 68,200	\$ 78,661
Replace Gilcrest Road PRV Pit	Replace failing piping and underground structure	1813928, 1906952	\$ 110,000	Yes	\$ 110,000	\$ 140,000
Upgrade Michells Way PRV Pit	Add additional pit with power and motor control valve to work with dist. system.		\$ -	Yes	\$ -	\$ 45,000
Rolling Hills Water Main Replacement	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	1825265, 1901649	\$ 150,000	Yes	\$ 150,000	\$ 150,000
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Per Tariff	n/a	\$ 96,000	Yes	\$ 96,000	\$ 94,880
Alexander Road, Water Main Upsizing	Alexander Road, Water Main Upsizing	1908374		No		\$ 1,120
Weinstein/Darne Station Upgrades	Weinstein/Darne Station Upgrades	1506159, 1603114, 1703756, 1813249, 1907079		Yes		\$ 108,286
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	760 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Well Pump replacements	Replace well pumps as they fail (run rate)	700 - 763 workorders	\$ 40,000	Yes	\$ 40,000	\$ 40,000
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	760 - 763 workorders	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	n/a	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Misc. Structural Improvements	Misc. Structural Improvements	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	n/a	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	n/a	\$ 30,000	Yes	\$ 30,000	\$ 30,000
Well Rehabilitation	Well Rehabilitation	n/a	\$ 60,000	Yes	\$ 60,000	\$ 60,000
Adkinson Booster pump station design	Adkinson Booster pump station design	n/a	\$ 50,000	No	\$ -	\$ -
Replace softener media, W and E	Replace softener media, W and E	1901650	\$ 10,000	Yes	\$ 10,000	\$ 10,000
Add communications between remote facility and Nashua WTP	Install web based communication equipment, 4 locations	n/a	\$ 20,000	Yes	\$ 20,000	\$ 20,000
New Services (5)	Single Family, Owner Build, New Homes	720 workorders	\$ 23,000	Yes	\$ 23,000	\$ 23,000
Renewed Services (10)	Replacement of failed services	721 & 722 workorders	\$ 46,000	Yes	\$ 46,000	\$ 46,000
Hydrants (5)	Replacement of non functional hydrants	730 & 731 workorders	\$ 25,000	Yes	\$ 25,000	\$ 25,000
Gates (8)	Replacement of Failed Gate Valves	712 workorders	\$ 32,000	Yes	\$ 32,000	\$ 32,000
Radios (550)	New and replaced radios for meter reading	754 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	750 workorders	\$ 22,000	Yes	\$ 22,000	\$ 22,000
Meters 5/8"-6" Lead Meter Exchange - PEU (550)	Replace High lead brass meter with new no lead brass meter	750 workorders	\$ 55,000	Yes	\$ 55,000	\$ 55,000

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) - \$ 1,951,500 adjusted for project el  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment, June 30 Update - \$ 2,258,166  
Funded with SRF Funds - \$ 1,072,500 \$ 1,072,500  
Amount to be funded with 2020 Loan from CoBank<sup>3</sup> - \$ 879,000 \$ 1,185,666

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are
5. Projected SRF Terms for Locke Lake project are

25 Years at 5.5%  
20 Years at 2.704%

resulting in Annual P&I of \$ 88,391  
resulting in Annual P&I of \$ 70,131

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2019 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Exhibit DLW-1  
Page 3

Project Name/Description	Project Description	Board Approved 2019 Capex Budget	Eligible for 2020 QCPAC Surcharge	Community	Taxable	Tax Rate (l)	QCPAC Eligible Property Tax Expense
Elevated Storage Tank in Londonderry <sup>2</sup>	Construct 1.25 MG Elevated Storage Tank	\$ 700,000	\$ -	Londonderry	Yes	\$ -	\$ -
Airstrip alternative aeration treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ 440,000	\$ 440,000	Barnstead	Yes	\$ 33.23	\$ 14,621
Locke Lake Surface Water Treatment	Design and Permitting of treatment and intake for Locke Lake surface water	\$ 200,000	\$ -	Barnstead	Yes	\$ -	\$ -
Locke Lake treatment evaluation	Pilot different treatment technologies to treat Locke Lake surface water	\$ 75,000	\$ -	Barnstead	Yes	\$ -	\$ -
Georgetown Drive water main replacement	Replace 4600 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 619,300	\$ 619,300	Barnstead	Yes	\$ 33.23	\$ 20,579
Bradford Lane water main replacement	Replace 1825 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 253,000	\$ 253,000	Barnstead	Yes	\$ 33.23	\$ 8,407
	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	\$ 132,000	\$ 132,000	Barnstead	Yes	\$ 33.23	\$ 4,386
N. Barnstead Road - Eliminate deadend piping	Replace 500 LF of 4 inch schedule 40 PVC with 6 inch C900 PVC	\$ 68,200	\$ 68,200	Barnstead	Yes	\$ 33.23	\$ 2,266
Belmont Drive water main replacement	Replace failing piping and underground structure	\$ 110,000	\$ 110,000	Londonderry	Yes	\$ 29.00	\$ 3,190
Replace Gilcrest Road PRV Pit	Replace substandard 2 inch diameter pipe with 4 inch C900 PVC	\$ 150,000	\$ 150,000	Plaistow	Yes	\$ 30.00	\$ 4,500
Rolling Hills Water Main Replacement	Per Tariff	\$ 96,000	\$ 96,000	Various	Yes	\$ 28.64	\$ 2,749
1x revenue investments Normal Run Rate with two months of PFOA in Litchfield	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Booster Pump replacement/rebuild	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64	\$ 1,146
Well Pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Chemical Feed pump replacements	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Install/replace treatment systems in small CWS	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Misc. Structural Improvements	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64	\$ 286
Miscellaneous Fencing and Security projects	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64	\$ 859
Miscellaneous SCADA/Electrical	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64	\$ 1,718
Well Rehabilitation	Atkinson Booster pump station design	\$ 30,000	\$ -	Atkinson	Yes	\$ -	\$ -
Atkinson Booster pump station design	Replace softener media, W and E	\$ 10,000	\$ 10,000	Windham	Yes	\$ 27.25	\$ 273
Replace softener media, W and E	Install web based communication equipment, 4 locations	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64	\$ 573
Add communications between remote facility and Nashua WTP	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64	\$ 659
New Services (5)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64	\$ 1,317
Renewed Services (10)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64	\$ 716
Hydrants (5)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64	\$ 916
Gates (8)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Radios (550)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64	\$ 630
Meters (Growth) 5/8"-2" - PEU (220)	Replace High lead brass meter with new no lead brass meter	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64	\$ 1,575
Meters 5/8"-4" Lead Meter Exchange - PEU (550)							

Pennichuck East Utilities Board approved 2019 Capital Expenditures - \$ 3,396,500  
Pennichuck East Utilities Projected 2019 QCPAC Eligible Capital Investment (Based on Board approved 2019 Budget) - \$ 2,391,500  
Projected annual property tax expenses for QCPAC eligible projects - \$ 75,665

Funded with SRF Funds - \$ 1,512,500  
Amount to be funded with 2020 Loan from CoBank<sup>4</sup> - \$ 879,000

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000
2. The Londonderry Tank will not be used and useful in 2019 and hence it is not qualified to be included in QCPAC
3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.
4. Projected CoBank Loan Terms are  
25 Years at 5.50%  
20 Years at 2.704%

Pennichuck East Utilities, Inc.

DW 19-035

2019 QCPAC Filing

Board Approved 2020 Capital Expenditures<sup>3</sup>

2/15/2019, Revised 6/17/19 to reflect delayed payment on Locke Lake Surface Water Treatment

Revised 8/6/2019 to reflect Airstrip alternative arsenic treatment being used and useful in 2020 instead of 2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
Londonderry Tank	Construct 1.25 MG Elevated Storage Tank	\$ 693,580	\$ 1,393,580	Londonderry	Yes	\$ 29.00
Airstrip alternative arsenic treatment	Raw Water Pipeline from Air Strip well to Peacham Road WTP	\$ -	\$ 540,000	Barnstead	Yes	\$ 33.23
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,400,000	\$ -	Barnstead	Yes	\$ 33.23
Arsenic Treatment install to respond to new MCL	Arsenic Treatment install to respond to new MCL	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (150)	New and replaced radios for meter reading	\$ 15,000	\$ 15,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Lead Meter Exchange - PEU (420)	Replace High lead brass meter with new no lead brass meter	\$ 42,000	\$ 42,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2020 Total Capital Expenditure Budget - \$ 3,630,580 \$ 2,470,580  
 Pennichuck East Utilities Projected 2020 QCPAC Eligible Capital Investment -  
 Funded with CoBank Loan - \$ 1,930,580  
 Funded with SRF Loan - \$ 540,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are

25 Years at 5.5% resulting in P&I of \$ 143,923 per year

5. Projected SRF Terms for Locke Lake project are

20 Years at 2.704% resulting in P&I of \$ 35,310 per year

6. Locke Lake Surface Water Treatment project completed in late 2020. First P&I payments expected in May 2021. Monthly P&I based on borrowing \$ 2,800,000.00

Resulting in a monthly payment of P&I on this loan of about \$ 15,258 Expected P&I payments in 2021 of \$ 122,060.86 to be paid with 0.1 DSRR

Property taxes will be incurred on this project in 2021 and need to be recovered in the 2021 QCPAC filing

Pennichuck East Utilities, Inc.  
DW 19-035  
2019 QCPAC Filing  
Board Approved 2021 Capital Expenditures<sup>3</sup>  
2/15/2019, Revised 6/17/2019

Project Name/Description	Project Description	Board Approved 2020 Capex Budget	Eligible for 2021 QCPAC Surcharge	Community	Taxable	Tax Rate (1)
New Services (5)	Single Family, Owner Build, New Homes	\$ 23,000	\$ 23,000	Various	Yes	\$ 28.64
Renewed Services (10)	Replacement of failed services	\$ 46,000	\$ 46,000	Various	Yes	\$ 28.64
Hydrants (5)	Replacement of non functional hydrants	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Gates (8)	Replacement of Failed Gate Valves	\$ 32,000	\$ 32,000	Various	Yes	\$ 28.64
Radios (550)	New and replaced radios for meter reading	\$ 55,000	\$ 55,000	Various	Yes	\$ 28.64
Meters (Growth) 5/8"-2" - PEU (220)	New meters for new customers	\$ 22,000	\$ 22,000	Various	Yes	\$ 28.64
Meters 5/8"-6" Meter Exchange - PEU (180)	Replace failed meters (Run Rate)	\$ 18,000	\$ 18,000	Various	Yes	\$ 28.64
Wellesley Drive water main replacement <sup>5</sup>	Replace 1760 LF of 2 inch PE with 1760 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Radcliffe Drive water main replacement <sup>5</sup>	Replace 720 LF of 1.5 inch PE with 720 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Vassar Drive water main replacement <sup>5</sup>	Replace 1740 LF of 2 inch PE with 1740 LF of C900 PVC	\$ -	\$ -	Pelham	Yes	\$ 29.95
Rolling Hills water main replacement <sup>5</sup>	Replace 4,300 LF of 2 inch PE with 4,300 LF of C900 PVC	\$ -	\$ -	Plaistow	Yes	\$ 30.00
Locke Lake Surface Water Treatment <sup>6</sup>	Intake & Treatment Facility construction	\$ 2,800,000	\$ 2,800,000	Barnstead	Yes, but collected in 2020 QCPAC	
1x revenue investments	Per Tariff	\$ 72,000	\$ 72,000	Various	Yes	\$ 28.64
Booster Pump replacement/rebuild	Replace small booster pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Well Pump replacements	Replace well pumps as they fail (run rate)	\$ 40,000	\$ 40,000	Various	Yes	\$ 28.64
Chemical Feed pump replacements	Replace Chemical feed pumps as they fail (run rate)	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Install/replace treatment systems in small CWS	Install/replace treatment systems in small CWS	\$ 25,000	\$ 25,000	Various	Yes	\$ 28.64
Misc. Structural Improvements	Misc. Structural Improvements	\$ 20,000	\$ 20,000	Various	Yes	\$ 28.64
Miscellaneous Fencing and Security projects	Miscellaneous Fencing and Security projects	\$ 10,000	\$ 10,000	Various	Yes	\$ 28.64
Miscellaneous SCADA/Electrical	Miscellaneous SCADA/Electrical	\$ 30,000	\$ 30,000	Various	Yes	\$ 28.64
Well Rehabilitation	Well Rehabilitation	\$ 60,000	\$ 60,000	Various	Yes	\$ 28.64

Pennichuck East Utilities Projected 2021 Total Capital Expenditure Budget - \$ 3,328,000

Pennichuck East Utilities Projected 2021 QCPAC Eligible Capital Investment - \$ 3,328,000

Funded with CoBank Loan - \$ 528,000

Funded with SRF Loan - \$ 2,800,000

Projected Property Tax Expense associated with  
QCPAC projects -

1. Tax rate is the sum of the local community rate plus the Statewide Utility tax rate of \$6.60/\$1000

2. The Londonderry Tank will be constructed in 2019 and 2020. The tank will be used and useful in 2020 with the total 2 year project cost being qualified to be included in the 2020 QCPAC

3. The 2019 PEU Capital Expenditures Budget presented were approved by the Board in January of 2019.

4. Projected CoBank Loan Terms are 25 Years at 5.5% resulting in P&I of \$ 39,362 per year

5. Projects moved out of 2021 Capex

6. Funding of Locke Lake Surface Water Treatment sought in the QCPAC. First 5 months of P&I paid in 2021 will be covered with the 0.1 DSRR

Projected SRF Terms for Locke Lake project are 20 Years at 2.704% resulting in P&I of \$ 183,091 per year

Executive.Director@puc.nh.gov  
amanda.noonan@puc.nh.gov  
anthony.leone@puc.nh.gov  
carolann.howe@pennichuck.com  
Christopher.tuomala@puc.nh.gov  
donald.kreis@oca.nh.gov  
donald.ware@pennichuck.com  
james.brennan@oca.nh.gov  
jay.kerrigan@pennichuck.com  
jayson.laflamme@puc.nh.gov  
joseph.vercellotti@puc.nh.gov  
larry.goodhue@pennichuck.com  
mrp@rathlaw.com  
ocalitigation@oca.nh.gov  
robyn.descoteau@puc.nh.gov  
rwh@rathlaw.com  
steve.frink@puc.nh.gov