Date Request Received: 10/14/21 Request No. Energy 1-1 Date of Response: 10/28/21 Witness: Donald L. Ware

REQUEST: Re: Response to Staff Tech 1-1 and First Quarterly Update Exhibit DLW-1 (08-13-21), Page 2 (2020 CapEx): Please provide an update of the status of the anticipated \$1,135,409 CoBank Loan approved by Commission Order No. 26,507 (8/10/21) in DW 21-102.

- a) Has the Company closed on this loan?
  - i) If yes, what was the date of closing?
  - ii) If no, what is the anticipated date of closing?
- b) If the Company has closed on this loan, what are the final terms of the loan, including interest rate? Please provide supporting documentation.
- c) Please explain whether and how the date of closing on the loan impacts the anticipated effective date of the 2021 QCPAC.

#### **RESPONSE**:

a) Yes. The loan was closed on September 29, 2021.

b) Final loan terms were \$1,135,409 borrowed for 25 years at a rate of 4.18%. A copy of the Promissory Note is attached to this data request as Attachment 1-1b)-1. The Company asserts that this document contains confidential business terms and will file a motion for protective order and confidential treatment with the Commission. The Company asks that this document be kept confidential until decision on the motion by the Commission. The amortization schedule is attached to this data request as Attachment 1-1b)-2 Amortization Schedule.

c) The proposed effective date for the 2021 QCPAC would be September 29, 2021, the date at which the loan was closed.

Date Request Received: 10/14/21 Request No. Energy 1-2 Date of Response: 10/28/21 Witness: Donald L. Ware

## REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-21), Page 2 (2020 CapEx), Line 50 – MSDC payment to MWW - \$127,007:

- a) Please provide further explanation with regard to the basis for this particular line item and its inclusion for recovery under the QCPAC mechanism.
- b) Please provide a detailed explanation with regard to how the transaction involving the payment of these MSDC charges was recorded on the books and records of the Company, and if there will be an annual amortization of these charges (and over what period of time).
- c) In Commission Order No. 26,076 (November 17, 2017) in Docket Nos. DW 17-119 and DW 17-120, the Commission approved a new method by which the Company (and PWW) would collect the MSDC from individual customers upon their connection to the system rather than from the entire customer base as a whole. In that order the Commission commented, "Applying the MSDC to customers as they connect a new service line to a system that purchases its supply from Manchester Water Works, eliminates an expense shared by all customers and thereby mitigates any claim that the fee is unjust or unreasonable when applied to customers who do not take supply from Manchester Water Works." (See Page 4, Commission Analysis) Please explain how the Company's proposed inclusion of the MSDC in the QCPAC in this circumstance comports with Commission Order No. 26,076.
- d) Please provide documentation in support of the Company's prior purchase of MSDC capacity from MWW, and please indicate the amount of prior capacity purchased in gallons per day (gpd).
- e) Please provide documentation in support of the requirement for the Company to purchase additional MSDC capacity from MWW during 2020 as well as the required unit cost of the purchase.

- a) Per PEU's purchase water contract with Manchester Water Works (MWW) PEU must pay for used MSDC capacity which is based on the average highest two months of usage on a gallons per day (gpd) basis based on PEU's total usage from its metered connections with MWW. Since 2020 was a drought year, there was record usage. Prior to 2020, PEU had purchased 787,073 gpd of MSDC capacity. In 2020, PEU used 897,411 gpd in MSDC capacity resulting in PEU needing to purchase an additional 110,338 gpd of capacity at \$3.79 per gpd or \$418,182.72. Since the approval of PEU's tariff which allowed it to collect MSDC from individual customers, PEU has collected \$291,174 from new customers in accordance with Commission Order No 26,026, leaving a residual MSDC fee to be collected of \$127,008. The fee to be collected is \$127,008, which has been updated in attached Exhibit DLW 1-5 on Page 2, line 51. The MSDC is a source of supply cost and the Company included the cost of this fee as a regulatory asset and the cost of that asset is amortized over 20 years, the term of the PEU/MWW purchased water agreement. Please see Attachment DOE 1-2a) for the calculation of this fee as provided by MWW and verified by PEU.
- b) The \$127,008 is recorded as a regulatory asset and it will be amortized over 20 years. Since the cash that was used to pay this asset was paid for with the proceeds derived from the CoBank loan that was closed on September 29, 2021, and associated with this Source of Supply Expense is proposed to be collected via the QCPAC. The amortization expense associated with this regulatory asset will be a proforma out of amortization expense in future rate cases and will not be collected as part of the MOERR.
- c) The fees collected by PWW in accordance with Commission Order No. 26,076 were collected from new customers in the amount of \$291,174 reduced PEU's MSDC payment to MWW from \$418,182.71 to \$127,008.39. The additional MSDC usage above and beyond that used and paid for by new customers was created by record usage by existing PEU customers during the summer months of 2020 that was a result of record outside usage in response to the drought of 2020. Since the \$127,008 was driven by existing customers this expense is appropriately shared by all PEU's rate payers, as it has been consistent in past rate cases.
- d) Please see Attachment DOE 1-2a). Please see the 2016 tab of this attachment in support of the Company's prior purchase amount of 569,005 gallons per day of MSDC capacity. This spreadsheet is prepared annually by Manchester Water Works (MWW) and is based on the meter readings and the resultant usage at each of PWW interconnections with Manchester Water Works. The meter readings from each metered location between MWW and PWW are found in the lower portion of the spreadsheet.

e) Please see Attachment DOE 1-2b) which is a copy of the MWW-PWW Purchase Water Agreement. In regard to the MSDC requirement please see Article 3, Section 303 for the obligation of PWW to pay MWW for incremental increases in the MSDC usage at the MSDC rate in effect that the incremental increase occurs. The MSDC charge in 2020 was \$3.79 per gallon. Please see Attachment DOE 1-2c), specifically page 39 of Manchester Water Works tariff which defines the MSDC charges in effect as of January 1, 2021 as being \$3.90. This was a 3% increase over the rate charged for MSDC in 2020 of \$3.79 per gallon.

#### Pennichuck East Utilities, Inc. DW 21-022

2021 QCPAC - Qualified Capital Project Adjustment Charge Responses to NH DOE Data Requests – Set 1

Date Request Received: 10/14/21 Request No. Energy 1-3 Date of Response: 10/28/21 Witness: Donald L. Ware

### REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-21), Page 3 (2021 CapEx), Line 12 – Londonderry System Improvements - \$1,000,000:

- a) It appears that the original \$1,600,000 budget cost of this project has been deferred to 2022. (See First Quarterly Update Exhibit DLW-1 (8-13-21), Page 4 (2022 CapEx), Line 11.) Please provide a detailed explanation as to why the original budgeted cost of this project has been deferred to 2022.
- b) Despite the deferral of the original project cost of \$1,600,000 to 2022, an estimated cost of \$1,000,000 is still indicated for this project for 2021 (Cell M12). Please provide a detailed explanation as to why the overall cost of this project now appears to be \$2,600,000 (2021: \$1,000,000 + 2022: \$1,600,000).
- c) The 'Source of Funding' for the \$1,000,000 project cost in 2021 is indicated as 'CoBank'. (See Cell J12) However, the \$1,000,000 estimated cost is not indicated as 'QCPAC Eligible' for 2021 (Cell K12) and does not appear to be included in the total project costs to be 'Funded with CoBank Loan' of \$1,436,147 (Cell M43). Please provide detailed explanations as to why the \$1,000,000 amount is not QCPAC eligible for 2021 and is not included in the overall projected CoBank borrowing for 2021 CapEx.
- d) The \$1,000,000 project cost during 2021 is indicated as taxable (Cell R12). However, no property tax amount has been included for this project in Cell T12. Please explain.

- a) The project has been deferred from 2021 projects planned to the 2022 Capex projects planned due to the time required to gain the various town permits necessary to construct this project. The Company will be progressing through the town permitting process during the winter and into the spring of 2022, with the hope of attaining the approvals in the early spring so that the project can be placed out to bid and constructed during 2022.
- b) The \$1,000,000 was a typo. The figure should have been \$100,000 for monies spent on engineering and permitting of this project. PEU's total projected cost for this project is still \$1.6 million with an estimated \$100,000 being spent in 2021, with the balance of

\$1.5 million being spent in 2022. Please see the attached revised Exhibit DLW 1-5 reflecting the correct estimated 2021 and 2022 expenditures on this project.

- c) As noted in response b) above the correct amount is \$100,000 for Engineering design and permitting for this project. Since this project will not be used and useful at the end of 2021, the \$100,000 will be funded with 0.1 DSRR funds. Please see the attached revised Exhibit DLW 1-5 reflecting the correct source of funding for the 2021 expenditures for this project. Since this portion of the project is being funded with 0.1 DSRR funds it is not included in the projected CoBank loan amount for 2021 PEU QCP's.
- d) Since the project will not be used and useful in 2021, there are no associated property taxes in 2021. The property taxes, associated with this finished project, are reflected in the 2022 tab and reflect the Company's projected total investment of \$1,600,000, in addition to the investment of the Developer of about \$1.6 million, bringing the total taxable property associated with this project to about \$3.2 million.

Date Request Received: 10/14/21 Request No. Energy 1-4 Date of Response: 10/28/21 Witness: Donald L. Ware

REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-21), Page 3 (2021 CapEx), Line 32 – Interconnect the W&E CWS to the Town of Salem Water System - \$565,000: Please provide a more detailed explanation with regard to nature and purpose of this project, including its anticipated source of funding (Cell J32).

#### **RESPONSE:**

The interconnect between the W&E CWS and the Town of Salem water system is driven by two primary factors (1) well yield and (2) well water quality.

- 1. Well Yield The W&E system currently has 3 active wells (#'s 3, 4 and 6) with respective capacities of 30 gpm (43,200 gpd), 12 gpm (17,280 gpd) and 10 gpm (14,400 gpd) for an aggregate total of 74,880 gpd. The average daily demand in the W&E system varies between about 40,000 gpd during the non-summer months to about 66,000 gpd with 1x per week outside usage restrictions in summer months. With the largest well "out of service," which is a requirement in determining safe water yields for a CWS per regulation; the remaining wells cannot not produce enough water to meet the base system demands. With all the wells running, this system has to continuously impose severe outside water usage restrictions. The proposed interconnection will supplement the existing supply with 30,000 gpd, such that, even with the largest well "out of service" the base demand of the system can be met. Also, the addition of the 30,000 gpd will allow for lesser outside usage restrictions during the summer months.
- 2. Well Quality –The three W&E wells have high levels of hardness, manganese and iron. The average raw water hardness from the combined well flows is about 400 ppm as calcium hardness. The average raw water manganese and iron levels from the combined wells is about 0.3 ppm of manganese and about 2.6 ppm of iron. As such, the average raw water hardness, manganese and iron levels are well in excess of the Safe Drinking Water Act secondary standards, and the raw water manganese levels exceed the proposed NHDES primary standard for manganese. To compensate for these raw water influence levels, the raw well water is treated by softening and green sand filtration. This allows the levels of manganese and iron to be reduced to below the secondary standards and the proposed primary standard for manganese. With all of this, the treated harness level can only be reduced to about 150 ppm as Calcium hardness, which is still considered to be a hard water. And, it is important to note, that the hardness can only be lowered to this level (no further) without exceeding the secondary limit for sodium in the water, and

making the water taste salty. Mixing the very hard well water with about 30% to 40% soft water from the interconnection will allow the treated water hardness to be reduced down to about 50 ppt as calcium hardness, without exceeding the secondary standard for sodium.

The total project cost is projected to be about \$675,000 (inclusive of a 5% contingency) with the costs be broken down as follows:

- 1. MSDC \$117,000 (30,000 gpd @ \$3.90 per gallon)
- 2. Meter between Salem and W&E \$3,000
- 3. Weston & Sampson Disinfection study \$6,000
- 4. Water Main Upgrades Installation of 1,250' of new water main and associated road reconstruction. American Excavation awarded a contact of \$343,183.
- 5. Pennichuck purchase of Treatment Equipment for the Chloraminated water for items that had long lead times. \$27,369
- 6. W&E Station Upgrades Cost to provide new water treatment system, piping and valves; including the installation of the Pennichuck purchased items above. NE Earth awarded a contract of \$94,500.
- Control panel & wiring; electrical work associated with the Station upgrades. The control wiring and electrical work will be completed by Pennichuck's electricians. The panel will be supplied by EII. - \$20,000
- 8. Internal Pennichuck Engineering Cost for design, inspection, and management of the water main and W&E Station upgrade projects \$35,000

The engineering for this project will be funded with 0.1 DSRR funds. The remainder of the project will be funded with a loan from CoBank.

Date Request Received: 10/14/21 Request No. Energy 1-5 Date of Response: 10/28/21 Witness: Donald L. Ware

#### REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-21), Page 3 (2021 CapEx):

- a) Does the Company agree that the annual 'current year' capital budget, which in this filing is 2021, should be inclusive of a budget line item and amount pertaining to the anticipated interest on short-term borrowings, i.e. the CoBank Fixed Asset Line of Credit (FALOC), incurred during the construction / acquisition of the current year CapEx, that will be included in the subsequent year's long-term financing for the 2021 projects? Please explain.
- b) Please provide the short-term interest amount that the Company currently anticipates will be incurred relative to its 2021 CapEx. Please provide the detailed calculation(s).

#### **RESPONSE:**

- a) Yes.
- b) It is not possible to accurately project the expected short-term interest amount that the Company currently anticipates it will incur in regard to its 2021 Capex necessary to provide an accurate "detailed calculation" due to:
  - 1. Project timing which impacts when CoBank FALOC funds will be drawn. The timing and magnitude of cash draws impacts both the interest expense on the borrowed funds and the amount of expense associated with the unused fee portion of the FALOC.
  - 2. Final projects and final project costs that will be completed, used and useful at the end of the year.
  - 3. The interest charged on FALOC draws varies with LIBOR. The Company has no way to project what the daily LIBOR rate will be.
  - 4. When PEU will be approved and able to close on the loan with CoBank to pay off the CoBank FALOC, as interest continues to accrue on the FALOC until it is repaid with term loan funds annually.

With the qualifiers noted above the Company has included a very high-level projection, with detailed calculations, of the interest it projects will be incurred on the

CoBank FALOC, based on current project statuses and anticipated project expenditure draws, through July 30, 2022 (the estimated closing date on the PEU CoBank loan to garner the cash used to pay off the 2021 CoBank FALOC borrowings). Attachment DOE 1-5 shows the actual FALOC draws for 2021 PEU Capex through 10/25/2021. Please note that the CoBank FALOC was fully paid down on 9/29/2021; the day that PEU closed on the long-term loan with CoBank that was used to repay FALOC draws that were made in 2020 to pay for PEU 2020 Capex for projects that were completed, used and useful as of 12/31/2020. The projected CoBank FALOC interest has been added to each QCPAC addition tab (2021, 2022 and 2023) as a budgeted item.

Date Request Received: 10/14/21 Request No. Energy 1-6 Date of Response: 10/28/21 Witness: Donald L. Ware

REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-31), Page 5 (2023 CapEx), Line 9 – Wellesley Drive - \$70,000: This schedule indicates that the 'Source of Funding' for this project is anticipated to be the '0.1 DSRR' account (Cell J9). However, the \$70,000 estimated project cost appears to be included in the total amount to be 'Funded with CoBank Loan' of \$2,503,500 (Cell L33). Please explain.

#### **RESPONSE:**

The Source of Funding for this proposed project was incorrectly identified as 0.1 DSRR. This project will be funded with a loan from CoBank. The attached Exhibit DLW-1, Page 5 has been updated to show the correct financing source for this project.

Date Request Received: 10/14/21 Request No. Energy 1-7 Date of Response: 10/28/21 Witness: John B. Boisvert

REQUEST: Re: First Quarterly Update Exhibit DLW-1 (8-13-31), Page 5 (2023 CapEx), Line 12 – Atkinson Booster Station - \$600,000: This project appears to have been deferred from 2022, per the Company's original filing, to now 2023, as indicated in the Company's most recent update. Please provide a detailed explanation for this apparent project deferral.

#### **RESPONSE:**

The project was shifted to 2023 because of delays in the projected start of the Londonderry storage tank project associated with the Special Agreement with Pillsbury, LLC (DW 18-101 Order 26,473). Shifting the Atkinson Booster Station to 2023 balances expenditures/investments between 2022 and 2023, to minimize rate impacts in any one year. The station is aging and needs to be replaced, but at the same time can be deferred for one year given the importance of completing the Londonderry project.

Date Request Received: 10/14/21 Request No. Energy 1-8 Date of Response: 10/28/21 Witness: John B. Boisvert

## REQUEST: Re: First Quarterly Update Exhibit DLW-1 (08-13-21), Pelham water main upgrades (2020, lines 18-22; 2022, lines 8-10; 2023, line 8):

Regarding these upgrades, please indicate:

- a) The largest main diameter in the Williamsburg system prior to the improvements.
- b) Why the project scope of Williamsburg Phase I was significantly expanded in 2020.
- c) What percent of Williamsburg mains were or will have been replaced at completion of Phase I (2020) and Phase II (2023).
- d) The largest main diameter in the Gage Hill system prior to the improvements.
- e) What percent of Gage Hill mains will have been replaced at completion of that project (2022)?
- f) Are the Williamsburg and Gage Hill systems interconnected, or connected to any other system? Please explain.

- a) The largest main had a 12-inch diameter. The system has distribution storage (350,000 gallon Collins Way Tank) and is designed to support fire flows with a core of 12 inch diameter and 8 inch diameter water mains.
- b) This area of the Williamsburg system was transferred to the Company with very limited accurate mapping of the water distribution system. Much of the water main is not in a public street (right of way) but installed along the back lots of private properties. Investigations prior to construction discovered system valves which were not functioning properly, and pipeline thought to be looped was left as dead end runs of mains. This explained why this section of the system was shut down by only one valve. Dead end pipes were closed in the project area and a buried 2-inch pressure reducing valve was located during excavation. This valve was replaced with an accessible vault structure for proper maintenance and adjustment.
- c) Approximately 4.5% of the Gage Hill mains were replaced in 2020. The next phase will be of similar scope and will likely need to be followed by a third phase in this area of the system
- d) The largest main had a 2-inch diameter.

- e) It is anticipated that 100% of the mains in Gage Hill will replaced, but this may occur in two to three "used and useful" phases over a two to three-year period pending budget considerations each year.
- f) No. Each are independent systems with their own sources of supply. These systems are not connected to any other water system.

Date Request Received: 10/14/21 Request No. Energy 1-9 Date of Response: 10/28/21 Witness: Donald L. Ware

# REQUEST: Re: First Quarterly Update Exhibit DLW-1 (08-13-21), Londonderry Core System/Mountain Homes Station Re-chloramination (evaluation/design 2020, line 25; construction 2022, line 13); W&E System De-chloramination (2021, line 32):

- a) Please describe generally how Pennichuck has handled chloraminated water purchased from Manchester Water Works or other entities in its various systems over the years, including whether Pennichuck systems downstream of the meter have typically been chlorinated or chloraminated.
- b) When did re-chloramination become a concern for the Londonderry core system? Is the system currently chloraminated? Please explain.
- c) Why is de-chloramination anticipated for the W&E system? Why does the company believe de- chloramination will be successful? Has it had any experience with that process? Please explain.
- d) Regarding the 2020 Londonderry Core System Evaluation, please explain the meaning of "Design costs incorporated into Station rebuild above" in the last column of line 25.

- a) Pennichuck has typically not completed any change to the treated water it purchases from other water systems, such as Manchester Water Works. Until recently there has been no need to consider additional treatment as the purchased water met all the criteria of the SDWA and the water quality did not degrade within the Pennichuck systems so that there was never any potential of a violation of the SDWA. Rechloramination has become a consideration in the past 3-4 years. Pennichuck began to see mono-chloramine residuals diminish, and in some cases, be non-detectable in its consecutive systems in Londonderry and Derry, where the purchased water supplied into those systems is chloraminated water from Manchester Water Works. The lack of a mono-chloramine residual (which is problematic in total water quality meeting SDWA requirements) appears to have resulted in the regrowth of nitrifying bacteria, which in turn resulted in numerous coliform bacteria hits over the past number of years.
- b) The water received by the Londonderry Core system is chloraminated water from Manchester Water Works. Over the past 3 to 4 years, as noted in a) above and c)

below, during the summer months when water is warmer, the level of monochloramines entering the Londonderry system has been very low and trended to no residual being present within the system. This in turn created ideal conditions for bacterial regrowth and denitrification. As noted above, this has resulted in numerous coliform bacteria hits and a request being issued to the Company from the NHDES, requesting a plan on how to eliminate the nitrifying bacteria.

- c) The water that will be received via Salem and the Southern NH regional water main distribution system, is chloraminated water from Manchester Water Works. During the summer of 2020, the Town of Salem and the Hampstead Water Company experience problems with denitrification and nitrifying bacteria within their respective water systems. In anticipation of this problem, which is the result of little to no monochloramine residual, these systems installed re-chloramination facilities to boost the monochloramine within their systems and eliminate the condition (little or no monochloramine residual) that allowed the regrowth of nitrifying bacteria to occur. This became a concern in the past 3-4 years. Given its location along for interconnection into the regional water main, it is fully expected that the monochloramine residual at the entrance to the W&E system will be very low to non-existent during the summer and early fall, resulting in optimal conditions for bacterial regrowth.
- d) The note was not correct. It was a carryover from another spreadsheet. There is a total of \$12,000 in outside engineering costs associated with the Londonderry Core System evaluation. This evaluation was performed by an outside engineer to address the NHDES concerns about the lack of chloramine residual in the Londonderry core system and the resultant nitrifying bacteria growth in the system. The initial recommendation was to boost incoming chloramine levels from Manchester Water Works with a re-chloramination facility. The facility would boost chloramine levels such that a chloramine residual was maintained throughout the Londonderry distribution system to minimize the opportunity for bacteria regrowth.

Date Request Received: 10/14/21 Request No. Energy 1-10 Date of Response: 10/28/21 Witness: John B. Boisvert

## REQUEST: Re: First Quarterly Update Exhibit DLW-1 (08-13-21); Sunrise Station (Middleton) design (2020, line 24; 2021, line 17), re-build and arsenic treatment (2020, line 8)

- a) Please indicate the current status of the Sunrise station design, including the type of arsenic treatment anticipated.
- b) How does this treatment compare to the arsenic treatment at the Locke Lake Peacham Road facility?
- c) How does it compare to supplemental arsenic treatment systems installed or anticipated in 2021 (line 23) in other PEU systems?

- a) The upgrade design of the Sunrise Estates station including pumps, storage, treatment, electrical, and mechanical systems is about 30% complete. Because of the relative size of the Sunrise Estates system and its location, an adsorptive filter media will be used.
- b) The arsenic treatment planned for Sunrise Estates is adsorptive media where arsenic is removed by a beaded resin media that when fully utilized is changed out with new media. This process lends itself to and is very effective for small systems with lower water demand. The Locke Lake Peacham Road facility serves a larger customer base with higher demand flows. Peacham Road employs a process called coprecipitation. Peacham Road uses traditional iron and manganese filtration with a "permanent" media that is regenerated/refreshed by traditional backwash. Iron (iron oxide or rust) naturally adsorbs arsenic given the proper pH and a ratio of roughly 20-parts iron to 1-part arsenic. Ferric chloride is added to the raw water to achieve the 20:1 ratio prior to the filters. The filters remove the iron along with the arsenic that is attached to the iron.
- c) Supplemental arsenic treatment for smaller systems will be adsorptive media like Sunrise Estates as opposed to Peacham Road.

Date Request Received: 10/14/21 Request No. Energy 1-11 Date of Response: 10/28/21 Witness: Donald L. Ware

### **REQUEST:** Re: First Quarterly Update Exhibit DLW-1 (08-13-21), High Lead Brass Meters:

At one-point replacement of all remaining high lead brass meters had been anticipated by year end 2021 (Staff 2-2 in DW 20-019). That effort now appears to be continuing annually through 2023. Please explain, including any regulatory time requirements involved.

#### **RESPONSE:**

Due to COVID-19, the Company did not do inside home appointments between March 2020 and the present, unless there was an emergency that required entrance into a customer's home. The planned high lead brass meter replacement work that was planned for 2020 and 2021, is now scheduled for 2022 and 2023. The only regulatory requirement regarding high lead brass meters is that when a meter of this type is removed from a customer's home for any purpose (meter pull and test, failed meter, etc.), that meter must be disposed of and cannot be reused.