

**THE STATE OF NEW HAMPSHIRE**  
**BEFORE THE**  
**PUBLIC UTILITIES COMMISSION**

**DG 17-070**

**STEP ADJUSTMENT 2**  
**NORTHERN UTILITIES, INC.**

**DIRECT TESTIMONY OF**  
**TODD R. DIGGINS**  
**CHRISTOPHER J. LEBLANC**  
**KEVIN E. SPRAGUE**

**EXHIBIT TDCLKS-1**

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1 **I. INTRODUCTION**

2 **Q. Please state your names and business addresses.**

3 A. My name is Todd R. Diggins, and my business address is 6 Liberty Lane West,  
4 Hampton, New Hampshire. My name is Christopher J. LeBlanc, and my business  
5 address is 325 West Road, Portsmouth, New Hampshire. My name is Kevin E.  
6 Sprague, and my business address is 6 Liberty Lane West, Hampton, New  
7 Hampshire.

8 **Q. Mr. Diggins, for whom do you work and in what capacity?**

9 A. I am Director of Finance for Unitil Service Corp. (“Unitil Service”), a subsidiary  
10 of Unitil Corporation that provides a variety of administrative and professional  
11 services including, regulatory, financial, accounting, human resources,  
12 engineering, operations, information systems technology and energy supply  
13 management services to Unitil Corporation’s utility subsidiaries, including  
14 Northern Utilities, Inc. (“Northern” or the “Company”). My responsibilities are  
15 primarily in the areas of financial planning and analyses, regulatory projects,  
16 treasury services, banking relationships, and insurance/loss control programs.

17 **Q. Mr. Diggins, please summarize your professional and educational**  
18 **background.**

19 A. I have over 20 years of professional experience in the utility industry focused  
20 within the finance, accounting and regulatory areas. I joined Unitil Service in 1998  
21 as a Systems Financial Analyst. In 2004 I accepted a position within the

1 Accounting Department as a General Accountant and was promoted to Corporate  
2 Accounting Manager in 2009. In 2018 I assumed my current responsibilities as  
3 Director of Finance. I hold a Bachelor of Science degree from the University of  
4 New Hampshire and a Master of Science in Finance from Southern New  
5 Hampshire University as well as a Master of Global Business Administration from  
6 Southern New Hampshire University.

7 **Q. Mr. Diggins, do you hold any professional licenses?**

8 **A.** Yes, I am a Certified Public Accountant in the State of New Hampshire and  
9 Maine.

10 **Q. Mr. LeBlanc, for whom do you work and in what capacity?**

11 **A.** I am Vice President of Gas Operations for Unitil Service. In this capacity, I am  
12 responsible for managing all gas operations for Northern and its corporate  
13 affiliated gas companies, including the safe, reliable, and efficient production,  
14 transportation and delivery of natural gas service to customers.

15 **Q. Mr. LeBlanc, please summarize your professional and educational**  
16 **background.**

17 **A.** I have more than 20 years of experience in the utility industry and an extensive  
18 background in the operation, maintenance and construction of natural gas  
19 distribution systems. I have been Operator Qualified in 84 covered tasks and have  
20 had formal industry-specific training at the Gas Technology Institute in Gas  
21 Distribution Operations, Transmission Operations, Pipeline Design and  
22 Construction Practices and Regulator Station Design.

1 I joined Unitil Service in 2000 as a Field Technician and since then have  
2 progressed through several positions of increasing responsibility including Project  
3 Leader in 2002 and Manager, Gas Operations in 2003. I was promoted to  
4 Director, Gas Operations in 2008 and was named Vice President, Gas Operations  
5 on January 1, 2017. Prior to joining Unitil Service, I was employed for nine years  
6 at R.H. White Construction Company, where I was responsible for leading and  
7 directing field crews in construction and installation of underground utility  
8 infrastructure.

9 I hold a Bachelor of Arts degree in Business Administration from Assumption  
10 College and a Master's degree in Business Administration from the same  
11 institution. Additionally, I have completed civil engineering course work at the  
12 University of Massachusetts, Lowell.

13

14 **Q. Have you previously testified before the Commission or other regulatory**  
15 **agencies?**

16 A. Yes, I have testified before the New Hampshire Commission on numerous issues  
17 related to gas safety and operations, and on operational issues as needed during the  
18 Company's base rate proceedings. I have also testified before the Massachusetts  
19 Department of Public Utilities and the Maine Public Utilities Commission on  
20 issues related to gas safety and operations.

21 **Q. Mr. Sprague, would you please state your name and business address?**

1 A. My name is Kevin E. Sprague. My business address is 6 Liberty Lane West,  
2 Hampton, New Hampshire 03842.

3 **Q. What is your position and what are your responsibilities?**

4 A. I am Vice President of Engineering for Unitil Service. In this capacity, I manage  
5 all of the engineering functions, including electric engineering, gas engineering,  
6 computer-aided design and drafting, Geographic Information Systems (GIS), and  
7 management of utility-owned land and property.

8 **Q. Please describe your business and educational background.**

9 A. I have been employed by Unitil Service for over 20 years. I was originally hired  
10 as an Associate Engineer in the Distribution Engineering group. I have held the  
11 positions of Engineer, Distribution Engineer, Manager of Distribution Engineering  
12 and Director of Engineering. I accepted the Vice President of Engineering  
13 position in January 2019. I hold a Bachelor of Science in Electric Power  
14 Engineering from Rensselaer Polytechnic Institute and a Master of Business  
15 Administration from the University of New Hampshire.

16 **Q. Do you have any licenses that qualify you to speak to issues related to**  
17 **engineering?**

18 A. Yes. I am a registered Professional Engineer in the State of New Hampshire and  
19 the Commonwealth of Massachusetts.

20 **Q. Have you previously testified before the Commission, or other regulatory**  
21 **agencies?**

1 A. Yes, I have testified on previous occasions before the New Hampshire  
2 Commission, the Maine Public Utilities Commission and the Massachusetts  
3 Department of Public Utilities. Most recently, I testified in Northern Utilities  
4 request for franchise in the towns of Epping, NH (DG 18-094) and Atkinson,  
5 NH/Kingston, NH (DG 18-103). I also provided testimony in Northern's most  
6 recent base rate case DG 17-070 which provided the opportunity to file the step  
7 adjustment requested in this filing.

8 **Q. What is the purpose of your joint testimony and how is it organized?**

9 A. The purpose of our testimony is to: 1) describe the Company's approach to capital  
10 spending and cost management, 2) describe the settlement agreement made in the  
11 Company's last base rate case proceeding, DG 17-070, ("the Agreement") with  
12 respect to capital spending on Eligible Facilities; 3) describe the capital spending  
13 on the identified Eligible Facilities in the year 2018; 4) describe the largest six  
14 Eligible Facility projects in greater detail; and 5) describe the rate design, cost  
15 recovery and bill impact the step adjustment will have on customer rates.

## 16 **II. CAPITAL SPENDING AND INVESTMENT PLANNING**

### 17 **A. PLANNING AND BUDGETING PROCESS**

18 **Q. How does the Company plan for needed investments?**

19 A. The annual planning process begins with engineering studies performed by the  
20 Company's engineering group. These studies are updated with the latest load  
21 forecasts at the distribution level and are employed to identify both short term and

1 long term needs. Engineering planning studies are the first and most important  
2 input into the capital planning process.

3 **Q. Please describe the annual budget process and explain how needs are**  
4 **identified and prioritized as part of this process.**

5 A. As described above, the engineering group identifies the need for system  
6 improvement projects. Operations personnel identify the need for condition  
7 replacements based on inspection and maintenance programs. Budgets are  
8 constructed using a “bottom up” process each year with input from dozens of  
9 engineering and operations employees. Technical and managerial personnel with  
10 responsibility for planning, designing, operating and maintaining the gas delivery  
11 system are responsible for identifying needs and developing cost-effective  
12 solutions. A multistep process is used to budget hundreds of individual projects,  
13 and to then prioritize needs and determine which projects are essential to meet our  
14 objective of safe and reliable service for our customers. Projects are also proposed  
15 that may not be essential, but which represent an improvement or enhancement to  
16 existing systems or capabilities, including projects to replace old or obsolete  
17 equipment, and projects with a defined economic payback.

18

19 After several rounds of review involving multiple levels of engineering and  
20 operations management, a preliminary budget is recommended to senior

1 management for review and approval. Upon approval by senior management, the  
2 final budget is presented to the Board of Directors for final approval.

3 **Q. How does the Company ensure projects are appropriately specified, estimated**  
4 **and prioritized?**

5 A. In advance of the budget cycle each year, instructions are provided to all budget  
6 managers and other contributors that define expectations for the proper  
7 development and justification of projects. These instructions ensure that  
8 individual budget items are well defined, estimated and justified, and ensure  
9 accurate and consistent entry into the budget system. Comparative analysis of  
10 competing project costs is completed to identify the most economical solution.  
11 The goal of this process is to streamline the review and approval process.  
12 Specifically, each submitted project is expected to meet the following  
13 requirements:

- 14 • Each project must have a well-defined project scope, which fully describes  
15 the project and the extent of work to be undertaken.
- 16 • Each project must also have a detailed justification that describes the need  
17 for the project, including quantitative analysis where possible.

18 In general, only projects that are well-defined and appropriately justified are  
19 included in the budget. Project entries intended to be “place holders” for  
20 undefined plans or needs are not accepted. This allows management to efficiently

1 and effectively review priorities and spending, and ensure an appropriate level of  
2 funding for important projects.

3 **Q. How is all this information reviewed and validated in developing a final**  
4 **budget compilation?**

5 A. As budgets are compiled and submitted for review and approval, the budgets are  
6 reviewed project-by-project, line-by-line, and category-by-category in a series of  
7 meetings held with all applicable budget managers and contributors. Each project  
8 is reviewed to ensure that it has been appropriately categorized and prioritized  
9 within the budget, and to ensure complete documentation of scope, justification  
10 and cost estimates have been provided. Categories of spending are scrutinized to  
11 ensure the budgeted spending levels are appropriate based on historic spending  
12 levels and current assumptions, and adjustments (if needed) are made to ensure  
13 budgeted spending levels are appropriate. Priorities are reviewed to ensure all  
14 projects have complete justification. Projects without adequate justification are  
15 removed or deferred as appropriate. Once a well-prepared budget has been  
16 validated and fully vetted, it is advanced through the formal review process for  
17 final approval by the Board of Directors.

1           **B. AUTHORIZATION AND CONTROL OF CAPITAL SPENDING**

2   **Q.   How does the Company approve, authorize and control spending to ensure**  
3   **the reasonableness and prudence of capital additions?**

4   A.   There are several layers of controls on spending.  First, and perhaps most  
5   important, is the budget process.  The capital budget represents the culmination of  
6   a lengthy planning process to identify and prioritize important needs, while  
7   ensuring that projects submitted for approval are the most cost effective solutions  
8   to address those needs and are estimated appropriately.  The budget proceeds  
9   through several rounds of review at multiple levels of the organization before  
10   concluding with review and approval by executive management, and by the  
11   Company's Board of Directors.

12   **Q.   Are there other controls over budgeted spending on capital additions?**

13   A.   Yes.  After the budget is approved, each project within the budget must be further  
14   authorized before spending can occur.  This is a second step in the approval  
15   process, and occurs on a project-by-project basis.  A construction authorization  
16   must be prepared and submitted for approval for each planned expenditure and  
17   each project in the budget, even though the budget has already been approved.  
18   Each authorization must be fully approved prior to the commencement of any  
19   work, except where an unforeseen emergency occurs that requires the work to be  
20   completed to ensure public safety or restore service to customers, in which case  
21   the authorization can be completed immediately following the work.

1 **Q. Who approves construction authorizations?**

2 A. The approval routing for each construction authorization includes, but is not  
3 limited to, the Plant Accountant, the Department Manager, the Director-level  
4 manager with functional responsibility for the project and the Vice President of  
5 Engineering. Additional approvals may be required by one or more functional  
6 heads depending on the project and the functional areas affected by it. All  
7 authorizations over \$50,000 also require the approval of the Assistant Controller.  
8 In addition, all authorizations exceeding \$500,000 must be approved by the  
9 Controller and the Chief Financial Officer. Plant Accounting is responsible for  
10 assigning the appropriate routing for each authorization and for validating the  
11 authorization and construction work order (“CWO”) number once all managers  
12 have approved the authorization, whereupon expenditures may begin.

13 **Q. Who is responsible for managing each project, including the cost of the**  
14 **project, once the project is approved and authorized?**

15 A. Each project and each construction authorization is assigned a Project Supervisor.  
16 The Project Supervisor is designated on the authorization form as it is routed for  
17 approval, and is typically the person who developed the scope and cost of the  
18 project, and who initiated the construction authorization for approval. In all cases,  
19 the Project Supervisor is the person responsible for managing the project and the  
20 person directly accountable for controlling the scope and cost of the project.

1 **Q. What happens if the scope or cost of a project changes after the project has**  
2 **been approved and authorized?**

3 A. Changes in the field sometimes result in changes to the scope of a project already  
4 approved and underway. When this occurs, the Project Supervisor is expected to  
5 submit a revised authorization reflecting the revised scope, including cost, before  
6 proceeding further with the project. The revised authorization must be resubmitted  
7 for approval in the same manner as the original authorization, with the additional  
8 approval of the Controller and the Chief Financial Officer. The revised  
9 authorization must include a detailed description identifying the change in scope  
10 and the reasons for the change, and provide a detailed cost breakdown.

11 **Q. What happens if a project overruns its original cost estimate?**

12 A. The budget and authorization process recognizes that project estimates are just that  
13 – “estimates.” Invariably a small number of projects will overrun the original  
14 estimate due to conditions in the field, increases in material costs and other factors.  
15 The Project Supervisor’s responsibility is to manage the cost of each project to the  
16 original authorized spending amount. If the cost of the project exceeds the  
17 authorized amount by 15 percent and \$5,000, a supplemental authorization must be  
18 submitted that includes a detailed description of the reasons the project exceeded  
19 its authorized amount. The supplemental authorization must be resubmitted for  
20 approval in the same manner as the original authorization, with the additional  
21 approval of the Controller and the Chief Financial Officer.

1 **Q. What happens if a project is needed but was not anticipated in the budget**  
2 **process?**

3 A. All projects, whether budgeted or unbudgeted, must be approved and authorized  
4 before spending can occur. If a non-budgeted expenditure is required, a non-  
5 budget authorization must be prepared and all necessary approvals received. It is  
6 the responsibility of the applicable budget manager to ensure that non-budgeted  
7 expenditures are required to ensure a safe and reliable system for our customers.  
8 Non-budget authorizations must be submitted for approval in the same manner as  
9 the project would normally be authorized, with the additional approval of the  
10 Controller and the Chief Financial Officer.

### 11 **III.SETTLEMENT AGREEMENT**

12 **Q. Can you describe the Settlement Agreement from DG 17-070?**

13 A. As part of the most recent base rate case in DG 17-070, a settlement agreement  
14 was negotiated among the parties and subsequently approved by the Commission.  
15 section 2.4 of the agreement states:

16

17 *“The Settling Parties agree that in addition to the annual revenue increase in*  
18 *Section 2.1, above, there shall be one step increase to revenues and rates effective*  
19 *May 1, 2018, with an option to the Company for a second step increase effective*  
20 *May 1, 2019. If the Company chooses the option to implement the second step*  
21 *increase pursuant to section 2.4.2 below, then the Company’s next filing of a*

1        *distribution base rate case shall be based on an historic test year of no earlier*  
2        *than twelve months ending December 31, 2020. If the Company chooses to not*  
3        *implement the second step increase, this Settlement Agreement places no*  
4        *restriction upon when it may file its next distribution base rate case.” Settlement*  
5        *Agreement at page 6 of 13.*

6

7        Section 2.4.2 describes the requirements for the Step 2 adjustment.

8

9        *“If implemented, the Step 2 adjustment to the Company’s distribution rates shall*  
10       *be effective May 1, 2019 to recover the Eligible Facilities revenue requirement*  
11       *associated with the Company’s investments in Eligible Facilities (excluding Farm*  
12       *Taps for Step 2 only) which are additions to and closed to utility plant during*  
13       *calendar year 2018, subject to a revenue requirement cap on such investments not*  
14       *to exceed \$2,215,273. The Eligible Facilities revenue requirement for this Step 2*  
15       *adjustment will be derived using the method outlined in Exhibit 3. To determine*  
16       *distribution rates for effect May 1, 2019 that include this Step 2 adjustment, the*  
17       *(Step 1) Base Rates effective May 1, 2018 in Exhibit 2 will be multiplied by an*  
18       *equal percentage increase. The rate design and distribution rates including the*  
19       *Step 2 adjustment are illustrated in Exhibit 4. For this illustration, Step 2 base*  
20       *distribution rates are based on the cap of \$2,215,273. The Company shall file its*

1           *proposed Step 2 adjustment to distribution rates on or before the last day of*  
2           *February, 2019.”*

3

#### 4   **IV. ELIGIBLE FACILITIES**

5   **Q.    Please summarize “Eligible Facilities” as defined in the Agreement?**

6    A.    The Agreement provided an annual revenue increase and base rate step adjustment  
7           to recover the prudently incurred costs of the defined “Eligible Facilities.” The  
8           “Eligible Facility” projects are defined in Section 2.4.1 of the Settlement  
9           Agreement (including footnote 2) as follows:

- 10           •   Gas Mains Extensions consists of extensions and gas mains, excluding  
11                services, as required to serve customers under the Company’s line  
12                extension policy.
- 13           •   NH Mains Replacement Program covers replacement of cast iron and  
14                bare steel mains and services and associated facilities.
- 15           •   Gas Highway Projects covers replacement of facilities caused by forced  
16                relocations of gas facilities due to City and State roadway and  
17                municipal infrastructure project (e.g., sewer separation).
- 18           •   Rochester Reinforcement Projects covers the projects reinforcement of  
19                the Distribution Hi-Line located in Dover as well as mains and  
20                regulator station reinforcements required in Rochester.

1 **Q. Can you provide a summary of the investments made in eligible facilities in**  
2 **2018?**

3 A. Yes. The following table provides a summary of the investment for each of the  
4 types of Eligible facilities:

<b><u>Eligible Facilities</u></b>	<b><u>Total</u></b>
Gas Mains Extensions (excluding services)	\$ 1,546,611
Gas Mains Extensions, Carryover (excluding services)	\$ 1,047,337
NH Bare Steel Replacement, Carryover	\$ 53,889
Gas Highway	\$ 7,116,952
Gas Highway, Carryover	\$ 293,388
Rochester Reinforcement	(\$ 26,394)
<b>Total</b>	<b>\$10,031,783</b>

5 Table 1 – Eligible Facilities

6  
7 **Q. Can you describe what the “Carryover” projects are?**

8 A. Carryover projects are construction projects that begin in a prior year but are not  
9 closed to plant or placed into service until the following year. Typical reasons for  
10 carryover projects could result from delays from customer projects, permitting  
11 issues, delays in material delivery or resource constraints, just to name a few.

12 **Q. Has the Company provided the detail associated with each of the projects**  
13 **identified as an “Eligible Facility”?**

14 A. Yes. The 2018 “Eligible Facility” project detail is summarized in Attachment 2, at  
15 Page 2. The total closed to plant associated with “Eligible Facility” projects is  
16 listed on line 82 is \$10,031,783. Attachment 5 provides the Construction

1 Authorization (including any Revised or Supplemental Authorizations if  
 2 applicable) and detailed cost record for each Construction Work Order (“CWO”).

3 **Q. Are all of the “Eligible Facility” projects identified in Attachment 2 complete**  
 4 **and in service?**

5 A. Yes. For each project identified in Attachment 2, the construction is complete, has  
 6 been placed in service and has been closed to plant.

7 **Q. Can you identify the 6 largest “Eligible Facility” projects identified in**  
 8 **Attachment 2?**

9 A. The 6 largest “Eligible Facility” projects are identified in Table 2 below:

<u>Work Order Number</u>	<u>Project</u>	<u>Total</u>
N-008030-00183411	Whitehouse Road Rochester NH	\$ 5,418,362
N-008048-00183421	201 Atlantic Ave North Hampton NH	\$ 525,289
N-007052-00173469	Tuscan Village Project/Pleasant Street	\$ 503,727
N-008040-00183412	Barberry Lane/Green St Portsmouth NH	\$ 393,817
N-007040-00173446	Islington St/Bartlett St Portsmouth NH	\$ 324,994
N-008047-00183420	Woodbury Avenue/Piscataqua Dr Newington NH	\$ 297,948
	<b>Total</b>	<b>\$ 7,464,137</b>

10 Table 2 – Top 6 Eligible Facility Projects

11 **Q. What percentage of the total “Eligible Facility” projects does this represent?**

12 A. The 6 largest “Eligible Facility” projects are represent approximaltey 74%  
 13 (\$7,464,137 / \$10,031,783 = 74.4%) of the “Eligible Facility” spending with the  
 14 largest project, Whitehouse Road, Rochester, NH representing 54% (\$5,418,362 /  
 15 \$10,031,783 = 54.0%) of the “Eligible Facility” project spending.

16 **Q. Please describe the Whitehouse Road, Rochester, NH project.**

1 A. This project is a gas highway project. As City and State projects develop, it is  
2 often necessary that gas lines be relocated and/or upgraded due to construction  
3 conflicts. The City of Rochester planned a very aggressive roadway realignment  
4 to remove multiple locations where the roadway rises and falls creating blind spots  
5 for drivers. Our existing main was in direct conflict with their full depth  
6 reconstruction and change of grade in areas of this road. This project consisted of  
7 the replacement of 6,700 feet of 6” coated steel with 6,700 feet of 12” coated steel  
8 and the replacement of 25 services with pressure limiting valves.

9 **Q. What was the original project estimate for this project?**

10 A. This project was originally authorized for \$2,280,239 (Reference page 176 of  
11 Attachment 5).

12 **Q. Was there a Revised Authorization for this project submitted for approval?**

13 A. Yes. There were two revisions required for this project. Revision 1 (Reference  
14 page 174 of Attachment 5) revised the project amount to \$ 4,300,108. This  
15 revision was required due to unanticipated challenges associated with construction.  
16 There was much more ledge encountered in areas that required additional depth due  
17 to roadway grade changes and culvert crossings. There were several wet areas that  
18 required all spoils to be hauled away and new fill brought back in. This increased  
19 the cost of the police and flagging details required for the job as well.

20

1 A second Revised Authorization was submitted increasing the authorized total to  
2 \$6,874,485 (Reference page 172 of Attachment 5). This Revised Authoriation  
3 covers the additional costs associated with the extent of ledge in this project which  
4 pushed the scheduled finish date back approximately 10 weeks. The reasons for  
5 the revision are as follows:

- 6 • The original estimate for ledge removal was 6,100 cu/ft. Actual ledge removal was  
7 approximately 75,000cu/ft.
- 8 • Large excavations with ledge removal were needed every 80' to make room for a  
9 shoring box and welder to make daily tie ins.
- 10 • The additional ten weeks of construction increased the cost of non-destructive  
11 testing (i.e., x-ray) for the welds.
- 12 • The additional ten weeks of construction increased the cost of police detail and  
13 flaggers for traffic control.
- 14 • Ledge removal at each end of the job to facilitate the hydro-testing of the pipeline  
15 reduced the width of the road to one travel lane. The City of Rochester required  
16 24-hour traffic detail for each end of the project while there was a restriction in the  
17 travel lanes. The duration of this requirement was approximately two weeks.
- 18 • The City of Rochester had scheduled the start of their construction project upon  
19 the completion of our work and were unable to postpone their project and provided  
20 us with a hard deadline to complete our work. This deadline resulted in additional  
21 costs as the Company worked to meet this deadline.

1       • Construction crews were on a six day a week schedule for approximately twenty-  
2       six weeks. In September, the last month of the project, the work week was  
3       extended to seven days in order to meet the City of Rochester's deadline. Saturday  
4       and Sunday work is paid at a premium, which increased the project cost.

5       **Q. Please describe the 201 Atlantic Ave North Hampton NH project?**

6       A. This was a main extension that was started and completed in 2018. This  
7       Authorization covered the cost associated with the installation of 3,200 feet of 6"  
8       HDPE gas main to the North Hampton Elementary School. This was tied into an  
9       existing 6" IP main in Atlantic Ave.

10      **Q. What was the original project estimate for this project?**

11      A. This project was originally authorized for \$280,818 (Reference page 23 of  
12      Attachment 5).

13      **Q. Was there a Revised Authorization for this project submitted for approval?**

14      A. Yes. There was a revision required for this project. The Revised Authorization  
15      (Reference page 21 of Attachment 5) revised the project amount to \$462,579. The  
16      revision was required due to the costs associated with ledge removal and  
17      additional cut backs and paving required by the NHDOT. Ledge removal and the  
18      close proximity of the installed main to the edge of pavement caused the pavement  
19      to become undermined and the NHDOT requirements were to cut trench back 1  
20      foot and repave. This required more ledge removal than estimated.

21

1 **Q. Please describe the Tuscan Village/Pleasant Street project?**

2 A. This was a main extension that was started in 2017 and completed in 2018. This  
3 project consisted of the installation of 6,000 feet of 6” HDPE main in Pleasant St  
4 and Mall Rd, 1,600 feet of 4” IPS HDPE on Market St and North Village Way,  
5 1,000 feet of 2” IPS HDPE to supply various townhouses.

6 **Q. What was the original estimate for this project?**

7 A. This project was originally authorized for \$ 1,006,455 (Reference page 130 of  
8 Attachment 5).

9 **Q. Was there a Revised Authorization for this project submitted for approval?**

10 A. No. This project was completed and closed to plant at a cost of \$503,727.

11 **Q. Please describe the Barberry Lane/Green St. Portsmouth, NH project?**

12 A. This was a gas highway project. As City and State projects develop it is often  
13 necessary that gas lines be relocated and/or upgraded due to construction conflicts.  
14 The City of Portsmouth was underaking a full depth reconstruction of railroad  
15 crossings at Barberry Lane and Green Street, and the existing 6”CS main was in  
16 direct conflict with proposed construction. This authorization was for the  
17 replacement of 1,300’ of 6” CS with 1,300’ 8” HDPE and the replacement of six  
18 (6) services.

19 **Q. What was the original project estimate for this project?**

20 A. This project was originally authorized for \$286,262 (Reference page 185 of  
21 Attachment 5).

1 **Q. Was there a Revised Authorization for this project submitted for approval?**

2 A. Yes. There was one revision required for this project. The Revised Authorization  
3 (Reference page 183 of Attachment 5) revised the project amount to \$442,680.

4 The Barberry Lane Project had a change of scope. The original area proposed to  
5 make the tie in for the replacement main at the existing 6" CS main had coating  
6 that was very poor. That required the extension of the tie in location an additional  
7 200' to tie in to the existing main that had adequate coating. This project was  
8 completed in conjunction with the City of Portsmouth as they made repairs to an  
9 existing rail way. This caused multiple construction delays as our crews were  
10 required to work in close proximity with the City of Portsmouth construction  
11 crews. There were numerous time when our crews were shut-down and moved to  
12 other projects while the City continued their work. Much of this project was  
13 charged on a time-and-material basis due to several instances of the City stopping  
14 the project, which required us to redeploy our resources onto other projects.

15 **Q. Please describe the Islington Street/Bartlett Street Portsmouth, NH project?**

16 A. This is a gas highway project that was started in 2017 and completed in 2018. As  
17 City and State projects develop it is often necessary that gas lines be relocated  
18 and/or upgraded due to construction conflicts. The City of Portsmouth was  
19 undertaking a full depth reconstruction of Islington Street. There were direct  
20 conflicts with the existing gas main. The City of Portsmouth approved a proposed  
21 route for the installation of the new gas main. This authorization consisted of the

1 the replacement of 3,750 feet of 8" and 10" CI with 3,750 feet of 8" HDPE on  
2 Islington Street, 1,300 feet of 4" PE with 1,300 feet of 4" HDPE on Bartlett Street  
3 and 700 feet of 4" PE with 2" HDPE in Cate Street.

4 **Q. What was the original project estimate for this project?**

5 A. This project was originally authorized for \$ 1,559,520 (Reference page 235 of  
6 Attachment 5).

7 **Q. Was there a Revised Authorization for this project submitted for approval?**

8 A. Yes. There were two revisions required for this project. Revision 1 (Reference  
9 page 234 of Attachment 5) revised the project amount to \$ 2,382,130. This  
10 revision was due to Ledge, additional paving from ledge and sidewalk along with  
11 100% spoils removal. Service installation cost also increased from 100% spoils  
12 removal and work in a congested area. Revision 2 (Reference page 232 of  
13 Attachment 5) revised the project amount to \$ 2,841,828. This revision was  
14 required due to additional ledge, additional paving and the installation of a  
15 regulator station on McDonough St.

16 **Q. Please describe the Woodbury Avenue/Piscataqua Drive Newington, NH**  
17 **project?**

18 A. There was a gas highway project that was started and completed in 2018. As City  
19 and State projects develop it is often necessary that gas lines be relocated and/or  
20 upgraded due to construction conflicts. The NHDOT was working on Woodbury  
21 Avenue and Piscataqua Drive in Newington, and there were direct conflicts with

1 the existing gas main. This authorization was for the relocation of 700 feet of 6”  
2 CS main in Woodbury Avenue, replaced with 700 feet of 6” HDPE. There was  
3 also a relocation of 300 feet of 2” HDPE on Picataqua Drive.

4 **Q. What was the original project estimate for this project?**

5 A. This project was originally authorized for \$133,862 (Reference page 206 of  
6 Attachment 5).

7 **Q. Was there a Revised Authorization for this project submitted for approval?**

8 A. Yes. There were three revisions required for this project. Revision 1 (Reference  
9 page 204 of Attachment 5) revised the project amount to \$253,672. Tie in  
10 locations in Woodbury Avenue were extremely deep (7 feet - 8 feet) and required  
11 timber shoring. Both tie ins added several days to the total project. The work area  
12 in the front of Newington Mall is very wet and need extensive restoration due to  
13 high public visibility. Police detail requirements also increased with the added  
14 days on the project. Revision 2 (Reference page 202 of Attachment 5) revised the  
15 project amount to \$56,108. Note: This revision was routed for an incremental  
16 amount but not the total amount of the authorization. Revision 3 (Reference page  
17 200 of Attachment 5) corrected this error to the total project cost of \$311,713.  
18 This revision is for the additional costs associated with a scope change. The tie in  
19 for the 4” coated steel main feeding Newington Mall needed to be extended due to  
20 poor coating on the existing main. New 4” HDPE was installed to the point where  
21 good coating could be found. Most of this project was placed in service in 2017.

1           The 2018 amount reflects the portion of the project that was not placed in service  
2           in 2017.

3           **V. REVENUE REQUIREMENT, RATE DESIGN, TARIFF CHANGES AND BILL**  
4           **IMPACTS**

5           **A. DISTRIBUTION RATE ADJUSTMENT REVENUE REQUIREMENT**

6           **Q.     Please explain the increase for the Step 2 Distribution Rate Adjustment.**

7           A.     The proposed distribution rate adjustment is to recover the annual revenue  
8           requirement associated with the Company's investments in Step 2 Eligible  
9           Facilities during calendar year 2018. The revenue requirement associated with  
10          calendar year 2018 Eligible Facilities is \$1,431,349, which is below the remaining  
11          cap of \$2,215,273 on such investments. Additional details for the Step 2  
12          Distribution Rate Adjustment are provided below.

13          **Q.     Please summarize what Step 2 Eligible Facilities are recoverable in the Step 2**  
14          **Distribution Rate Adjustment.**

15          A.     As discussed above, the Step 2 Eligible Facilities are defined as capital spending  
16          related to the NH Mains Replacement Program, Gas Main Extensions and Gas  
17          Highway Projects and Rochester Reinforcement Projects.

18          **Q.     Please describe the derivation of Rate Base on page 1 of Attachment 2?**

19          A.     Rate Base is calculated by sourcing lines 1 and 2 from the Company's plant  
20          accounting records to arrive at the Step 2 Eligible Facilities shown on line 3.

1 Accumulated Depreciation is calculated on line 4 by taking 50% of the calculated  
2 Depreciation Expense. Next, Accumulated Depreciation is removed from the Step  
3 2 Eligible Facilities to derive Net Utility Plant as shown on line 5. Then  
4 Accumulated Deferred Income Taxes (ADIT) is calculated on line 6 by applying  
5 the Effective Income Tax Rate to the difference between Book and Tax  
6 Depreciation as shown on lines 19-26. Lastly, ADIT is deducted from Net Utility  
7 Plant to get the Rate Base associated with Step 2 Eligible Facilities as shown on  
8 line 7.

9 **Q. Please describe the derivation of Revenue Requirement on page 1 of**  
10 **Attachment 2?**

11 A. As described above, once Rate Base is calculated it is multiplied by the Pre-Tax  
12 Rate of Return on line 9 to derive the Return and Related Income Taxes on line 10.  
13 The Pre-Tax Rate of Return of 9.43% has been updated for the Tax Act and is  
14 calculated on Page 4 of Attachment 2. Next, Depreciation Expense associated  
15 with Step 2 Eligible Facilities is calculated by account on page 3 of Attachment 2,  
16 lines 1-7. Then, Property Taxes are calculated on Net Utility Plant on line 12  
17 using a property tax rate of 2.49%, which was calculated by dividing 2018  
18 Property Taxes of \$4,423,909 by 2018 Net Utility Plant of \$177,697,797. Finally,  
19 Return and Related Income Taxes, Depreciation and Property Taxes are added  
20 together to arrive at the Revenue Requirement on line 13.

1 **Q. What schedules support page 1 of Attachment 2?**

2 A. Page 2 of Attachment 2 presents the actual plant accounting project detail related  
3 to Step 2 Eligible Facilities closed to plant during calendar year 2018.

4 **Q. What is the Revenue Requirement that you derived?**

5 A. Page 1 of Attachment 2, Line 14, shows the Revenue Requirement of \$1,431,349.

6 **Q. Is the Step 2 Distribution Rate Adjustment subject to a Revenue Requirement**  
7 **cap?**

8 A. Yes. Per the Settlement Agreement in Docket DG 17-070, the Step 2 Distribution  
9 Rate Adjustment is subject to a Revenue Requirement cap on Eligible Facilities  
10 not to exceed \$2,215,273. The rate cap limit is calculated on Page 1 of Attachment  
11 2, Lines 14-18. The Allowable Revenue Requirement is calculated on Line 18 and  
12 is the minimum of Line 14 or Line 17. Thus the Step 2 Allowable Revenue  
13 Requirement is \$1,431,349.

14 **Q. Is the Step 2 Distribution Rate Adjustment an optional step increase?**

15 A. Yes. Under the Settlement Agreement in the above referenced docket, if the  
16 Company chooses the option to implement the second step increase, then the  
17 Company's next filing of a distribution base rate case shall be based on an historic  
18 test year of no earlier than twelve months ending December 31, 2020. See  
19 paragraph 2.4, page 6 of the Settlement Agreement.

20 **B. RATE DESIGN**

21 **Q. Please explain the Step 2 Distribution Rate Adjustment rate design.**

1 A. Attachment 3 shows the rate design from current rates to the rates proposed in this  
2 filing. For the purpose of the rate calculations, the 2016 Test Year billing  
3 determinants are shown on Page 1 of Attachment 3. In addition, Pages 1 and 2 of  
4 Attachment 3 show the progressive rate changes since the Company's last  
5 distribution base rate case. The Step 2 adjustment increase of \$1,431,349 is applied  
6 to proportionally to customer charges and distribution energy charges such that  
7 each class received the same overall percent increase. The resulting rates, revenue,  
8 and percent change are shown on Page 2 of Attachment 3.

9 **C. TARIFF UPDATES**

10 **Q. Does this filing include proposed distribution rate schedules?**

11 A. Yes. Redline versions as well as clean versions reflecting the proposed  
12 distribution rate changes are included with this filing in Attachment 1.

13 **D. BILL IMPACTS**

14 **Q. Have you calculated bill impacts associated with this filing?**

15 A. Yes. The impact of the Step 2 Distribution Rate Adjustment on each customer  
16 class is illustrated in Attachment 4. The impacts are shown from a distribution-  
17 only and a total monthly bill basis. For the Residential Heating customer class, the  
18 monthly increases range from 1.9% to 4.1%, on a total bill basis, depending on the  
19 customer's usage level. Bill impacts for other rate classes are similar, but vary  
20 based on consumption level and pattern.

1

2 **VI. CONCLUSION**

3 **Q. Does this conclude your testimony?**

4 **A. Yes, it does.**