

BEFORE THE
NEW HAMPSHIRE PUBLIC SERVICE COMMISSION

IN THE MATTER OF PENNICHUCK)
EAST UTILITY, INC. REQUEST FOR)
CHANGE IN RATES) DOCKET DW 20-156

DIRECT TESTIMONY

OF

DAVID F. RUSSELL, PE

ON BEHALF OF THE TOWNS OF LITCHFIELD AND LONDONDERRY,
NEW HAMPSHIRE

OCTOBER 26, 2021

1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is David F. Russell, and my primary business address is 15 Titcomb
4 Street, Newburyport Massachusetts, 01950 with a second Office at 23599 Awabuki
5 Drive, Venice Florida, 34293.

6 **Q. On whose behalf are you testifying in this case?**

7 A. I am testifying on behalf of the Town of Litchfield and the Town of Londonderry,
8 both of whom are collectively interveners in this case, referred to as the ‘Towns.’
9 I am the owner and President of my consulting Company, RUSSELL
10 CONSULTING, LLC, which has been in business for 25 years.

11 **Q. What information have you reviewed in preparing this testimony?**

12 A. I have reviewed the Direct Testimony and exhibits of all of the Company’s
13 witnesses in this case. In addition, I have reviewed all of the responses to Data
14 Requests issued by the Towns and Staff of the New Hampshire Department of
15 Energy (“NHDOE”); and all of the orders issued by the Commission in this case,
16 and the Company’s responses to them.

17 **Q. What is the nature of your involvement in this case?**

18 A. As the Towns expert rate consultant I am assisting both Towns in evaluating the
19 Pennichuck East Utility (“PEU” or the “Company”) case in chief and whether or
20 not the Company’s proposals are appropriate and reasonable, and if they are not,
21 what modifications should be made to make them such.

22

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1 **Q. What is the purpose of your testimony?**

2 A. This testimony was prepared to present my findings, conclusions and
3 recommendations with respect to the Company's proposed increase in revenue
4 requirements and their proposed rate design. Specifically, my review and analysis
5 is designed to ensure that the proposed rate increase is the minimum level needed
6 to provide safe and reliable water service to all ratepayers, including ratepayers in
7 both Towns and all Town-owned facilities and fire protection services.
8 Additionally, I am tasked with ensuring that the Cost-of-Service Study (COSS), and
9 the resulting rate design is fair and equitable to all customers and that the Towns,
10 will as a result of the rate design, only pay their fair share of the total revenues that
11 are determined by the Commission to be necessary going forward.

12

13 **Q. What is your present occupation?**

14 A. I am a professional consultant specializing in utility management, operations,
15 capital planning, economics, and rates. I am the owner and founder of my own
16 consulting business - *RUSSELL CONSULTING, LLC*. I specialize in providing
17 the following professional services to cities and towns, municipal utilities,
18 regulatory agencies and consumer advocacy groups: management reviews and
19 audits, needs assessment and facilities planning, utility economics and rate studies,
20 determination of component and total revenue requirements, cost-of-service
21 studies, demand management and conservation programs, expert witness services,
22 utility contracts and negotiations, feasibility studies, system appraisals and related
23 regulatory/institutional studies.

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1

2 **Q. Please summarize your training and experience.**

3 A. I have over 40 years of experience as a professional engineer, utility manager and
4 consultant. My formal education consists of a B.S. Degree in Electrical
5 Engineering from Rutgers College, an M.S. Degree in Engineering Management
6 from Northeastern University and an M.A. Degree in Economics from Rutgers
7 University. I am a Registered Professional Engineer in the States of Massachusetts
8 (Registration Number 28342), New Jersey (Registration Number 26512), and
9 Florida (Registration Number 75247). For nearly all my career, I have been
10 actively involved in the management and control of utility businesses, from small
11 public water systems to large multi-state, fully integrated, private electric
12 companies.

13 I have provided expert witness testimony on many occasions before several
14 state public utility commissions, legislative committees and Superior Courts,
15 including testimony on matters directly related to utility management and
16 operations, planning, forecasting and needs assessment, least cost planning, capital
17 improvements, revenue requirements, cost of service studies and rate design, and
18 demand management/conservation programs.

19 Early in my career I was directly employed by two state regulatory agencies.
20 For the Massachusetts Department of Public Utilities, I held the position of Chief
21 Engineer for 2 years before leaving State service for a position (Strategic Planner
22 for General Public Utilities in New Jersey) in the private sector. For the New Jersey
23 Board of Public Utilities, I was employed as a consultant to the Board's Chief

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1 Economist. I have held management positions for three large Electric Utilities
2 operating in the Northeast and Mid-Atlantic states, and was a Principal
3 Management Consultant for a large environmental engineering company with
4 headquarters in Boston, Massachusetts for eight years before establishing my own
5 consulting business over 20 years ago.

6 I have written several papers and articles that have been published in
7 professional journals and/or presented at utility industry conferences. Topics have
8 included rate design and cost of service studies, appraisals of utility systems, energy
9 conservation and other measures to reduce total energy costs, and cost/benefit
10 analysis of alternative ownership options for utilities. Many of these papers have
11 been published in Professional Journals and/or presented at industry conferences.
12 I also taught undergraduate and graduate courses in economics and management
13 science, as an adjunct professor at Boston University.

14 **Q. Have you previously testified before this Commission or others?**

15 A. I have previously testified before this Commission on many occasions. I have also
16 testified before the Utilities Commissions in the states of Massachusetts, Rhode
17 Island, New York, New Jersey, Delaware, Illinois, Indiana, Pennsylvania, Ohio,
18 South Carolina, Louisiana, and Florida. Additionally, I have testified before two
19 State Superior Courts, one in New Hampshire and one in Massachusetts.

20

21 **Q. How have you organized the remainder of your testimony?**

22 A. My testimony is separated into two general areas – Revenue Requirements (RRs)
23 and Cost of Service/Rate Design. I address two issues directly related to RRs;

1 namely, the Proposed Material Operations Expanse Fund (MOEF) and
2 replenishment of the Rate Stabilization Fund (RSF). Relative to the second general
3 area, I discuss the Company's COSS; rate design and rate mitigation or rate
4 "Gradualism;" and present the Towns recommendation on rate design.

5

6 **II. REVENUE REQUIREMENTS**

7 **Q. What is your understanding of the Material Operating Expense Factor**
8 **(“MOEF”) that PEU proposes in this case ?**

9 **A:** The Company has proposed a 6% MOEF that would be applied to the Material
10 Operating Expense Revenue Requirement (MOERR) established in each case. The
11 total MOERR, with the MOEF included, would be added to the Company's
12 Operating Expense Revenue Requirement component of PEU's overall revenue
13 requirement. According to the Company, the MOEF is designed to ensure that the
14 Company has sufficient cash in between rate cases to cover any and all increases in
15 operating expenses. It is based on an assumed average increase in these expenses
16 of 6% each year.

17 **Q: Do you believe that the proposed MOEF is appropriate in this case?**

18 **A:** No. I do not believe that the Company's proposed MOEF, especially at its 6%
19 level, is appropriate.

20 **Q: What are your concerns with the MOEF?**

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1 **A:** With this proposed MOEF, PEU is asking the Commission to guarantee a high level
2 of cost increase protection without any incentives that would ensure that the
3 Company is operating as effectively and efficiently as possible. The Commission
4 has previously stated its concern about the Company’s rapid increases in costs, its
5 significant proposed rate increase, and PEU’s efforts to lower costs.

6 Specifically, in the Commission’s Order on Temporary Rates, dated August 16,
7 2021, the Commission stated that “the size of the rate increase is significant,” and
8 observed that “while the temporary rate increase is appropriate per statute, the amount of
9 the increase points to a need for a high level of scrutiny in the permanent rate case.” The
10 Commission further stated that it would “want to understand the average increase in rates
11 over the last 10 years and the specific actions that PEU is taking to lower costs while
12 providing adequate service to its customers.” Providing a guaranteed expense factor of
13 such a magnitude provides no incentive for PEU to lower costs and operate efficiently.

14 **Q:** **Do you believe that the Company has demonstrated a need for a 6% MOEF**
15 **in this case?**

16 **A:** The Company has not demonstrated the need for such a new and large component
17 of its RRs. The supposed need for the MOEF is based on several assumptions and
18 cost projections that may or may not be realized between rate cases. For example,
19 the implicit allowed price escalation is very high and unnecessary. It assumes an
20 escalation rate of 6% which is 3 times (200%) higher than long term inflation of
21 2%

1 **Q: Are there other ways to pay for the cost increases between rate cases that the**
2 **MOEF is designed to mitigate?**

3 **A:** Yes. The Company also already has 3 reserve funds that can be used to protect
4 potential cash flow issues between rate cases. And, as discussed in the next section,
5 as part of this case the Company is also requesting that it be allowed to bring the
6 level of the other 3 reserve funds to some earlier determined “appropriate” level
7 (“imprest”). Together these two increases in reserve levels add nearly \$700,000 in
8 increased revenue requirement that will raise all customer rates to levels that are
9 considered to create “rate shock” by many.

10 **Q: Should the Commission approve the MOEF as a part of this case?**

11 **A:** For all of the reasons previously discussed, the Commission should not approve the
12 MOEF as part of this case. This would lower the proposed increase in RRs by about
13 \$420,000 (which is about 25% of the total proposed increase).

14 **Q: What if the Commission concludes that some type of new revenue requirement**
15 **is needed to pay for increased costs between rate cases?**

16 **A:** If the Commission is persuaded that some level of the MOEF should be allowed,
17 the increase should be limited to no more than the level that assumes a 2%
18 escalation rate (not 6%). This assumption, which would match the rate of long-
19 term inflation, would lower the RR increase by about \$280,000.

20 **III. REPLENISHMENT OF THE RSFs**

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1 **Q: What is your understanding of the Company's efforts to replenish their rate**
2 **stabilization funds?**

3 **A:** The Company has requested to refill their Rate Stabilization Funds (RSFs) to the
4 imprest level of \$980,000, which is consistent with the level approved in DW 17-
5 128. Given the current state of the funds, PEU estimates that it will need around
6 \$2.1 million to replenish the funds.

7 **Q: How has PEU proposed to pay for the replenishment of its RSFs?**

8 **A:** PEU has proposed to set up a deferred debit for around \$2,087,598 and to amortize
9 that debit over 10 years, which would result in an increased annual amortization
10 expense of around \$212,000 but would have the effect of lowering the rate in the
11 near term.

12 **Q: Has an alternative proposal been raised to replenish the RSFs?**

13 **A:** Yes. During discovery with the parties to this case, the Company discussed the
14 alternative of immediately funding a one-time replenishment of the RSFs with
15 external debt and spreading the cost over 25 years by amortizing the principal and
16 interest on the debt issued for that purpose. This debt-based proposal, which the
17 Company has requested approval of in the financing docket, DW 21-129, also
18 assumes the implementation of a MOEF at a 4% level and provides funding for
19 the shortfall between that 4% MOEF and the Company's requested 6% MOEF.
20 The funding of these two items would reduce PEU's RR by about \$350,000.

21 **Q: Do you agree with the Company's approach as detailed in DW 21-129?**

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1 **A:** While the Company’s approach is a feasible alternative, the Towns believe the
2 preferred approach separates the funding of the MOEF from the financing of the
3 funds needed to replenish the RSF funds. The Town’s alternative consists of not
4 allowing an MOEF, or at least greatly reducing its magnitude in this case, plus
5 incurring new debt spread over 25 years to replenish the RSF Funds. The reduction
6 in RRs for the recommendation relative to the MOEF were discussed above.

7 **Q: What would be the effect on ratepayers under the Towns’ proposal of**
8 **financing the replenishment of the RSFs?**

9 **A:** The savings in the first 10 years would be the difference in the annual cost of simply
10 dividing the total RSF deficit by 10 minus the debt service associated with the
11 financing alternative (\$212,000 – [the Company’s estimate of the levelized debt
12 service on the new debt]). The net result would be sizable savings in the first 10
13 years, followed by the additional cost of debt service payments in years 11 through
14 25. Factoring in the time value of money, the longer term costs would be somewhat
15 higher than the short term savings.

16 However, it is expected that the additional savings to the Company and its
17 customers resulting from overall interest cost to the Company as a result of the
18 financing alternative would more than offset any direct net cost. Additionally,
19 given the large increase proposed by the Company on residential customers, a
20 short-term reduction in the level of increase to general service customers is
21 greatly needed. In that sense, the alternative is a much-needed way too mitigate
22 some of the rate increase impacts to residential customers. As discussed above,

1 the Commission, in its Order on Temporary Rates, expressed skepticism about the
2 size of the proposed increase in permanent rates. Financing the replenishment of
3 the RSFs would minimize the rate increase that ratepayers experience in this case.

4 **Q: Is there any other benefit to the Towns' financing strategy?**

5 **A:** Yes. By replenishing the RSFs immediately through debt, it will place the
6 Company in a better position with its lenders, thereby allowing the Company to
7 obtain debt in the future at more preferential rates. Given that PEU can only obtain
8 extra funding through debt transactions, the replenishment of its funds will have a
9 positive impact in PEU's future ability to reduce debt-service costs.

10 **IV. COSS/RATE DESIGN**

11 **Q: Did the company undertake a COSS in this case?**

12 **A:** Yes.

13 **Q: What is a COSS?**

14 **A:** A COSS is a study in which a utility determines its costs for providing service to
15 each specific class of customers. The COSS is designed to aid in designing the
16 rates that the utility charges.

17 **Q: What is the significance of a COSS?**

18 **A:** A COSS is important because it is industry standard in the water industry to set
19 rates based on a cost-of-service ratemaking approach. Although rate designs can,
20 and sometimes do, deviate from a pure cost of service allocation for certain
21 reasons, it is generally accepted that a customer's rates should, generally, conform
22 to the cost of the service that the utility is providing. It is also generally accepted

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1 that cost-of-service ratemaking is an appropriate and reasonable method of utility
2 ratemaking in the water utility industry.

3 **Q: Under the COSS that PEU originally completed for this case, what was the**
4 **recommended revenue that would be recovered from fire protection**
5 **customers?**

6 **A:** Originally, the Company's COSS allocated a total of just under \$1,400,000 in
7 RRs to be obtained from Fire Protection customers.

8 **Q: Is that the Company's current position?**

9 **A:** No. During discovery, I identified an error that improperly attributed about
10 \$330,000 of T&D main costs to fire protection classes. Absent this correction,
11 fire protection customers would have been charged \$330,000 more than they
12 should have been. (if the Company's Proposed COSS was followed). The
13 Company has already accepted the correction I have made to their COSS and
14 COS model whereby the total costs allocated to Fire Protection costs has been
15 reduced by about \$330,000 (down from approximately \$1,400,000 to
16 \$1,070,000).

17 **Q: What is the impact of this correction to charges amongst the customer**
18 **classes?**

19 **A:** Under the corrected COSS, Fire Protection customers will actually pay less than
20 what they pay under current rates.

21 **Q: Had the Company's initial proposed COSS been implemented what would**
22 **have been the impact?**

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1 **A:** PEU’S Initial COSS would have resulted in a greatly expanded cross-
2 subsidization of General Service Customers by all Fire Protection Customers.
3 All Fire protection Customers would have been charged about \$330,000 more
4 than they should have been. Public Fire protection Customers would have been
5 charged about \$240,000 more than they should have been.

6 **Q:** **Based on your analysis, do you believe that this overcharge and cross-**
7 **subsidization (resulting from the misallocated T&D mains) was present in**
8 **previous rates charged to PEU Fire Protection customers?**

9 **A:** Yes, I believe that it is reasonably likely based on my investigation that Fire
10 Protection customers have been overcharged and therefore cross-subsidizing other
11 customer classes for some time. There are strong indications that this same or at
12 least a similar level of overcharges based on misallocated T&D mains should be
13 attributed to the results of the prior COSS. Because of this, fire protection
14 customers’ rates should be adjusted downward to ensure that this inequity is
15 reduced in the short run and eliminated in the long run, and to bring those rates
16 closer to a proper cost-of-service allocation.

17 **Q:** **What is your estimate of what the extent of this overcharging/cross-**
18 **subsidization could have been?**

19 **A:** Based on my review of the Company’s proposed COSS and its previous COSS, I
20 estimate that since the last rate case Fire Protection Customers may have been
21 subsidizing the General Water Service Customers in the order of \$50,000-
22 \$100,000 (and could be as much as \$140,000) in each of those 7 years.

23 **Q:** **What evidence exists to support this estimate?**

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1 A: In making this estimate, I considered the following similarities between PEU's
2 initial COSS in this case and its previous COSS in 2013. *First*, the total
3 allocation of Revenue Requirements (RR) to Fire Protection Customers in the
4 prior COSS (2013) was 13.2%. PEU's COSS in this case initially allocated
5 nearly the same percentage (13.3%) of Total RRs to Fire Protection
6 Customers. *Second*, the percentage of T&D mains allocated to fire protection
7 customers to total assets in the prior case was 36.9%. The percentage of T&D
8 mains allocated to fire protection customers to total assets in this case is nearly
9 identical at 36.7%. *Third*, the percentage of total fire protection costs allocated to
10 public fire protection customers in the prior case was 76%. The percentage of
11 total fire protection costs allocated to public fire protection customers in this case
12 is very close at 73%. *Fourth*, the max day to average day factor in both cases
13 was the same at 1.5. *Fifth*, the max hour to max day factor in both cases was the
14 same at 3.0. *Sixth*, the Fire Demand in both cases was the same at 2,000 GPM.

15 Q: **What did these similarities suggest to you?**

16 A: Given the nearly identical key parameters that were used in both COSSs, it is
17 extremely likely that a proportionate cross subsidization resulted from that case as
18 in the COSS initially submitted in this case (based on Fire protection costs as a
19 percent of total costs that was corrected to 10.3% instead of 13.2%).

20 Q: **Do you estimate that this cross subsidization has grown over time?**

21 A: Since the 2013 COSS, the cross subsidization would have only gotten more
22 pronounced as the public hydrant charges have increased by 22.3% since that
23 case, and the Inch-Foot charge has gone up 18% since that case.

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1 **Q: Have you have proposed a rate design in this case that accounts for the**
2 **necessary corrections to the COSS model?**

3 **A:** Yes.

4 **Q: Can you explain this rate design?**

5 **A:** Yes. The Towns' proposed rate design recognizes the need for rate gradualism,
6 but also recognizes the very significant overcharges that the Public Fire Protection
7 Customers have been paying in the past, and but for corrections made to PEU's
8 COSS, that inequity in the Towns subsidization of other classes would have been
9 much larger. If PEU's COSS/COS Model had not been corrected, all Fire
10 Protection Customers would have been required to pay about \$330,000 more than
11 they should. The Public Fire Protection portion of that amount is approximately
12 \$234,000. To make the rate design truly a gradual movement to cost of service-
13 based rates, while still recognizing the large cross-subsidization from Public Fire
14 Protection Customers to other rate classes, the Towns' rate Design Proposal
15 includes a 25% transfer from Public Fire Protection Customers to general water
16 service customers through the Metered Consumption charge. The Towns firmly
17 believe this is a fair and reasonable rate design to all rate classes, particularly
18 given the level of cross subsidization identified in this case.

19 The Towns Rate Design Proposal provides a balance between providing a
20 reasonable level of gradualism to the straight COSS rates, while recognizing the
21 very high level of cross-subsidization (from Fire protection customers to General
22 water service customers) that existed prior to this case, and which would continue

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1 without significant modifications to the rates directly following the COSS results
2 of this case.

3 The Towns' Rate Design Proposal provides for a sizable portion of the reduction
4 level of charges that would result from this approach without this change. In
5 essence, the Towns propose to mitigate the reductions by transferring 25% of
6 these reduced charges to General Water Service Customers.

7 I have disclosed versions of this rate design to several of the other parties in this
8 case during discovery discussions. Should this rate case proceed to a final hearing
9 on the merits, I will produce a detailed schedule and/or model of the Towns' rate
10 design with the Towns' exhibits.

11 **Q: Based on your experience, is the rate design fair and reasonable under the**
12 **circumstances?**

13 **A:** Yes. This Rate Design Proposal is fair and reasonable given the need for some
14 gradualism, while recognizing the high level of subsidies the Public Fire
15 Protection Customers have and will continue to provide to the General Water
16 Service Customers going forward.

17 **V. FINDINGS, CONCLUSION, AND RECOMMENDATIONS**

18 **Q. Following your review and investigation of this case, do you have specific**
19 **recommendations for these utilities going forward?**

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1 A. Yes, I do. Based on our investigation and all of the foregoing testimony, I fully
2 endorse the recommendations that I provided above and suggest they be adopted
3 by the Commission

4 **Q. Mr. Russell, do you anticipate the need to supplement and/or amend your**
5 **testimony going forward?**

6 A. Yes, I do. Because the parties were working diligently on and fully anticipated a
7 settlement in this case, this testimony was unable to include a comprehensive
8 analysis of all issues concerning PEU's proposed rate increases. I anticipate that as
9 more information is learned during the outstanding discovery in the litigation phase
10 of this case, I will need to supplement my testimony. I also anticipate that I will
11 provide detailed rebuttal testimony to the pre-filed testimony of the other subject-
12 matter experts in this case. Should this case proceed to litigation, I anticipate that
13 I will supplement this testimony.

14 **Q. Mr. Russell, does that conclude your testimony at this time?**

15 A. Yes, it does.

CERTIFICATE OF SERVICE

I, Ryan Lirette, hereby certify that on this date I sent a copy of this document to the email addresses of everyone on the current docket list in this matter.

/s/ Ryan Lirette
Ryan Lirette