



STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DOCKET DE 17-136

IN THE MATTER OF: 2018 – 2020 New Hampshire Statewide Energy Efficiency Plan
2020 Plan Update

DIRECT TESTIMONY

OF

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Mr. Dudley, please state your full name and business address.**

3 A. My name is Jay E. Dudley. My business address is 21 South Fruit Street, Suite 10,
4 Concord, NH 03301.

5 **Q. Please state your employer and your position.**

6 A. I am employed by the New Hampshire Public Utilities Commission (“Commission”) as a
7 Utility Analyst for the Electric Division.

8 **Q. Please describe your professional background.**

9 A. I started at the Commission in June of 2015 as a Utility Analyst in the Electric Division.
10 Before joining the Commission, I was employed at the Vermont Public Service Board,
11 now known as the Vermont Public Utilities Commission (VT-PUC), for seven years as a
12 Utility Analyst and Hearing Officer. In that position I was primarily responsible for the
13 analysis of financing and accounting order requests filed by all Vermont utilities,
14 including review of auditor’s reports, financial projections, and securities analysis. As
15 Hearing Officer, I managed and adjudicated cases involving a broad range of utility-
16 related issues including rate investigations, energy efficiency, consumer complaints,
17 utility finance, construction projects, condemnations, and telecommunications. Prior to
18 working for the VT-PUC, I worked in the commercial banking sector in Vermont for
19 twenty years where I held various management and administrative positions. My most
20 recent role was as Vice President and Chief Credit Officer for Lyndon Bank in
21 Lyndonville, Vermont. In that position I was responsible for directing and administering
22 the analysis and credit risk management of the bank’s loan portfolio, including internal
23 loan review, regulatory compliance, and audit. In performing those responsibilities, I

1 also provided oversight for the commercial and retail lending functions with detailed
2 financial analysis of large corporate relationships, critique of loan proposals and loan
3 structuring, consultation on business development efforts, and advised the Board of
4 Directors on loan approvals and loan portfolio quality. Prior to my role as Chief Credit
5 Officer, I held the position of Vice President of Loan Administration. In this position, I
6 was responsible for directing and administering the underwriting, processing, and funding
7 of all commercial, consumer, and residential mortgage loans. My responsibilities also
8 included the management of loan processing and loan origination staff and partnering
9 with the Compliance Officer to monitor and ensure compliance with all banking laws,
10 regulations, and the bank's lending policy. Previous to my position as Loan
11 Administration Vice President, I held the position of Assistant Vice President of
12 Commercial Loan Administration with Passumpsic Savings Bank in St. Johnsbury,
13 Vermont. In that role, I was responsible for supervising loan administration and loan
14 operations within the commercial lending division of the bank.

15 **Q. Please describe your educational background?**

16 A. I received my Bachelor of Arts degree in Political Science from St. Michael's College.
17 Throughout my career in banking, I took advantage of numerous Continuing Professional
18 Education (CPE) opportunities involving college level coursework in the areas of
19 accounting, financial analysis, real estate and banking law, economics, and regulatory
20 compliance. Also, during my tenure with the VT-PUC I took advantage of various CPE
21 opportunities including the Regulatory Studies Program at Michigan State University
22 (sponsored by the National Association of Regulatory Utility Commissioners "NARUC"),

1 Utility Finance & Accounting for Financial Professionals at the Financial Accounting
2 Institute, and Scott Hempling seminars on Electric Utility Law.

3 **Q. Have you previously testified before the Commission?**

4 A. Yes. I previously submitted Staff testimony to the Commission in Docket No. DE 14-
5 238, Docket No. DE 15-137, Docket No. DE 16-383, and Docket DE 17-136.

6 **II. SUMMARY OF TESTIMONY**

7 **Q. Please describe the purpose of your testimony today.**

8 A. The purpose of my testimony is to provide an overview of the modified performance
9 incentive framework proposed in the 2020 update to the NH Statewide Energy Efficiency
10 Plan (2020 Update). In Order No. 26,095 (Order), the Commission approved a
11 Settlement Agreement (Settlement) for the 2018-2020 Plan which provided for the
12 creation of a working group to review potential modifications to the calculation of
13 performance incentive (PI) for year 2020:

14 *The Settlement Agreement continues the current performance incentive*
15 *mechanism, as proposed by the Utilities in the Three-Year Plan, and provides for*
16 *a working group to review the performance incentive calculation beginning in*
17 *2018 (including consideration of metrics for income eligible participation and*
18 *peak load reductions) with the goal of implementing any changes to the*
19 *performance incentive calculation by 2020.¹*
20

21 In accordance with the Order, a Performance Incentive Working Group (PIWG) was
22 established in January 2018 to review potential PI calculation methodologies that could
23 further promote the achievement of energy efficiency goals established under the New
24 Hampshire Energy Efficiency Resource Standard (EERS). Areas for review included,
25 but were not limited to, metrics to cover income eligible participation and peak load

¹ Order at 15.

1 reduction.² With this guidance in mind, the PIWG met in monthly sessions during
2 January-December 2018 and January-July 2019, resulting in the development of a new PI
3 framework which disaggregates the calculation of PI into five performance components –
4 i.e., lifetime kWh savings, annual kWh savings, summer peak demand savings, winter
5 peak demand savings, and value. A report summarizing the conclusions and
6 recommendations of the working group, *NH Energy Efficiency Calculation of*
7 *Performance Incentive Beginning in 2020, dated July 31, 2019* (PIWG Report) was
8 prepared. The report is attached as Attachment M to the 2020 Update and is posted to the
9 Commission's website.³

10 Lastly, as Staff lead for the Funding and Financing Working Group, my testimony will
11 also include a brief summary of the status and work of that group.

12 **III. SUMMARY OF PIWG REPORT**

13 **Q. Please summarize the report provided by the PIWG.**

14 **A.** Pursuant to the Commission's Order, the PIWG undertook a review of the current, and
15 alternative, PI calculation methodologies, and considered the inclusion of potential
16 metrics to encourage electric system peak load reductions and to increase participation by
17 income eligible groups and households in energy efficiency programs. A major portion
18 of the Working Group's time focused on studying and revising minimum PI thresholds,
19 calculation methodologies, and developing a more comprehensive and transparent

² In its approval of the 2019 Plan Update, the Commission reiterated the mission of the PIWG in Order No. 26,207 at 15.

³ Reference: http://www.puc.state.nh.us/EESE%20Board/EERS_Working_Groups.html

1 framework for calculating PI that would constitute a good replacement for the existing
2 methodology. The new proposed framework is based on the following key elements:⁴
3 • Categorizing and weighting five separate performance indicators (components), at the
4 portfolio level, each involving minimum savings thresholds (as well as other minimum
5 thresholds summarized in the tables below) that must be met in order for any PI to be
6 earned for that component.
7 • The source data for the PI value of each performance component is taken from the
8 Benefit-Cost model spreadsheets utilized by the utilities in the preparation of their annual
9 PI filings showing calculations of program cost-effectiveness and present value of
10 benefits. The reporting requirement and the compilation of this data on an annual basis
11 will not change – only the calculation of PI has changed.
12

⁴ Also, refer to the PIWG Report, at pages 3-4.

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The new PI frameworks, electric and gas, are summarized in the tables below:

Table 1
Performance Incentive Components (Electric)

PI #	Component Title	Description	Incentive Weight	Minimum Threshold	Maximum PI Level	Verification
1	Lifetime kWh Savings	Actual/Planned Lifetime kWh Savings	35%	75%	125%	Annual PI Filing w/PUC
2	Annual kWh Savings	Actual/Planned Annual kWh Savings	10%	75%	125%	Annual PI Filing w/PUC
3	Summer Peak Demand Savings	Actual/Planned ISO-NE System-wide Summer Peak Passive kW Savings	12%	65%	125%	Annual PI Filing w/PUC
4	Winter Peak Demand Savings	Actual/Planned ISO-NE System-wide Winter Peak Passive kW Savings	8%	65%	125%	Annual PI Filing w/PUC
5	Value	Actual/Planned Net Benefits ⁵	35%	75%	125%	Annual PI Filing w/PUC
Total			100%			

⁵ Total resource benefits less utility costs (not including PI).

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Table 2
Performance Incentive Components (Gas)

PI #	Component Title	Description	Incentive Weight	Minimum Threshold	Maximum PI Level	Verification
1	Lifetime MMBtu Savings	Actual/Planned Lifetime MMBtu Savings	45%	75%	125%	Annual PI Filing w/PUC
2	Annual MMBtu Savings	Actual/Planned Annual MMBtu Savings	20%	75%	125%	Annual PI Filing w/PUC
3	Value	Actual/Planned Net Benefits ⁶	35%	75%	125%	Annual PI Filing w/PUC
Total			100%			

Q. Please continue your summary by touching upon the key differences between the proposed new PI framework and the existing PI calculation.

A. The existing PI calculation, established by the Commission in 2000,⁷ remains the primary basis (with few modifications made in the intervening years) for calculating New Hampshire’s energy efficiency program performance incentive today. To be eligible for a performance incentive under the existing framework, the gas or electric utilities currently must achieve the following minimum threshold requirements for a specific sector (i.e. Residential/income-eligible programs, and Commercial/Industrial, inclusive of the Municipal program for electric programs) as follows:

- A benefit cost ratio of greater than 1.0 in that sector.

⁶ Id.
⁷ Order No. 23,574 at 19. See also, Order No. 23,982 at 13.

- 1 • Actual lifetime kWh savings at or above 65 percent of the planned savings for that
- 2 sector.
- 3 • Actual lifetime MMBtu savings at or above 65 percent of the planned savings in
- 4 that sector for the gas utilities.
- 5

6 Once the above-mentioned threshold requirements are met, the current performance
7 incentive for the electric energy efficiency programs is calculated on a sector specific
8 basis, based on the following factors:

- 9 • Actual electric lifetime savings (for both electric and non-electric measures) are
- 10 greater than or equal to 55 percent of total lifetime energy savings, the multiplier
- 11 for the savings component is 2.75 percent of sector spending; if it is less than 55
- 12 percent then the multiplier is 2.2 percent.
- 13 • The actual dollars spent (by the utility and by customers) to carry out programs.
- 14 • The actual benefit cost ratio compared to the planned benefit cost ratio.
- 15 • The actual lifetime electric energy (kWh) savings compared to the planned
- 16 lifetime electric energy (kWh) savings
- 17 • The benefit cost ratio component and the kWh savings ratio component are each
- 18 capped at 3.4375 percent for each sector and each sector PI is capped at 6.875
- 19 percent.
- 20 • Actual spending amounts for the PI calculation may exceed the total budget by up
- 21 to 5 percent.
- 22

23 The current performance incentive formula ties these factors together as follows for each
24 sector as follows:

$$25 \quad \text{PI} = [(2.75\% \text{ or } 2.2\%) \times \text{Actual Spend}] \times [(\text{BCR Actual} / \text{BCR Planned}) + (\text{lifetime kWh} \\ 26 \quad \text{Actual} / \text{lifetime kWh Planned})]$$

27
28 Where:

29 Actual Spend = Actual dollars spent by utilities and customers.

30 BCR Actual = Actual benefit-to-cost ratio.

31 BCR Planned = Planned benefit-to-cost ratio.

32 Lifetime kWh Actual = Actual lifetime kWh savings.

33 Lifetime kWh Planned = Planned lifetime kWh savings.

34
35 Please refer to the PIWG Report for further information about the minimum thresholds

36 and the current PI calculation.

1 The PWIG recognized that changes have occurred in the energy systems and energy
2 efficiency programs since the original PI framework was first adopted. In the course of
3 exploring a revised PI formula, , the PIWG identified the following limitations of the
4 current framework that were ripe for potential modification and revision: (1) a narrow
5 focus on lifetime savings and benefit cost ratios; (2) a limited emphasis on the value of
6 electric peak demand reduction; (3) a low threshold for incentive eligibility that begins at
7 65 percent of lifetime savings goals; (4) a threshold for incentive eligibility at the sector
8 level rather than portfolio level; and (5) a focus on the ratio of benefits to costs rather
9 than on net benefits. A major portion of the PIWG's extensive review involved an
10 examination of current issues associated with these five factors and approaches used in
11 other jurisdictions to better measure performance. An in-depth discussion of each of
12 these factors is provided in the PIWG Report.

13 Upon completion of our analysis, the PIWG developed consensus regarding a new
14 framework involving specific performance indicators that provide a more targeted
15 approach to incentivizing the energy efficiency efforts of the utilities. As outlined in
16 Tables 1 and 2 above, this new framework attempts to measure and reward performance
17 on five separate levels: (1) lifetime kWh savings, (2) actual kWh savings, (3) summer
18 peak demand savings, (4) winter peak demand savings, and (5) value. PI is then based on
19 the corresponding weighting of each component.

20 **Q. Did the PIWG propose any changes to the existing PI requirements as part of**
21 **adopting the new framework?**

22 A. As outlined in the PIWG Report, most of the existing minimum PI
23 requirements/parameters remain unchanged:

- 1 • Target PI equal to 5.5 percent of each company’s program spending with a
2 maximum PI equal to 6.875 percent of actual spending.
- 3 • Actual spending (not budget) as the basis of the calculating PI.
- 4 • Benefit-cost ratio ≥ 1.0 before PI can be earned.
- 5 • Cap on PI that can be earned equal to 125 percent of design PI (equivalent to
6 6.875 percent of actual spending).
- 7 • Annual and lifetime savings calculations based on “adjusted gross savings” (not
8 net savings).
- 9 • Minimum portfolio-wide threshold of 55% of lifetime energy savings from
10 electric measures in the electric programs.

11 Minimum PI requirements/parameters that were revised or discontinued are as follows:

- 12 • Going forward, PI will be calculated based on savings at the portfolio level and
13 not the sector level (i.e. Residential/Income Eligible and Commercial/Industrial
14 sectors).
- 15 • Increase minimum threshold to 75 percent from 65 percent for the lifetime
16 savings and annual savings components as well as the net benefits (value)
17 component before any PI is earned for those components. For the new passive
18 electric summer and winter peak demand components, the minimum threshold
19 will be 65 percent.
- 20 • The benefit-cost ratio is no longer embedded in the PI calculation.

21 **Q. What are the benefits of utilizing the new PI framework developed by the PIWG?**

22 **A.** The benefits of using the new PI framework are as follows:

- 1 • The five metrics that comprise the new framework are incentivized within
- 2 separate key metric areas that are clear, well-defined, and align with EERS goals.
- 3 • The new framework provides an easy to use one-page template based on the
- 4 existing data compilation methods used by the utilities.
- 5 • The new framework increases focus on targets and promotes various policy
- 6 objectives by establishing minimum thresholds and applying incentives to each
- 7 performance component separately (e.g. peak demand).
- 8 • The new framework retains the effective elements of the existing minimum PI
- 9 requirements as described above.
- 10 • The new framework employs a portfolio approach which allows the utilities
- 11 greater flexibility in terms of program implementation and innovation, and
- 12 increasing low income participation.

13 **Q. What are the proposed 2020 PI amounts for Eversource, Liberty, Unitil, and New**
14 **Hampshire Electric Coop under the new methodology?**

15 **A.** The projected PI amounts for the electric utilities under the new framework are provided
16 in the attachments to the Plan Update which are summarized below:

17	<u>Utility</u>	<u>Attachment</u>	<u>Projected (Planned) PI</u>
18	Eversource	E1	\$2,611,277
19	Liberty	F1	\$ 333,536
20	NH Electric Coop	G1	\$ 240,394
21	Unitil	H1	<u>\$ 425,897</u>
22		Total Electric	\$ 3,611,104

1 The projected PI amounts for the gas utilities under the new framework are summarized
2 below:

<u>Utility</u>	<u>Attachment</u>	<u>Projected (Planned) PI</u>
4 Liberty	I1	\$ 479,744
5 Unitil	J1	<u>\$ 133,615</u>
6	Total Gas	\$ 613,359

7 All the above amounts were verified by Staff. For more information on the specific data
8 used and the calculations for PI for both gas and electric, please refer to the above
9 attachments in the Plan Update.

10

11 **IV. INCOME ELIGIBLE CUSTOMERS**

12 **Q. One of the PIWG's key assignments was considering the participation of income**
13 **eligible customers in energy efficiency programs and how performance incentives**
14 **could enhance that participation. Can you comment on that issue?**

15 **A.** Yes. The PIWG engaged in several comprehensive discussions covering this issue,
16 including convening a special session on July 24, 2018, in conjunction with the B/C
17 Working Group, to meet with and obtain feedback from Community Action Agencies,
18 project managers, low income advocates, the Consumer Advocate, and the utilities on the
19 effectiveness of energy efficiency programs in this sector. From these discussions, the
20 PIWG considered a number of additional performance metrics to boost participation
21 including specific savings targets, minimum participation requirements, and spending
22 thresholds. Ultimately, group consensus was reached that continuation of the current 17
23 percent budget earmark for spending on low-income energy efficiency programs was still

1 the most effective means of delivering these programs to this segment of customers.⁸ In
2 addition, concerns about the exclusion of some low income projects due to low benefit-
3 cost screening were offset by the proposed transition to the portfolio level approach to PI,
4 which allows utilities more flexibility in incorporating low scoring projects. Moreover,
5 the current obligation to carry over any unspent funds from Home Energy Assistance
6 programs was viewed as additional assurance that sufficient funds will be dedicated to
7 these programs. As a result, the PIWG concluded that the income eligible programs
8 would receive adequate investment and prioritization without the inclusion of a specific
9 PI metric in program year 2020. Nevertheless, in recognition of ongoing developments
10 in program design and innovation in other jurisdictions, group members also agreed that
11 future consideration of income eligible metrics merits further study and should be a
12 consideration during the planning process for the next three-year plan.

13
14 **V. EMERGENT ISSUES**

15 **Q. The PIWG Report sets aside certain issues for future consideration during the 2021-**
16 **2023 planning process. What are those issues and why were they moved forward to**
17 **the next planning phase?**

18 A. During the course of the PIWG's extensive review, we encountered relatively new
19 subject areas within energy efficiency that are seen nationally as important up and
20 coming issues. In addition to income eligible metrics discussed above, many of these
21 developments involve energy optimization/electrification, new approaches to cost
22 effectiveness testing, and the measurement of gas peak demand. As we point out in the

⁸ New Hampshire State Budget Bill, HB4, was recently passed into law raising the spending threshold for electric programs to 20 percent. *See* Testimony of Stephan R. Eckberg at 3-4.

1 report, these are areas that cover a broad range of interrelated issues (e.g. grid
2 modernization, CO2 emissions, distributed generation, etc.) that are currently under
3 various levels of investigation, study, and implementation in other jurisdictions, including
4 other working groups and dockets here at the Commission. As a result, the PIWG
5 concluded that the emergent nature of these various issues, combined with the lack of
6 state-specific data, made it difficult for the group to make informed decisions in
7 designing appropriate performance metrics. However, given that these issues are
8 important and under continued development and study, the working group concluded that
9 the best way forward was to leave these issues for future consideration during the next
10 three-year planning phase, and perhaps beyond, when presumably more and better
11 information would become available.

12 **Q. With the issuance of the PIWG Report, is the work of the PIWG now finished?**

13 **A.** Yes. Under the terms of the Settlements in Docket DE 17-136, the work of the PIWG
14 terminated upon submission of its report for inclusion in the 2020 Plan Update.
15 However, because of unfinished work involving the emergent issues discussed above and
16 in the report, the PIWG left open the prospect that the group may be restarted for the
17 purpose of taking up those issues during the next triennium.

18 **Q. What is the overall recommendation of the PIWG in terms of the new proposed**
19 **framework?**

20 **A.** For the reasons stated above and discussed in the PIWG Report, we believe that the new
21 proposed framework is superior to the current PI formula and recommend that the
22 Commission approve it as proposed.

23

1 **VI. DISCUSSION OF THE FUNDING AND FINANCING WORKING GROUP**

2 **Q. What is the current status of the Funding and Financing Working Group?**

3 **A.** As stated in the 2020 Plan Update, the group has met quarterly throughout 2019 to review
4 the ongoing efforts of the utilities in rolling out various financing offerings as outlined in
5 the 2019 Plan Update. These initiatives include:

6 • Ongoing developments in on-bill financing by the gas and electric utilities
7 including increases of minimum loan amounts and expansion into small business
8 and commercial offerings.

9 • Financing options for moderate income customers including 0% interest offerings
10 in partnership with local lenders.

11 • Partnering with the Community Development Loan Fund.

12 • Evaluation of a loan loss reserve.

13 • Development and roll-out of a universal lending platform with the National
14 Improvement Energy Fund.

15 • Grant funding facilitated by a grant fund consultant hired by the utilities.

16 **Q. What, in your view is expected duration of the Funding and Financing Working**
17 **Group?**

18 **A.** Under the terms of the Settlement approved by the Commission in its Order, the Funding
19 and Financing Working Group is to:

20 *“...research potential funding and financing mechanisms for energy efficiency*
21 *services. If potential funding and financing options are found and determined to*
22 *be reasonable and appropriate, the Working Group shall work with the Utilities*
23 *to test such potential funding options and shall make recommendations for*
24 *incorporation of such options in annual Plan Update filings and in the 2021-2023*
25 *Plan.”*

26

1 Given that the utilities are continuing their efforts in developing and implementing the
2 above-referenced financing initiatives, and the fact that preparations are currently
3 underway for formulating and drafting the 2021-2023 Plan, the working group will
4 continue its quarterly meetings in order to finalize its recommendations for inclusion in
5 the plan.

6 **Q. Does that conclude your testimony?**

7 A. Yes, it does.