BEFORE THE
STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DOCKET DE 20-092

IN THE MATTER OF: Electric and Gas Utilities

2022-2023 New Hampshire Statewide Energy Efficiency Plan

DIRECT TESTIMONY

OF

Scott T. Balise, Jay E. Dudley, Stephen R. Eckberg, and Elizabeth R. Nixon
New Hampshire Department of Energy

April 19, 2022

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Introduction of Witnesses

Q. Please state your names.

A. Scott T. Balise, Jay E. Dudley, Stephen R. Eckberg, and Elizabeth R. Nixon.

Q. By whom are you employed, and what is your business address?

A. We are employed by the New Hampshire Department of Energy (DOE) in the Regulatory Support Division. Our business address is 21 S. Fruit Street, Suite 10, Concord, NH 03301.

Q. Mr. Balise, please summarize your education and professional work experience.

A. I have been employed as a Utility Analyst with the DOE since January 2022. Prior to the DOE, I was employed at the NH Department of Safety, Division of Administration, from 2021 until 2022 as a Business Administrator. Prior to joining the State, I worked for a non-profit business and a government contractor in Massachusetts. My tasks at the non-profit included reconciliations of sub-ledger accounts, and coordination and review of monthly balance sheet and income statement account trend analysis. At the government contractor, I authorized and calculated costs of work order transfers. I also prepared month-end reporting entries which included labor, cost of sales and sales revenues. I have a B.S. in Business Administration from the Massachusetts College of Liberal Arts and a Master's in Business Administration from Southern New Hampshire University.

Q. Mr. Dudley, please summarize your education and professional work experience.

A. I started at the New Hampshire Public Utilities Commission ("Commission" or "PUC") in June of 2015 as a Utility Analyst in the Electric Division. Effective July 1, 2021, the Electric Division was transferred to, and became part of, the newly created DOE, and I am presently employed by that agency. Before joining the Commission, I was employed at the Vermont

Public Service Board (now known as the Vermont Public Utilities Commission, "VT-PUC") for seven years as a Utility Analyst and Hearing Officer. In that position I was primarily responsible for the analysis of financing and accounting order requests filed by all Vermont utilities, including review of auditor's reports, financial projections, and securities analysis. As Hearing Officer, I managed and adjudicated cases involving a broad range of utility-related issues including rate investigations, construction projects, energy efficiency, consumer complaints, utility finance, condemnations, and telecommunications. Prior to working for the VT-PUC, I worked in the commercial banking sector in Vermont for twenty years where I held various management and administrative positions. My most recent role was as Vice President and Chief Credit Officer for Lyndon Bank in Lyndonville, Vermont. In that position I was responsible for directing and administering the analysis and credit risk management of the bank's loan portfolio, including internal loan review, regulatory compliance, audit, and coordinating periodic bank examinations by state and federal regulators. In performing those responsibilities, I also provided oversight for the commercial and retail lending functions with detailed financial analysis of large corporate relationships, critique of loan proposals and loan structuring, consultation on business development efforts, and advised the Board of Directors on loan approvals and loan portfolio quality. Prior to my role as Chief Credit Officer, I held the position of Vice President of Loan Administration. In this position, I was responsible for directing and administering the underwriting, processing, and funding of all commercial, consumer, and residential mortgage loans. My responsibilities also included the management of loan processing and loan origination staff and partnering with the Compliance Officer to monitor and ensure compliance with all banking laws, regulations, and the bank's lending policy. I received my Bachelor of Arts

degree in Political Science from St. Michael's College. Throughout my career in banking, I took advantage of numerous Continuing Professional Education (CPE) opportunities involving college level coursework in the areas of accounting, financial analysis, real estate and banking law, economics, and regulatory compliance. Also, during my tenure with the VT-PUC I took advantage of various CPE opportunities including the Regulatory Studies Program at Michigan State University (sponsored by the National Association of Regulatory Utility Commissioners "NARUC"), Utility Finance & Accounting for Financial Professionals at the Financial Accounting Institute, Standard & Poor's seminars on credit ratings for public utilities, and Scott Hempling seminars on Electric Utility Law and Public Utility Regulation.

Q. Mr. Eckberg, please summarize your education and professional work experience.

A. I was employed as a Utility Analyst with the New Hampshire Office of Consumer Advocate (OCA) from 2007 to 2014. In 2014, I joined the Sustainable Energy Division of the PUC. In 2019, I joined the PUC's Electric Division. In July, 2021, with the passage of HB2, the New Hampshire Legislature created DOE, and I became an employee of the Regulatory Support Division of DOE. I have a B.S. in Meteorology from the State University of New York at Oswego and an M.S. in Statistics from the University of Southern Maine. I have worked in a variety of energy related analytic and administrative roles for over 25 years. Attachment DOE-JT-1 provides more complete details of my education and professional work experience.

Q. Ms. Nixon, please summarize your education and professional work experience.

A. I joined the PUC in August 2012 in the Sustainable Energy Division working on renewable energy issues. In August 2016, I became a Utility Analyst in the PUC's Electric Division, which is now DOE. In January 2022, I became the Electric Director, in the Regulatory

Support Division of the DOE. Prior to the PUC, I was employed at the NH Department of Environmental Services, Air Quality Division, from 1999 until 2012, in various positions. Prior to joining the State, I worked as a consultant at ICF and AER*X, Inc. Throughout my career, I have focused on energy, environmental, and economic issues and analysis. I earned a B.S. in Mathematics from the University of Vermont. More details on my educational and professional background are provided in Attachment DOE-JT-2.

Q. What is the purpose of your testimony in this proceeding?

A. Our testimony provides comments and recommendations of the Department of Energy regarding the 2022-2023 New Hampshire Statewide Energy Efficiency Plan ("Plan" or "plan") dated March 1, 2022 filed jointly by the New Hampshire electric and gas utilities ("Utilities"). The Utilities are Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities ("Liberty Utilities Electric"), New Hampshire Electric Cooperative, Inc. ("NHEC"), Public Service Company of New Hampshire d/b/a Eversource Energy ("Eversource"), and Utility Energy Systems, Inc. ("UES"), and EnergyNorth Natural Gas, Inc. d/b/a Liberty Utilities ("Liberty Utilities Gas"), and Northern Utilities, Inc. ("Northern").

Summary

Q. Please summarize your testimony.

A. In our testimony, DOE provides support for the plan filed by the Utilities, explains whether and how the plan meets the requirements of HB 549 (2022), and provides further explanation of several items included in the plan and HB 549 (2022), such as the purpose and application of a primary and secondary cost-effectiveness test. DOE supports the continuation of the PI approved by the Commission starting in 2020 as described in the plan; however, DOE

questions whether a separate PI for Smart Start for Eversource is warranted. DOE specifically addresses the following topics in our testimony:

- System Benefit Charge (SBC)/Local Delivery Adjustment Charge (LDAC) rates[1], including lost base revenue calculations and the requirement for $400,000 for education and outreach programs from SBC funds that are separate from the utilities' program budgets;
- Cost-Effectiveness, including Granite State Test (GST) and Total Resource Cost Test (TRC), Avoided Energy Supply Cost Study, net savings calculations documented in the Technical Resource Manual (TRM), and the requirement for planned electric savings to be at least 65 percent of overall planned energy savings;
- Evaluation, Measurement and Verification (EM&V) budget requirement of no more than 5% of total budget;
- Home Energy Assistance Program (HEA) including budget requirements of no less than 20 percent of funds collected and HEA incentive cap; and
- Performance Incentive.

SBC/LDAC Rates

Q. Please provide a summary of the system benefit charge (SBC) rates and local delivery adjustment charge (LDAC) rates proposed in the March 1, 2022 filing.

[1] Throughout our testimony we will refer to "SBC" and "LDAC" to mean the energy efficiency charge or rate components of these larger rate elements unless otherwise specified. The SBC and LDAC are comprised of other rate components as well. See, for example, Northern Utilities tariff Second Revised Page 44 for a complete listing of rate elements in their LDAC. See, Liberty Utilities (EnergyNorth) Tariff Second Revised Page 32 – First Revised Page 33 for a complete listing of rate elements in their LDAC. The SBC is comprised of an energy efficiency (EE) rate, a lost base revenue (LBR) rate (for some), and the energy assistance program (EAP) rate.

A. Table 1 summarizes the SBC rates for each electric utility, and Table 2 summarizes the LDAC rates for each gas utility. The rates in Tables 1 and 2 show the energy efficiency portion of the rates required by HB 549 (2022). Prior to the approval of HB 549 (2022), the utilities implemented other approved rates until the time in which they could implement the statutorily required rates. Refer to Attachment DOE-JT-3 for a summary of the EE component of the rate by month as implemented/proposed by each utility. Note that the 2023 rates are estimated and may need to be updated when the consumer price index information is available.

Table 1. Summary of SBC rates

	Energy Efficiency Portion* (cents/kWh)	Lost Base Revenue Portion (cents/kWh)	Energy Assistance Program Portion (cents/kWh)	Total SBC Rate (cents/kWh)
Eversource				
2022	0.528	0.185	0.150	0.863
2023	0.543	0.205	0.150	0.898
Liberty Utilities				
2022	0.528	0.114**	0.150	0.792
2023	0.543	--	0.150	0.693
NHEC				
2022	0.528	--	0.150	0.678
2023	0.543	--	0.150	0.693
UES* **				
2022	0.528	0.003	0.150	0.681
2023	0.543	--	0.150	0.693

*Energy Efficiency (EE) portion of SBC rate in accordance with HB 549 (2022). The EE portion of the rate was effective for each utility as soon as feasible, which was March 1, 2022 for each electric utility except for UES, which implemented it on February 14, 2022. For each utility, the rate was implemented on a service rendered basis, except for NHEC, which implemented the change on a bill rendered basis.

** Liberty Electric has only proposed an LBR rate associated with LBR for 2019 and 2020 and has not included LBR for 2021.

***UES assumed that revenue decoupling would become effective on April 1, 2022. UES's LBR portion may need to be recalculated when the Commission rules on UES's decoupling proposal in DE 21-030.

Table 2. Summary of LDAC Rates

	Residential		C&I	
	EEC* ($/therm)	**LRR** ($/therm)**	**EEC* ($/therm)**	**LRR** ($/therm)**
Liberty Utilities (Gas)				
2022	0.0640	--	0.0426	--
2023	0.0658	--	0.0438	--
Northern				
2022	0.0499	0.0066	0.0247	0.0006
2023	0.0513	--	0.0254	--

*Energy Efficiency Cost (EEC) rate in accordance with HB 549 (2022). The EEC portion of the rate was effective for each utility as soon as feasible, which was March 1, 2022 for Liberty (Gas) and February 14, 2022 for Northern. For each utility, the rate was implemented on a service rendered basis.
**Lost Revenue Rate (LRR) effective November 1, 2021 for Northern.

Q. Please provide more of an explanation of the Lost Base Revenue (LBR) rates presented above.

A. Utilities that have not yet begun revenue decoupling are permitted to recover lost base revenues, defined as the lost revenue associated with energy not sold due to savings from installed energy efficiency measures, either through a LBR portion of the SBC for the electric utilities or a lost revenue adjustment mechanism (LRAM) or lost revenue rate (LRR) for gas utilities in the LDAC. The utilities reconcile the forecasted LBR with actual LBR after each program year is completed. NHEC does not collect LBR. Liberty Gas has had revenue decoupling in place for several years, and therefore, no longer collects LBR.

UES proposed revenue decoupling in DE 21-030 that was to begin on April 1, 2022, and its LBR rate in this docket assumes that the revenue decoupling would start as proposed, but UES's decoupling proposal has not yet been approved. UES's LBR includes a preliminary reconciliation for 2021 and a forecasted LBR for 2022.

Liberty Electric was approved to begin revenue decoupling as of July 1, 2021, so it will cease to accrue LBR as of that date. Note though that Liberty Electric was allowed to collect LBR previously for 2019, 2020, and 2021, but has not yet been approved the associated rate to collect the LBR, and has only included the 2019 and 2020 LBR in this filing.

Northern has proposed revenue decoupling in DG 21-131 that they propose to begin on August 1, 2022. Northern's LRR (which it implemented effective November 1, 2021) assumes that the revenue decoupling would start as proposed.

Q. Please explain the calculation methodology that the Commission proposed in Order No. 26,553 (dated November 12, 2021) concerning LBR calculation following a rate case where decoupling is not implemented.

A. The Commission Order No. 26,553 (p. 40) states that the LBR calculation following a rate case where revenue decoupling is not implemented should not include installations prior to or during the test year. The only utility that has not been approved for revenue decoupling or has not proposed revenue decoupling yet is Eversource. However, per the approved settlement in DE 15-137, Eversource is to propose a new decoupling mechanism or an alternative to the LRAM in its next rate case. UES and Northern have not been approved for revenue decoupling yet, but they both have pending rate cases, where they have proposed revenue decoupling.

Q. Does DOE have concerns about the Commission approving this Plan which contain the LBR calculations?

A. For the most part, no. However, given the shortened review timeframe for this filing, DOE has not had adequate time to thoroughly review each LBR rate calculation. The LBR calculations included in the filing are primarily forecasts for the purpose of calculating an LBR rate to be included in the energy efficiency portion of the SBC rate and the LDAC rates. Each utility that includes an LBR rate in its Plan will eventually file a post facto calculation of the actual LBR amount based on actual installed energy efficiency measures and corresponding energy (kWh) and demand (kW) savings. Those calculations for the 2022 Program Year are required to be filed on or before May 31, 2023. In effect, the LBR rate is a reconciling rate mechanism, and there will inevitably be a difference between the forecast and actual amounts. As such, the proposed LBR rates also include a reconciliation for previous years. DOE recommends that the Commission accept the utility calculations for the purpose of establishing the LBR rate to be included in each utility's energy efficiency SBC and LDAC rate, while recognizing that these calculations may need to be adjusted during the reconciliation process and possibly the audit process, especially to account for the results of the UES and Northern rate cases, the actual versus forecasted rates as well as the appropriate reconciliation for previous periods.

Q. HB 549 (2022) provided that "up to $400,000 from system benefits charge funds collected annually shall be used to promulgate the benefits of energy efficiency according to guidelines developed as specified in RSA 125-O:5-a, I(c) as determined by the department of energy." Have the Utilities included such an amount and indicated how such funds will be used?

A. Yes. We have verified that the Utilities will collect $400,000 through the SBC for marketing and education efforts that will be developed in conjunction with DOE and other stakeholders.

As explained on Bates 17 of the plan, this amount is not included in EE program budgets and therefore not included in the Performance Incentive (PI) calculations. Each electric utility's sales forecast was used to determine the portion of funding to be collected by each electric utility. See the attached data response DOE 1-016 included as Attachment DOE-JT-4 and Attachment DOE-JT-5.

Cost-Effectiveness

Q. What does HB 549 require regarding cost-effectiveness of the energy efficiency programs?

A. The statute requires that "the latest completed and available Avoided Energy Supply Cost Study for New England, the results of any Evaluation, Measurement and Valuation studies contracted for by the department of energy or joint utilities, incorporate savings impacts associated with free-ridership for those programs and measures where such free-ridership may have a material impact on savings figures, and use the Granite State Test as the primary test, with the addition of the Total Resource Cost test as the secondary test."

Q. Does the March 1, 2022 plan filing meet the statutory requirements regarding cost-effectiveness?

A. Yes. The plan uses the Granite State Test (GST) as the primary test and the Total Resource Cost Test (TRC) as the secondary test. These tests use the latest Avoided Energy Supply Cost Study[2] for New England as the basis as well as Evaluation, Measurement, and Verification (EM&V) Studies, which are summarized in the Technical Resource Manual

[2] See Attachment L in the March 1, 2022 filing starting on Bates p. 738, https://www.puc.nh.gov/Regulatory/Docketbk/2020/20-092/LETTERS-MEMOS-TARIFFS/20-092_2022-03-01_NH_UTILITIES_ATT-NHSAVES-PLAN.PDF

(TRM)[3] prepared by the utilities with assistance from the EM&V Working Group (consisting of the utilities, DOE, a stakeholder representative, and the DOE consultant). As shown in the TRM, the savings impacts associated with free ridership are taken into account.

Q. Please provide more explanation regarding the Granite State Test and the Total Resource Cost Test.

A. In December 2018, the benefit/cost working group reviewed cost-effectiveness tests using a framework established in the National Standards Practice Manual. With the help of a consultant, the benefit/cost working group recommended the use of the GST as the primary test[4]. The Commission approved the use of the GST as the primary test in Order No. 26,322, dated December 31, 2019[5]. HB 549 (2022) approved on February 24, 2022 requires the use of the Granite State Test as the primary test. The March 1, 2022 filing includes the same benefit and cost categories for GST as was approved initially, except for the inclusion of reliability, which was later excluded since we (as PUC Staff) did not support the avoided cost calculation methodology for reliability for New Hampshire. For the TRC test, the filing uses the same benefit and cost categories as was used prior to the switch to the GST as the primary test. Please see Attachment DOE-JT-6 for a detailed list of the benefit/cost categories for each of the tests, but as noted in the data response, reliability is not included.

Q. Please explain the purpose of a primary cost-effectiveness test.

[3] See Attachment A in the March 1, 2022 filing starting on Bates p. 109, https://www.puc.nh.gov/Regulatory/Docketbk/2020/20-092/LETTERS-MEMOS-TARIFFS/20-092_2022-03-01_NH_UTILITIES_ATT-NHSAVES-PLAN.PDF

[4] See the Staff recommendation memo dated October 31, 2019 .https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/LETTERS-MEMOS-TARIFFS/17-136_2019-10-31_STAFF_FILING_WORKING_GROUP_REC.PDF and *New Hampshire Cost-Effectiveness Review* conducted by Synapse Energy Economics, Inc., dated October 24, 2019. https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/LETTERS-MEMOS-TARIFFS/17-136_2019-10-31_STAFF_NH_COST_EFFECTIVENESS_REVIEW.PDF

[5] See Order No. 26,322. https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/ORDERS/17-136_2019-12-30_ORDER_26322.PDF

A. The benefit/cost working group discussed the purpose of the primary cost-effectiveness test. The *New Hampshire Cost-Effectiveness Review*[6] summarizes the purpose of the primary test as follows:

> The purpose of a *primary* cost-effectiveness test is to answer the threshold question of: what is the universe of resources whose benefits exceed their costs and therefore merit acquisition (in lieu of acquiring other supply or demand-side resources)? The primary test should not necessarily be considered in a vacuum. In some instances, regulators may wish to weigh the primary test results alongside other factors, including but not limited to: the results of secondary tests; least-cost planning imperatives; rate, bill, and participation impacts; jobs and economic development impacts; customer equity; and any other important policy goals.

Q. Please explain the purpose of a secondary cost-effectiveness test.

A. The benefit/cost working group also discussed the purpose of the secondary cost-effectiveness test. The *New Hampshire Cost-Effectiveness Review*[7] states the following regarding the secondary test: "*Secondary* tests can help enhance regulators' and stakeholders' overall understanding of efficiency resource impacts by answering other questions that address how best to use ratepayer funding on energy resources…By looking at cost-effectiveness through the different perspectives provided by secondary tests (perspectives that may be favored by different stakeholders), stakeholders can assess the merits of different levels or types of efficiency resource acquisition."

[6] See *New Hampshire Cost-Effectiveness Review* conducted by Synapse Energy Economics, Inc., dated October 24, 2019, p 53. https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/LETTERS-MEMOS-TARIFFS/17-136_2019-10-31_STAFF_NH_COST_EFFECTIVENESS_REVIEW.PDF

[7] See *New Hampshire Cost-Effectiveness Review* conducted by Synapse Energy Economics, Inc., dated October 24, 2019, p 53. https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-136/LETTERS-MEMOS-TARIFFS/17-136_2019-10-31_STAFF_NH_COST_EFFECTIVENESS_REVIEW.PDF

Q. How should the primary cost-effectiveness test be applied?

A. The application of the primary and secondary cost-effectiveness tests was also discussed in the benefit/cost working group. The working group determined that the primary test should be the "go-no go test," meaning that the primary test determines whether a program should be implemented. If a program has a benefit/cost ratio greater than one using the primary test (except for a few situations), then the program is cost-effective and can be implemented. Previously, the PUC determined that low-income programs, educational programs, and pilot programs could proceed if the programs are well designed and feasible, even if they do not have a benefit/cost ratio greater than one. Sometimes benefits unique to low-income programs may not be fully captured in the cost-effectiveness test. For educational programs, the benefits are often realized in the future and are difficult to estimate, and for pilot programs, the purpose often is to determine the feasibility of the program and to try to quantify the actual costs and benefits of the programs.

Q. How should the secondary cost-effectiveness test be applied?

A. The benefit/cost working group discussed the application of the secondary cost-effectiveness test. If a program fails the primary test or is marginally cost-effective, then the secondary test's primary purpose is to help inform the decision of whether the program should proceed. The secondary test can also provide other information even if a program passes the primary test, such as to provide information that might help inform which programs to prioritize, if funding is limited.

Q. Do all of the programs have a benefit/cost test ratio in the GST primary test greater than one?

A. Yes. In a few instances, the benefit/cost ratio in the GST is barely greater than one (e.g., Northern's HEA program and residential behavior program, NHEC's municipal program, and Liberty Electric's residential behavior program). Given that these programs do have a benefit/cost ratio greater than one, we recommend approval of these programs. As mentioned above, the benefits of the HEA programs may not be fully captured with the benefit/cost test. The municipal program is required per statute so it should continue. For the residential behavior programs, they are projected to have a higher benefit/cost ratio in 2023; however, these programs could be monitored to ensure that they continue to provide benefits greater than the costs.

Q. How would you consider the secondary test for this plan?

A. Given that all of the programs have a benefit/cost ratio greater than 1.00, the secondary test does not need to be considered.

Q. Please provide more explanation regarding the Technical Resource Manual (TRM).

A. The utilities and the EM&V working group have developed and continue to update the TRM to document the savings calculations for each program and the associated measures. The TRM considers EM&V studies conducted in New Hampshire, and also uses EM&V studies conducted in other states to inform the assumptions for New Hampshire. The TRM is the foundation for New Hampshire's energy efficiency programs. The TRM includes such factors as peak coincidence factors, realization rates, free ridership[8], and other assumptions to consider when determining the net savings. The net savings calculation takes these factors into account. The TRM (and the underlying assumptions from EM&V studies) are a fundamental part of the energy efficiency programs, because it not only provides consistent

[8] Free riders are individuals who would be willing to adopt an idea or measure with minimal or no incentive to do so. These consumers would most likely have adopted the energy efficiency product/service on their own.

calculation methodologies across the utilities' programs and individual projects and measures, but through the use of the EM&V studies, the actual savings are verified and then incorporated into future program plans.

Q. Please provide example measures or programs where free ridership was taken into consideration?

A. The LED lighting program for residential and C&I takes into account free ridership. Free ridership for residential LED lamps ranges from 57-77% resulting in a net to gross savings of 23 - 43%. Free ridership for C&I LED lamps ranges from 16-60% plus spill over is considered resulting in a net to gross savings of 63 - 89%.

Q. HB 549 (2022) includes a requirement that at least 65 percent of an electric utility's total planned energy savings shall be from electric savings. Does the plan meet this requirement?

A. Yes. We have verified that the planned electric savings are at least 65 percent of the total planned energy savings for each electric utility, except in one scenario for both 2022 and 2023. The electric utilities calculated the percent electric savings as a percent of overall energy savings on an annual basis and on a lifetime basis. NHEC's lifetime basis planned electric savings as a percent of overall energy savings is less than 65 percent for 2022 and 2023 installations, but on annual basis is over 65 percent. NHEC projects that this requirement on a lifetime basis cannot be met, because the lifetime of the measures that save electricity is lower resulting in higher savings on a lifetime basis for non-electric measures. Since the residential programs tend to save more non-electric savings on a lifetime basis than the C&I sector, NHEC cannot offset lifetime residential non-electric savings with more electric C&I savings.

Evaluation, Measurement, and Verification (EM&V)

Q. Please verify if the proposed budget for EM&V is no more than five percent of the total budget.

A. Yes, the total proposed budget for EM&V is no more than 5 percent of the total program budgets. See Table 3. Note that because the EM&V working group was paused during the state of flux with the energy efficiency programs, the EM&V working group had to pause EM&V studies. Ramping these studies back up will take time. Therefore, the EM&V budget for 2022 and 2023 reflects the delay in restarting the studies and also in issuing requests for proposals for additional studies to be conducted in 2023 and awarding those contracts.

Table 3. Summary of EM&V Budget as Percent of Total Program Budget

	2022	**2023**
EM&V Budget	$2,143,632	$3,149,013
Total Program Budgets	$70,457,819	$72,192,539
EM&V Budget as % of Total Program Budget	3.0%	4.4%

Q. Please provide more explanation of what the EM&V budget will be used for.

A. EM&V is essential to providing cost effective energy efficiency programs. The working group associated with EM&V periodically meets to discuss impact and process evaluations to verify savings and improve program implementation. EM&V functions also include comparative studies with what other states have done, testing, impact evaluations and other incremental cost studies.

The studies that the working group and consultants[9] participate in will help to show that these savings to consumers are substantial over the length of the program. This is documented in the TRM, which provides valuable information when estimating the energy and demand savings.

EM&V also allows for participation in the ISO-NE Forward Capacity Market (FCM) which provides oversight and quality control of energy efficiency resources that are bid into the market. By having a dedicated budget which examines and quantifies these savings, utilities are able to verify and accurately report out on the specific EE programs that are exceeding expectations and areas where more resources may need to be allocated.

Evaluations determine energy efficiency program-specific effects, which could include reductions in energy use, demand and non-energy benefits. Verification of energy efficiency measures validates the savings expected using data collected from measurement activities documented for the program.

Home Energy Assistance Program

Q. What specific issues related to the Home Energy Assistance (HEA) program will you address in your testimony?

A. There are several issues that we would like to address in more detail regarding the HEA program. These include: 1) the program budgets and whether they meet statutory requirements, and; 2) the proposed HEA project cap for the 2022-2023 program years.

Q. HB549 (2022) requires that "[n]o less than 20 percent of the portion of the funds collected for energy efficiency shall be expended on low-income energy efficiency

[9] The EM&V budget also includes the expenses from DOE's expert EM&V consultants, who are extremely valuable since they have knowledge across the region and the country.

programs." The Home Energy Assistance program is the low-income energy efficiency program is that correct?

A. Yes, that is correct.

Q. Do the proposed HEA budgets meet the 20 percent requirement specified in HB549 (2022)?

A. Yes, they do. In response to discovery, the utilities provided a schedule demonstrating that the proposed HEA budgets for both 2022 and 2023 meet this requirement. This schedule is provided as an attachment to this joint testimony as Attachment DOE-JT-7.

Q. Does the 20 percent requirement apply similarly to the HEA programs operated by the two regulated natural gas utilities?

A. Yes, that is our interpretation of the provisions in HB 549 (2022). The 20 percent threshold specified in HB 549 (2022) is presented initially in the context of the "system benefits charge." However, Section 5:2 of the bill's language amends RSA 374 by inserting after Section 62 a new section titled "374:63 Ratepayer-Funded Energy Efficiency Programs for Gas Utilities." DOE's interpretation of that new language is it extends the requirements of the electric utility system benefits charge funded programs to gas utility programs. Therefore, the 20 percent funding requirement that applies to the HEA program for electric utilities also applies to the gas utilities' HEA program.

Q. Do the proposed HEA budgets for the gas utility program meet the 20% funding requirement?

A. Yes, they do. The supporting details were provided in response to discovery which is included as Attachment DOE-JT-8.

Q. Are there any other funding or budget requirements that the HEA programs must meet?

A. There is one other statutory requirement that we are aware of. RSA 125-O:23, which is part of the Regional Greenhouse Gas Initiative (RGGI) statute, establishes the Energy Efficiency Fund which receives a portion of the proceeds of each quarterly RGGI Auction. Specifically, RSA 125-O:23.III.(a) allocates "[a]t least 15 percent of the [Energy Efficiency Fund] to the low income core energy efficiency program."

Q. Have the electric utilities, which receive a portion of the proceeds of RGGI auctions for the Energy Efficiency Fund (EEF), allocated the required 15 percent minimum amount of RGGI funds to the HEA program?

A. Yes. We have calculated the percentages of estimated 2022 and 2023 RGGI auction proceeds that the electric utilities have budgeted to the HEA Program. That information is presented in Table 4 below. For both 2022 and 2023, the estimated budget percentage of RGGI funds is greater than 17 percent so the proposed HEA budgets clearly meet this requirement also.

Table 4. RGGI Funding Allocation to HEA Programs

Allocation of RGGI Energy Efficiency Funds (EEF) to HEA	**2022 EE Plan**	**2023 EE Plan**
RGGI Funds to HEA (Bates 514 and 519 of plan)	$469,706	$450,487
Total Estimated RGGI Funds to EEF (Bates 18 of plan)	$2,487,460	$2,585,262
Percentage of RGGI Funds to HEA	18.9%	17.4%

Q. You mentioned the HEA project cap as another area of discussion regarding this program. What have the utilities proposed as the maximum rebate per HEA project?

A. As seen on Bates 65 of the Plan, the utilities propose a maximum rebate per project of $15,000, which would cover the costs associated with remediating barriers to weatherization as well as air sealing, insulation, lighting measures, and appliance and heating system repairs and replacements, where recommended as part of an overall cost-effective package of measures.

Q. Is this maximum rebate per project in line with the maximum in recent years?

A. Yes, it is. On the face of it, this maximum project rebate appears larger than in recent program years. However, this larger project maximum rebate level combines "regular" weatherization measure work and will also include, when applicable, heating system repairs and replacements, which can significantly increase project cost. Not all projects will include these more costly project elements. In addition, combining all the project elements under a single rebate maximum will facilitate modeling all these project elements together.

Q. Do you have any concern that an increased maximum project rebate will increase spending per project?

A. No. The information provided by the Company strongly suggests that the proposed $15,000 maximum project rebate is very much in line with per project spending in recent years when we consider the combined average weatherization spending with the average heating system spending – when that occurs. Also, it's important to understand that the federally-funded Weatherization Assistance Program, which works in conjunction with the HEA program, especially in single family homes and smaller multi-family buildings takes a "whole house weatherization" approach – as does the plan's HEA program. This means an energy auditor will evaluate the mechanical systems, building shell measures, electric baseload measures, as

well as health and safety measures in order to maximize the cost-effective investments available for each project.

Q. What were the actual results of average HEA project rebates in recent program years?

A. The utilities were asked to provide that information in discovery. Included as Attachment DOE-JT-9 is a table of information provided which shows average project costs with heating system costs separated in years 2018 and 2019 and then transitioning to those costs being included in the average project cost in 2020 and 2021. It's most useful to review the amounts shown in the upper table titled "HEA Program Project Cost Averages" *combined* with the amounts shown in the lower table titled "HEA Program Heating System Cost Averages." Doing so, one can see, for example, in 2018 for single family homes, a combined average of these amounts is $13,466 ($4,718 + $8,748) and in 2020, the same combined amount for a single-family home was $17,737 ($9,537 + $8,200). This indicates that the plan's proposed $15,000 maximum project rebate, which would include weatherization measures and heating system repair and replacement costs when necessary, is comparable to actual HEA average expenditures in recent years.

Q. To summarize, do you support the proposed plan to have a maximum rebate per project of $15,000 which would cover costs associated with remediating barriers to weatherization, the actual weatherization measures, and appliance and heating system replacements where recommended.

A. Yes, we support this element of the 2022 - 2023 plan proposal at presented on Bates 65 of the plan.

Performance Incentive

Q. Have the utilities proposed any modifications to the PI framework approved in DE 17-136 as part of the proposed Plan?

A. No. In the last iteration of the Plan filed on September 1, 2020, the utilities proposed to reduce the minimum threshold percentage requirement for the Lifetime Savings component, Annual Savings component, and the Value Savings component for both electric and gas from 75 percent to 65 percent, and add a sixth PI component for electric, Active Demand Savings, to the existing framework of five PI categories. At the time, Staff was opposed to the revised framework,[10] but with the submission of the new revised Plan, the utilities have now restored the PI framework to its original format, and category weightings which was implemented in the 2020 Plan Year, and have removed the Active Demand component.

Q. Is DOE satisfied with this change of direction by the utilities?

A. Yes. The DOE continues to believe that the existing framework is the fairest and most transparent method of calculating PI for the utilities. As a result, DOE recommends that the Commission approve the PI framework as proposed in the updated Plan.

Q. Does the DOE have any other observations related to the Performance Incentive as discussed in the updated Plan?

A. Yes. As stated in Mr. Dudley's previous testimony to the Commission,[11] both Eversource and the New Hampshire Electric Cooperative (NHEC) offer an on-bill financing program for municipalities that provides municipal customers with the opportunity to install energy saving measures with no upfront costs and the ability to pay for the measures over time on

[10] *See* Docket DE 20-092, Exhibit 6, Testimony of Jay E. Dudley dated October 29, 2020, at Bates 5-7.
[11] *Id.* at Bates 12-13.

their electric bill. The program is known as SmartSTART.[12] The SmartSTART program was initiated in the early 2000's and has been renewed and approved by the Commission as part of the annual CORE programs every year since that time, and then as part of the EERS programs in recent years. SmartSTART earns a separate annual PI payment, i.e. separate from and in addition to the overall PI calculation referenced above, based on 6 percent of the amount of total loan repayments received. Eversource is the only recipient of this PI since NHEC does not collect PI on its offerings under the SmartSTART program. Based on its history, the program has been successful and well-received within its target market of municipal customers for more than a decade. Eversource proposes to continue with the program in its present form, however, given the success and the maturity of the program, DOE continues to question whether or not the separate PI for this program is still warranted. In addition, DOE remains concerned that the separate PI for SmartSTART essentially amounts to a double-count of PI for Eversource since Eversource already benefits from earning an annual PI on the savings realized from the energy efficiency improvements funded by the program. For example, in 2020 Eversource earned $67,802 in separate SmartSTART PI and claimed total Lifetime Savings under this program of 3.3 million kWh.[13] Likewise, in 2021 Eversource earned $54,691 in separate SmartSTART PI and claimed total Lifetime Savings of 10.5 million kWh.[14] Although the amounts of the SmartSTART PI are small when compared with the overall energy efficiency budget, the

[12] Plan at Bates 30-31.
[13] *See* New Hampshire Statewide Energy Efficiency Programs, 4th Quarter Report January 2020 – December 2020, dated March 1, 2021, filed in Docket No. DE 17-136 at 25.
[14] *See* New Hampshire Statewide Energy Efficiency Programs, 4th Quarter Report January 2021 – December 2021, dated March 1, 2022, filed in Docket No. DE 17-136 at 25. Also *see* Attachment DOE-JT-10, DOE Data Request No. TS 1-004. In response to part a. of the request, Eversource explains that the SmartSTART PI amount of $48,239 reported in the 2021 report was adjusted upward to $54,691 due to an error in not applying the 6% PI to a loan repayment received in early 2021.

annual Lifetime Savings claimed under this program are also imbedded in the Lifetime Savings amounts reported under the "Commercial, Industrial, Municipal" portion of the Program Cost-Effectiveness report submitted as part of Eversource's annual PI calculation (Eversource's administrative costs for the program are not included in the overall PI calculation).[15] Consequently, given that the SmartSTART program is fully established, popular, and successful, and given that Eversource earns a portion of its overall PI from the savings contributed by this program, DOE still questions the necessity and practicality of continuing with the separate 6% PI under the program.

Q. Does that conclude your testimony?

A. Yes.

[15] *See* Docket No. DE 17-136, Eversource's Performance Incentive Calculation for 2020, dated June 1, 2021, at 2. Also *see* Attachment DOE-JT-11, DOE Data Request No. TS 1-004. In response to part c. of the request, Eversource did not provide the requested supporting calculations demonstrating that the Lifetime Savings contributed by the SmartSTART program were not included with the overall Lifetime Savings totals used for the calculation of PI.

Qualifications of Stephen R. Eckberg

My name is Stephen R. Eckberg. I am employed as a Utility Analyst with the Regulatory Support Division of the New Hampshire Department of Energy. My business address is 21 S. Fruit Street, Suite 10, Concord, New Hampshire 03301.

I earned a B.S. in Meteorology from the State University of New York at Oswego and an M.S. in Statistics from the University of Southern Maine.

After receiving my M.S. degree, I was employed as an analyst in the Boston office of Hagler Bailly, Inc, a consulting firm working with regulated utilities to perform evaluations of energy efficiency and demand-side management programs. From 2000 through 2003, I was employed at the NH Governor's Office of Energy and Community Services as the Director of the Weatherization Assistance Program. Following that, I was employed at Belknap Merrimack Community Action Agency as the Statewide Program Administrator of the NH Electric Assistance Program (EAP). In that capacity, I developed the statewide EAP budget, presented testimony before the NH Public Utilities Commission (PUC) in dockets related to the design, implementation and management of the EAP, and worked closely with the software vendor to implement improvements. I have testified before Committees of the New Hampshire General Court on issues related to energy efficiency and low income electric bill assistance. From 2007 – 2014 I was employed as a Utility Analyst with the New Hampshire Office of the Consumer Advocate (OCA). During my tenure with the OCA, I attended rate making and regulatory training at New Mexico State University's Center for Public Utilities.

In my position with the OCA, I entered pre-filed testimony in the following dockets:

- DG 08-048 Unitil Corporation and Northem Utilities, Inc. Joint Petition for Approval of Stock Acquisition. Joint testimony with Kenneth Traum.
- DW 08-070 Lakes Region Water Company Financing & Step Increase. Joint testimony with Kenneth Traum.
- DW 08-098 Aquarion Water Company of New Hampshire. Joint testimony with Kenneth Traum.

- DE 09-035 Public Service of New Hampshire Distribution Service Rate Case. Joint testimony with Kenneth Traum.
- DT 07-027 Kearsarge Telephone Company, Wilton Telephone Company, Hollis Telephone Company & Merrimack County Telephone Company Petition for Alternative Form of Regulation. Phase II & Phase III.
- DW 08-073 Pennichuck Water Works, Inc. Petition for Rate Increase
- DW 08-070 Lakes Region Water Company Third Step Increase.
- DW 08-065 Hampstead Area Water Company Petition for Rate Increase.
- DE 09-170 2010 CORE Energy Efficiency Programs.
- DW 10-090 Pittsfield Aqueduct Company Petition for Rate Increase.
- DW 10-091 Pennichuck Water Works Petition for Rate Increase.
- DW 10-141 Lakes Region Water Petition for Rate Increase.
- DE 10-188 2011-2012 CORE and Natural Gas Energy Efficiency Programs.
- DE 11-250 PSNH Installation of a Wet Flue-Gas Desulphurization Scrubber.
- DE 12-262 2013-2014 CORE and Natural Gas Energy Efficiency Programs.
- DE 12-292 PSNH 2013 Default Energy Service Rate.
- DE 12-262 2014 CORE Energy Efficiency Programs Update Filing.
- DE 13-108 PSNH 2012 Energy Service Reconciliation.
- DG 14-091 Liberty Utilities Special Contract and Lease Agreement with Innovative Natural Gas, LLC dba iNATGAS.

In August 2014, I joined the Sustainable Energy Division (SED) of the New Hampshire Public Utilities Commision (PUC). My responsibilities included grant review and administration, and compliance oversight of New Hampshire's Renewable Portfolio Standard requirements. While employed with SED, I filed testimony in the following dockets:

- DE 18-140 Liberty Utilities Petition for Approval of a Renewable Natural Gas Supply and Transportation Contract

In October 2019, I joined the PUC's Electric Division. I have filed testimony in:

- DE 17-136 2018-2020 New Hampshire Statewide Energy Efficiency Plan - 2020 Third Year Programs.
- DE 19-197 Development of a Statewide, Multi-Use Online Energy Data Platform. Joint testimony with Jason Morse.
- DE 20-092 2021 – 2023 Triennial Energy Efficiency Plan.

In July 2021, with the passage of HB2, the New Hampshire Legislature created the Department of Energy, I became an employee of the Regulatory Support Division of the Department of Energy. Since joining the Department of Energy I have filed testimony in the following dockets:

- DE 21-030 Unitil Energy Systems, Inc. Request for Change in Rates.
- DE 21-020 Eversource Energy and Consolidated Communications, Joint Petition to Approve Pole Asset Transfer.
- DG 21-104 Northern Utilities, Inc., Request for Change in Rates.

Attachment DOE-JT-2

Education and Professional Background

Elizabeth R. Nixon

My name is Elizabeth R. Nixon. I am employed as the Electric Director in the Regulatory Support Division at the New Hampshire Department of Energy (DOE). My business address is 21 S. Fruit St., Suite 10, Concord, NH 03301.

I earned a B.S. in Mathematics from the University of Vermont in 1985. I worked for ICF, a consulting firm, where we estimated, modeled, and analyzed the energy, environmental and economic impacts of various emission reduction strategies at electric utilities. At ICF and AER*X, Inc., I assisted companies in implementing market-based emissions trading programs. I provided comments on various air quality programs affecting the electric utilities and other industries in the Northeast and other states. I also worked for the Center for Clean Air Policy where we coordinated a dialogue of states and electric utilities to discuss energy efficiency and other emission control strategies to reduce acid rain and greenhouse gases at electric utilities.

At the New Hampshire Department of Environmental Services, I wrote the air quality permits for Eversource's electric generating facilities as well as other electric generating facilities and manufacturing facilities in NH. I testified before the NH Air Resources Council regarding the determination of the baseline mercury emissions for Eversource's coal-fired electric generating facilities.

I joined the New Hampshire Public Utilities Commission, which is now DOE, in August 2012. I started in the Sustainable Energy Division where I managed renewable energy incentive programs, determined compliance with the renewable portfolio standard (RPS) program, and

conducted analysis of and provided testimony and presentations on the RPS program and rebate programs. In August 2016, I joined the Electric Division. I completed electric utility rate training at New Mexico State University's Center for Public Utilities. As of July 1, 2021, I was a Utility Analyst in the Regulatory Support Division at DOE. In January 2022, I became the Electric Director in the Regulatory Support Division at DOE.

I have testified in the energy efficiency program dockets (DE 17-136 and DE 20-092), Liberty Utility's battery storage pilot docket (DE 17-189), and Unitil Energy System's distribution rate case (DE 21-030). In addition, I have provided Staff recommendations in the grid modernization docket (IR 15-296) and electric vehicle rate design docket (IR 20-004).

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 20-092

Date Request Received: March 11, 2022 **Date of Response: March 25, 2022**
Data Request No. DOE 1-002 **Page 1 of 1**

Request from: Department of Energy

Request:

Please provide a chart or table showing EE rates in effect for each month for each utility for the full plan period 2022 – 2023. If the shown rate was not effective for a full month, please provide the dates the rate was effective.

Response:

Please refer to Attachment DOE 1-002.