

Schedules and Attachments



Courtney Lane, Senior Associate

Synapse Energy Economics | 485 Massachusetts Avenue, Suite 3 | Cambridge, MA 02139 | 617- 453-7028
clane@synapse-energy.com

PROFESSIONAL EXPERIENCE

Synapse Energy Economics, Inc., Cambridge, MA. *Senior Associate*, November 2019 – Present.

Provides consulting and researching services on a wide range of issues related to the electric industry including performance-based regulation, benefit-cost assessment, rate and bill impacts, and assessment of distributed energy resource policies and programs. Develops expert witness testimony in public utility commission proceedings.

National Grid, Waltham, MA. *Growth Management Lead, New England*, May 2019 – November 2019, *Lead Analyst for Rhode Island Policy and Evaluation*, June 2013 – April 2019.

- Portfolio management of product verticals including energy efficiency, demand response, solar, storage, distributed gas resources, and electric transportation, to optimize growth and customer offerings.
- Strategy lead for the Performance Incentive Mechanisms (PIMs) working group.
- Worked with internal and external stakeholders and led the development of National Grid's Annual and Three-Year Energy Efficiency Plans and System Reliability Procurement Plans for the state of Rhode Island.
- Represented energy efficiency and demand response within the company at various Rhode Island grid modernization proceedings.
- Led the Rhode Island Energy Efficiency Collaborative; a group focused on reaching consensus regarding energy efficiency plans and policy issues for demand-side resources in Rhode Island.
- Managed evaluations of National Grid's residential energy efficiency programs in Rhode Island, and benefit-cost models to screen energy efficiency measures.

Citizens for Pennsylvania's Future, Philadelphia, PA. *Senior Energy Policy Analyst*, 2005–2013.

- Played a vital role in several legislative victories in Pennsylvania, including passage of energy conservation legislation that requires utilities to reduce overall and peak demand for electricity (2009); passage of the \$650 million Alternative Energy Investment Act (2008); and important amendments to the Alternative Energy Portfolio Standards law vital to the development of solar energy in Pennsylvania (2007).
- Performed market research and industry investigation on emerging energy resources including wind, solar, energy efficiency and demand response.
- Planned, facilitated and participated in wind energy advocates training meetings, annual partners retreat with members of wind and solar companies, and the PennFuture annual clean energy conference.

Northeast Energy Efficiency Partnerships, Inc., Lexington, MA. *Research and Policy Analyst*, 2004–2005.

- Drafted comments and testimony on various state regulatory and legislative actions pertaining to energy efficiency.
- Tracked energy efficiency initiatives set forth in various state climate change action plans, and federal and state energy regulatory developments and requirements.
- Participated in Regional Greenhouse Gas Initiative (RGGI) stakeholder meetings.
- Analyzed cost-effectiveness of various initiatives within the organization.

Massachusetts Executive Office of Environmental Affairs, Boston, MA. *Field Projects Extern*, 2003.

- Worked for the Director of Water and Watersheds at the EOE, examining the risks and benefits of different groundwater recharge techniques and policies throughout the U.S.
- Presented a final report to both Sea Change and the EOE with findings and policy recommendations for the state.

EnviroBusiness, Inc., Cambridge, MA. *Environmental Scientist*, July 2000 – May 2001

- Conducted pre-acquisition assessments/due diligence assignments for properties throughout New England. Environmental assessments included an analysis of historic properties, wetlands, endangered species habitat, floodplains, and other areas of environmental concern and the possible impacts of cellular installations on these sensitive areas.
- Prepared and managed NEPA reviews and Environmental Assessments for telecommunications sites.

SKILLS

Software: SPSS, Arcview GIS, IMPLAN, Access, Microsoft Excel, Word, Power Point

EDUCATION

Tufts University, Medford, MA

Master of Arts; Environmental Policy and Planning, 2004.

Colgate University, Hamilton, NY

Bachelor of Arts; Environmental Geography, 2000, *cum laude*.

PUBLICATIONS

Woolf, T., D Bhandari, C. Lane, J. Frost, B. Havumaki, S. Letendre, C. Odom. 2021. *Benefit-Cost Analysis of the Rhode Island Community Remote Net Metering Program*. Synapse Energy Economics for the Rhode Island Division of Public Utilities and Carriers.

Lane, C., S. Kwok, J. Hall, I. Addleton. 2021. *Macroeconomic Analysis of Clean Vehicle Policy Scenarios for Illinois*. Synapse Energy for the Natural Resources Defense Council.

Lane, C., K. Takahashi. 2020. *Rate and Bill Impact Analysis of Rhode Island Natural Gas Energy Efficiency Programs*. Synapse Energy Economics for National Grid.

Chang, M., J. Frost, C. Lane, S. Letendre, PhD. 2020. *The Fixed Resource Requirement Alternative to PJM's Capacity Market: A Guide for State Decision-Making*. Synapse Energy Economics for the State Energy & Environmental Impact Center at the NYU School of Law.

National Energy Screening Project. 2020. *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources*. E4TheFuture, Synapse Energy Economics, Energy Futures Group, ICF, Pace Energy and Climate Center, Schiller Consulting, Smart Electric Power Alliance.

TESTIMONY

Maryland Public Service Commission (Docket No. 9655): Direct and Surrebuttal Testimony of Courtney Lane regarding the application of Potomac Electric Company for a Multi-Year Plan and Performance Incentive Mechanisms. On behalf of the Maryland Office of People's Counsel. March 3, 2021 and April 20, 2021.

Pennsylvania Public Utility Commission (Docket No. M-2020-3020830): Direct testimony of Alice Napoleon and Courtney Lane regarding PECO Energy Company's proposed Act 129 Phase IV Energy Efficiency and Conservation Plan. On behalf of the Natural Resources Defense Council. January 14, 2021.

Maryland Public Service Commission (Case No. 9645): Direct and Surrebuttal Testimony of Courtney Lane regarding the Application of Baltimore Gas and Electric Company for an Electric and Gas Multi-Year Plan. On behalf of the Maryland Office of People's Counsel. August 14, 2020 and October 7, 2020.

Maryland Public Service Commission (Case No. 9619): Comments of Maryland Office of People's Counsel Regarding Energy Storage Pilot Program Applications, attached Synapse Energy Economics Report. June 23, 2020.

Public Service Commission of the District of Columbia (Formal Case No. 1156): Direct, Rebuttal, Surrebuttal, and Supplemental Testimony of Courtney Lane regarding the Application of Potomac Electric Power Company for Authority to Implement a Multiyear Rate Plan for Electric Distribution Service in the District of Columbia. On behalf of the District of Columbia Government. March 6, 2020, April 8, 2020, June 1, 2020, and July 27, 2020.

Rhode Island Public Utilities Commission (Docket No. 4888): Oral testimony of Courtney Lane regarding the Narragansett Electric Co. d/b/a National Grid - 2019 Energy Efficiency Program (EEP). On behalf of National Grid. December 11, 2018.

Rhode Island Public Utilities Commission (Docket No. 4889): Oral testimony of Courtney Lane regarding the Narragansett Electric Co. d/b/a National Grid - 2019 System Reliability Procurement Report (SRP). On behalf of National Grid. December 10, 2018.

Rhode Island Public Utilities Commission (Docket No. 4755): Oral testimony of Courtney Lane regarding the Narragansett Electric Co. d/b/a National Grid - 2018 Energy Efficiency Program (EEP). On behalf of National Grid. December 13, 2017.

Rhode Island Public Utilities Commission (Docket No. 4684): Oral testimony of Courtney Lane regarding the RI Energy Efficiency and Resource Management Council (EERMC) Proposed Energy Efficiency Savings Targets for National Grid's Energy Efficiency and System Reliability Procurement for the Period 2018-2020 Pursuant to §39-1-27.7. On behalf of National Grid. March 7, 2017.

Rhode Island Public Utilities Commission (Docket No. 4684): Oral testimony of Courtney Lane regarding National Grid's 2018-2020 Energy Efficiency and System Reliability Procurement Plan. On behalf of National Grid. October 25, 2017.

Rhode Island Public Utilities Commission (Docket No. 4654): Oral testimony of Courtney Lane regarding the Narragansett Electric Co. d/b/a National Grid - 2017 Energy Efficiency Program Plan (EEPP) for Electric & Gas. On behalf of National Grid. December 8, 2016.

Rhode Island Public Utilities Commission (Docket No. 4580): Oral testimony of Courtney Lane regarding the Narragansett Electric Co. d/b/a National Grid - 2016 Energy Efficiency Program Plan (EEPP) for Electric & Gas. On behalf of National Grid. December 2, 2015.

Pennsylvania Public Utility Commission (Docket No. P-2012-2320369): Direct testimony of Courtney Lane regarding the Petition of PPL Electric Utilities Corporation for an Evidentiary Hearing on the Energy Efficiency Benchmarks Established for the Period June 1, 2013 through May 31, 2016. On behalf of PennFuture. October 19, 2012.

Pennsylvania Public Utility Commission (Docket No. P-2012-2320334): Direct testimony of Courtney Lane regarding the Petition of PECO Energy for an Evidentiary Hearing on the Energy Efficiency Benchmarks Established for the Period June 1, 2013 through May 31, 2016. On behalf of PennFuture. September 20, 2012.

Pennsylvania Public Utility Commission (Docket No. I-2011-2237952): Oral testimony of Courtney Lane regarding the Commission's Investigation of Pennsylvania's Retail Electricity Markets. On behalf of PennFuture. March 21, 2012.

Committee on the Environment Council of the City of Philadelphia (Bill No. 110829): Oral testimony of Courtney Lane regarding building permitting fees for solar energy projects. On behalf of PennFuture. December 5, 2011.

Pennsylvania Public Utility Commission (Docket No. M-00061984): Oral testimony of Courtney Lane regarding the En Banc Hearing on Alternative Energy, Energy Conservation, and Demand Side Response. On behalf of PennFuture. November 19, 2008.

PRESENTATIONS

Lane, C. 2021. "Accounting for Interactive Effects: Assessing the Cost-Effectiveness of Integrated Distributed Energy Resources." Presentation at the 2021 American Council for an Energy-Efficient Economy (ACEEE) National Conference on Energy Efficiency as a Resource, October 27, 2021.

Lane, C. 2019. "The RI Test." Presentation for AESP Webinar: Emerging Valuation Approaches in Cost-Effectiveness and IRPs, October 31, 2019.

Lane, C., A. Flanders. 2017. "National Grid Rhode Island: Piloting Wireless Alternatives: Forging a Successful Program in Difficult Circumstances." Presentation at the 35th Annual Peak Load Management Association (PLMA) Conference, Nashville, TN, April 4, 2017.

Lane, C. 2013. "Regional Renewable Energy Policy Update." Presentation at the Globalcon Conference, Philadelphia, PA, March 6, 2013.

Lane, C. 2012. "Act 129 and Beyond." Presentation at the ACI Mid-Atlantic Home Performance Conference, October 1, 2012.

Lane, C. 2012. "Act 129: Taking Energy Efficiency to the Next Level." Presentation at the Energypath Conference, June 28, 2012.

Lane, C. 2011. "Pennsylvania's Model Wind Ordinance." Presentation at Harvesting Wind Energy on the Delmarva Peninsula, September 14, 2011.

Lane, C. 2011. "Electric Retail Competition and the AEPS." Presentation at the Villanova Law Forum, November 4, 2011.

Lane, C. 2009. "Act 129: Growing the Energy Conservation Market." Presentation at the Western Chester County Chamber of Commerce, March 25, 2009.

Resume updated March 2022



Danielle Goldberg, Associate

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dgoldberg@synapse-energy.com

PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Associate*, April 2019 – Present, *Research Associate*, February 2017 – March 2019

- Conducts research and provides consulting on energy sector issues, with a focus on data, programs, policies, and technologies related to energy efficiency, electrification, and electricity generation.
- Analyzes ratepayer-funded energy efficiency and other distribute energy resource programs across North America for best practices in cost-effectiveness testing and program design.
- Develops and evaluates cost-benefit analyses and other Excel-based models for energy efficiency programs and technologies.
- Assists with the preparation of expert testimony related to various energy-sector topics

Helping Overcome Obstacles Peru, Arequipa, Peru. *School Coordinator, English Teacher*, May 2016 – July 2016

- Managed daily operation of the school and organized school functions, including assemblies and field trips.
- Acted as liaison between office staff, volunteers, and parents, communicating in both Spanish and English.
- Developed and led custom lesson plans to teach English to children ages 3-6.

Allen Medical Systems, Acton, MA. *New Product Development Co-op*, January – June 2015

- Designed lifecycle tests for arm traction device adhering to medical standards.
- Worked with pneumatic and electromechanical equipment.
- Developed extensive test documentation detailing calculations and procedures for load profiles and estimated lifetime usage.
- Created parts, drawings, and assemblies for design prototypes.

Bose Corporation, Framingham, MA. *Design Compliance Engineering Mechanical Test Co-op*, January – June 2014

- Performed design validation testing on audio and visual products.
- Conducted environmental and dynamic testing, such as thermal testing, transportation testing, drop testing, and surface damage testing.

Amphenol Alden Products, Brockton, MA, *Mechanical Engineering Co-op*, January – June 2013

- Completed extensive formal training in the fundamentals of SolidWorks for 2D and 3D modeling followed by application of software.
- Performed tolerance analyses and proposed changes based on the results.
- Assessed severity of micro-cracks in electrical connectors using advanced lab equipment.

EDUCATION

Northeastern University, Boston, MA

Bachelor of Science in Mechanical Engineering, 2016. *Cum Laude*.

PUBLICATIONS

Takahashi, K., T. Woolf, B. Havumaki, D. White, D. Goldberg, S. Kwok, A. Takasugi. 2021. *Missed Opportunities: The Impacts of Recent Policies on Energy Efficiency Programs in Midwestern States*. Synapse Energy Economics for the Midwest Energy Efficiency Alliance.

Takahashi, K., E. Sinclair, A. Napoleon, A.S. Hopkins, D. Goldberg. 2021. *Evaluation of EnergyWise Low-Income Energy Efficiency Program in Mississippi – Program Performance, Design, and Implications for Low-Income Efficiency Programs*. Synapse Energy Economics for Sierra Club and Gulf Coast Community Foundation.

Eash-Gates, P., K. Takahashi, D. Goldberg, A.S. Hopkins, S. Kwok. 2021. *Boston Building Emissions Performance Standard: Technical Methods Overview*. Synapse Energy Economics for the City of Boston.

Goldberg, D., J. Frost, D. Hurley, K. Takahashi. 2020. *New England Electrification Load Forecast*. Synapse Energy Economics for E4TheFuture.

Takahashi, K., J. Frost, D. Goldberg, A. S. Hopkins, K. Nishio, K. Nakano. 2020. *Survey of U.S. State and Local Building Decarbonization Policies and Programs*. Presented at the 2020 ACEEE Summer Study of Energy Efficiency in Buildings.

Malone, E., T. Woolf, D. Goldberg. 2019. "Assessing Resource Cost Effectiveness." *A.E.S.P. Magazine*, 2019 Edition, 8-10.

Napoleon, A., D. Goldberg, K. Takahashi, T. Woolf. 2019. *An Assessment of Prince Edward Island Energy Corporations' 2018 - 2021 Energy Efficiency and Conservation Plan*. Synapse Energy Economics for Carr, Stevenson and MacKay as Counsel to the Island Regulatory and Appeals Commission.

Malone, E., D. Goldberg, J. Frost. 2018. *Database of State Efficiency Screening Practices (DSESP): A Resource of the NESF*. Synapse Energy Economics for E4TheFuture.

Knight, P., D. Goldberg, E. Malone, A. S. Hopkins, D. Hurley. 2018. *Getting SMART: Making sense of the Solar Massachusetts Renewable Target (SMART) program*. Prepared for Cape Light Compact.

Malone, E., T. Woolf, D. Goldberg. 2018. *Updating the Energy Efficiency Cost-Effectiveness Framework in Minnesota: Application of the National Standard Practice Manual to Minnesota*. Conservation Applied Research and Development (CARD) Report. Synapse Energy Economics for Minnesota Department of Commerce, Division of Energy Resources.

Fisher, J., M. Whited, T. Woolf, D. Goldberg. 2018. *Utility Investments for Market Transformation: How Utilities Can Help Achieve Energy Policy Goals*. Synapse Energy Economics for Energy Foundation.

A. Hopkins, PhD, K. Takahashi, D. Goldberg. 2018. *Strategic Electrification Webinar*. Synapse Energy Economics.

D. Goldberg, E. Malone, J. Kallay, K. Takahashi. 2018. *Blog post: Switch on the Savings: A Heat Pump Cost-Effectiveness Study*. Synapse Energy Economics.

D. Goldberg, J. Kallay. 2017. *Blog post: Energy Efficiency Programs Plan for Post LED Success*. Synapse Energy Economics.

TESTIMONY ASSISTANCE

Illinois Commerce Commission (Docket No. 18-0211): Direct Testimony of Max Chang regarding Ameren Illinois Company's voltage optimization plan and the importance of prioritizing low-income communities. On behalf of the People of the State of Illinois, represented by the Office of the Illinois Attorney General. March 7, 2018.

Commonwealth of Massachusetts Appellate Tax Board (Docket No. C331142): Expert report by Max Chang on the process of steam generation and distribution under the Commonwealth of Massachusetts' definition for manufacturing. On behalf of the City of Boston. January 11, 2018.

Resume updated April 2022

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

Date Request Received: March 11, 2022
Data Request No. DOE 1-002

Date of Response: March 25, 2022
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.

Unitil Energy Services	Jan 2022⁽¹⁾	Feb 2022⁽²⁾	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
SBC (EE Portion) \$/kWh	0.00373	0.00373 & 0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528

(1) Per Order No. 26,553 issued November 12, 2021

(2) Rate change effective February 14, 2022 per Order No. 26,579 issued February 10, 2022 & Passage of HB 549

Unitil Energy Services	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
SBC (EE Portion) \$/kWh	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

Northern Utilities	Jan 2022⁽¹⁾	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
Residential EEC \$/therm	0.0476	0.0476	0.0499	0.0499	0.0499	0.0499	0.0499	0.0499	0.0499	0.0499	0.0499	0.0499
Commercial & Industrial EEC \$/therm	0.0326	0.0326	0.0247	0.0247	0.0247	0.0247	0.0247	0.0247	0.0247	0.0247	0.0247	0.0247

(1) Per Order No. 26,553 issued November 12, 2021

(2) Per Order No. 26,303 issued October 29, 2019 & Passage of HB 549

Northern Utilities	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Residential EEC \$/therm	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513	0.0513
Commercial & Industrial EEC \$/therm	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254	0.0254

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

Eversource Energy	Jan 2022⁽¹⁾	Feb 2022	Mar 2022⁽²⁾	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
SBC (EE Portion) \$/kWh	0.00373	0.00373	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528

(1) Per Order No. 26,553 issued November 12, 2021

(2) Rate change effective March 1, 2022 per Order No. 26,579 issued February 10, 2022 & Passage of HB 549

Eversource Energy	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
SBC (EE Portion) \$/kWh	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

Granite State Electric	Jan 2022⁽¹⁾	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
SBC (EE Portion) \$/kWh	0.00373	0.00373	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528

(1) Per Order No. 26,553 issued November 12, 2021

Granite State Electric	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
SBC (EE Portion) \$/kWh	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

EnergyNorth Natural Gas	Jan 2022⁽¹⁾	Feb 2022	Mar 2022	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
Residential EEC \$/therm	0.00475	0.00475	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
Commercial & Industrial EEC \$/therm	0.0258	0.0258	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426	0.0426

(1) Per Order No. 26,553 issued November 12, 2021
(2) Per Order No. 26,303 issued October 29, 2019 & Passage of HB 549

EnergyNorth Natural Gas	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
Residential EEC \$/therm	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658	0.0658
Commercial & Industrial EEC \$/therm	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438	0.0438

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

New Hampshire Electric Cooperative, Inc.	Jan 2022⁽¹⁾	Feb 2022	Mar 2022⁽²⁾	Apr 2022	May 2022	June 2022	July 2022	Aug 2022	Sep 2022	Oct 2022	Nov 2022	Dec 2022
SBC (EE Portion) \$/kWh	0.00373	0.00373	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528	0.00528

(1) Per Order No. 26,553 issued November 12, 2021

(2) Rate change effective March 1, 2022 per Order No. 26,579 issued February 10, 2022 & Passage of HB 549

New Hampshire Electric Cooperative, Inc.	Jan 2023⁽³⁾	Feb 2023	Mar 2023	Apr 2023	May 2023	June 2023	July 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023
SBC (EE Portion) \$/kWh	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543	0.00543

(3) Estimated to incorporate the inflation calculation in accordance with HB 549 (does not reflect adjustment for carry-over/carry-under)

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

Date Request Received: April 07, 2022
Data Request No. TS 1-002

Date of Response: April 12, 2022
Page 1 of 1

Request from: Department of Energy

Request:

Please refer to data response to DOE 1-016. Please explain how each electric utility accounted for its share of the \$400,000, of systems benefit charges identified in HB-549 to “promulgate the benefits of energy efficiency” including an explanation of whether the funding was included in the total program budgets, whether the funding was included in the performance incentive calculation, and how it is accounted for in the SBC calculations. If helpful, please provide updated tables or spreadsheets that explicitly show how each utility’s share of the \$400,000 was accounted for.

Response:

The Electric Utilities accounted for their share of the \$400,000 of systems benefit charges identified in HB-549 to “promulgate the benefits of energy efficiency” by reducing the amount of funding available for their total program budgets. Since this share of the \$400,000 is excluded from the total program budgets, it is not included in the performance incentive calculation. For a demonstration of how this accounted for in the SBC calculations, please refer to the following for each Electric Utility.

- Eversource: Please refer to Attachment E3 in the March 1, 2022 Plan Filing. In the Energy Efficiency Expense & SBC Revenue Reconciliation attachments, the company’s share of the \$400,000 (\$290,311.93 for 2022 and \$290,745.70 for 2023) is delineated in line 6 as RSA 125-O:5-a Funding. The amount for Program Expenses in line 7 is the remainder of what is used in the planned program budgets.
- Liberty: Please refer to Page 3 in Attachment DOE 1-007.
- NHEC: Please refer to Line 7 on Pages 2 and 3 in NHEC Attachment TS 1-002. The amounts shown on Line 7 represent the amounts NHEC set aside from the 2022 and 2023 funding for the Company’s allocation of the \$400,000. The actual amounts NHEC anticipates allocating are \$29,995.79 in 2022 and \$29,522.22 in 2023, as depicted in Attachment DOE 1-016.
- Unitil: Please refer to DOE 1-012 Attachment 1-UES. In UES’ Energy Efficiency Expense & SBC Revenue Reconciliation attachments, its share of the \$400,000 is delineated in line 2 as RSA 125-O:5-a Funding. The amount for Program Expenses in line 3 is the remainder of what is used in the planned program budgets. Line 3 includes program costs as well as projected performance incentives.

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New Hampshire Electric Cooperative, Inc.
Energy Efficiency Expense & SBC Revenue Reconciliation
January 1, 2022 to December 31, 2022
 (\$ in 000's)

Line	Description	Carryover 12/31/21	Forecast Jan 2022	Forecast Feb 2022	Forecast Mar 2022	Forecast Apr 2022	Forecast May 2022	Forecast June 2022	Forecast Jul 2022	Forecast Aug 2022	Forecast Sep 2022	Forecast Oct 2022	Forecast Nov 2022	Forecast Dec 2022	2022 Total
		Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N	Col. O
1	kWh Sales	1,532	324	295	357	345	272	282	358	352	363	287	285	378	3,886
2	RGGI Revenues		17	17	17	17	17	17	17	17	17	17	17	17	207
3	FCM Revenues		8	8	8	8	8	8	8	8	8	8	8	8	100
4	Total Revenues		349	320	383	370	297	308	383	377	388	312	311	403	4,203
5	Program Expenses		476	476	476	476	476	476	476	476	476	476	476	476	5,713
6	Total Program Expenses		476	476	476	476	476	476	476	476	476	476	476	476	5,713
7	HB 549 EE Education Allocation		2	2	2	2	2	2	2	2	2	2	2	2	23
8	Current Month Over/(Under) Recovery		(128)	(157)	(95)	(108)	(181)	(170)	(94)	(101)	(90)	(166)	(167)	(75)	
9	Cumulative Over/(Under) Recovery		1,404	1,246	1,151	1,043	863	692	598	497	407	242	75	(0)	
12	Interest @ Prime Rate	1,532	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%
13	Interest		4	4	3	3	3	2	2	1	1	1	0	0	24
14	Monthly Sales (MWh)		86,829	79,055	67,616	65,290	51,453	53,394	67,784	66,601	68,721	54,318	54,018	71,520	786,599
15	EE SBC Rate		0.373	0.373	0.528	0.528	0.528	0.528	0.528	0.528	0.528	0.528	0.528	0.528	

Line 1: (Line 14 x Line 15) / 100

Line 2: Page 1, Col. C

Line 3: Page 1, Col. D

Line 4: Sum of Lines 1 through Lines 3

Line 5: Page 1, Col. B

Line 6: Sum of Line 5

Line 7: HB 549 EE Education Allocation

Line 8: Line 4 - Line 6 - Line 7

Line 9: Prior month Line 8 + Current month Line 9

Line 12: Prime Rate / 12

Line 13: (Prior Month Line 8 + Current Month Line 8) / 2 x Line 11

Line 14: Company Forecast

Line 15: Page 1, Col. J/K

New Hampshire Electric Cooperative, Inc.
Energy Efficiency Expense & SBC Revenue Reconciliation
January 1, 2023 to December 31, 2023
 (\$ in 000's)

Line	Description	Carryover 12/31/22	Forecast Jan 2023	Forecast Feb 2023	Forecast Mar 2023	Forecast Apr 2023	Forecast May 2023	Forecast June 2023	Forecast Jul 2023	Forecast Aug 2023	Forecast Sep 2023	Forecast Oct 2023	Forecast Nov 2023	Forecast Dec 2023	2023 Total
		Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N	Col. O
1	kWh Sales	-	466	424	363	350	276	287	364	357	369	291	290	384	4,221
2	RGGI Revenues	-	17	17	17	17	17	17	17	17	17	17	17	17	207
3	FCM Revenues	-	8	8	8	8	8	8	8	8	8	8	8	8	100
4	Total Revenues		492	450	388	376	302	312	389	383	394	317	316	409	4,529
5	Program Expenses		376	376	376	376	376	376	376	376	376	376	376	376	4,507
6	Total Program Expenses		376	376	376	376	376	376	376	376	376	376	376	376	4,507
7	HB 549 EE Education Allocation		2	2	2	2	2	2	2	2	2	2	2	2	22
8	Current Month Over/(Under) Recovery		114	72	11	(1)	(76)	(65)	12	6	17	(60)	(62)	32	
9	Cumulative Over/(Under) Recovery		114	187	198	196	121	55	67	73	90	30	(32)	(0)	
12	Interest @ Prime Rate		0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	0.27%	
13	Interest		0	0	1	1	0	0	0	0	0	0	(0)	(0)	3
14	Monthly Sales (MWh)		85,812	78,129	66,824	64,525	50,851	52,768	66,990	65,820	67,916	53,682	53,385	70,682	777,382
15	EE SBC Rate		0.543	0.543	0.543	0.543	0.543	0.543	0.543	0.543	0.543	0.543	0.543	0.543	

Line 1: (Line 14 x Line 15) / 100

Line 2: Page 1, Col. C

Line 3: Page 1, Col. D

Line 4: Sum of Lines 1 through Lines 3

Line 5: Page 1, Col. B

Line 6: Sum of Line 6

Line 7: HB 549 EE Education Allocation

Line 8: Line 4 - Line 6 - Line 7

Line 11: Line 9 - Line 10

Line 12: Prime Rate / 12

Line 13: (Prior Month Line 8 + Current Month Line 8) / 2 x Line 11

Line 14: Company Forecast

Line 15: Page 1, Col. J/K

Bill Impacts of Changes in System Benefits Charge - New Hampshire Electric Cooperative, Inc.

	2021	Jan-Feb 2022	Mar-Dec 2022	2023
System Benefits Charge (\$/kWh)	\$ 0.00678	\$ 0.00523	0.00678	0.00693
<u>Bill per month, including NHEC default energy service</u>				
Residential Rate B (625 kWh/month)	\$ 124.33	\$ 123.36	\$ 124.33	\$ 124.42
Commercial B3, three-phase service (<50 kW, 10,000 kWh/month)	\$ 1,766.24	\$ 1,750.74	\$ 1,766.24	\$ 1,767.74
<u>Change from previous rate level - \$ per month</u>				
Residential Rate B (625 kWh/month)		\$ (0.97)	\$ 0.97	\$ 0.09
General Service Rate G, three-phase service (40 kW, 10,000 kWh/month)		\$ (15.50)	\$ 15.50	\$ 1.50
<u>Change from previous rate level - %</u>				
Residential Rate B (625 kWh/month)		-0.8%	0.8%	0.1%
General Service Rate G, three-phase service (40 kW, 10,000 kWh/month)		-0.9%	0.9%	0.1%

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Request from: Office of Consumer Advocate

Request:

1. Please refer to the 2021-2023 New Hampshire Statewide Energy Efficiency Plan, Revised by Settlement and Submitted January 19, 2021 ("Settlement Plan") and the 2022-2023 New Hampshire Statewide Energy Efficiency Plan, submitted March 1, 2022 ("Revised Plan").

- a. Please explain the process by which the NH Electric and Natural Gas Utilities revised the Settlement Plan for years 2022 and 2023 to comply with House Bill 549.
- b. What are the key differences between the Settlement Plan and the Revised Plan for years 2022 and 2023?
- c. The passage of House Bill 549 reduced the total funding levels available for the 2022 and 2023 energy efficiency programs. Please explain how the NH Electric and Natural Gas Utilities allocated budget reductions across each program. Please include in your response any criteria relied upon such as cost-of-saved energy, historic participation, customer equity, and evaluation results.
- d. Did the NH Electric and Natural Gas Utilities consider reducing each program's budget by the same percentage to comply with House Bill 549? Please explain why or why not.
- e. For each Residential Energy Efficiency Program please explain any programmatic differences between the Settlement Plan and the Revised Plan for years 2022 and 2023. Please include in your response if these differences impact participation, savings, target populations, delivery channels, or measure mix.
- f. For each Commercial and Industrial ("C&I") Efficiency Program please explain any programmatic differences between the Settlement Plan and the Revised Plan for years 2022 and 2023. Please include in your response if these differences impact participation, savings, target populations, delivery channels, or measure mix.
- g. For each Active Demand Reduction ("ADR") pilot, please explain any differences between the Settlement Plan and the Revised Plan for years 2022 and 2023. Please include in

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your response if these differences impact participation, savings, target populations, or delivery channels.

- h. Were there any programs and/or measures that were offered in the Settlement Plan that are not offered in the Revised Plan for years 2022 and 2023? If yes, please identify and explain.
- i. How is the Revised Plan different for low-income ratepayers compared to the Settlement Plan in years 2022 and 2023?
- j. Did the NH Electric and Natural Gas Utilities make modifications to planned evaluation, measurement and evaluation ("EM&V") activities in the Revised Plan as compared to the Settlement Plan? If yes, please explain.
- k. Please provide an amended version of Tables 1-1. 2022-2023 Plan Goals (Electric) and Table 1-2: 2023-2023 Plan Goals (Natural Gas) as included on pages 7 and 8 of the Revised Plan so that it also includes the same information from the Settlement Plan. For each row, if there are differences between the Revised Plan and the Settlement Plan, please explain what contributed to the difference.
- l. Please explain why the Revised Plan 2022 program budget for the Municipal Program remains the same as year 2022 in the Settlement Plan but the annual savings, lifetime savings, and participants increases?
- m. Please explain why the Revised Plan 2022 program budget and participants for the Home Performance with Energy Star program decreases compared to year 2022 in the Settlement Plan, but the annual savings and lifetime savings increase?
- n. Please explain why the Revised Plan 2022 program budget, annual savings, and lifetime savings for the Energy Star Homes program decreases compared to year 2022 in the Settlement Plan, but the kW reduction and participation increases?
- o. Please explain why the Revised Plan no longer includes an Energy Optimization Pilot.
- p. Please confirm that the number of Participants included in Table 2-2: Small Business Energy Solutions Program - Energy Savings and Budgets on page 31 of the Revised Plan are correct for both Electric and Gas. If confirmed, did the NH Electric and Natural Gas Utilities

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change the definition of participants in the Small Business Energy Solutions Program compared to the Settlement Plan?

q. Please explain whether the electric energy efficiency programs provide incentives for customers to switch from natural gas space heating to electric heat pumps. If not, why not?

r. Please explain whether the electric energy efficiency programs provide incentives for customers to switch from space heat fueled by oil, propane, or other delivered fuels to electric heat pumps. If not, why not?

s. Please explain whether and how energy equity was addressed in developing the Revised Plan. The term “energy equity” refers to the fair distribution of costs and benefits of energy investments, particularly the distribution of costs and benefits to marginalized, disadvantaged, or vulnerable customers.

Response:

- a. Given the direction provided by HB 549 and recent PUC Orders, the NH Utilities updated the NHSaves Plan from program year 2020 based on funding available, current savings assumptions, and current market conditions.

Following the guidance of the PUC and HB 549, the NH Utilities focused resources on those programs that were in place in program years 2020 and 2021 and on overcoming current market barriers. Activities not directly resulting in energy savings were carefully considered and, in some cases, scaled back or eliminated, including Liberty Utilities’ originally proposed aerial mapping program and the statewide Energy Optimization pilot. Given the rates set by HB 549, the scale of ramping up of programs and increase in participation included in the 2021-2023 Settlement Plan is no longer feasible. As a result, some outreach efforts described in the Settlement Plan are unlikely to be pursued in order to avoid generating customer demand for energy efficiency services that cannot be met.

The NH Utilities worked together to draft the revised 2022-2023 narrative, to coordinate our approach to program design, and to budget for statewide expenses such as evaluation. Prior to developing the budgets for the programs, \$400,000 was set aside from the SBC revenue forecast to provide funding to the NH Department of Energy to promulgate the benefits of energy efficiency. The EM&V Working Group worked collaboratively on the strategic

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evaluation plan chapter, which reflects the consensus of that group, including consultants to the DOE. Measure savings assumptions are based on a revised TRM specific to Plan Year 2022, which was also reviewed and approved by the EM&V Working Group. The OCA, SNHS, and Listen were consulted regarding the setting of rebate levels to be offered in the Home Energy Assistance program targeting income-eligible customers. The NH Department of Energy was consulted regarding the calculation of the 2023 inflation adjustment and estimate of RGGI revenues.

- b. The key differences include a scaling back of program offerings, lower funding levels, revised savings assumptions, and a change to the planned proportion of electric savings relative to overall energy savings. The Settlement had full programs for ADR, the creation of a statewide pilot for Energy Optimization (EO) and the creation of an Aerial Infrared Mapping (AIM) program for Liberty. This plan contains the continuation of pilots for ADR, no EO pilot, and no AIM program. The Settlement was developed utilizing 2019 data and savings assumptions ramped up to achieve an EERS goal developed by the stakeholder process, while this plan was developed utilizing 2021 supporting data and the funding available given rates established by statute. The Settlement planned for at least 55% of all energy savings in the NH Electric utilities' programs be electric savings, while the current plan is responsive to the mandate included in HB 549 that the NH Electric Utilities plan for at least 65% of all energy savings to come from electricity.
- c. The Utilities undertook the following process for allocating funding:
 - 1. The SBC funding that HB 549 mandated be directed to the Department of Energy and EESE Board were removed.
 - 2. The forecasted RGGI dollars were allocated, per statute, to the Municipal and Income-Eligible programs.
 - 3. Each utility's forecasted sales and the rates included in the legislation were used to determine the sector funding for Residential and C&I as well as the income-eligible programs.
 - 4. Each utility allocated the mandated portion of funding to be dedicated to the income-eligible programs.
 - 5. Remaining dollars were allocated within each sector across the suite of programs in place in 2020 and 2021 such that:

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- Cost-effective programs will enable participating customers to overcome existing market barriers;
 - Portfolio-wide planned electric savings in the electric programs met the mandate in HB 549 that at least 65 percent of energy savings planned for in the electric portfolio be electric savings;
 - Measure mixes within programs reflected both a prospective look at market trends as well as a retrospective look at historic participation
 - Savings assumptions reflected the 2022 TRM (for prescriptive measures) and estimates of future performance (for custom measures or those based on algorithms)
- d. No. Please refer to the response provided to OCA 3-001 Part C for an explanation as to why that approach was not taken.
- e. As noted above, the scale of residential programs proposed in the March 1, 2022 filing remains at roughly current levels, resulting in program participation and savings that are lower than were proposed in the settlement plan. In addition, there are some programmatic changes compared to the settlement.
 - Home Energy Assistance – Please refer to the response provided to Part I of this question for changes related to this program.
 - HPwES – The NH Utilities will carefully monitor incentive levels for this program. The demand for services in this program is expected to outpace the available funding, which has resulted in a reduction in the outreach, marketing and community engagement that was planned for in settlement. It is also likely that certain utilities will have to institute a waiting list for HPwES services before the end of each year, given current budget levels. The NH Utilities will continue to actively manage the demand for services in this program in order to minimize the stop-start issues that were identified by stakeholders and vendors during the development of the Plan. The settlement Plan also included several new elements that are no longer anticipated in the 2022-2023 Plan; a potential pathway for self-

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installed insulation, expansion of financing to cover health and safety barriers, and virtual assessments.

- Homes – Demand for this new construction program is also anticipated to outpace the available funding, leading to active management of fees to HERs raters and rebates to customers. The pursuit of a Codes and Standards initiative, which was proposed in the settlement plan, will no longer be investigated given limited funding and the absence of near-term energy savings. Several other pathways for new construction included in the Settlement are no longer included; a renovations and major additions offering, an offering focused on the US DOE Zero Energy Ready Home Program, and new incentive structures for passive solar, solar PV ready, EV ready and all electric homes have all been removed from the 2022-2023 Plan.
- Retail (appliances and lighting) - Retail lighting rebates will be focused on those retailers that are last to adopt high quality, high efficiency lighting options. The Settlement Plan anticipated additional eligible equipment products including freezers and appliance recycling for air conditioners and dehumidifiers. These items are not included in the 2022-2023 Plan. The NH Natural Gas Utilities will carefully monitor natural gas water heating equipment and may lower or stop offering rebates on this equipment in order to focus on other equipment. The originally proposed EO program, which would have focused on encouraging customers to choose electric heat pumps instead of fossil fuel heating equipment, has been dropped from this proposal, as described in the response to Part O of this question.
- Home Energy Reports / Behavior - The AIM program that Liberty proposed is no longer contained in the plan.

f. While the scale of the programs has been altered, the actual programmatic offerings for the Municipal Program, as well as the Small and Large Business Energy Solutions Programs, are similar to those contemplated in the settlement. Primarily due to the reduction in scale of the programs, participation and savings are expected to be lower than contemplated in the settlement. However, there are a number of customer-focused recruitment strategies that were proposed in the settlement that are no longer being pursued, including:

- expansion of general outreach and education
- the elimination of a multi-year Codes and Standards initiative

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- the buildout of a community network of energy champions that was to include municipal representatives, sustainability groups, energy committees, and economic development commissions
 - expansion of Main Streets efforts and community blitzes
- g. Rather than developing ADR into a full program with expanded access for customers and increased savings, as proposed in the Settlement Plan, the continuation of the pilots will be consistent with the scope of the 2020 pilot. These differences impact participation and savings as they are currently operating with a waitlist and are unable to accept more customers unless and until a change in funding occurs for ADR.
- h. Please refer to the response to Part B of this question.
- i. There is less funding dedicated to income-eligible customers in this revised plan compared to the Settlement Plan. As a result, the NH Utilities and the Community Action Agencies with whom we partner will be able to serve fewer participants and achieve lower overall program savings through the Home Energy Assistance program. In order to reflect actual data on average project size from 2020 and 2021 and the desire to provide comprehensive services during a single project, the maximum rebate for participating customers was planned at \$15,000, subject to waiver in certain circumstances. Otherwise, the operation of programs is anticipated to be similar in the future as it was in the 2018-2020 term.
- j. Yes. The Settlement Plan anticipated that a number of additional studies would be undertaken, notably of the EO pilot, which is no longer being proposed. The 2022-2023 Plan was developed based on the current suite of program offerings and revised funding for both energy efficiency programs and evaluation. As described in the response to Part A of this question, the EM&V activities contained in this updated Plan were reviewed and approved by the EM&V Working Group.

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- k. The below tables are amended versions of Tables 1-1 and 1-2 from the 2022-2023 New Hampshire Statewide Energy Efficiency Plan, which include an additional column displaying the same metrics for 2022-2023 from the Settlement Plan. The differences in savings can be attributed to the revised budget that was filed in accordance with HB549. The most directly comparable metrics in the tables are the costs per lifetime kWh and MMBtu. The revised 2022-23 Plan for electric programs has a cost per lifetime kWh of \$0.060, which is nearly the same as the \$0.061 filed in the Settlement Plan for 2022-2023, and a cost per lifetime MMBtu of \$4.19, which is slightly lower than the \$4.61 filed in the Settlement Plan for 2022-2023.

Electric Programs	2022	2023	2022-2023 Plan	2022-2023 Settlement Plan
Cumulative Lifetime MWh Savings	1,028,080	957,048	1,985,128	3,987,380
Cumulative Annual MWh Savings	88,246	82,170	170,416	331,531
Cumulative Annual Savings as a % of 2019 Delivery Sales	0.84%	0.78%	1.62%	3.15%
Cumulative Program Funding	\$59,179,376	\$60,825,179	\$120,004,555	\$242,695,563
Program Cost per Lifetime kWh Savings	\$0.058	\$0.064	\$0.060	\$0.061

Note: Numbers may not add up due to rounding

Natural Gas Programs	2022	2023	2022-2023 Plan	2022-2023 Settlement Plan
Cumulative Lifetime MMBtu Savings	2,766,322	2,639,195	5,405,517	6,478,337
Cumulative Annual MMBtu Savings	187,974	187,425	375,399	521,814
Cumulative Annual Savings as a % of 2019 Delivery Sales	0.75%	0.75%	1.49%	2.08%
Cumulative Program Funding	\$11,278,443	\$11,367,360	\$22,645,045	\$29,843,776
Program Cost per Lifetime MMBtu Savings	\$4.08	\$4.31	\$4.19	\$4.61

Note: Numbers may not add up due to rounding.

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- l. The difference in planned savings between the revised 2022 Plan and the Settlement Plan can be attributed to an adjustment in the measure mix and average project savings that more closely aligns with actual projects that were incentivized in 2021, versus the 2019 and partial year 2020 program data that were used to develop the Settlement Plan. It also reflects less emphasis on non-energy savings outreach and support activities than were proposed in the original 2021-2023 Plan.
- m. The difference in planned savings between the revised 2022 Plan and the Settlement Plan can be attributed to an adjustment in the measure mix and average savings that more closely aligns with actual projects that were incentivized in 2021, versus the 2019 and partial year 2020 program data that were used to develop the Settlement Plan. It also reflects less emphasis on non-energy savings outreach, marketing, vendor training and support activities than were proposed in the original 2021-2023 Plan, which were intended to increase the capacity of the program to reach customers.
- n. The difference in the kW reduction between the revised 2022 Plan and the Settlement Plan is due to a modeling update made for cooling and hot water measures. In the Settlement Plan, kW savings were only claimed based on a load shape associated with heating measures. In the revised 2022 Plan, the measures were disaggregated and included lines specific to cooling savings, which have a higher maximum demand factor – which resulted in higher overall planned kW for the program.

The number of planned participants in the revised 2022 Plan is 769 versus 764 in the Settlement Plan, reflecting an immaterial change. Participation is achieved with lower budgets and lower per-participant rebates. The difference can be attributed to a planned average project savings that more closely aligns with actual projects that were incentivized in 2021, versus the 2019 and partial year 2020 program data that were used to develop the Settlement Plan.

- o. The NH Utilities developed the original 2021-2023 Plan over the course of many months in collaboration with a diversity of stakeholders. Given the increasing emphasis in other jurisdictions, including Maine, Vermont, and Massachusetts, and interest on the part of both

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stakeholders and the NH Electric Utilities in realizing energy efficiency potential through heat pump technologies that displace fossil fuels, the NH Utilities proposed to launch an EO pilot. The intent of this pilot was to incentivize the adoption of heat pumps by residential customers and measure the impact on those customers' electric use in both the summer cooling season as well as in the shoulder and heating months and the impact on those customers' fossil fuel use during the shoulder and heating months.

Because "energy optimization" results in increases in electricity use while driving fossil fuel use down, the pilot would be in direct conflict with the mandate in HB 549 to prioritize kWh savings in portfolio planning. Additionally, the funding required to undertake an EO pilot would necessarily reduce funding and/or support for other programs and measures. This budgetary pressure would only increase should the pilot be transitioned to a full program.

- p. For the NH Electric Utilities, the number of planned Small Business participants in the revised 2022 Plan is lower than the Settlement Plan in a way that is proportional to the decrease in budgets. The revised 2022 Plan budget for Small Business is 45% lower than the Settlement Plan, and the number of participants is 27% lower. The reason they are not directly proportional is due to the larger share of the incentive budget that is planned for midstream offerings, which have a relatively higher number of participants per dollar spent.

For the NH Gas Utilities, there is no change to the definition of participants in the revised 2022 Plan as compared to the Settlement plan. A notable difference for Liberty Gas is the quantity of projected Faucet Aerators, Low Flow Showerheads and Pre-Rinse Spray Valves in the revised 2022 Plan (i.e., 1,507 in 2022) as compared to the Settlement Plan (i.e., 180 in 2022).

- q. The Electric NH Utilities provide incentives to customers to adopt high-efficiency heating appliances. The incentive is designed to overcome the market barrier posed by a higher up-front cost of this equipment compared to standard-efficiency equipment, not to incentivize the customer to switch from fossil fuel heating to electric heat pump equipment. Similarly, the NH Gas Utilities use incentives to help customers overcome the higher cost of a high efficiency gas heating appliance, but do not incentivize customers to switch their heating fuel.

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- r. Please refer to the response provided to Part Q of this question.
- s. The NH Utilities are dedicated to providing excellent service to all of our residential and Commercial and Industrial customers. The Utilities pay particular attention to our most vulnerable customers, who are income-eligible for weatherization services at no cost to them. The NH Utilities work with the network of Community Action Agencies throughout the state to identify and serve income-eligible customers in both single family and multi-family housing. Each utility dedicates at least 17 percent of all portfolio energy efficiency funding to income-eligible programming, and spends a portion of this funding on overcoming barriers to weatherization in our customers' homes, such as electrical wiring, minor repairs, mold and other issues. The NH Utilities also work closely with non-profit organizations, offering enhanced incentives to overcome financial barriers to energy efficiency adoption.

Recognizing the importance of developing a more comprehensive understanding of and approach to equity, the EM&V Working Group has proposed a study to "identify if there are systematic patterns or gaps in how well these populations are served." The NH Utilities anticipate being able to leverage the recent surge in attention and research related to improving equity in energy efficiency program design and delivery so that NHSaves programs will engage those customers who have been least able to access our programs and the benefits they deliver.

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Data Request No. DOE 2-002

Date of Response: April 04, 2022
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Request from: Department of Energy

Request:

Reference EE Plan at Bates 65 where, in Section 3.4.2 it states that NH Utilities plan to utilize a maximum HEA Program rebate per project of \$15,000. Please respond to the following:

- a) What is the current maximum project rebate level and that for each of the prior 3 program years 2019, 2020, 2021?
- b) What specific decision criteria will be used by an “implementation supervisor” to make a determination about exceeding the \$15,000 project limit?
- c) Is the “implementation supervisor” an employee of one of the NHSaves sponsoring utilities? An employee of a program implementation contractor? Please clarify.

Response:

- a. In November 2021, in response to PUC Order 26,553, the project cap was adjusted to \$8,000, which remains in effect today. The cost of replacing heating systems is included within the cap.

In program year 2019, the maximum project rebate level was \$8,000. If additional cost-effective weatherization work was identified for the residence, it would often need to be deferred to the next program year if the limited amount of available federal Weatherization Assistance Program (“WAP”) funding could not cover it. At that time, heating systems were excluded from the project cap calculation. If a heating system replacement was recommended as part of the project, the cost of the replacement was considered separately from the weatherization project cost. Each utility allowed for up to 25% of the HEA budget to be used for heating systems. Heating system spending could be approved above the project cap after reviewing the work scope, cost, project needs, energy savings, and taking into account portfolio cost-effectiveness.

Program year 2020 began under the same framework as 2019, but in May of 2020 the project cap was adjusted to \$20,000. With the adjustment to the higher rebate limit, the cost of heating system replacements moved to be included within the project cap rather than being assessed separately. This approach was less administratively burdensome and allowed for the interactive effects of the weatherization and heating system to be included, providing more

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accurate energy savings. It also provided a more consistent and clear policy for both Community Action Agencies (“CAAs”) and utility staff.

The \$20,000 cap helped to account for, and was responsive to, increases in material and labor costs and was consistent with a program approach that focuses on serving an income-eligible customer fully with a comprehensive set of measures during a single project. It also minimized the need to break projects up and go back for additional cost-effective work in a subsequent program year, or the potential to leave some measures undone altogether. The increased \$20,000 cap also ensured that the opportunity to provide cost-effective insulation or a heating system was not lost due to a conservative spending cap.

In addition, a utility supervisor could, on a case-by-case basis, approve work above the \$20,000 project cap after reviewing the work scope, cost, project needs, energy savings, and taking into account portfolio cost-effectiveness.

For program year 2021, the cap remained at \$20,000 until November 2021, when the project cap was adjusted to \$8,000 in response to PUC Order 26,553. Heating systems continue to be included within the cap, which creates a limiting effect on the amount of weatherization available to income-eligible customers that are in need of a heating system.

- b. If additional cost-effective work can be performed within a given residence that would exceed the \$15,000 limit, based on the CAA recommendation including review of any Weatherization Assistance Project (“WAP”) funding, then the project will be escalated to a utility supervisor on a case-by-case basis to review the work scope, cost, project needs, energy savings and cost-effectiveness of the proposed measures to determine if the exception is justifiable in the event that there is available budget.
- c. The implementation supervisor is always an employee of one of the NHSaves Utilities.