March 31, 2025 *Submitted electronically via: SESComments@energy.nh.gov*

New Hampshire Department of Energy
Division of Policy and Programs
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Public Comment on New Hampshire's State Ten-Year Energy Strategy

To whom it may concern,

On behalf of Northeast Energy Efficiency Partnerships (NEEP)[1], we are pleased to submit comments on New Hampshire's Ten-Year State Energy Strategy. NEEP is a non-profit whose mission is to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities.

We thank the New Hampshire Department of Energy (NHDOE) for the opportunity to provide input on the State's Ten-Year Energy Strategy. We commend NHDOE and the state of New Hampshire for the work it has done so far to accelerate energy efficiency and develop the energy workforce. The state faces comparatively high energy prices, the fifth highest nationally in 2022, especially in its low-income and minority communities. Addressing energy costs is critical.

The following comments are intended to provide technical assistance and resources relating to advancing energy efficiency programming in the state. NEEP is available to answer any further questions and assist in any way possible.

Our comments are organized by section of the 10-year plan: Section 1 – Energy Policy Goals; Section 2 – Energy Overview; Section 3 – Fuel Diversity; and Section 4 – Demand-Side Resources. Our top-line recommendations may be summarized as follows:

- Increase investments in energy efficiency.
- Establish integrated demand response and energy efficiency programs as distributed energy resources.
- Establish long-term energy efficiency targets through an Energy Efficiency Resource Standard.
- Open PUC proceedings to investigate performance-based rates and time-of-use rates.
- Build New Hampshire's energy efficiency and heat pump workforce.
- Encourage consumer-driven, cost-effective heat pump adoption.
- Adopt a contractor-driven whole-home weatherization program.
- Update codes and appliance standards.
- Implement IRA Home Energy Rebates alongside NHSaves.

[1] These comments are offered by NEEP staff and do not necessarily represent the view of the NEEP Board of Directors, sponsors or partners. NEEP is a 501 (c)(3) non-profit organization that does not lobby or litigate.

Section 1: Energy Policy Goals

In the section below, NEEP has identified 3 specific goals from the 10-year energy strategy and included comments on those goals.

1. ***Prioritize cost-effective energy policies.***

Recommendation: Increase Targeted Investments in Energy Efficiency

Nationwide, electricity prices have risen in recent years. From 2022 to 2023, residential electricity prices rose 6.2 percent. When energy costs increase, more households face high or severe energy burden leading to economic energy insecurity – the inability to adequately meet basic household energy costs – and must make difficult choices like trading off costs for heating or eating. This inequity is especially pronounced in the Northeast, with New England demonstrating the largest gap between low-income and median energy burdens, coupled with some of the highest energy costs in the country. These points highlight the need for increased investment in energy efficiency.

Energy efficiency is a least cost resource to the utility system and a critical tool for helping customers lower energy bills by lowering overall energy consumption. Programs promote advanced technologies, provide targeted incentives and assistance to customer segments such as low-to-moderate-income customers and renters, improve grid efficiency to constrain costs, and promote prudent long-term utility strategies and investments. Customer-funded energy efficiency investments in New Hampshire have increased over the last 10 years: for combined electric and gas energy efficiency, the total utility funding for 2025 is 88 percent higher compared to the funding from 2015, adjusted for inflation, almost entirely as a result of increased investment in electric efficiency. However, savings goals for electricity and gas are only 17 and 6 percent higher, respectively, for 2025 as compared to 2015, even with a much larger increase in funding. More targeted investments are needed to give households and businesses a strategy for lowering energy bills.

2. ***Ensure a secure, reliable, and resilient energy system.***

Recommendation: Establish Distributed Energy Resources Programs Alongside Energy Efficiency Programs

DERs can provide a suite of secure, reliable, and resilient energy systems. A 2022 report shows that integration of additional net-metered DERs (namely solar, solar with battery storage, and micro hydro resources) in New Hampshire would generate substantial net avoided cost value. The value of net-metered DERs will increase as distributed generation resources yield higher transmission and distribution avoided costs, a trend anticipated to continue. As grid costs are mostly borne by ratepayers, establishing temporal price signals and recognizing the value of avoided infrastructure costs are essential to reduce customer costs.

Integrating energy efficiency and demand response resources provide further value for grid flexibility. These demand-side resources provide value to distribution system planners but research finds they are typically underutilized.

To start to invest in DERs, New Hampshire can expand the NHSaves energy efficiency portfolio to include integrated energy efficiency and demand response programs such as appliance-based programs that allow customers to flex demand when needed for the grid. Some of these appliances already exist in homes and when aggregated can change demand and load on the grid as needed.

Additionally, appliance-based programs provide an opportunity to use price signals to incentivize customers to participate, helping to lower customer rates. For example, a study by Ecotope and NRDC found that using heat pump water heaters (HPWHs) for demand flexibility can reduce electricity costs by 15 percent for customers and operating costs by 34 percent for the utility. In Hawaii, demand response programs have been designed to reduce residential lighting and water loads, as the state found that those tend to be the largest coincident peak loads. Further, studies allow for a side-by-side breakdown of residential energy usage by appliance. With this data, program administrators can make more informed decisions about which appliances to target and how to best design programs to help both customers and the grid.

4. ***Achieve cost-effective energy savings.***

Recommendation: Enact Legislation to Adopt an Energy Efficiency Resource Standard and Drive Investment in Efficiency

Energy efficiency is one of the most cost-effective resources New Hampshire can invest in. To drive investment in energy efficiency programs, NEEP recommends New Hampshire consider legislation to adopt an Energy Efficiency Resource Standard (EERS). This can ensure that utilities are always achieving cost-effective energy savings and create a long-term, predictable environment for implementers of NHSaves, under a framework for more consistent, lasting energy and financial savings. An EERS remains a cost-effective tool for achieving energy efficiency improvements in the state. According to ACEEE, states with an EERS achieved on average incremental electricity savings of 0.85% of retail sales, compared to average savings of 0.28% in states without an EERS.

Section 2: Energy Overview

The last two updates to the 10-Year Strategy describe higher energy costs in New Hampshire arising from a number of factors, including other New England states' clean energy and decarbonization policy (specifically described as "seeking above-market-cost energy resources" and "the so-called 'clean energy transition'"), lack of supply for low-cost resources, uncertainty in national and international markets, inadequate infrastructure, and geographic realities. The recent plans make recommendations to protect and modernize the grid. These include enhancing cybersecurity measures, continuing the development of grid modernization planning and implementation processes, reducing the risk of outages from severe winter weather events (described as "the winter resource adequacy problem"), and developing workforce training programs. Below NEEP has outlined some additional recommendations that can help the state in these efforts:

Recommendation 1: Open a PUC Proceeding to Explore Performance Based Rates

With relation to modernization of the grid, NH should investigate performance-based regulation as a framework to encourage utilities to develop innovative strategies for better service delivery and greater reliability. The state

could look to the example of Hawaii, where the Public Utility Commission (PUC) adopted a performance-based rate for Hawaiian Electric. Under this structure, the company earns additional revenue if it achieves performance in key areas: interconnection, low-to-moderate income energy efficiency, and advanced metering infrastructure. The decision to include performance-based rates and the scheme to use them was a culmination of over two-and-a-half years of work through a stakeholder process that included utilities, the state consumer advocate, local governments, clean energy companies, and environmental groups. We recommend legislation that directs the NH PUC to investigate the implementation of performance-based regulation.

Recommendation 2: Increase Demand Response Programs Available in the State

We also recommend that New Hampshire increase implementation of demand response programs to deliver peak demand shaving and resultant grid benefits – this recommendation is discussed further in **Section 4: Demand-Side Resources**.

Recommendation 3: Build New Hampshire's Energy Efficiency Workforce

Additionally, NH should invest in workforce development, building a robust pipeline through apprenticeships and training programs. This should include the establishment of a qualified contractor network. To develop the energy efficiency market there will be a growing demand for all kinds of new workers including HVAC installers, home auditors, building operators, code officials, and design professionals. The state can leverage existing resources such as local vocational and technical high schools and community colleges to get students engaged in energy efficiency related workforce tracks. NH should consider encouraging workforce development in underrepresented areas, to encourage local community development.

Section 3: Fuel Diversity

The last two updates to the 10-Year Strategy support having a diverse resource mix, which can help ensure a secure, reliable, and resilient energy system. The plans support investments and policies that prioritize the most cost-effective energy production and delivery, with an end goal of "unaided market competition where the technology competes on its own specific attributes and costs, not one that depends on taxpayer or ratepayer support." Additionally, this section highlights policies that allow customers to choose their heating system and not force early replacement. Below NEEP has provided some high-level recommendations concerning Fuel Diversity:

Recommendation 1: Encourage Consumer-Driven, Cost-Effective Heat Pump Adoption

Heat pumps are a highly efficiency way to heat and cool homes. NEEP encourages New Hampshire to continue to enable customers to make overall cost-effective switches that improve energy affordability. Heat pumps reduce energy costs and electricity use for customers on electric baseboard resistance heating, which helps the 10 percent of the state's residents that use electricity as the primary heating source. New Hampshire should encourage fuel-switching that improves costs for customers, rather than evaluating the benefits of fuel-switching on a per-fuel basis (i.e., only measuring increase/decrease of electric use, rather than overall energy spending).

Currently, only about 2 percent of the state's residents use heat pumps. Customers using electric baseboard resistance stand to save approximately $3000 annually by switching to heat pumps. Another 40 percent of New Hampshire's households use fuel oil as their primary heating fuel, ten times the national average, and almost 20 percent of homes use propane for heat, nearly four times the national average. These customers using delivered fuels stand to save between $700-$1000 annually by switching to heat pumps.

The New England Heat Pump Accelerator will also help increase cost effective adoption of heat pumps and heat pumps water heaters. This midstream program will work with distributors to stock heat pumps and heat pump water heaters. This will ensure that heat pump technology and qualified, well-trained installers are available to customers who choose heat pumps. However, because the Accelerator uses a midstream market approach, it needs to be paired with a strong state-led, consumer-driven heat pump initiative.

Recommendation 2: Invest in More DERs

Initiatives that improve the integration of distributed energy resources (DERs) onto the grid are cost-effective because they flatten peak demand, providing additional supply at critical time periods. We recommend that New Hampshire increase integration of DERs to benefit the grid by flattening peak demand – this recommendation is discussed further in **Section 4: Demand-Side Resources**.

Additional energy efficiency recommendations are included in: **Section 4: Demand-Side Resources**.

Section 4: Demand-Side Resources

The 10-Year Energy Strategy identifies energy efficiency as a low cost and clean energy resource. As the plan states, investing in efficiency boosts the state's economy and reduces energy costs for consumers and businesses. New Hampshire should continue capturing cost-effective energy efficiency in all sectors, including buildings, manufacturing, and transportation. Cost-effective measures might include increased integration of demand response, as well as weatherization and other energy efficiency improvements.

Recommendation 1: Adopt a Contractor-Driven Whole-Home Weatherization Program

NH should invest in cost-effective comprehensive energy efficiency programs, such as weatherization as part of whole-home improvements and retrofits, to invest in homes, improve long-term affordability and home comfort, and decrease the strain on the grid. Deep energy retrofit programs can save 50 percent or more of energy used in the home and include measures such as building shell improvements, insulation and air sealing, and upgrades to high-efficiency heating and cooling and hot water systems. Current energy efficiency programs are offered in a "program-centric manner" with incentives, technical assistance, and strategic planning administered across multiple programs and agencies. This puts the burden on customers or implementers to identify which rebates apply to their project and separately apply for each one. Programs can shift away from a measure-by-measure to a multi-measure approach. This can be achieved through changes in energy efficiency program implementation and design, by developing pre-determined suites of retrofit solutions that can be replicated in similar homes within a state or region, or through other program innovations. For customers, this means providing a streamlined set of options from insulation to appliance replacement. For program

implementers, this requires shifting away from thinking about measures on an individual basis to thinking about measures holistically (weatherization, HVAC, and appliances) with modeled or measured savings programs.

Another route to encourage weatherization is through the contractors in the state, with a market-based approach. A contractor-based program that combines weatherization, electrification, and renewable energy into one package for customers can provide a comprehensive, bundled approach. One program the state could consider is the Total Energy Pathways (TEP) program. This program is contractor driven and includes a contractor certification, Total Building Performance (TBP) Certificate, that can enable the workforce in New Hampshire to deliver whole-home solutions. The Certificate is the only one of its kind designed to prepare individuals with the holistic knowledge to assist and guide whole-building retrofits that center customer satisfaction and maximize residential energy and emissions savings. To earn the TBP certificate, contractors must successfully pass the certificate exam.

Recommendation 2: Integrate Demand Response with Energy Efficiency Programs

Demand response will shift load and shave peak demand, which provides grid benefits and lowers infrastructure investment costs. A 2022 report shows that integration of additional DERs in New Hampshire would generate substantial net avoided cost value. The report describes benefits of a total net avoided cost value of $0.11 to $0.18 per kWh energy produced in 2021 and $0.10 to $0.23 per kWh produced in 2035, with net energy metered installation of residential and commercial solar PV, battery storage, and micro hydro resources. Increasing the deployment of net-metered DERs provides substantial cost savings primarily in energy and transmission costs. Over time, transmission is expected to become more expensive, representing 74 percent of the total avoided cost value stack. Integrating DERs can therefore lower grid costs significantly over the next ten years from the supply side. Net-metered DERs can also provide additional value, aside from avoided infrastructure costs, including transmission capacity, transmission and distribution system upgrades, distribution grid support services, and resiliency. Furthermore, customer bills are expected to decrease significantly for those using distributed generation, especially residential customers.

When aggregated, large appliances (refrigerators, washers and dryers, and dishwashers) in households can account for 30 percent of electricity used in residential buildings in the United States. Demand response programs spread this aggregated use across the customer base, which reduces peak electricity demand and lowers stress on the grid. Demand response programs are typically designed so that customers agree to not run a large appliance, such as a dishwasher, during peak periods in exchange for a discount on their utility bill. Further, demand response programs that are focused on large appliances (refrigerators, washers, dryers, and dishwashers) are particularly beneficial to consumers since altering their time of use will not significantly affect the comfort of the indoor environment.

Recommendation 3: Initiate a TOU Rates Proceeding at the Public Utilities Commission

Time-of-use (TOU) rates are used to encourage customers to reduce their energy usage at times of peak load and/or encourage customers to increase their energy usage during off-peak periods. TOU rates are cost-effective policy tools because they flatten peak demand, providing additional supply and reducing demand

respectively at critical time periods. Active demand response programs, such as time-of-use programs or appliance-based offerings, are a great way to engage a wider swath of customers at a lower cost. These programs can work as a tool to inform consumers about their energy habits and empower them to have more control over their power bill. Maine and other states in the region have opened proceedings to explore the use of TOU rates to shift customers' usage during peak times in the winter and summer.

Recommendation 4: Update Codes and Appliance Standards

Updated codes and standards can encourage the market to find innovative solutions to decrease energy use requirements of buildings and appliances. Codes and standards establish firm timelines for bringing improvements to market and provide clear regulatory signals that spur changes in technologies and building practices. The last 10-Year State Energy Strategy updates called out inadequate infrastructure as a reason for higher energy costs experienced in New Hampshire. Adopting more advanced codes could avoid later costs; NH might consider adopting either the 2021 or 2024 IECC. Additionally, New Hampshire last adopted appliance standards with SB259 (2008), for water dispensers and commercial hot food holding cabinets. If the state were to adopt updated appliance standards, it stands to save $21 million by 2030 and $65 million by 2040 in annual utility bill savings, or $1.25 billion cumulatively by 2050.

Recommendation 5: Implement IRA Home Energy Rebates Alongside NHSaves

Other federal funds including the IRA Home Energy Rebates should be implemented in coordination with existing utility and state programs. Different entities implement energy efficiency programs within the state and have the potential to receive funding. The state can coordinate with these various actors now to streamline program implementation. NEEP encourages NHDOE to work with utilities in implementing IRA and can help the state integrate new and existing programs. For deeper discussion of how to coordinate programs with different funding sources, NEEP recently published a report titled "Expanding the Energy Savings Pie: Attribution Frameworks to Align IRA Home Energy Rebates and State Programs."

Recommendation 6: Establish an Energy Efficiency Resource Standard

NH should revive the EERS to coordinate and develop energy efficiency programming to achieve maximized cost-effective savings. Binding, long-term energy savings targets for measures installed through energy efficiency programs are highly effective energy saving policies that can drive utilities to optimize investments in energy efficiency, bringing the greatest possible financial benefit to New Hampshire ratepayers. New Hampshire could create a framework for more consistent, lasting energy and financial savings by codifying energy efficiency targets through legislation. According to ACEEE, states with an EERS in effect achieved on average incremental electricity savings of 0.85 percent of retail sales, compared to average savings of 0.28 percent in states without an EERS.

Conclusion

We thank the New Hampshire Department of Energy for the opportunity to provide comments. These comments are intended to support the work currently underway with the update to the 10-Year State Energy Strategy, and we appreciate the opportunity to provide input. In addition to these comments, NEEP is available

to provide technical assistance to the NHDOE on the Strategy and other energy efficiency policies and programs. If you have questions or would like additional information, please reach out to Erin Cosgrove, ecosgrove@neep.org.

Sincerely,

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