

**STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION**

DE 17-136

GAS AND ELECTRIC UTILITIES

2018-2020 NEW HAMPSHIRE STATEWIDE ENERGY EFFICIENCY PLAN

BENEFIT COST WORKING GROUP RECOMMENDATIONS

Order Approving Benefit Cost Working Group Recommendations

ORDER NO. 26,322

December 30, 2019

APPEARANCES: Matthew J. Fossum, Esq., for Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource); Patrick Taylor, Esq., for Northern Utilities, Inc., (Northern), and Until Energy Systems; Michael J. Sheehan, Esq., for Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities, Inc., (Liberty), and for Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities (EnergyNorth); Mark W. Dean, Esq., for New Hampshire Electric Cooperative; New Hampshire Legal Assistance, by Raymond Burke, Esq., for The Way Home; Rebecca Ohler for the New Hampshire Department of Environmental Services; Caitlin Peale Sloan, Esq., for Conservation Law Foundation; Madeleine Mineau, for Clean Energy NH; Jeff Marks, Esq., for Acadia Center; Melissa E. Birchard, Esq., for Sunrun, Inc.; Office of the Consumer Advocate, by D. Maurice Kreis, Esq., and Christa Shute, Esq., for residential ratepayers; and Paul B. Dexter, Esq., and Brian D. Buckley, Esq., for the Staff of the Public Utilities Commission.

This order adopts a new cost-effectiveness screening framework for New Hampshire's ratepayer-funded energy efficiency programs. The framework consists of a primary test, known as the Granite State Test, and two secondary tests: the Utility Cost Test, and the Secondary Granite State Test. A summary of these tests is attached in Appendix 1 of this order. The Commission also confirms that the planning process identified in Order No. 26,207 (December 31, 2018), should continue to investigate opportunities for load factor improvements associated with energy optimization.

I. PROCEDURAL HISTORY

On December 31, 2018, the Commission approved the implementation of an energy efficiency plan for 2019 for electric and gas utilities (2019 Plan Update). Order No. 26,207. In approving the 2019 Plan Update, the Commission designated the Benefit/Cost (B/C) Working Group as the technical lead for two studies analyzing cost effectiveness and energy optimization. The Commission also required the B/C Working Group to make recommendations for the Commission's use in developing the next triennial energy efficiency plan for 2021-2023. *Id.* at 8-9.

The B/C Working Group met eight times between February 2019 and September 2019. On October 31, 2019, the Commission Staff filed the *New Hampshire Cost-Effectiveness Test Review* (Cost-Effectiveness Test Review) and *Energy Optimization through Fuel Switching Study* (Energy Optimization Study) along with a report on behalf of the B/C Working Group (B/C Working Group Report, or Report). The Report summarizes the findings of both studies and lists recommendations for next steps based on those studies. On November 6, the Commission issued a secretarial letter soliciting comments on the Report and the recommendations contained therein. Comments were filed by New Hampshire Legal Assistance, Clean Energy NH, and the NH Utilities.¹

II. B/C WORKING GROUP RECOMMENDATIONS

Based on the outcome of the Cost-Effectiveness Test Review and Energy Optimization Study, the B/C Working Group recommended that the Commission:

- (1) Adopt the Granite State Test as the primary test for energy efficiency cost-effectiveness screening;

¹ The "NH Utilities" include the electric utilities (Eversource, Liberty, New Hampshire Electric Cooperative, Unitil) and gas utilities (EnergyNorth and Northern).

(2) Adopt the Utility Cost Test and Secondary Granite State Cost Test as secondary tests, requiring the utilities to perform and file both alongside the primary test;

(3) Consider, if proposed following additional review during development of future plans, other alterations to cost-effectiveness screening practices recommended by the Cost-Effectiveness Test Review; and

(4) Provide guidance as to whether stakeholders should continue, through the planning process identified in Order No. 26,207, to investigate energy optimization and related load factor improvement opportunities, including through:

- a) Establishment of any relevant programs or pilot programs (*e.g.*, for air source heat pumps) to evaluate the reasonableness of accounting for unregulated fuel savings and increases in regulated fuel consumption resulting from energy optimization measures; and/or
- b) Consideration of a net MMBtu savings goal component of the electric programs and any related alterations to the performance incentive mechanism during the program planning process for the next triennial plan.

B/C Working Group Report at 11-12.

A. Granite State Test

The B/C Working Group Report describes the Granite State Test (GST) as a test that “focuses on costs and benefits which accrue to the utility system, while also considering impacts associated with unregulated fuels, water, fossil fuel emissions, and income eligible participants.” *Id.* at 5. Typical costs included in the GST are those associated with program administration, such as the customer incentive, evaluation costs, and the utility performance incentive. Typical benefits included in the GST are those associated with the utility system, as well as unregulated fuel savings, water savings, and low-income participant benefits such as improved occupant health and safety. Notably, the GST would not include the installed costs of a measure paid for by a program participant. *Id.* at 13; Cost-Effectiveness Test Review at 23-31. As the primary test, the GST would be the determinant of whether a program should be included in the portfolio of energy efficiency measures.² *Id.* at 4.

² The B/C Working Group report notes the Commission 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

B. Utility Cost Test and Secondary Granite State Test

In addition to the GST, the B/C Working Group Report describes two secondary tests that the utilities will perform and file in order to help inform future resource allocation decisions, as well as treatment of marginally cost-effective programs: The Utility Cost Test (UCT) and Secondary Granite State Test (GST-2).

The UCT includes only those costs and benefits which affect the utility system and the distribution utility's revenue requirement. *Id.* at 5, citing Cost-Effectiveness Test Review at 54. Typical costs included in the UCT are those associated with program administration, such as the customer incentive, evaluation costs, and the utility performance incentive. Typical benefits included in the UCT include avoided energy, distribution, and transmission costs, and avoided credit and collection costs. *Id.* at 13; Cost-Effectiveness Test Review at 23-31.

The GST-2 includes all of the impacts within the GST, but also “includes participant costs, participant non-energy impacts beyond the income eligible sector, income eligible societal benefits, and environmental impacts beyond the fossil emission value currently used in New Hampshire.” *Id.* at 5, citing Cost-Effectiveness Test Review at 55-58. Typical costs included in the GST-2 are those associated with program administration (*e.g.* the customer incentive, evaluation costs, and the utility performance incentive), the participating customer (*e.g.* the customer's share of installed measure costs), and costs that accrue to society more broadly. Typical benefits included in the GST-2 are those associated with the utility system (*e.g.* avoided energy, avoided distribution, avoided transmission, and avoided credit and collection costs); the participating customer (*e.g.* improved occupant health and productivity); and society (*e.g.* avoided emissions and public health). *Id.* at 13; Cost-Effectiveness Test Review at 23-31.

participation impacts; jobs and economic development impacts; customer equity; and any other goals of the programs.

C. Other Alterations to Cost-Effectiveness Screening Practices

The B/C Working Group Report cites several recommendations within the Cost-Effectiveness Review that the Commission may consider, if proposed, during future iterations of program plan filings, including: (1) adopting an alternative quantification of economic development impacts; (2) extending the measure lives in the B/C model from 25 years to 30 years; (3) adopting dual baselines for early replacement measures; (4) transitioning from adjusted gross savings accounting methodologies to a net savings accounting methodology; (5) adopting the National Standard Practice Manual's (NSPM) standardized program-level reporting template; and (6) collecting more detailed information regarding program participation. *Id.* at 6, citing Cost-Effectiveness Test Review at 41, 47-49, 65-67.

D. Energy Optimization Study and Request for Guidance

The B/C Working Group Report defines energy optimization as “a strategy to minimize energy use and maximize customer benefits ... [that] considers efficiency and the mix of fuels used,” and distinguishes energy optimization from fuel switching, energy efficiency, and beneficial electrification. *Id.* at 7-8, citing Energy Optimization Study at 1. The Report observes that New Hampshire's energy efficiency program administrators already offer “fuel blind programs through which the regulated utilities claim savings and recover costs for measures that target unregulated fuel savings.” *Id.* at 8. The Report further explains that when a customer switches fuels to an electric or natural gas-powered end-use for heating or cooling, the program administrators do not claim savings associated with the previous fuel, which is often an unregulated fuel such as oil or propane. In those cases, the programs assume that the decision to switch fuels was not influenced by the program incentives, and, as a result, the program administrators only claim savings for the difference between the electricity use of the incented

measure and a less efficient baseline version of the same fuel type. *Id.* at 8-9. The Report observes that, as a result of recent statutory and regulatory guidance, and supporting program evaluations, program administrators throughout the Northeast are transitioning “to a model where, in at least some residential retrofit applications, the calculation of program savings does not assume the customer would have switched fuels regardless of program support.” *Id.* at 9.

The B/C Working Group Report notes that the Energy Optimization study also includes modeled customer energy usage and bill impacts associated with energy optimization on a measure-by-measure basis. *Id.* at 10-11, citing Energy Optimization Study at 30-32. To assess those impacts, a pre-existing residential energy optimization model was adapted to include New Hampshire specific inputs such as fuel cost data, weather data, saturation of various air conditioning technologies, and the regional electric generation mix. *Id.* Consistent with treatment of energy optimization measures in neighboring jurisdictions, the model nets MMBtu savings associated with the previous fuel (*e.g.* oil or propane) against increased energy usage and demand associated with the new fuel (*e.g.* electricity). Although the study models both oil-to-electric and oil-to-natural gas measures, the study notes that no Northeast states allow program administrators to claim savings for conversion from an unregulated fuel to natural gas, largely due to concerns that the customer would have switched to gas regardless of the program intervention. Energy Optimization Study at 19, 30-32, 36.

Based on the study’s review of existing energy optimization analyses, the B/C Working Group Report also observes that certain energy optimization measures have the potential to put downward pressure on rates by spreading the costs of the system peak over more units of usage. The downward pressure on rates is attributable to the average load shape of those newly electrified end uses, which on average would increase load during times when the transmission

and distribution system is not at its peak load. The result, which has the potential to reduce rates for both program participants and non-participants, is often referred to as “improved load factor.” B/C Working Group Report at 11, citing Energy Optimization Study at 25-27.

III. NOVEMBER 13, 2019 COMMENTS

In response to the Commission’s November 6, 2019, Secretarial Letter soliciting comment, the NH Utilities, The Way Home, and Clean Energy NH filed comments on the B/C Working Group Report.³

A. NH Utilities

The NH Utilities expressed appreciation for the time and attention devoted to the B/C Working Group process and Report, as well as support for the consensus described therein. NH Utilities Comments at 1.

B. The Way Home

The Way Home expressed support for the Report and recommendations of the B/C Working Group, and suggests that the Commission’s approval of the revised cost-effectiveness test will improve program planning, implementation, and evaluation. The Way Home Comments at 1.

C. Clean Energy NH

Clean Energy NH expressed appreciation for the efforts of the working group, and suggested that any energy optimization approach embraced by New Hampshire should be technology neutral, encouraging “adoption of all forms of renewable and efficient energy including but not limited to geothermal energy and modern efficient centralized wood heating.” Clean Energy NH Comments at 1.

³ Clean Energy NH’s comments are date-stamped on the day following the Commission’s comment deadline, but are still addressed in this order.

IV. COMMISSION ANALYSIS

As a preliminary matter, the Commission thanks the members of the B/C Working Group for the time and effort they have invested in the Cost-Effectiveness Test Review, Energy Optimization Study, the B/C Working Group Report, and the consensus recommendations contained therein. The stakeholders have consistently worked in a collaborative manner and serve as an example of how constructive stakeholder processes can aid the Commission in its decision-making duties and allow parties to reach a result in line with their expectations.

A. Cost-Effectiveness Screening

The B/C Working Group Report recommends that the Commission adopt a new framework for determining benefits and costs associated with investments in energy efficiency.⁴ The proposed cost-effectiveness framework was informed by an extensive review of state policies as defined by statute, interpreted by Commission precedent, and guided by the state energy strategy. Cost-Effectiveness Test Review, at 71-74 (Appendix A). The proposed framework departs from our previously approved framework, which was developed as a result of a similar working group process and adopted nearly two decades ago. Order No. 23,574 at 14. (November 1, 2000). While the previously approved framework applied a variation of the Total Resource Cost (TRC) test to New Hampshire's energy efficiency programs, the proposed framework embraces the GST as a primary test, while supplementing that with the UCT and GST-2 secondary tests. As the primary determinant of whether to include a program in the portfolio, we appreciate that the benefits and costs within the GST are based on a review of New Hampshire's existing statutes and policies. We also appreciate inclusion of the secondary

⁴ As discussed *supra* at section II.C, the B/C Working Group Report suggests the Commission defer consideration of certain recommendations contained in the Cost-Effectiveness Test Review. We agree that certain issues would be more appropriately addressed in the context of a specific program proposal.

tests to aid the Commission and other stakeholders in decisions relating to resource allocation and treatment of marginally cost-effective programs. We note that the secondary tests provide additional data points, among several others, that the Commission may consider when evaluating marginally cost-effective programs, and that the primary test shall be the primary determinant of whether to include a program in the portfolio.

Use of the GST as the primary test will improve energy efficiency program screening by placing a greater emphasis on the utility system impacts than our current test. For example, in evaluating the cost-effectiveness of a lighting retrofit at a small business under the TRC, program evaluators consider the costs and benefits that accrue to the utility system and the program participant who installed the lighting measure. Evaluating that same lighting retrofit under the GST, program evaluators would consider the costs and benefits that accrue to the utility system, but would not generally consider those impacts accruing to program participants (*e.g.*, the participant's improved productivity, comfort, property value, and share of installation costs). We find that this emphasis on utility system impacts, which accrue to program participants and non-participants equally, will more appropriately target those measures and programs that lower utility system costs, minimizing disparate treatment of program participants and non-participants.

Based on the foregoing, we adopt the proposed framework for energy efficiency programs, subject to additional guidance regarding: (1) applicability of the framework to distributed energy resource (DER) investments other than energy efficiency; and (2) treatment of hard-to-quantify impacts.

1. Applicability to Other Investments

The Cost-Effectiveness Test Review contains a section discussing whether the new cost-effectiveness framework might apply to other DERs. Cost-Effectiveness Test Review at 83-85 (Appendix C). Noting stakeholder agreement that it was beyond the scope of the working group to address issues relating to the cost-effectiveness of other DERs, the Cost Effectiveness Test Review describes how the new framework *might* be applied to other DERs and makes recommendations relative to that application. *Id.* at 83. We note that the policies considered by the B/C Working Group in their development of the cost-effectiveness framework and contained in Appendix A of the B/C Working Group Report focused on statutes, policies, and precedents related to energy efficiency, rather than the broader universe of DERs. We also note that cost-effectiveness is an issue being considered in other dockets before the Commission, including DE 16-576 where the Commission has approved studying the value of certain distributed energy resources, and DE 15-296 where cost-effectiveness screening of certain distribution system investments remains at issue. Because cost effectiveness is an issue we are evaluating in other dockets, we clarify that our approval of the proposed framework for energy efficiency investments should not be considered approval for the purpose of any other investments, DER or otherwise.

2. Treatment of Hard-to-Quantify Impacts

Both the GST and the GST-2 include non-energy impacts that have not previously been quantified through New Hampshire specific primary research. B/C Working Group Report at 5-6. The Cost-Effectiveness Test Review describes two ongoing studies related to non-energy impacts that may inform the quantification of those impacts. Cost-Effectiveness Test Review at 69-70. The Report notes that, consistent with the Commission-approved 2018-2020 Energy

Efficiency Plan Settlement, the B/C Working Group will determine whether to accept the results of the evaluations, adopt a reasonable proxy based on those evaluations, or continue to use the existing adders. B/C Working Group Report at 5-6. As the B/C Working Group stakeholders consider the results of the ongoing evaluations, we direct stakeholders to minimize, to the extent reasonable, any incremental costs associated with quantifying impacts that were not previously included in New Hampshire's variation of the TRC test. For example, the cost of quantifying impacts associated with secondary tests should be balanced against the likely magnitude of the impact and opportunities to embrace evidence-based studies from other jurisdictions whose values might be adapted for New Hampshire-specific impacts. While we agree in principle that hard-to-quantify impacts should not be neglected simply because they are hard to quantify, we remain mindful that the costs associated with quantifying those impacts are ultimately borne by ratepayers, and direct the relevant working group(s) to carefully balance the costs and benefits of each possible approach.

B. Energy Optimization

The B/C Working Group Report requests guidance from the Commission regarding whether stakeholders should continue to investigate energy optimization and related load factor improvement opportunities, citing establishment of pilot programs and alterations to the savings goals or performance incentive framework as two opportunities for further investigation. B/C Working Group Report at 10. We note that there is no specific pilot proposal, savings goal alteration, or revised performance incentive framework before us to consider. In light of that fact, we take no position on whether a pilot or alterations to the savings goals or performance incentive framework are appropriate at this time. We do, however, provide further guidance

below, on our understanding of how energy optimization might fit within the landscape of New Hampshire's energy efficiency programs.

1. Precedent and Unregulated Fuel Savings

In 2013, the Commission expanded the residential Home Performance with Energy Star® (HPwES) fuel neutral pilots to full-fledged program status for two primary reasons. First, fuel neutral savings tend to also have ancillary electric savings (*e.g.*, weatherizing an oil-heated home also minimizes the need for summer air cooling). Second, fuel-neutral measures can help improve cost-effectiveness at a given site and “serve as the catalyst for electric savings once utilities are ‘in the door’ with customers.” Order No. 25,402, at 20-25 (August 23, 2012).⁵

2. Load Factor Improvement Opportunities

The B/C Working Group Report and Energy Optimization Study posit an additional reason the Commission might encourage efficiency program administrators to save fuels other than the one they deliver: load factor improvement. The Report suggests that certain energy optimization measures have the potential to put downward pressure on rates by spreading the costs of the system peak over more units of usage. Load shape can be improved if newly electrified end uses operate primarily during times when the transmission and distribution system have unused capacity. Increasing usage without increasing peak demand, (improving the system load factor) has the potential to result in lower rates for both program participants and non-program participants. B/C Working Group Report at 11, citing Energy Optimization Study at 25-27.

⁵ Customers derive benefit from the uniform availability of weatherization programs throughout the territory of the electric distribution utilities, rather than just to those homes that heat with regulated fuels such as electricity or natural gas.

In approving the energy efficiency programs for each of the first two years of the current EERS triennium (2018 and 2019), and the Commercial and Industrial (C&I) Demand Reduction Initiative, we noted that both participants and non-participants benefit from New Hampshire's energy efficiency programs. Order No. 26,232 at 6 (approving C&I Demand Reduction Initiative); Order No. 26,207 at 17 (approving 2019 energy efficiency programs); Order No. 26,095 at 18 (January 2, 2018) (approving 2018 energy efficiency programs). We find, based on the analyses of the Cost-Effectiveness Test Review, that load factor improvements associated with certain energy optimization measures, namely heat pumps and ductless mini-splits, may present a related opportunity for ratepayers. In that situation, non-participants may stand to benefit from increased electricity sales that do not significantly increase transmission and distribution system costs.

3. Energy Optimization Guidance

The Commission remains mindful that cost-of-service ratemaking promotes capital investment and may encourage a distribution utility that also administers energy efficiency programs to focus on savings strategies that either increase or do not adversely affect its own sales. For example, in order to counter-balance that incentive, shortly after approving the transition of the fuel neutral pilots to full-scale programs, the Commission altered the energy efficiency program performance incentive to ensure electric savings remain the primary focus of the programs. Order No. 25,569, at 2-3. (September 6, 2013) ("If it is determined that electric lifetime savings are greater than or equal to 55 percent of total lifetime energy savings, a higher performance incentive would apply. If the electric lifetime savings fall below 55 percent of total lifetime energy savings, a lower incentive would apply"). We note that that aspect of the performance incentive remains in effect today. While we continue to view that aspect of the

performance incentive as necessary, below we clarify additional safeguards which can be used to ensure the unregulated fuel program savings and incentives do not unreasonably shift costs to non-participants.

In reviewing the 2019 Update Plan settlement agreement, the Commission approved a plan to conduct a bill impact analysis for the energy efficiency programs that would consider bill impacts to efficiency program participants and non-participants. Order No. 26,207, at 10. (December 31, 2018). The Cost-Effectiveness Test Review notes that the bill impact analysis is expected to be complete by spring 2020 and “can help inform program priorities, program design, and whether and how to place limits on program spending.” Cost-Effectiveness Test Review at 64. The bill impact analysis and the utility cost test will be used by the Commission, and should be used by the utilities and other stakeholders to ensure unregulated fuel program savings and incentives do not unreasonably shift costs to non-participants.

The Energy Optimization Study identifies program changes related to energy optimization that Northeastern states have pursued through pilots or small scale programs including: counting unregulated fuel savings and electric load increase for fuel-to-electric measures; offering tailored air-source heat pump measure bundles, such as those including weatherization and integrated controls; and offering energy optimization-specific workforce training guidance. Energy Optimization Study at 59. If the next iteration of the program plans were to propose an energy optimization pilot, the effectiveness of the above-mentioned program changes could be tested and verified prior to any decision regarding whether to embrace them at the program level. For example, the Energy Optimization Study modeled the savings that might be claimed for various energy optimization measures when embracing a more holistic accounting method that nets MMBtu savings against electric load increases. There are no existing New

Hampshire-specific evaluations that verify the validity of those projected bill savings and effects on avoided cost assumptions. Such evaluation results could also be used to inform the treatment of so-called “lost revenues” which are offset by load built through the installation of a program-sponsored heat pump or ductless mini-split, which could be described as “found revenues.” A pilot and/or study could also be used to determine whether installation of certain energy optimization measures really do, on average, result in load factor improvements without unduly impacting overall peak transmission or distribution system load.

We observe that all stakeholders praised the efforts of the B/C Working Group and were generally supportive of the recommendations. The single caveat to this observation is the comment filed by Clean Energy NH, which supports the recommendations of the B/C Working Group, but also suggests that any energy optimization framework embraced by the Commission should be technology neutral and encourage “all forms of renewable and efficient energy including but not limited to geothermal energy and modern efficient centralized wood heating.” Clean Energy NH Comments at 1.

In response to CENH’s comments, we take this opportunity to clarify the potential scope of any continued energy optimization investigation that might occur within the planning process identified in Order No 26,207. The planning process identified in that Order focuses on the types of measures and technologies supported within energy efficiency programs. We note that the Energy Optimization Study contains only limited discussion of wood pellet and geothermal heating, and that in other states incentives for such measures are not generally provided through energy efficiency programs. Energy Optimization Study at 18, 19, Appendix E. Since the Energy Optimization Study and the planning process outlined in Order No. 26,207 did not consider the measures suggested by Clean Energy NH, we clarify that we do not view it as a

reasonable investment of energy efficiency program funds to consider those measures during this docket's continued investigation of energy optimization.

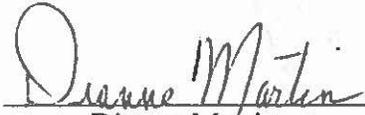
Based upon the foregoing, it is hereby

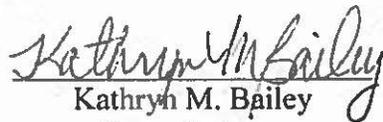
ORDERED, that the Granite State Test as described above is adopted as the primary test for screening the cost effectiveness of investments in energy efficiency, effective January 1, 2021; and it is

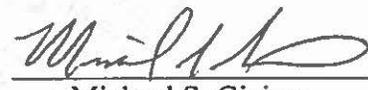
FURTHER ORDERED, that the Utility Cost Test and Secondary Granite State Test as described above are adopted as secondary tests for screening the cost effectiveness of investments in energy efficiency, effective January 1, 2021; and it is

FURTHER ORDERED, that an energy optimization pilot and/or study and related alterations to the cost-effectiveness screening methods of energy optimization measures will be considered if a specific proposal detailing such a pilot is presented.

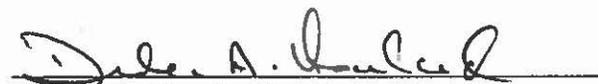
By order of the Public Utilities Commission of New Hampshire this thirtieth day of December, 2019.


Dianne Martin
Chairwoman


Kathryn M. Bailey
Commissioner


Michael S. Giaimo
Commissioner

Attested by:


Debra A. Howland
Executive Director

Appendix 1: Cost-Effectiveness Screening Framework Summary

The table below summarizes the impacts included in the Granite State Test (GST), the Utility Cost Test (UCT), and Secondary Granite State Test (GST-2).

Impact	Primary Test: Granite State Test	Secondary Test: Utility Cost Test	Secondary Test: Secondary Granite State Test
<i>Utility System Costs</i>			
Measure costs (utility portion)	✓	✓	✓
Other financial or technical support costs	✓	✓	✓
Other program and administrative costs	✓	✓	✓
EM&V costs	✓	✓	✓
Performance incentives	✓	✓	✓
<i>Utility System Benefits</i>			
Avoided energy costs	✓	✓	✓
Avoided generating capacity costs	✓	✓	✓
Avoided reserves	✓	✓	✓
Avoided transmission costs	✓	✓	✓
Avoided distribution costs	✓	✓	✓
Avoided T&D line losses	✓	✓	✓
Avoided ancillary services	✓	✓	✓
Intrastate price suppression effects (DRIFE)	✓	✓	✓
Avoided compliance with RPS requirements	✓	✓	✓
Avoided environmental compliance costs (embedded)	✓	✓	✓
Avoided credit and collection costs	✓	✓	✓
Reduced risk	✓	✓	✓
Increased reliability	✓	✓	✓
Market transformation	✓	✓	✓
<i>Non-Utility System Impacts</i>			
Other fuel	✓		✓
Water resource	✓		✓
Income eligible (participant)	✓		✓
Income eligible (societal)			✓
Participant costs			✓
Participant non-energy benefits			✓
Environmental, NH fossil fuel proxy	✓		✓
Environmental, other externalities			✓
Public health			
Energy security			

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