

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-1

Date of Response: October 13, 2023
Page 1 of 1

Request from: New Hampshire Public Utilities Commission

Request:

Subset 1 - Inquiries Related to Benefit-Cost ("B/C") Testing to the Joint Utilities

Refer to the joint utilities' response to 2-001-5, part 3.

- a. Can the joint utilities confirm through a yes or no response that the nominal discount rate in Row 33 of the Lookups tab in the B/C model flows through a formula into the real discount rate in row 35, using an inflation adjustment?
- b. Consider a case where the nominal discount rate is changed in Row 33 of the Lookups tab in the B/C model (scenario A). Consider another case (scenario B), where the nominal discount rate is not changed, but the real discount rate is hard-coded to the number that scenario A produces. Please confirm whether, all else equal, the GST and TRCT tests from scenario A and scenario B would generate the same results.
- c. Now consider a hypothetical case where the nominal discount rate and inflation are inputted as zero, but the real discount rate is entered as a hard-coded input entry matching the original real discount rate that was already in the model. Please confirm whether the GST and TRCT tests would match the result that was originally generated by the model. If not, why not?

Response:

- a. Yes, the nominal discount rate is adjusted by a formula that includes an inflation adjustment to arrive at the real discount rate.
- b. The benefit-cost ratios under the GST and TRCT will differ between these scenarios. The nominal discount rate is used to adjust the denominator of the test (costs, specifically for years 2025 and 2026) while the real discount rate is used to adjust the numerator (benefits). In scenario A, changing the nominal discount rate changes the present value of both the costs and benefits. In scenario B, however, benefits are changed while costs are not.
- c. Refer to the response to part b; because 2025 and 2026 costs would not be adjusted in this scenario, the benefit-cost ratios will differ from those in the model as originally submitted.

**New Hampshire Utilities
Docket No. DE 23-068**

**Date Request Received: October 06, 2023
Data Request No. PUC 4-001-2**

**Date of Response: October 13, 2023
Page 1 of 1**

Request from: New Hampshire Public Utilities Commission

Request:

Subset 1 - Inquiries Related to Benefit-Cost ("B/C") Testing to the Joint Utilities

Please complete the table below with quarterly inflation rates for 2021, 2022 and 2023 alongside prime rates for the same period. Derive the real discount rates for the quarters noted in the Table.

Response:

Please refer to Attachment PUC 4-001-02 for the requested information.

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-3

Date of Response: October 13, 2023
Page 1 of 1

Request from: New Hampshire Public Utilities Commission

Request:

Subset 1 - Inquiries Related to Benefit-Cost ("B/C") Testing to the Joint Utilities

Please refer to the input source from the Lookup Tab in the B/C models. For Inflation, the data source was GDP Deflator data derived from: <https://fred.stlouisfed.org/data/GDPDEF.txt>

a. Please confirm whether the Inflation was calculated as percentage change in GDP deflator numbers from 2022-01-01 to 2023-01-01.

Response:

The inflation value used in the models was calculated as percentage change in GDP deflator numbers from 2022-01-01 to 2023-01-01 using the numbers contained on the webpage on May 11, 2023. Current numbers on the webpage may not reflect what has historically populated the webpage.

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-4

Date of Response: October 13, 2023
Page 1 of 5

Request from: New Hampshire Public Utilities Commission

Request:

Subset 1 - Inquiries Related to Benefit-Cost (“B/C”) Testing to the Joint Utilities

- a. Who pays upfront for vendor costs?
- b. Does the denominator of the TRCT include costs associated with reimbursements to vendors for the cost of direct services to customers (see 2-001-9)? Does the GST include these costs as well?
- c. Is it correct to understand from the response in 2-001-9 that, in a given year, the measure-level incentives should be lower than the sub-program incentive totals from the Calculations Yr tab and the Costs tab, respectively? If so, please explain the reasoning for the following examples of numbers that have been obtained from a representative B/C model (Unitil) and confirm whether these are errors in the model. If not, please explain for the Commission’s understanding of the issues.

Spending on Incentives in 2024			
Sub-Programs	Measure Total for Sub-Program (A)*	Sub-Program Total (B)**	Delta
Home Energy Assistance (HVAC)	\$470,241	\$460,000	\$10,241
Home Energy Assistance - Weatherization (Sub-program total)	\$179,873	\$173,468	\$6,405

*Derived from the sum of measures over a sub-program found in Column J in the Calculations Yr 1 Tab

** Listed per sub-program in Costs Tab Column F.

- d. All joint utilities are requested to check the numbers a provide a list of sub-programs similar to the table above, for which the total for the measures are *different* from the incentives reported at the sub-program level.

Response:

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-4

Date of Response: October 13, 2023
Page 2 of 5

- a. Nearly all of the utility-contracted vendors involved in program delivery, such as those engaged with rebate fulfillment, technical assistance, education, training, marketing, evaluation, software and other activities are paid after the services have been provided. In the case of the Home Energy Assistance Program, for instance, the Community Action Agencies act as the “vendor” and are paid after projects have been completed and invoiced. Therefore, the CAAs initially cover their own upfront costs.

In other scenarios, the customer will retain a “vendor,” or contractor, to install high efficiency equipment for which the customer receives a rebate. Typically, when contractor costs are part of the customer incentive, they are not paid until the energy efficiency project has been completed and the contractor has submitted an invoice accompanied by data associated with the project to the relevant NH Utility for their review and approval. In these instances, either the customer or the contractor may cover the upfront costs.

- b. Reimbursements to utility-contracted vendors for direct services to customers (such as assisting customers with rebate processing or call center interactions) are included in the denominator of portfolio-level cost-testing for both the Granite State Test and the Total Resource Cost Test, which are, respectively, the primary cost test and a secondary cost test on which program cost-effectiveness is based.
- c. Measure incentives from the Calculations tabs may not equal the customer incentives in the Cost tab, depending on how the utility has developed their budget for customer incentives and whether all non-energy saving activities associated with customer incentives have been included in the Input tabs.

However, in Unutil’s case, the customer incentives in the Inputs tab and summed by program and subprogram in the Calculations tab (Column J) are intended to match the customer incentives as reflected in the relevant year of the Cost Tab (Column F).

The figures presented by the Commission in its question are not related to the Home Energy Assistance Program, but rather to the market rate residential “A2 - Home Performance Program”. The combined total of customer incentives for sub-programs “A2a -Home Performance (Weatherization)” (\$460,000) and “A2c Home Performance 3rd Party Financing (Loan buy-down)” (\$10,241) are equal to \$470,241. The latter subprogram is reflected in the Calculations tab in row 276, and in the Cost tab in row 13, as displayed below. There is no discrepancy in incentives for these sub-programs between the Cost Tab Column F and the Calculations Tab Column J.

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-4

Date of Response: October 13, 2023
Page 3 of 5

Year	Subprogram (Dropdown)	Program Planning & Administrative	Customer Incentives	Implementation Services	Education and Marketing	EM&V	Performance Incentive	TOTAL PA COSTS
2024	B1a - HEA (Weatherization)	\$ 43,499	\$ 881,500	\$ 150,257	\$ 27,374	\$ -	\$ -	\$ 1,102,630
2024	B1b - HEA (HVAC Systems)	\$ -	\$ 182,500	\$ -	\$ -	\$ -	\$ -	\$ 182,500
2024	B2a - IE Education	\$ -	\$ -	\$ -	\$ 23,695	\$ -	\$ -	\$ 23,695
2024	B2b - IE Evaluation, Measurement and Verification	\$ -	\$ -	\$ -	\$ -	\$ 59,915	\$ -	\$ 59,915
2024	B3a - IE TBD Pilots/Demonstrations 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2024	A1a - ES Homes	\$ 15,306	\$ 221,000	\$ 291,797	\$ 9,311	\$ -	\$ -	\$ 537,414
2024	A2a - Home Performance (Weatherization)	\$ 27,551	\$ 460,000	\$ 200,418	\$ 16,760	\$ -	\$ -	\$ 704,729
2024	A2b - Home Performance (HVAC Systems)	\$ -	\$ 14,250	\$ -	\$ -	\$ -	\$ -	\$ 14,250
2024	A2c - Home Performance 3rd Party Financing (Loan buy-down)	\$ -	\$ 10,241	\$ -	\$ -	\$ -	\$ -	\$ 10,241
2024	A3b - ES Appliances and Products	\$ 22,959	\$ 173,468	\$ 152,848	\$ 13,966	\$ -	\$ -	\$ 363,243
2024	A3c - ES HVAC Systems	\$ -	\$ 290,194	\$ -	\$ -	\$ -	\$ -	\$ 290,194
2024	A4a - Residential Behavior	\$ 7,653	\$ 175,508	\$ 25,949	\$ 4,655	\$ -	\$ -	\$ 213,766
2024	A5a - Residential Active Demand Response	\$ 1,531	\$ 40,000	\$ 27,538	\$ 931	\$ -	\$ -	\$ 70,000

The reference in the question to “Home Energy Assistance -Weatherization (Sub-program total)” of \$173,468 seems to correspond instead to “A3b – ES Appliances and Products” of the Cost Table for year 2024, as shown below.

Year	Subprogram (Dropdown)	Program Planning & Administrative	Customer Incentives	Implementation Services	Education and Marketing	EM&V	Performance Incentive	TOTAL PA COSTS
2024	A3b - ES Appliances and Products	\$ 22,959	\$ 173,468	\$ 152,848	\$ 13,966	\$ -	\$ -	\$ 363,243
2024	A3c - ES HVAC Systems	\$ -	\$ 290,194	\$ -	\$ -	\$ -	\$ -	\$ 290,194

Regarding the variance of \$6,405 referenced in the question, this seems to be associated with a single measure in the “A3 – ES Products program”, within the “A3c - ES HVAC Systems” subprogram. The measure (EA3b015 in row 364 of the “Calculations Yr 2” tab) is a central AC system, for which the company plans to provide \$6,405 in customer incentives in 2024. Please see part d for explanation of a minor variance in the customer incentives for the “A3b - ES Appliances and Products” and the “A3c - ES HVAC Systems” sub-programs between the Calculations Yr 2 tab and Costs tab.

d.

Eversource:

The following are the variances between the “Customer Incentive” amounts displayed in the Costs tab and the “Incentive (Total)” amounts displayed in the Calculations Yr 1, Calculations Yr 2, and Calculations Yr 3 tabs of the Company’s BC Model:

- The HEA (Weatherization) sub-program has costs associated with Quality Assurance, a measure line that carries through to the Calculations tabs, but those dollars are allocated to the Implementation Services accounting category rather than Customer Incentives on the Costs tab.
- The ES Appliances and Products sub-program has a vendor costs measure line that totals \$450,000 each year on the Calculations tabs, but on the Costs tab those dollars are

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-4

Date of Response: October 13, 2023
Page 4 of 5

assigned to the Implementation Services accounting category rather than Customer Incentives; the cost is also split between the Appliance and Products sub-program and the HVAC Systems sub-program on the Costs tab.

- The Residential and C&I Active Demand Response programs have no values within the Calculations tabs in the primary BC model; the measure-level incentives are shown in the separate ADR BC Model provided with the Plan filing. Further, the total incentives shown on the Costs tab include vendor costs to administer the programs which are not captured on the Calculations tab.
- The SmartSTART sub-program has Customer Incentives on the Costs tab but does not appear within the Calculations tabs as this pathway offers Municipal customers a financing option and does not contain any measure-specific incentives.

Liberty:

For Liberty Electric and Liberty Gas and its Primary BC models, the Residential and C&I Education programs have incentives on the Cost tab, but they do not appear within the Calculations tab as there are no measure-specific incentives. All other program measure-level incentives detailed in the Primary BC models for Liberty Electric and Liberty Gas are equal to their respective sub-program incentive totals from the Calculations Yr tabs and the Costs tabs.

For Liberty Electric and its ADR BC Model, the Residential and C&I Active Demand Response programs have variances between the total incentives shown on the Costs tab and the Calculations tabs, due to projected vendor costs to administer the programs which are not captured on the Inputs tab.

NHEC:

The C&I Education program has Incentives on the Cost tab, but they do not appear within the Calculations tab as there are not any measure specific incentives. All measure-level incentives are equal to the sub-program incentive totals from the Calculations Yr tabs and the Cost tabs.

Unitil:

The Calculations Yr 2 tab for the subprogram "A3b - ES Appliances and Products" totals to \$168,468 or \$5,000 less than what is displayed in the Cost Tab for that subprogram, while the Calculations Yr 2 tab shows \$295,194 for the "A3c - ES HVAC Systems" subprogram or \$5,000 more than what is displayed in the Cost Tab. However, the total customer incentives for the "A3

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-4

Date of Response: October 13, 2023
Page 5 of 5

Energy Star Products” Program is equal to \$463,662 in both the Calculations Yr 2 tab and the Costs Tab.

The Residential and C&I Active Demand Response programs measure-level incentives are shown in the separate ADR BC Model provided with the Plan filing and do not reflect all the vendor costs associated with the “Customer Incentives” cost category. These vendor costs are not displayed in the Calculations tab but are included in the Cost Tab.

New Hampshire Utilities
Docket No. DE 23-068

Date Request Received: October 06, 2023
Data Request No. PUC 4-001-5

Date of Response: October 13, 2023
Page 1 of 2

Request from: New Hampshire Public Utilities Commission

Request:

Subset 1 - Inquiries Related to Benefit-Cost (“B/C”) Testing to the Joint Utilities

Refer to response 2-001-8 pertaining to measure lives as “consistent among the Utilities for individual measures.” The Commission would like to understand certain discrepancies identified from a comparison of B/C models across utilities and provides some examples below. These measure lives can be found in Column H of the Calculations Yr tabs.

<u>Program</u>	<u>Measure</u>	<u>Measure ID</u>	<u>Eversource</u>	<u>NHEC</u>	<u>Liberty</u>	<u>Unitil</u>
C1 Large Business Energy Solutions	Custom Large Compressed Air Retro	EC1a001	15	13	10	8
	Lighting Fixture – Exterior w/o Controls	EC1a011	4	5	5	5
	Lighting Fixture – Interior w/o Controls	EC1a013	5	10	5	5
	Custom Small HVAC Retro	EC2a003	12	13	13	15
	Custom Muni HVAC New	EC3b003	12.6	13.3	13.3	15

1 The Commission notes similar discrepancies, for example, for Liberty Electric C1c (LCI Midstream), Liberty Gas C1c, and Unitil NU Gas C1c.

Please identify all discrepancies (add rows as needed to the above table) and provide an explanation to validate the original response in 2-001-8.

Response:

Please refer to the response to PUC 2-001-8, which states in part that “Certain projects (e.g., lighting) include multiple measures which leads to an individualized weighted measure life in a single project, or for custom projects, where the measure lives are estimated based on prior years’ projects and experience and actual measure lives are developed based on the project-specific installation as determined by engineering and implementation staff.”

**New Hampshire Utilities
Docket No. DE 23-068**

**Date Request Received: October 06, 2023
Data Request No. PUC 4-001-5**

**Date of Response: October 13, 2023
Page 2 of 2**

Custom measures savings, measure life, loadshapes, etc., are calculated based on site specific conditions and will vary among individual projects and among utilities. For planning purposes, savings assumptions, including measure lives, are based on a combination of past experience and expectation of future activity and will necessarily vary from actual experience, which will be reported in quarterly and annual reports and subject to third party review and evaluation.

Within the BC Models, all custom measures are labeled as "Custom..." for their measure name. Additionally, please reference the BC Models, which highlight green all input factors that are PA-specific within the "Inputs Yr" tabs of the models.