

Explanation of Market Barriers

The attached worksheet includes a reproduction of the market barriers tables by sector (C&I and Residential, inclusive of income eligible customers) from the 2022-2023 Plan, as well as the planned interventions and program objectives. To this list, each of the utilities has included a column detailing the cost of the intervention for program year 2021, where such delineation is possible. A description of the source (e.g., the benefit cost ("BC") model for 2021 reporting, or the Q4 2021 report) is included in a separate column.

The budgeting of expenditures related to the energy efficiency programs has not been explicitly tied to overcoming specific market barriers, nor are the general ledger accounts used by the utilities designed to track these costs. Therefore, granular estimates of either planned or actual costs to overcome the specific market barriers identified in planning are, in most cases, not quantifiable. The energy efficiency programs budgets and expenditures have been organized across six budget categories, described in Table 1-13 on Bates 23 of the 2022-2023 Plan. The six cost categories have served as the basis of planning and reporting of expenses related to the regulated New Hampshire energy efficiency programs since 2002.

They are as follows:

- a) Internal Administration
- b) External Administration
- c) Customer Rebates and Services
- d) Internal Implementation Services
- e) Marketing
- f) Evaluation

The method of accounting for expenditures for the NH Energy Efficiency programs has been audited annually by the previous Public Utility Commission Audit Staff and now the Department of Energy Audit Staff. Also, the organization of expenditures, by cost category and program, is displayed most clearly in the Cost Table worksheet of each Company's B/C model, as well as in Attachment C the plan filed with and approved by the Commission. Because program year 2021 budgets were based on program year 2020 (see PUC Order 26,440 in Docket 17-136), the breakdown of planned costs by program and budget activity for 2021 is most closely associated with the 2020 Update Plan, Attachment C.

Not all energy efficiency program expenditures relate to identified market barriers or program interventions. Costs related to other activities include the following:

EM&V Costs

While the Market Barriers listed in the 2022-2023 Plan do not explicitly include activities related to Evaluation, Measurement and Verification, ("EM&V"), expenditures related to the Evaluation cost category are essential to the effective operation and continual improvement of program design and delivery. By reviewing how savings are calculated, how customers are using efficient equipment, and otherwise verifying that savings claims based on the best available information, independent third party evaluation ensures that reporting to the Commission is accurate and that offerings continue to be cost-effective. Evaluation activities also lead to continual evolution and improvements to the design and delivery of programs and help to ensure that customers are well served. Evaluation also supports the participation of utility staff in the EM&V Working Group as well as the cost of retaining a team of expert EM&V advisors whose services are competitively procured by the DOE. Finally, the evaluation cost category reflects expenditures associated with setting up and maintaining each utility's tracking systems as well as internal and external personnel engaged in data tracking activities.

Internal and External Admin Costs

While the Market Barriers listed in the 2022-2023 Plan do not explicitly include activities related to internal and external administration of programs, expenditures related to that cost category provide essential management oversight and administration of programs required to effectively comply with evolving regulatory requirements of the NHPUC programs. Docket administration, report preparation, meetings with stakeholder groups such as the Energy Efficiency and Sustainable Energy ("EESE") Board, development of new plans, budgets, bill impacts, lost base revenue calculations, benefit cost modeling, presentations, and more are covered under this budget category. These expenditures are essential to the administration of programs and ensure that program activity is fully transparent to the Commission, DOE and other stakeholders, and that the programs are responsive to the evolving policy and regulatory environment in New Hampshire.

Line	C&I Market Barrier	Program Interventions	Program Objectives	Cost of Intervention \$2021	Description of the cost / source
1	Incremental price difference between standard and high-efficiency goods and services.	1. Provide rebates to give effective price signals to help cover incremental first cost.	Customers consider operating costs and not just price tag when making purchase/investment decisions.	\$2,210,314	Total cost of rebates and services, not including those included elsewhere in this table On-bill financing loans (part of the revolving loan fund, not included in energy efficiency budget as no new funds were expended / allocated in 2021)
2		2. Offer low-interest or interest-free loans to allow customers to finance their portion of energy efficiency investment.	Market penetration of high-efficiency equipment and services increases.	\$66,455	
3		3. Provide information about alternative sources of funding for their high-efficiency investments (state and federal rebates or tax credits).			
4		4. Provide information/training/proformas about the importance of looking at life-cycle costs on website and in communication.			
5	Lack of customer awareness related to: <ul style="list-style-type: none"> • benefits of energy efficiency • existence of high-efficiency alternatives • where to purchase high-efficiency equipment/quality installation * how and when to reduce demand during system peaks. 	1. Promote energy-efficient options in store/online/at point of purchase.	Customers learn to look for and demand high-efficiency options. Market sales of high-efficiency equipment and services increases.	\$281,253	Total cost of marketing and internal implementation services from the Cost Tab of the B/C model rebates associated with the C&I Active Demand pilot from the Cost Tab of the B/C model
6		2. Keep information on NHSaves website up to date.	System peak usage is reduced.	\$163,317	
7		3. Engage and train contractor network to improve understanding of/familiarity with new, high-efficiency technologies.			
8		4. Provide information to target customer audience through case studies, one-on-one contact, technical assistance, and building assessments.	Customer iCAP charges are reduced.		
9		5. Co-market with contractors and retailers.			
10		6. Refer customers to Program Administrator vetted turnkey service providers.			
11	Midstream (retailers/ distributors) fail to stock high-efficiency products. <ul style="list-style-type: none"> • Lower turnover * stocking cost * lack of awareness / experience 	1. Include retailer training and recruitment in midstream program offering.	Greater availability/visibility of high-efficiency equipment at point of sale.	\$365,687	total cost of rebates associated with midstream measures in the input tab of the BC model (not included in the total rebates in line 1)
12		2. Communicate attributes of emerging or improving high-efficiency equipment stock.	Engaged and motivated retailers committed and rewarded for selling high-efficiency products.		
13		3. Provide proper price signals to retailers who stock/sell targeted equipment.	Market share of high-efficiency equipment and services increases.		
14		4. Co-market available incentives to customers.			
15	Building trades lack sufficient cadre of trained personnel, awareness, experience, or commitment to high-efficiency practices, both for existing building renovations and new construction.	1. No-cost training in best practices provided to builders and trade allies.	Build confidence and competence in high-efficiency building practices.	\$10,393	Cost of C&I Education under rebate category (marketing costs reflected in rows 7-11) sumproduct of all New Equip and Construction Subprogram rebates for C&I (quantity x incentive), subtracted from rebates above
16		2. Incentives provided for exceeding commercial building energy efficiency code and appliance standards.	Improve the industry standard practice in building design.	\$75,389	
17		3. Case studies developed and promoted to highlight exceptional builders and homes.	Reward and celebrate builders and other professionals who demonstrate commitment to high-efficiency building design.		
18		4. Collaboration with professional associations to promote the program and the benefits of high-efficiency homes.	Capture opportunity at time of building/renovation for energy savings over the life of building. Increase the industry standard practice for high-efficiency design/build/renovation.		
19					

Total Cost \$3,106,353
 Total NPV Costs C&I Sector 2021 \$3,419,770
Remaining \$313,417

EM&V \$115,168
 Internal Admin \$195,259
 External Admin \$2,992
Total \$313,419

Line	Resi Market Barrier	Program Interventions	Program Objectives	Cost of Intervention \$2021	Description of the cost / source
1	Incremental price difference between standard and high-efficiency goods and services.	1. Provide rebates to give effective price signals to help cover incremental first cost.	Customers consider operating costs and not just price tag when making purchase/investment decisions.	\$3,163,689	Total Rebates / Services from Cost Table for Residential and Income Eligible programs, minus behavior, active demand, lighting offers (which are listed below)
2		2. Offer low-interest or interest-free loans to allow customers to finance their portion of larger investments in weatherization and heating systems.	Market penetration of high-efficiency equipment and services increases, allowing the transition to market-based measure offering.	\$55,127	On bill financing loans, which are not reflected in the cost table of the B/C model as this is a revolving loan fund with no new funding for 2021
3		3. Provide customers information about alternative sources of funding for their high-efficiency investments (state and federal rebates or tax credits).		\$7,489	Third party financing for electric customers participating in the HPwES or Appliances programs.
4		4. Provide information/training about the importance of looking at life-cycle costs on website and in communication.			
5	Lack of customer awareness related to: <ul style="list-style-type: none"> • benefits of energy efficiency • existence of high-efficiency alternatives. • where to purchase high-efficiency equipment • how and when to reduce demand during system peaks. 	1. Promote energy-efficient options in store/online/at point of purchase.	Customers learn to look for and demand high-efficiency options.	\$247,467	total cost of marketing for Residential and Income Eligible programs, as well as implementation services from Cost Table of BC model
6		2. Use NH Saves/EnergyStar product labeling at point of purchase.	Market sales of high-efficiency equipment and services increases.		
7		3. Keep information on NHSaves website up to date.		\$159,757	rebates and services for behavior program from Cost Table of BC model (subtracted from line 1 rebate total)
8		4. Provide customers access to pre-vetted online marketplace for energy efficiency goods and services.			
9		5. Send Home Energy Reports directly to customers though mail and email.		\$57,026	cost of residential Active Demand program rebates from cost table (subtracted from line 1 rebate total)
10		6. Provide information to target audience at trade and home shows.			
11		7. Co-market with contractors and retailers.			
12		8. Directly control thermostat settings to reduce air conditioning use during system peaks.	System peak usage is reduced.		
13	Midstream (retailers/ distributors) fail to stock high-efficiency products.	1. Provide retailer training and recruitment in midstream program offering.	Greater availability/ visibility of high-efficiency equipment at point of sale • Engaged and motivated retailers committed and rewarded for selling high- efficient products	\$172,108	sumproduct of residential lighting subprogram measures, subtracted from rebates above
14	- lower turnover	2. Communicate attributes of emerging or improving high-efficiency equipment stock.	Market share of high- efficiency equipment and services increases		
15	- stocking cost	3. Provide proper price signals to retailers who stock/ sell targeted equipment.			
16	- lack of awareness / experience	4. Co-market available incentives to customers.			
17	Building trades lack sufficient cadre of trained personnel, awareness, experience, or commitment to high-efficiency practices.	1. No-cost training in best practices provided to builders and trade allies.	Build competence and confidence in high-efficiency building practices	\$90,340	total cost of rebates for Energy Star Homes program (subtracted from line 1 rebate total)
18		2. Incentives provided for meeting Energy Star Homes standards and for other above-energy code practices.	Improve the industry standard practice in building design		
19		3. Case studies developed and promoted to highlight exceptional builders and homes.	Reward and celebrate builders and other professionals who demonstrate commitment to high-efficiency building design		
20		4. Collaboration with professional associations to promote the program and the benefits of high-efficiency homes.	Capture opportunity at time of building/renovation for energy savings over the life of a building or home		

Total Cost \$3,897,876
Total NPV Costs C&I Sector 2021 \$4,164,104
Remaining \$266,228

EM&V \$90,345
Internal Admin \$173,052
External Admin \$2,822
Total \$266,219

Tracking Activity	Description
Administration—Internal	Internal utility costs associated with program design, development, regulatory support, and quality assurance. Costs include employee labor, benefits, expenses, materials, and supplies.
Administration—External	External costs associated with program administration. This includes contractors and consultants used in support of program design, development, regulatory support, and quality assurance.
Customer Rebates and Services	Costs associated with incentives that reduce the cost of equipment as well as costs for services to speed adoption. This includes direct rebate dollars paid to distinct participants, as well as indirect incentives for equipment discounts. It also includes services such as technical audits, employee and contractor labor to install measures, expenses, materials, and supplies.
Internal Implementation Services	Tracking of internal utility costs associated with delivering programs to customers, including labor, benefits, expenses, materials, and supplies.
Marketing	Costs for marketing, advertising, trade shows, toll-free numbers, and NHSaves website. Types of expenses include labor, benefits, consultants, contractors, expenses, materials, and supplies.
Evaluation	Costs for EM&V activities including labor, benefits, expenses, materials, supplies, consultants, contractors, and tracking systems.