

**NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION**

**LIBERTY UTILITIES (ENERGYNORTH NATURAL GAS) CORP. d/b/a  
LIBERTY**

**ENERGY EFFICIENCY PROGRAMS - 2023 YEAR-END REPORT**

**NHPUC Docket No. IR 22-042**

**May 31, 2024**



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Table 1a. Program Cost-Effectiveness - 2023 PLAN

	Benefit/Cost Ratios		Benefits (\$000) <sup>1</sup>		Utility Costs (\$000 - 2023\$) <sup>2</sup>	Customer Costs (\$000 - 2023\$) <sup>2</sup>	Performance Incentive (\$000)	Annual Net MWh Savings	Lifetime Net MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual Net MMBtu Savings	Lifetime Net MMBtu Savings
	Total Resource Cost Test	Granite State Test	Total Resource Cost Test	Granite State Test										
<b>Residential Programs</b>														
B1 - Home Energy Assistance	2.10	2.10	\$ 3,623	\$ 3,623	\$ 1,779	\$ -		136	2,680	-	75	308	6,935	130,040
A1 - Energy Star Homes	1.06	1.64	\$ 1,145	\$ 1,024	\$ 645	\$ 470		-	-	-	-	239	5,282	132,054
A2 - Home Performance with Energy Star	2.63	2.88	\$ 3,754	\$ 3,328	\$ 1,192	\$ 282		74	698	13	16	416	16,405	327,697
A3 - Energy Star Products	1.43	2.35	\$ 3,117	\$ 2,761	\$ 1,212	\$ 1,033		22	358	7	1	2,627	17,849	293,273
A4 - Home Energy Reports	1.83	1.61	\$ 310	\$ 273	\$ 175	\$ -		-	-	-	-	30,000	28,410	28,410
A6c - Residential Education	0.00	0.00	\$ -	\$ -	\$ 77	\$ -								
<b>Sub-Total Residential</b>	<b>1.80</b>	<b>2.24</b>	<b>\$ 11,949</b>	<b>\$ 11,009</b>	<b>\$ 5,080</b>	<b>\$ 1,785</b>		<b>231</b>	<b>3,735</b>	<b>20</b>	<b>91</b>	<b>33,590</b>	<b>74,881</b>	<b>911,474</b>
<b>Commercial &amp; Industrial Programs</b>														
C1 - Large Business Energy Solutions	1.76	3.48	\$ 7,742	\$ 6,863	\$ 2,036	\$ 2,512		-	-	-	-	444	49,999	751,638
C2 - Small Business Energy Solutions	1.50	2.66	\$ 4,929	\$ 4,470	\$ 1,736	\$ 1,666		-	-	-	-	2,495	23,081	411,783
C6c - C&I Education	-	-	\$ -	\$ -	\$ 42	\$ -		-	-	-	-	-	-	-
<b>Sub-Total Commercial &amp; Industrial</b>	<b>1.64</b>	<b>3.07</b>	<b>\$ 12,672</b>	<b>\$ 11,333</b>	<b>\$ 3,813</b>	<b>\$ 4,178</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,939</b>	<b>73,080</b>	<b>1,163,421</b>
<b>Total</b>	<b>1.71</b>	<b>2.59</b>	<b>\$ 24,620</b>	<b>\$ 22,342</b>	<b>\$ 8,893</b>	<b>\$ 5,963</b>	<b>\$ 489</b>	<b>231</b>	<b>3,735</b>	<b>20</b>	<b>91</b>	<b>36,529</b>	<b>147,961</b>	<b>2,074,895</b>

Notes:  
(1) The Granite State Test is used as the primary cost test, as approved in Order No. 26,322 and includes an annual NEI adder of \$405.71 per weatherization project in the Home Energy Assistance program. For the illustrative Total Resource Cost Test, NEI adders of 15% for Residential and 15% for C&I are applied to total benefits excluding water.  
(2) Utility and Customer Costs and Benefits are expressed in 2023 Dollars.  
(3) Per past precedent, discount and inflation rates have been updated for the year in which measures will be installed, and were updated as of June 2021 for program year 2023.

<b>Annual kWh Savings</b>	230,927	<b>0.5% kWh &lt; 65%</b>	<b>Lifetime kWh Savings</b>	3,735,144	<b>0.6% kWh &lt; 65%</b>
<b>Annual MMBTU Savings (in kWh)</b>	43,362,964	99.5%	<b>Lifetime MMBTU Savings (in kWh)</b>	608,091,752	99.4%
	43,593,891	100.0%		611,826,896	100.0%

Table 1b. Program Cost-Effectiveness - 2023 ACTUAL

	Benefit/Cost Ratios		Benefits (\$000) <sup>1</sup>		Utility Costs (\$000 - 2023\$) <sup>2</sup>	Customer Costs (\$000 - 2023\$) <sup>2</sup>	Performance Incentive (\$000)	Annual Net MWh Savings	Lifetime Net MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual Net MMBtu Savings	Lifetime Net MMBtu Savings
	Total Resource Cost Test	Granite State Test	Total Resource Cost Test	Granite State Test										
<b>Residential Programs</b>														
B1 - Home Energy Assistance	1.58	1.58	\$ 3,152.1	\$ 3,152.1	\$ 1,993	\$ 5		75	1,573	12	18	6,435	22,258	338,879
A1 - Energy Star Homes	1.97	2.05	\$ 768.1	\$ 682.9	\$ 333	\$ 60		-	-	-	-	63	2,750	68,762
A2 - Home Performance with Energy Star	0.54	1.25	\$ 1,830.7	\$ 1,622.2	\$ 1,296	\$ 2,150		55	1,198	9	14	311	7,537	150,867
A3 - Energy Star Products	1.22	1.80	\$ 2,063.1	\$ 1,827.9	\$ 1,015	\$ 704		17	271	6	0	1,726	11,762	195,505
A4 - Home Energy Reports	2.16	1.90	\$ 363.6	\$ 319.8	\$ 169	\$ -		-	-	-	-	21,205	33,298	33,298
A6c - Residential Education	0.00	0.00	\$ -	\$ -	\$ 28	\$ -								
<b>Sub-Total Residential</b>	<b>1.07</b>	<b>1.57</b>	<b>\$ 8,177.5</b>	<b>\$ 7,604.8</b>	<b>\$ 4,833</b>	<b>\$ 2,919</b>		<b>146</b>	<b>3,041</b>	<b>27</b>	<b>32</b>	<b>29,740</b>	<b>77,607</b>	<b>787,311</b>
<b>Commercial &amp; Industrial Programs</b>														
C1 - Large Business Energy Solutions	2.46	5.53	\$ 10,022.4	\$ 8,883.4	\$ 1,606	\$ 2,549		-	-	-	-	168	64,803	993,473
C2 - Small Business Energy Solutions	0.78	1.88	\$ 3,159.8	\$ 2,839.6	\$ 1,513	\$ 2,620		14	207	-	-	1,233	16,370	283,061
C6c - C&I Education	0.00	0.00	\$ -	\$ -	\$ 44	\$ -		-	-	-	-	-	-	-
<b>Subtotal Commercial &amp; Industrial</b>	<b>1.61</b>	<b>3.71</b>	<b>\$ 13,182.2</b>	<b>\$ 11,723.0</b>	<b>\$ 3,163</b>	<b>\$ 5,169</b>		<b>14</b>	<b>207</b>	<b>-</b>	<b>-</b>	<b>1,401</b>	<b>81,173</b>	<b>1,276,535</b>
<b>Total</b>	<b>1.35</b>	<b>2.42</b>	<b>\$ 21,359.7</b>	<b>\$ 19,327.6</b>	<b>\$ 7,996</b>	<b>\$ 8,088</b>	<b>\$ 444</b>	<b>160</b>	<b>3,248</b>	<b>27</b>	<b>32</b>	<b>31,141</b>	<b>158,780</b>	<b>2,063,845</b>

Notes:  
(1) The Granite State Test is used as the primary cost test, as approved in Order No. 26,322 and includes an annual NEI adder of \$405.71 per weatherization project in the Home Energy Assistance program. For the illustrative Total Resource Cost Test, NEI adders of 15% for Residential and 15% for C&I are applied to total benefits excluding water.  
(2) Utility and Customer Costs and Benefits are expressed in 2023 Dollars.  
(3) Per past precedent, discount and inflation rates have been updated for the year in which measures will be installed, and were updated in June 2021 for program year 2023.

<b>Annual kWh Savings</b>	159,965	<b>0.3% kWh &lt; 65%</b>	<b>Lifetime kWh Savings</b>	3,248,187	<b>0.5% kWh &lt; 65%</b>
<b>Annual MMBTU Savings (in kWh)</b>	46,535,679	99.7%	<b>Lifetime MMBTU Savings (in kWh)</b>	604,878,433	99.5%
<b>Total Energy Savings</b>	46,695,645	100.0%	<b>Total Energy Savings</b>	608,126,621	100.0%

Table 1c. Percent of Plan Program Cost-Effectiveness Targets Achieved

	Benefit/Cost Ratios		Benefits (\$000) <sup>1</sup>		Utility Costs (\$000 - 2023\$) <sup>2</sup>	Customer Costs (\$000 - 2023\$) <sup>2</sup>	Performance Incentive (\$000)	Annual Net MWh Savings	Lifetime Net MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual Net MMBtu Savings	Lifetime Net MMBtu Savings
	Total Resource Cost Test	Granite State Test	Total Resource Cost Test	Granite State Test										
<b>Residential Programs</b>	59%	70%	68%	69%	95%	164%	n/a	63%	81%	138%	35%	89%	104%	86%
<b>Commercial &amp; Industrial Programs</b>	99%	121%	104%	103%	83%	124%	n/a	0%	0%	0%	0%	48%	111%	110%
<b>Total</b>	<b>79%</b>	<b>93%</b>	<b>87%</b>	<b>87%</b>	<b>90%</b>	<b>136%</b>	<b>91%</b>	<b>69%</b>	<b>87%</b>	<b>138%</b>	<b>35%</b>	<b>85%</b>	<b>107%</b>	<b>99%</b>

Table 2a. Present Value Benefits - 2023 PLAN

	Total Benefits (\$000) <sup>1</sup>	Resource Benefits (\$000)												Non-Resource Benefits (\$000)				Environmental Benefits (\$000) <sup>3</sup>	
		Electric										Non - Electric		Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits <sup>2</sup>	Total Non-Resource Benefits		
		CAPACITY				ENERGY													
		Summer Generation	Winter Generation	Transmission	Distribution	Reliability	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits	Other Fuels						Water Benefit
Granite State Test																			
<b>Residential Programs</b>																			
B1 - Home Energy Assistance	\$3,623	\$23	\$0	\$115	\$119	\$0	\$11	\$7	\$62	\$52	\$7	\$396	\$1,101	\$2	\$1,499	\$184	\$1,939	\$2,124	\$94
A1 - Energy Star Homes	\$1,024	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$804	\$0	\$804	\$221	\$121	\$341	\$0
A2 - Home Performance with Energy Star	\$3,328	\$3	\$0	\$17	\$17	\$0	\$11	\$10	\$10	\$8	\$3	\$79	\$2,762	\$4	\$2,845	\$483	\$426	\$909	\$29
A3 - Energy Star Products	\$2,761	\$0	\$0	\$1	\$1	\$0	\$10	\$13	\$0	\$0	\$2	\$26	\$2,347	\$0	\$2,373	\$388	\$356	\$744	\$13
A4 - Home Energy Reports	\$273	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$249	\$0	\$249	\$24	\$37	\$61	\$0
A6c - Residential Education																			
Sub-Total Residential	\$11,009	\$27	\$0	\$133	\$137	\$0	\$32	\$30	\$72	\$60	\$11	\$501	\$7,263	\$7	\$7,770	\$1,299	\$2,879	\$4,178	\$137
<b>Commercial &amp; Industrial Programs</b>																			
C1 - Large Business Energy Solutions	\$6,863	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,865	\$0	\$5,865	\$997	\$880	\$1,877	\$0
C2 - Small Business Energy Solutions	\$4,470	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,059	\$819	\$3,878	\$593	\$459	\$1,052	\$0
C6c - C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal Commercial & Industrial	\$11,333	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,924	\$819	\$9,743	\$1,590	\$1,339	\$2,929	\$0
Total	\$22,342	\$27	\$0	\$133	\$137	\$0	\$32	\$30	\$72	\$60	\$11	\$501	\$16,187	\$825	\$17,513	\$2,889	\$4,218	\$7,107	\$137

Notes:  
(1) The Granite State Test is used as the primary cost test, as approved in Order No. 26,322. Benefits are calculated based on net savings.  
(2) Non-resource benefits include NEIs, which are only applied to the Home Energy Assistance program in the GST primary cost test.  
(3) Non-embedded environmental benefits are not included in the GST primary cost test.

Table 2b. Present Value Benefits - 2023 ACTUAL

	Total Benefits (\$000) <sup>1</sup>	Resource Benefits														Non-Resource Benefits				Environmental Benefits (\$000) <sup>3</sup>
		CAPACITY				Electric						Non - Electric								
						ENERGY														
Granite State Test	Summer Generation	Winter Generation	Transmission	Distribution	Reliability	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits	Other Fuels Benefits	Water Benefit	Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits <sup>2</sup>	Total Non-Resource Benefits			
Residential Programs																				
B1 - Home Energy Assistance	\$3,152	\$6	\$0	\$30	\$31	\$0	\$27	\$31	\$17	\$15	\$5	\$160	\$2,500	\$44	\$2,704	\$448	\$0	\$448	\$50	
A1 - Energy Star Homes	\$683	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$568	\$0	\$568	\$115	\$85	\$200	\$0	
A2 - Home Performance with Energy Star	\$1,622	\$4	\$0	\$24	\$25	\$0	\$20	\$23	\$14	\$12	\$3	\$124	\$1,267	\$2	\$1,393	\$229	\$209	\$438	\$37	
A3 - Energy Star Products	\$1,828	\$0	\$0	\$0	\$0	\$0	\$8	\$11	\$0	\$0	\$1	\$20	\$1,548	\$0	\$1,568	\$260	\$235	\$495	\$10	
A4 - Home Energy Reports	\$320	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$292	\$0	\$292	\$28	\$44	\$71	\$0	
A6c - Residential Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sub-Total Residential	\$7,605	\$10	\$0	\$54	\$55	\$0	\$55	\$64	\$30	\$26	\$9	\$303	\$6,175	\$46	\$6,525	\$1,080	\$573	\$1,653	\$97	
Commercial & Industrial Programs																				
C1 - Large Business Energy Solutions	\$8,883	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,593	\$0	\$7,593	\$1,290	\$1,139	\$2,429	\$0	
C2 - Small Business Energy Solutions	\$2,840	\$0	\$0	\$0	\$0	\$0	\$9	\$2	\$1	\$1	\$1	\$14	\$2,121	\$306	\$2,441	\$399	\$320	\$719	\$8	
C6c - C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Sub-Total Commercial & Industrial	\$11,723	\$0	\$0	\$0	\$0	\$0	\$9	\$2	\$1	\$1	\$1	\$14	\$9,714	\$306	\$10,034	\$1,689	\$1,459	\$3,148	\$8	
Total	\$19,328	\$10	\$0	\$54	\$55	\$0	\$63	\$67	\$31	\$27	\$10	\$317	\$15,890	\$352	\$16,559	\$2,769	\$2,032	\$4,801	\$105	

Notes:  
(1) The Granite State Test is used as the primary cost test, as approved in Order No. 26,322. Benefits are calculated based on net savings.  
(2) Non-resource benefits include NEIs, which are only applied to the Home Energy Assistance program in the GST primary cost test.  
(3) Non-embedded environmental benefits are not included in the GST primary cost test.

Table 2c. Percent of Plan Present Value Benefits Achieved

	Total Benefits (\$000) <sup>1</sup>	Resource Benefits																	Environmental Benefits (\$000) <sup>3</sup>
		Electric											Non - Electric			Non-Resource Benefits			
		CAPACITY				ENERGY													
		Generation		Transmission	Distribution	Reliability	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Resource Benefits	Other Fuels Benefits	Fossil Emissions	Total Resource Benefits	Fossil Emissions	Other Non-Resource Benefits <sup>2</sup>	Total Non-Resource Benefits	
		Summer	Winter																
Granite State Test																			
Residential Programs	69%	37%	0%	41%	41%	0%	169%	215%	42%	44%	81%	61%	85%	693%	84%	83%	20%	40%	71%
Commercial & Industrial Programs	103%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	109%	37%	103%	106%	109%	107%	0%
Total	87%	37%	0%	41%	41%	0%	195%	223%	44%	45%	90%	63%	98%	43%	95%	96%	48%	68%	77%

Table 3. Performance Incentive Calculation - 2023

Row	Category	Planned	Threshold	Actual	% of Plan	Design Coefficient	Actual Coefficient	Planned PI	125% of Planned PI	Actual PI	Source
1	Lifetime MMBtu Savings	2,074,895	1,556,171	2,063,845	99%	2.475%	2.462%	\$ 220,099	\$ 275,123	\$ 196,854.67	Program Cost Effectiveness (Page 1 of 3)
2	Annual MMBtu Savings	147,961	110,970	158,780	107%	1.100%	1.180%	\$ 97,822	\$ 122,277	\$ 94,391.16	Program Cost Effectiveness (Page 1 of 3)
3	Total Resource Benefits	\$17,513,219		\$16,558,655	95%						Present Value Benefits (Page 2 of 3)
4	Total Utility Costs <sup>1</sup>	\$8,892,870		\$7,996,309	90%						Program Cost Effectiveness (Page 1 of 3)
5	Net Benefits	\$8,620,349	\$6,465,261	\$8,562,346	99%	1.925%	1.912%	\$ 171,188	\$ 213,985	\$ 152,893.23	Line 5 minus line 6
6	Total					5.500%	5.554%	\$ 489,108	\$ 611,385	\$ 444,139.06	Sum of Rows 1, 2 & 5

Row	Category	Granite State Test		Source
		Planned	Actual	
7	Total Benefits	\$ 22,341,790	\$ 19,327,588	Present Value Benefits (Page 2 of 3)
8	Performance Incentive	\$ 489,108	\$ 444,139	from row 6 above
9	Total Utility Costs	\$ 8,892,870	\$ 7,996,309	from row 4 above
10	Portfolio GST BCR	2.38	2.29	Row 7 Divided by Rows 8+9

Costs, Benefits, and PI Expressed in 2023 Dollars. Nominal PI (2023\$) is \$489,107.85.

<sup>1</sup> Note that in order to avoid a circular reference in the calculation of performance incentive, "Total Utility Costs" does not include the value of PI.

**Table 4. Program Expenditures by Category - 2023 ACTUAL**

	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates- Services	Total
<b>Residential Programs</b>							
ENERGY STAR Homes	\$ 19,561	\$ 420	\$ 18,065	\$ 46,550	\$ 2,649	\$ 245,341	\$ 332,587
Home Performance with ENERGY STAR	\$ 36,124	\$ 776	\$ 26,613	\$ 88,984	\$ 5,532	\$ 1,138,460	\$ 1,296,489
ENERGY STAR Products	\$ 36,731	\$ 790	\$ 14,700	\$ 114,546	\$ 11,074	\$ 837,123	\$ 1,014,963
Home Energy Assistance	\$ 53,913	\$ 1,159	\$ 43,930	\$ 130,832	\$ 46,486	\$ 1,716,554	\$ 1,992,874
Home Energy Reports	\$ 5,310	\$ 114	\$ 7,139	\$ 8,511	\$ -	\$ 147,465	\$ 168,539
Residential Education	\$ 2,343	\$ 50	\$ 1,030	\$ 6,058	\$ 292	\$ 17,920	\$ 27,694
<b>Subtotal Residential</b>	<b>\$ 153,983</b>	<b>\$ 3,310</b>	<b>\$ 111,478</b>	<b>\$ 395,481</b>	<b>\$ 66,033</b>	<b>\$ 4,102,862</b>	<b>\$ 4,833,146</b>
<b>Commercial &amp; Industrial Programs</b>							
C&I Education	\$ 1,428	\$ 27	\$ 17,597	\$ 9,672	\$ -	\$ 14,828	\$ 43,552
Large Business Energy Solutions	\$ 62,211	\$ 1,326	\$ 55,531	\$ 207,846	\$ 16,900	\$ 1,262,622	\$ 1,606,436
Small Business Energy Solutions	\$ 53,618	\$ 1,131	\$ 59,097	\$ 164,546	\$ 17,644	\$ 1,217,139	\$ 1,513,175
<b>Subtotal Commercial &amp; Industrial</b>	<b>\$ 117,257</b>	<b>\$ 2,484</b>	<b>\$ 132,226</b>	<b>\$ 382,064</b>	<b>\$ 34,544</b>	<b>\$ 2,494,588</b>	<b>\$ 3,163,163</b>
<b>Total</b>	<b>\$ 271,240</b>	<b>\$ 5,794</b>	<b>\$ 243,703</b>	<b>\$ 777,545</b>	<b>\$ 100,577</b>	<b>\$ 6,597,450</b>	<b>\$ 7,996,309</b>