

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

d/b/a

LIBERTY

ENERGY EFFICIENCY PROGRAMS - 2022 YEAR-END REPORT

NHPUC Docket No. IR 22-042

May 31, 2023



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Table 1a. Program Cost-Effectiveness - 2022 PLAN

	Benefit/Cost Ratios		Benefits (\$000) ²		Utility Costs (\$000 - 2022\$) ²	Customer Costs (\$000 - 2022\$) ²	Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
	Total Resource Cost Test	Granite State Test	Total Resource Cost Test	Granite State Test										
Residential Programs														
B1 - Home Energy Assistance	1.57	1.57	\$ 1,845	\$ 1,845	\$ 1,177	\$ -		452	4,464	67	46	121	885	25,830
A1 - Energy Star Homes	6.02	6.31	\$ 1,328	\$ 1,074	\$ 170	\$ 51		194	4,592	55	5	96	791	19,682
A2 - Home Performance with Energy Star	4.19	4.33	\$ 3,299	\$ 2,676	\$ 617	\$ 171		57	1,176	13	15	84	4,188	95,184
A3 - Energy Star Products	1.69	1.59	\$ 904	\$ 736	\$ 462	\$ 73		673	6,759	153	102	6,887	(297)	2,161
A4 - Home Energy Reports	1.38	1.11	\$ 146	\$ 117	\$ 105	\$ -		1,153	1,153	249	161	10,256	-	-
A6b - Res ISO Forward Capacity Market Expenses	0.00	0.00	\$ -	\$ -	\$ 9	\$ -		-	-	-	-	-	-	-
A6c - Residential Education	0.00	0.00	\$ -	\$ -	\$ 46	\$ -		-	-	-	-	-	-	-
Sub-Total Residential	2.61	2.49	\$ 7,522	\$ 6,448	\$ 2,587	\$ 295		2,528	18,144	538	329	17,443	5,568	142,857
Commercial & Industrial Programs														
C1 - Large Business Energy Solutions	1.50	3.54	\$ 4,922	\$ 4,472	\$ 1,264	\$ 2,022		4,113	57,621	308	464	340	(1,646)	(21,273)
C2 - Small Business Energy Solutions	1.08	2.13	\$ 3,594	\$ 3,266	\$ 1,532	\$ 1,806		3,161	43,887	224	316	564	(1,058)	(13,216)
C3 - Municipal Energy Solutions	1.28	2.56	\$ 442	\$ 403	\$ 157	\$ 188		288	3,279	44	11	46	261	7,159
C6b - C&I ISO Forward Capacity Market Expenses	0.00	0.00	\$ -	\$ -	\$ 21	\$ -		-	-	-	-	-	-	-
C6c - C&I Education	0.00	0.00	\$ -	\$ -	\$ 25	\$ -		-	-	-	-	-	-	-
Sub-Total Commercial & Industrial	1.28	2.71	\$ 8,959	\$ 8,142	\$ 3,000	\$ 4,016		7,563	104,787	576	790	950	(2,443)	(27,330)
Total	1.67	2.61	\$ 16,480	\$ 14,589	\$ 5,587	\$ 4,311	\$ 307	10,091	122,931	1,114	1,119	18,393	3,125	115,527

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 25% for Residential and 10% for C&I are applied to total benefits excluding water.
 (2) Utility and Customer Costs and Benefits are expressed in 2022 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 2022.

Annual kWh Savings	10,090,780	91.7%	kWh > 65%	Lifetime kWh Savings	122,931,394	78.4%	kWh > 65%
Annual MMBTU Savings (in kWh)	915,872	8.3%		Lifetime MMBTU Savings (in kWh)	33,857,694	21.6%	
	11,006,652	100.0%			156,789,088	100.0%	

Table 1b. Program Cost-Effectiveness - 2022 ACTUAL

	Benefit/Cost Ratios		Benefits (\$000) ²		Utility Costs (\$000 - 2022\$) ²	Customer Costs (\$000 - 2022\$) ²	Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
	Total Resource Cost Test	Granite State Test	Total Resource Cost Test	Granite State Test										
Residential Programs														
B1 - Home Energy Assistance	3.38	3.38	\$ 3,406	\$ 3,406	\$ 1,006	\$ 0		392	3,627	29	31	1,284	1,231	25,753
A1 - Energy Star Homes	12.65	15.82	\$ 3,709	\$ 2,987	\$ 189	\$ 104		593	14,547	184	3	217	2,160	54,221
A2 - Home Performance with Energy Star	3.30	3.35	\$ 1,962	\$ 1,591	\$ 475	\$ 119		133	2,046	61	3	95	2,570	56,022
A3 - Energy Star Products	1.91	1.81	\$ 661	\$ 535	\$ 295	\$ 51		405	4,392	70	76	1,210	268	3,947
A4 - Home Energy Reports	1.86	1.49	\$ 183	\$ 146	\$ 98	\$ -		1,446	1,446	312	201	8,023	-	-
A6b - Res ISO Forward Capacity Market Expenses	0.00	0.00	\$ -	\$ -	\$ 14	\$ -		-	-	-	-	-	-	-
A6c - Residential Education	0.00	0.00	\$ -	\$ -	\$ 19	\$ -		-	-	-	-	-	-	-
Sub-Total Residential	4.18	4.13	\$ 9,921	\$ 8,666	\$ 2,097	\$ 275		2,969	26,059	656	315	10,829	6,229	139,943
Commercial & Industrial Programs														
C1 - Large Business Energy Solutions	2.43	4.04	\$ 4,780	\$ 4,346	\$ 1,077	\$ 892		3,666	51,137	228	384	60	-	-
C2 - Small Business Energy Solutions	1.21	1.81	\$ 1,997	\$ 1,816	\$ 1,001	\$ 645		2,243	25,736	137	102	138	-	-
C3 - Municipal Energy Solutions	1.53	3.60	\$ 568	\$ 516	\$ 144	\$ 228		462	5,244	24	40	40	103	2,570
C6b - C&I ISO Forward Capacity Market Expenses	0.00	0.00	\$ -	\$ -	\$ 19	\$ -		-	-	-	-	-	-	-
C6c - C&I Education	0.00	0.00	\$ -	\$ -	\$ 17	\$ -		-	-	-	-	-	-	-
Subtotal Commercial & Industrial	1.83	2.96	\$ 7,345	\$ 6,678	\$ 2,257	\$ 1,766		6,372	82,117	389	525	238	103	2,570
Total	2.70	3.52	\$ 17,266	\$ 15,343	\$ 4,353	\$ 2,040	\$ 240	9,341	108,176	1,045	839	11,067	6,332	142,513

Notes:
 (1) The Granite State Test is used as the primary cost test, as approved in Order No. 36,322, and includes an annual NEI adder of \$405.71 per weatherization project in the Home Energy Assistance program.
 (2) Utility and Customer Costs and Benefits are expressed in 2022 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 2022.

Annual kWh Savings	9,340,924	83%	kWh > 65%	Lifetime kWh Savings	108,176,127	72%	kWh > 65%
Annual MMBTU Savings (in kWh)	1,855,673	17%		Lifetime MMBTU Savings (in kWh)	41,766,367	28%	
Total Energy Savings	11,196,597	100%		Total Energy Savings	149,942,493	100%	

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

	Benefit/Cost Ratios		Benefits (\$000) ³		Utility Costs (\$000 - 2022\$) ²	Customer Costs (\$000 - 2022\$) ²	Performance Incentive (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
	Legacy TRC Test	Granite State Test ¹	Legacy TRC Test	Granite State Test										
Residential Programs	160%	166%	132%	134%	81%	93%	n/a	117%	144%	122%	96%	62%	112%	98%
Commercial & Industrial Programs	143%	109%	82%	82%	75%	44%	n/a	84%	78%	68%	66%	25%	-4%	-9%
Total	162%	135%	105%	105%	78%	47%	78%	93%	88%	94%	75%	60%	203%	123%

Table 3. Performance Incentive Calculation - 2022

Row	Category	Planned	Threshold	Actual	% of Plan	Design Coefficient	Actual Coefficient	Planned PI	125% of Planned PI	Actual PI	Source
1	Lifetime kWh Savings	122,931,394	92,198,545	108,176,127	88%	1.925%	1.694%	\$ 107,548	\$ 134,435	\$ 73,739	Program Cost Effectiveness (Page 1 of 3)
2	Annual kWh Savings	10,090,780	7,568,085	9,340,924	93%	0.550%	0.509%	\$ 30,728	\$ 38,410	\$ 22,163	Program Cost Effectiveness (Page 1 of 3)
3	Summer Peak Demand kW	1,119	728	839,1287	75%	0.660%	0.495%	\$ 36,874	\$ 46,092	\$ 21,539	Program Cost Effectiveness (Page 1 of 3)
4	Winter Peak Demand kW	1,114	724	1,045,2403	94%	0.440%	0.413%	\$ 24,582	\$ 30,728	\$ 17,974	Program Cost Effectiveness (Page 1 of 3)
5	Total Resource Benefits	\$ 13,607,181		12,744,872	94%						Present Value Benefits (Page 2 of 3)
6	Total Utility Costs ¹	\$ 5,586,900		4,353,088	78%						Program Cost Effectiveness (Page 1 of 3)
7	Net Benefits	\$ 8,020,281	\$ 6,015,210	\$ 8,391,784	105%	1.925%	2.406%	\$ 107,548	\$ 134,435	\$ 104,746	Row 5 Minus Row 6
8	Total					5.500%	5.517%	\$ 307,280	\$ 384,099	\$ 240,161	Sum of Rows 1, 2, 3, 4 & 7

Row	Category	Granite State Test		Source
		Planned	Actual	
9	Total Benefits	\$ 14,589,401	\$ 15,343,081	Present Value Benefits (Page 2 of 3)
10	Performance Incentive	\$ 307,280	\$ 240,161	from row 8 above
11	Total Utility Costs	\$ 5,586,900	\$ 4,353,088	from row 6 above
12	Portfolio GST BCR	2.48	3.34	row 9 divided by rows 10+11

Costs, Benefits, and PI Expressed in 2022 Dollars.

¹ 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 - 2022 ACTUAL

	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates-Services	Total
Residential Programs							
ENERGY STAR Homes	\$ 4,419	\$ 182	\$ 4,181	\$ 19,062	\$ 3,293	\$ 157,647	\$ 188,784
Home Performance with ENERGY STAR	\$ 12,879	\$ 355	\$ 6,882	\$ 36,898	\$ 1,339	\$ 416,644	\$ 474,998
ENERGY STAR Products	\$ 9,356	\$ 240	\$ 6,909	\$ 26,956	\$ 2,548	\$ 248,803	\$ 294,811
Home Energy Assistance	\$ 24,991	\$ 720	\$ 17,876	\$ 101,116	\$ 2,789	\$ 858,954	\$ 1,006,447
Home Energy Reports	\$ 2,297	\$ 70	\$ 1,747	\$ 7,094	\$ -	\$ 87,059	\$ 98,267
Residential Education	\$ 780	\$ 9	\$ 167	\$ 2,077	\$ 13	\$ 15,892	\$ 18,937
ISO-NE FCM	\$ 9,987	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,987
Subtotal Residential	\$ 64,710	\$ 1,576	\$ 37,761	\$ 193,203	\$ 9,983	\$ 1,784,999	\$ 2,092,232
Commercial & Industrial Programs							
C&I Education	\$ 736	\$ 35	\$ 4,115	\$ 5,176	\$ 141	\$ 6,449	\$ 16,652
Large Business Energy Solutions	\$ 29,494	\$ 1,027	\$ 20,264	\$ 119,431	\$ 4,407	\$ 901,886	\$ 1,076,508
Small Business Energy Solutions	\$ 30,994	\$ 789	\$ 23,310	\$ 100,940	\$ 4,964	\$ 839,763	\$ 1,000,760
Municipal	\$ 2,568	\$ 79	\$ 2,324	\$ 9,333	\$ 321	\$ 129,007	\$ 143,633
ISO-NE FCM	\$ 23,304	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,304
Subtotal Commercial & Industrial	\$ 87,095	\$ 1,930	\$ 50,012	\$ 234,881	\$ 9,834	\$ 1,877,104	\$ 2,260,856
Total	\$ 151,805	\$ 3,506	\$ 87,773	\$ 428,083	\$ 19,817	\$ 3,662,104	\$ 4,353,088

**Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Energy Efficiency Programs 2022 Year End Report**
NHPUC Docket No. IR 22-042

**Table 5. Revenue and Expense Balance
12 Months Actual 2022**

			2022
1	Beginning Balance: 1/1/2022	(Over) / Under	\$484,709.25
Revenues			
2	System Benefits Charge		\$4,375,968.34
3	RGGI Funding		\$266,112.00
4	FCM Payments		\$551,700.19
5	Interest		\$85,770.15
6	Total Revenues	Sum Lines 2 - 5	\$5,279,550.68
Expenses			
7	Program Expenses		\$4,353,087.90
8	Performance Incentive - 2022	Table 3a	\$240,160.87
9	Total Expenses	Sum Lines 7 - 8	\$4,593,248.77
10	Ending Balance: 12/31/2022	Lines 1 + 6 - 9	\$1,171,011.15