

NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.

d/b/a

LIBERTY UTILITIES

CORE PROGRAMS - 2015 YEAR-END REPORT

N.H. P.U.C. Docket No. DE 14-216

May 31, 2016



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Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities

SUMMARY OF 2015 PROGRAM ACTIVITY

This report presents the results of Liberty Utilities (Granite State Electric) Corp.'s d/b/a Liberty Utilities ("Liberty Utilities" or "Company") Residential and Commercial and Industrial (C&I) energy efficiency programs for calendar year 2015.

Table 1a, Table 1b and Table 1c show the 2015 year-end performance for the Residential and C&I programs and the annual goals and spending targets. Overall, the Company achieved 171% and 173% of its goals for annual and lifetime energy savings respectively. The Company achieved 132% and 126% of its goals for winter and summer demand savings. The Company achieved 151% of its planned participation while spending 93% of its planned budget in 2015. In addition, 91% of the annual, and 86% of the lifetime, total energy savings generated were for electricity.

Table 2a, Table 2b and Table 2c document the value created by the 2015 energy efficiency programs. Overall, efforts in 2015 created over \$11.3 million of value through achieved energy, demand and other resource savings.

Table 3a documents the Company's earned 2015 year-end performance incentive of \$267,320. As specified by the Commission, the performance incentive for 2015 has been documented using assumptions that are consistent with assumptions used to develop program-year goals. Table 3a summarizes the performance incentive calculation by component (Residential and C&I). As specified by the Commission, results for all programs have been included in the performance incentive calculation.

Table 3b provides the actual Total Resource Cost (TRC) benefit/cost ratio for each program, by sector (Residential and C&I), and for the entire portfolio of energy efficiency programs implemented in 2015. The overall benefit/cost ratio for energy efficiency efforts in 2015 for Residential was 2.38 and for C&I was 2.38.

Table 3c documents the Company's savings by sector and program. Overall, the Company achieved 125,431 megawatt hours of lifetime energy savings.

Table 4 documents the Company's expenses by Program. Overall, the Company had a total of \$2,788,829 of expenses in 2015, including \$24,723 in ISO-NE FCM expenses.

Tables 5 through 9 provide the 2015 year-end energy efficiency fund balances. These tables reflect revenues collected in support of energy efficiency efforts, 2015 spending levels, and the 2015 incentive. Table 5 summarizes the 2015 year-end energy efficiency fund balances for both the Residential and C&I sectors. Residential and C&I fund balances are shown in Tables 6 and 7, respectively. Tables 8 and 9 provide the Residential and C&I fund variance analyses, respectively.

Table 1a. Program Cost-Effectiveness - 2015 PLAN

	Total Resource Benefit/Cost Ratio	Present Value			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
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs												
ENERGY STAR Homes	5.37	\$ 789	\$ 130	\$ 17		43	953	13	11	38	1,187	29,562
Home Performance with ENERGY STAR	1.55	\$ 720	\$ 268	\$ 196		25	434	13	7	49	1,394	29,050
ENERGY STAR Products ¹	3.06	\$ 1,770	\$ 414	\$ 164		1,694	22,262	486	190	15,185	143	1,572
Home Energy Assistance	1.37	\$ 637	\$ 466	\$ -		53	660	7	5	46	1,243	26,130
ISO NE FCM - Residential	0.00	\$ -	\$ 6	\$ -		-	-	-	-	-	-	-
Subtotal Residential	2.23	\$ 3,915	\$ 1,283	\$ 377	\$ 96	1,815	24,309	519	213	15,318	3,967	86,314
Commercial/Industrial Programs												
Large Business	1.17	\$ 2,470	\$ 987	\$ 1,118		2,119	28,400	311	376	27	-	-
Small Business	1.16	\$ 1,351	\$ 540	\$ 629		1,098	14,673	168	224	99	-	-
C&I Education	0.00	\$ -	\$ 15	\$ -		-	-	-	-	-	-	-
Municipal	1.46	\$ 515	\$ 169	\$ 184		387	5,129	61	61	46	167	4,070
ISO NE FCM - C&I	0.00	\$ -	\$ 14	\$ -		-	-	-	-	-	-	-
Subtotal C&I	1.15	\$ 4,336	\$ 1,724	\$ 1,931	\$ 129	3,605	48,203	540	661	172	167	4,070
Total	1.49	\$ 8,251	\$ 3,007	\$ 2,308	\$ 226	5,420	72,512	1,059	874	15,490	4,134	90,384

Note 1: Plan includes 14,161 customers purchasing a total of 56,645 Energy Star lighting products (estimated at 4/customer) and 1,024 Energy Star appliances.

Annual kWh Savings	5,420,202	82% kWh > 55%	Lifetime kWh Savings	72,511,851	73% kWh > 55%
Annual MMBTU Savings (in kWh)	1,211,689	18%	Lifetime MMBTU Savings (in kWh)	26,489,995	27%
	6,631,891	100%		99,001,846	100%

Table 1b. Program Cost-Effectiveness - 2015 ACTUAL

	Total Resource Benefit/Cost Ratio	Present Value			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
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs												
ENERGY STAR Homes	2.48	\$ 609	\$ 150	\$ 96		16	259	2	2	67	1,018	25,240
Home Performance with ENERGY STAR	1.75	\$ 623	\$ 213	\$ 143		208	4,579	55	2	172	737	15,595
ENERGY STAR Products	3.74	\$ 2,233	\$ 414	\$ 183		2,474	28,892	736	272	22,142	136	1,492
Home Energy Assistance	1.50	\$ 570	\$ 379	\$ -		134	2,254	126	11	176	1,031	24,560
ISO-NE FCM	0.00	\$ -	\$ 11	\$ -		-	-	-	-	-	-	-
	2.54											
Subtotal Residential	2.38	\$ 4,034	\$ 1,166	\$ 422	\$ 105	2,831	35,983	918	286	22,557	2,922	66,887
Commercial/Industrial Programs												
Large Business	3.17	\$ 4,914	\$ 759	\$ 790		4,210	60,219	253	512	100	-	-
Small Business	1.89	\$ 2,024	\$ 681	\$ 388		2,015	26,344	196	258	770	-	-
C&I Education	0.00	\$ -	\$ 11	\$ -		-	-	-	-	-	-	-
Municipal	1.46	\$ 388	\$ 157	\$ 109		209	2,885	26	43	36	224	5,255
ISO-NE FCM	0.00	\$ -	\$ 14	\$ -		-	-	-	-	-	-	-
	2.52											
Subtotal C&I	2.38	\$ 7,326	\$ 1,623	\$ 1,288	\$ 162	6,434	89,448	476	813	906	224	5,255
Total	2.38	\$ 11,361	\$ 2,789	\$ 1,710	\$ 267	9,265	125,431	1,394	1,099	23,463	3,146	72,142

Annual kWh Savings	9,265,470	91% kWh > 55%	Lifetime kWh Savings	125,431,005	86% kWh > 55%
Annual MMBTU Savings (in kWh)	922,144	9%	Lifetime MMBTU Savings (in kWh)	21,143,672	14%
Total Energy Savings	10,187,614	100%	Total Energy Savings	146,574,677	100%

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

	Total Resource Benefit/Cost Ratio	Present Value			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
		Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)								
Residential Programs	107%	103%	91%	112%	109%	156%	148%	177%	134%	147%	74%	77%
Commercial/Industrial Programs	208%	169%	94%	67%	125%	178%	186%	88%	123%	527%	134%	129%
Total	160%	138%	93%	74%	119%	171%	173%	132%	126%	151%	76%	80%

Table 2a. Present Value Benefits - 2015 PLAN

	Total Benefits (\$000)	CAPACITY				ENERGY				Non Electric Resource
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	
Residential Programs										
ENERGY STAR Homes	\$789	\$24	\$0	\$4	\$16	\$16	\$22	\$8	\$10	\$690
Home Performance w/Energy Star	\$720	\$4	\$0	\$1	\$3	\$7	\$11	\$3	\$3	\$687
ENERGY STAR Products	\$1,770	\$217	\$0	\$40	\$162	\$361	\$488	\$175	\$218	\$108
Home Energy Assistance	\$637	\$6	\$0	\$1	\$4	\$11	\$16	\$4	\$5	\$590
Subtotal Residential	\$3,915	\$251	\$0	\$46	\$185	\$395	\$537	\$189	\$237	\$2,075
Commercial/Industrial Programs										
Large Business	\$2,470	\$470,497	\$0	\$85,091	\$343,820	\$0	\$512,224	\$550,593	\$258,185	\$249,887
Small Business	\$1,351	\$282,663	\$0	\$51,032	\$206,200	\$0	\$264,566	\$284,389	\$133,338	\$129,060
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$515	\$73,571	\$0	\$13,433	\$54,278	\$0	\$92,376	\$99,305	\$46,537	\$45,053
Subtotal C&I	\$4,336	\$826,731	\$0	\$149,556	\$604,298	\$0	\$869,166	\$934,287	\$438,060	\$423,999
Total	\$8,251	\$826,982	\$0	\$149,602	\$604,483	\$395	\$869,703	\$934,477	\$438,296	\$426,075

Table 2b. Present Value Benefits - 2015 ACTUAL

	Total Benefits (\$000)	CAPACITY				ENERGY				Non Electric Resource
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	
Residential Programs										
ENERGY STAR Homes	\$609	\$3	\$0	\$0	\$2	\$4	\$6	\$2	\$3	\$589
Home Performance w/Energy Star	\$623	\$1	\$0	\$0	\$1	\$85	\$172	\$4	\$5	\$355
ENERGY STAR Products	\$2,233	\$270	\$0	\$52	\$209	\$463	\$622	\$227	\$286	\$103
Home Energy Assistance	\$570	\$12	\$0	\$2	\$9	\$39	\$70	\$8	\$11	\$418
Subtotal Residential	\$4,034	\$286	\$0	\$55	\$221	\$592	\$870	\$241	\$305	\$1,465
Commercial/Industrial Programs										
Large Business	\$4,914	\$837	\$0	\$142	\$574	\$1,095	\$1,176	\$554	\$535	\$0
Small Business	\$2,024	\$294	\$0	\$55	\$220	\$474	\$510	\$239	\$231	\$0
C&I Education	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Municipal	\$388	\$55	\$0	\$10	\$40	\$52	\$56	\$26	\$25	\$123
Subtotal C&I	\$7,326	\$1,187	\$0	\$207	\$834	\$1,622	\$1,742	\$820	\$792	\$123
Total	\$11,361	\$1,472	\$0	\$261	\$1,055	\$2,214	\$2,612	\$1,061	\$1,096	\$1,588

Table 2c. Percent of Plan Present Value Benefits Achieved

	Total Benefits (\$000)	CAPACITY				ENERGY				Non Electric Resource
		Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	
Residential Programs	103%	114%	0%	119%	119%	150%	162%	127%	129%	71%
Commercial/Industrial Programs	169%	0%	0%	0%	0%	#DIV/0!	0%	0%	0%	0%
Total	138%	0%	0%	0%	0%	561%	0%	0%	0%	0%

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Table 3a. Performance Incentive Calculation - 2015

	<u>Planned</u>	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.15	2.38
2. Threshold Benefit / Cost Ratio ¹	1.00	1.00
3. Lifetime kWh Savings	48,202,778	89,447,630
4. Threshold Lifetime kWh Savings (65%) ²	31,331,805	31,331,805
5. Budget	\$ 1,724,190	\$ 1,622,642
6. Benefit / Cost Percentage of Budget	3.75%	
7. Lifetime kWh Percentage of Budget	3.75%	
8. C/I Incentive	\$ 129,314	\$ 162,264
9. Cap (10%)	\$ 172,419	\$ 172,419
Residential Incentive		
10. Benefit / Cost Ratio	2.23	2.38
11. Threshold Benefit / Cost Ratio ¹	1.00	1.00
12. Lifetime kWh Savings	24,309,074	35,983,375
13. Threshold Lifetime kWh Savings (65%) ²	15,800,898	15,800,898
14. Budget	\$ 1,283,111	\$ 1,166,187
15. Benefit / Cost Percentage of Budget	3.75%	
16. Lifetime kWh Percentage of Budget	3.75%	
17. Residential Incentive	\$ 96,233	\$ 105,055
18. Cap (10%)	\$ 128,311	\$ 128,311
19. TOTAL INCENTIVE EARNED	\$ 225,548	\$ 267,320

Notes

1. Actual Benefit / Cost Ratio for each sector must be greater than or equal to 1.0.
2. Actual Lifetime kWh Savings for each sector must be greater than or equal to 65% of projected savings.

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Table 3b. Planned Versus Actual Benefit / Cost Ratio by Sector - 2015

	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
1. Benefits (Value) From Eligible Programs	\$ 4,336	\$ 7,326
2. Implementation Expenses	\$ 1,724	\$ 1,623
3. Customer Contribution	\$ 1,931	\$ 1,288
4. Performance Incentive	<u>\$ 129</u>	<u>\$ 162</u>
5. Total Costs Including Performance Incentive	\$ 3,784	\$ 3,073
6. Benefit/Cost Ratio - C&I Sector	1.19	2.52
7. Benefit/Cost Ratio - C&I Sector including PI	1.15	2.38
Residential:		
8. Benefits (Value) From Eligible Programs	\$ 3,915	\$ 4,034
9. Implementation Expenses	\$ 1,283	\$ 1,166
10. Customer Contribution	\$ 377	\$ 422
11. Performance Incentive	<u>\$ 96</u>	<u>\$ 105</u>
12. Total Costs Including Performance Incentive	\$ 1,757	\$ 1,693
13. Benefit/Cost Ratio - Residential Sector	2.36	2.54
14. Benefit/Cost Ratio - Residential Sector including PI	2.23	2.38

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Table 3c. Actual Lifetime Energy Savings by Sector and Program - 2015

	Lifetime kWh Savings	
	<u>Planned</u>	<u>Actual</u>
Commercial & Industrial:		
Large Business	28,400,475	60,218,587
Small Business	14,673,310	26,343,610
C&I Education	0	0
Municipal	5,128,993	2,885,433
Total Commercial & Industrial Included for Incentive Calculation	48,202,778	89,447,630
Residential:		
ENERGY STAR Homes	952,871	258,829
NH Home Performance with ENERGY STAR	434,413	4,578,660
ENERGY STAR Products	22,261,649	28,891,600
Home Energy Assistance	660,141	2,254,286
Total Residential Included for Incentive Calculation	24,309,074	35,983,375
Total	72,511,851	125,431,005

Table 4. Program Expenditures by Category - 2015 ACTUAL

	Evaluation	External Administration	Internal Administration	Internal Implementation	Marketing	Rebates-Services	Total
Residential Programs							
ENERGY STAR Homes	\$ 3,478		\$ 441	\$ 25,640	\$ 2,471	\$ 117,922	\$ 149,953
Home Performance with ENERGY STAR	\$ 6,776		\$ 3,518	\$ 39,808	\$ 3,932	\$ 159,172	\$ 213,206
ENERGY STAR Lighting	\$ -		\$ -	\$ 7,467	\$ 84	\$ -	\$ 7,551
ENERGY STAR Appliances	\$ 10,357		\$ 3,153	\$ 44,728	\$ 18,526	\$ 329,328	\$ 406,092
Home Energy Assistance	\$ 11,893		\$ 3,949	\$ 42,633	\$ 242	\$ 320,157	\$ 378,874
ISO-NE FCM	\$ 10,510		\$ -	\$ -	\$ -	\$ -	\$ 10,510
Subtotal Residential	\$ 43,015	\$ -	\$ 11,061	\$ 160,276	\$ 25,255	\$ 926,580	\$ 1,166,187
Commercial/Industrial Programs							
C&I Education	\$ -		\$ -	\$ -	\$ 6	\$ 10,933	\$ 10,940
Large Business Energy Solutions	\$ 36,516		\$ 7,310	\$ 134,635	\$ 5,755	\$ 574,727	\$ 758,943
Small Business Energy Solutions	\$ 14,828		\$ 4,752	\$ 66,546	\$ 13,661	\$ 581,467	\$ 681,255
Municipal	\$ 4,683		\$ 404	\$ 19,648	\$ 996	\$ 131,560	\$ 157,291
ISO-NE FCM	\$ 14,213		\$ -	\$ -	\$ -	\$ -	\$ 14,213
Subtotal C&I	\$ 70,240	\$ -	\$ 12,466	\$ 220,829	\$ 20,420	\$ 1,298,687	\$ 1,622,642
Total	\$ 113,255	\$ -	\$ 23,527	\$ 381,105	\$ 45,675	\$ 2,225,267	\$ 2,788,829

TABLE 5

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES
CORE ENERGY EFFICIENCY PROGRAMS ADJUSTMENT AND BALANCE

12 Months Actual 2015

Total Energy Efficiency Revenue/Expense for Jan-Dec 2015

	Actual <u>JAN</u>	Actual <u>FEB</u>	Actual <u>MAR</u>	Actual <u>APRIL</u>	Actual <u>MAY</u>	Actual <u>JUNE</u>	6 MONTH <u>TOTAL</u>
Residential Revenue	\$58,068	\$59,392	\$62,031	\$30,199	\$70,427	\$51,472	\$331,590
C&I Revenue	<u>\$95,323</u>	<u>\$98,536</u>	<u>\$103,408</u>	<u>\$62,960</u>	<u>\$146,649</u>	<u>\$165,791</u>	<u>\$672,667</u>
1. TOTAL REVENUE (A)	\$153,391	\$157,928	\$165,439	\$93,158	\$217,076	\$217,264	\$1,004,256
Residential Expense	\$48,380	\$49,281	\$63,299	\$44,595	\$100,476	\$56,852	\$362,884
C&I Expense	<u>\$34,217</u>	<u>\$30,010</u>	<u>\$107,237</u>	<u>\$66,394</u>	<u>\$70,293</u>	<u>\$80,009</u>	<u>\$388,161</u>
2. TOTAL EXPENSE (B)	\$82,598	\$79,291	\$170,537	\$110,989	\$170,769	\$136,862	\$751,045
3. Cash Flow Over/(Under)	\$70,793	\$78,638	(\$5,098)	(\$17,831)	\$46,307	\$80,402	\$253,211
4. Start of Period Balance (C)	\$1,014,263	\$1,087,953	\$1,169,401	\$1,167,524	\$1,152,789	\$1,202,342	\$1,014,263
5. End of Period Balance Before Interest	\$1,085,056	\$1,166,591	\$1,164,304	\$1,149,694	\$1,199,096	\$1,282,744	\$1,267,474
6. Residential Interest	(\$1,076)	(\$950)	(\$1,042)	(\$1,032)	(\$1,131)	(\$1,144)	(\$6,374)
C&I Interest	<u>\$3,973</u>	<u>\$3,760</u>	<u>\$4,263</u>	<u>\$4,127</u>	<u>\$4,377</u>	<u>\$4,464</u>	<u>\$24,963</u>
TOTAL INTEREST (D)	\$2,897	\$2,810	\$3,221	\$3,095	\$3,246	\$3,319	\$18,589
7. End of Period Balance After Interest	\$1,087,953	\$1,169,401	\$1,167,524	\$1,152,789	\$1,202,342	\$1,286,063	\$1,286,063
	Actual <u>JULY</u>	Actual <u>AUG</u>	Actual <u>SEPT</u>	Actual <u>OCT</u>	Actual <u>NOV</u>	Actual <u>DEC</u>	ANNUAL <u>TOTAL</u>
Residential Revenue	\$68,394	\$53,907	\$53,247	\$40,936	\$33,260	\$89,098	\$670,433
C&I Revenue	<u>\$162,744</u>	<u>\$122,404</u>	<u>\$115,954</u>	<u>\$107,109</u>	<u>\$97,341</u>	<u>\$177,062</u>	<u>\$1,455,279</u>
8. TOTAL REVENUE (A)	\$231,138	\$176,311	\$169,201	\$148,045	\$130,600	\$266,160	\$2,125,712
Residential Expense	\$79,312	\$66,380	\$148,615	\$102,330	\$78,447	\$331,801	\$1,169,769
C&I Expense	<u>\$139,501</u>	<u>\$46,663</u>	<u>\$200,767</u>	<u>\$212,636</u>	<u>\$61,904</u>	<u>\$569,427</u>	<u>\$1,619,060</u>
9. TOTAL EXPENSE (B)	\$218,814	\$113,044	\$349,382	\$314,967	\$140,351	\$901,228	\$2,788,829
10. Cash Flow Over/(Under)	\$12,324	\$63,268	(\$180,181)	(\$166,921)	(\$9,750)	(\$635,068)	(\$663,116)
11. Start of Period Balance (C)	\$1,286,063	\$1,301,954	\$1,368,903	\$1,192,138	\$1,028,277	\$1,021,261	\$1,014,263
12. End of Period Balance Before Interest	\$1,298,387	\$1,365,222	\$1,188,722	\$1,025,217	\$1,018,527	\$386,193	\$351,147
13. Residential Interest	(\$1,208)	(\$1,244)	(\$1,351)	(\$1,616)	(\$1,711)	(\$2,170)	(\$15,674)
C&I Interest	<u>\$4,775</u>	<u>\$4,925</u>	<u>\$4,767</u>	<u>\$4,676</u>	<u>\$4,444</u>	<u>\$4,112</u>	<u>\$52,663</u>
TOTAL INTEREST (D)	\$3,567	\$3,681	\$3,416	\$3,060	\$2,734	\$1,942	\$36,989
14. 2015 Residential Incentive €						\$105,055	\$105,055
2015 Commercial & Industrial Incentive €						\$162,264	\$162,264
2015 Total Incentives €						\$267,320	\$267,320
15 End of Period Balance After Interest	\$1,301,954	\$1,368,903	\$1,192,138	\$1,028,277	\$1,021,261	\$120,816	\$120,816
16 End Balance as % of Revenue							5.68%

(A) See Tables 6 & 7

(B) See Tables 6 & 7

(C) "End of Period Balance Before Interest" from prior month.

(D) See Tables 6 & 7

(E) This is the amount credited to the Company's General Ledger during this year.

Interest Rates:	JAN =	3.25%	FEB =	3.25%	MAR =	3.25%	APR =	3.25%
	MAY =	3.25%	JUN =	3.25%	JUL =	3.25%	AUG =	3.25%
	SEP =	3.25%	OCT =	3.25%	NOV =	3.25%	DEC =	3.25%

TABLE 6

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES
CORE ENERGY EFFICIENCY PROGRAMS REVENUE/EXPENSE BALANCE
RESIDENTIAL FUND
12 Months Actual 2015

Energy Efficiency Residential Revenue/Expense for Jan-Dec 2015

	<u>Actual</u> <u>JAN</u>	<u>Actual</u> <u>FEB</u>	<u>Actual</u> <u>MAR</u>	<u>Actual</u> <u>APRIL</u>	<u>Actual</u> <u>MAY</u>	<u>Actual</u> <u>JUNE</u>	<u>6 MONTH</u> <u>TOTAL</u>
1. Residential Revenue (A)	\$58,068	\$59,392	\$62,031	\$30,199	\$70,427	\$51,472	\$331,590
2. Residential Energy Efficiency Expense (B)	<u>\$48,380.33</u>	<u>\$49,280.69</u>	<u>\$63,299.40</u>	<u>\$44,595.05</u>	<u>\$100,476.27</u>	<u>\$56,852.16</u>	\$362,884
3. Cash Flow Over/(Under)	\$9,687	\$10,111	(\$1,268)	(\$14,396)	(\$30,049)	(\$5,380)	(\$31,294)
4. Start of Period Balance (C)	(\$394,600)	(\$385,988)	(\$376,826)	(\$379,136)	(\$394,565)	(\$425,744)	
5. End of Period Balance Before Interest	(\$384,912)	(\$375,877)	(\$378,094)	(\$393,533)	(\$424,614)	(\$431,124)	
6. Estimated Interest	(\$1,076)	(\$950)	(\$1,042)	(\$1,032)	(\$1,131)	(\$1,144)	(\$6,374)
7. End of Period Balance After Interest	(\$385,988)	(\$376,826)	(\$379,136)	(\$394,565)	(\$425,744)	(\$432,268)	
	<u>Actual</u> <u>JULY</u>	<u>Actual</u> <u>AUG</u>	<u>Actual</u> <u>SEPT</u>	<u>Actual</u> <u>OCT</u>	<u>Actual</u> <u>NOV</u>	<u>Actual</u> <u>DEC</u>	<u>ANNUAL</u> <u>TOTAL</u>
8. Residential Revenue (A)	\$68,394	\$53,907	\$53,247	\$40,936	\$33,260	\$89,098	\$670,433
9. Residential Energy Efficiency Expense (B)	<u>\$79,312.26</u>	<u>\$66,380.37</u>	<u>\$148,614.57</u>	<u>\$102,330.09</u>	<u>\$78,446.66</u>	<u>\$ 331,800.97</u>	<u>\$1,169,769</u>
10. Cash Flow Over/(Under)	(\$10,918)	(\$12,473)	(\$95,367)	(\$61,394)	(\$45,187)	(\$242,703)	(\$499,336)
11. Start of Period Balance (C)	(\$432,268)	(\$444,394)	(\$458,111)	(\$554,830)	(\$617,840)	(\$664,737)	(\$394,600)
12. End of Period Balance Before Interest	(\$443,186)	(\$456,867)	(\$553,479)	(\$616,223)	(\$663,027)	(\$907,440)	(\$893,935)
13. Estimated Interest	(\$1,208)	(\$1,244)	(\$1,351)	(\$1,616)	(\$1,711)	(\$2,170)	(\$15,674)
14. 2015 Residential Incentive (D)						\$105,055	\$105,055
15 End of Period Balance After Interest	(\$444,394)	(\$458,111)	(\$554,830)	(\$617,840)	(\$664,737)	(\$1,014,665)	(\$1,014,665)
16 End Balance as % of Revenue							-151.34%

FOOTNOTES:

(A) Revenue Report

(B) Source: Great Plains query (Liberty Utilities) - includes ISO NE - FCM Expenses

(C) "End of Period Balance Before Interest" from prior month.

Estimated DSM incentive is included in Dec expense estimate.

(D) This is the amount credited to the Company's General Ledger during this year.

Interest Rates: JAN = 3.25% FEB = 3.25% MAR = 3.25% APR = 3.25%

 MAY = 3.25% JUN = 3.25% JUL = 3.25% AUG = 3.25%

 SEP = 3.25% OCT = 3.25% NOV = 3.25% DEC = 3.25%

Note: The Residential Factor is applied to the D-0, D-10, & T-0 rates.

TABLE 7

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES
 CORE ENERGY EFFICIENCY PROGRAMS REVENUE/EXPENSE BALANCE
 COMMERCIAL & INDUSTRIAL FUND
 12 Months Actual 2015

Energy Efficiency C&I Revenue/Expense for Jan-Dec 2015

	<u>Actual</u> <u>JAN</u>	<u>Actual</u> <u>FEB</u>	<u>Actual</u> <u>MAR</u>	<u>Actual</u> <u>APRIL</u>	<u>Actual</u> <u>MAY</u>	<u>Actual</u> <u>JUNE</u>	<u>6 MONTH</u> <u>TOTAL</u>
1. C&I Revenue (A)	\$95,323	\$98,536	\$103,408	\$62,960	\$146,649	\$165,791	\$672,667
2. C&I Energy Efficiency Expense (B)	<u>\$34,217.30</u>	<u>\$30,010.14</u>	<u>\$107,237.45</u>	<u>\$66,393.89</u>	<u>\$70,292.85</u>	<u>\$80,009.49</u>	\$388,161
3. Cash Flow Over/(Under)	\$61,106	\$68,526	(\$3,830)	(\$3,434)	\$76,356	\$85,782	\$284,505
4. Start of Period Balance (C)	\$1,408,862	\$1,473,941	\$1,546,228	\$1,546,661	\$1,547,353	\$1,628,086	\$1,408,862
5. End of Period Balance Before Interest	\$1,469,968	\$1,542,467	\$1,542,398	\$1,543,226	\$1,623,709	\$1,713,867	
6. Estimated Interest	\$3,973	\$3,760	\$4,263	\$4,127	\$4,377	\$4,464	\$24,963
7. End of Period Balance After Interest	\$1,473,941	\$1,546,228	\$1,546,661	\$1,547,353	\$1,628,086	\$1,718,331	
	<u>Actual</u> <u>JULY</u>	<u>Actual</u> <u>AUG</u>	<u>Actual</u> <u>SEPT</u>	<u>Actual</u> <u>OCT</u>	<u>Actual</u> <u>NOV</u>	<u>Actual</u> <u>DEC</u>	<u>ANNUAL</u> <u>TOTAL</u>
8. C&I Revenue (A)	\$162,744	\$122,404	\$115,954	\$107,109	\$97,341	\$177,062	\$1,455,279
9. C&I Energy Efficiency Expense (B)	<u>\$ 139,501.38</u>	<u>\$ 46,663.19</u>	<u>\$ 200,767.27</u>	<u>\$ 212,636.46</u>	<u>\$ 61,903.95</u>	<u>\$ 569,426.67</u>	<u>\$1,619,060</u>
10. Cash Flow Over/(Under)	\$23,242	\$75,741	(\$84,814)	(\$105,527)	\$35,437	(\$392,365)	(\$163,781)
11. Start of Period Balance (C)	\$1,718,331	\$1,746,348	\$1,827,014	\$1,746,968	\$1,646,117	\$1,685,998	\$1,408,862
12. End of Period Balance Before Interest	\$1,741,573	\$1,822,089	\$1,742,201	\$1,641,440	\$1,681,553	\$1,293,633	\$1,245,082
13. Estimated Interest	\$4,775	\$4,925	\$4,767	\$4,676	\$4,444	\$4,112	\$52,663
14. 2015 Commercial & Industrial Incentive (D)						\$162,264	\$162,264
15 End of Period Balance After Interest	\$1,746,348	\$1,827,014	\$1,746,968	\$1,646,117	\$1,685,998	\$1,135,481	\$1,135,481
16 End Balance as % of Revenue							78.02%

FOOTNOTES:

(A) Revenue Report

(B) Source: Great Plains query (Liberty Utilities) - includes ISO NE - FCM Expenses

(C) "End of Period Balance Before Interest" from prior month.

Estimated DSM incentive is included in Dec expense estimate.

(D) This is the amount credited to the Company's General Ledger during this year.

Interest Rates: JAN = 3.25% FEB = 3.25% MAR = 3.25% APR = 3.25%
 MAY = 3.25% JUN = 3.25% JUL = 3.25% AUG = 3.25%
 SEP = 3.25% OCT = 3.25% NOV = 3.25% DEC = 3.25%

Note: The C&I Factor is applied to the G-1, G-2, G-3, M,& V rates.

TABLE 8

**LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES
CORE ENERGY EFFICIENCY PROGRAMS VARIANCE ANALYSIS
RESIDENTIAL FUND
12 Months Actual 2015**

Energy Efficiency Residential Revenue/Expense for Jan-Dec 2015

	<u>JAN</u>	<u>FEB</u>	<u>MARCH</u>	<u>APRIL</u>	<u>MAY</u>	<u>JUNE</u>	
1. Residential Energy Efficiency Revenue (A)	\$58,068	\$59,392	\$62,031	\$30,199	\$70,427	\$51,472	
2. Estimated Residential Energy Efficiency Revenue (B)	<u>\$57,080</u>	<u>\$52,429</u>	<u>\$49,378</u>	<u>\$45,462</u>	<u>\$36,894</u>	<u>\$41,131</u>	
3. Difference (1)-(2)	\$988	\$6,963	\$12,653	(\$15,264)	\$33,533	\$10,341	
4. Residential Energy Efficiency Expense (A)	\$48,380	\$49,281	\$63,299	\$44,595	\$100,476	\$56,852	
5. Estimated Residential Energy Efficiency Expense (C)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	
6. Difference Residential Energy Efficiency Expense (4) - (5)	\$48,380	\$49,281	\$63,299	\$44,595	\$100,476	\$56,852	
	<u>JULY</u>	<u>AUG</u>	<u>SEPT</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
7. Residential Energy Efficiency Revenue (A)	\$68,394	\$53,907	\$53,247	\$40,936	\$33,260	\$89,098	\$670,433
8. Estimated Residential Energy Efficiency Revenue (B)	<u>\$52,942</u>	<u>\$50,979</u>	<u>\$46,525</u>	<u>\$39,354</u>	<u>\$40,938</u>	<u>\$51,333</u>	<u>\$564,446</u>
9. Difference (7)-(8)	\$15,452	\$2,928	\$6,722	\$1,582	(\$7,679)	\$37,766	\$105,987
10. Residential Energy Efficiency Expense	\$79,312	\$66,380	\$148,615	\$102,330	\$78,447	\$331,801	\$1,169,769
11. Estimated Residential Energy Efficiency Expense (C)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
12. Difference Residential Energy Efficiency Expense (10) - (11)	\$79,312	\$66,380	\$148,615	\$102,330	\$78,447	\$331,801	\$1,169,769

FOOTNOTES:

(A) See Table 6

(B) Calculation based on estimated monthly Residential kWh from Company's 2012-2018 forecast multiplied by a factor of \$0.00180

(C) No estimate provided.

Incentives are included in Dec exp est.

Note: The Residential Factor is applied to the D-0, D-10, & T-0 rates.

TABLE 9

**LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A LIBERTY UTILITIES
CORE ENERGY EFFICIENCY PROGRAMS VARIANCE ANALYSIS
COMMERCIAL & INDUSTRIAL FUND
12 Months Actual 2015**

Energy Efficiency C&I Revenue/Expense for Jan-Dec 2015

	<u>JAN</u>	<u>FEB</u>	<u>MARCH</u>	<u>APRIL</u>	<u>MAY</u>	<u>JUNE</u>		
1. C&I Energy Efficiency Revenue (A)	\$95,323	\$98,536	\$103,408	\$62,960	\$146,649	\$165,791		
2. Estimated C&I Energy Efficiency Revenue (B)	<u>\$96,659</u>	<u>\$92,924</u>	<u>\$98,944</u>	<u>\$87,552</u>	<u>\$95,444</u>	<u>\$103,637</u>		
3. Difference (1)-(2)	(\$1,336)	\$5,613	\$4,463	(\$24,592)	\$51,204	\$62,154		
4. C&I Energy Efficiency Expense (A)	\$34,217	\$30,010	\$107,237	\$66,394	\$70,293	\$80,009		
5. Estimated C&I Energy Efficiency Expense (C)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>		
6. Difference C&I Energy Efficiency Expense (4) - (5)	\$34,217	\$30,010	\$107,237	\$66,394	\$70,293	\$80,009		
	<u>JULY</u>	<u>AUG</u>	<u>SEPT</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>	
7. C&I Energy Efficiency Revenue (A)	\$162,744	\$122,404	\$115,954	\$107,109	\$97,341	\$177,062	\$1,455,279	
8. Estimated C&I Energy Efficiency Revenue (B)	<u>\$100,960</u>	<u>\$122,978</u>	<u>\$112,235</u>	<u>\$87,904</u>	<u>\$89,879</u>	<u>\$96,908</u>	<u>\$1,186,023</u>	
9. Difference (7)-(8)	\$61,784	(\$573)	\$3,719	\$19,205	\$7,461	\$80,154	\$269,257	
10. C&I Energy Efficiency Expense (A)	\$139,501	\$46,663	\$200,767	\$212,636	\$61,904	\$569,427	\$1,619,060	
11. Estimated C&I Energy Efficiency Expense (C)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	
12. Difference C&I Energy Efficiency Expense (10) - (11)	\$139,501	\$46,663	\$200,767	\$212,636	\$61,904	\$569,427	\$1,619,060	

FOOTNOTES:

(A) See Table 7

(B) Calculation based on estimated monthly C&I kWh from Company's 2012-2018 forecast multiplied by a factor of \$0.00180.

(C) No estimate provided.

Note: The C&I Factor is applied to the G-1, G-2, G-3, M,& V rates.