NEW HAMPSHIRE ELECTRIC COOPERTIVE, INC.

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Program Cost-Effectiveness - 2012 PLAN

	V = 1 2		Pro	eser	nt Value							
	Total											
	Resource					100	ember	Annual	Lifetime	Winter	Summer	Number of
	Benefit/Cost			Uti	lity Costs	1	Costs	MWh	MWh	kW	kW	Members
	Ratio	Ben	efit (\$000)		(\$000)	(\$000)	Savings	Savings	Savings	Savings	Served
Residential Programs												
ENERGY STAR Homes	4.6	\$	1,307.4	\$	160.9	\$	126.0	59.2	915.1	11.9	23.6	57
Home Performance w/Energy Star	2.5	\$	542.3	\$	180.8	\$	31.9	342.1	5,474.4	115.3	115.3	59
ENERGY STAR Lighting *1	2.3	\$	405.2	\$	108.1	\$	64.3	1,281.2	6,791.2	298.1	79.2	39,467
ENERGY STAR Appliances	1.4	\$	396.0	\$	142.1	\$	140.9	360.3	3,674.5	49.6	44.5	1,914
Home Energy Assistance	2.2	\$	477.1	\$	215.6	\$) <u>-</u>	73.6	883.4	24.8	24.8	61
High Efficiency Heat Pump	<u>2.3</u>	\$	657.4	\$	138.4	\$	148.1	408.6	10,214.7	107.3	6.1	20
Subtotal Residential	2.6	\$	3,785.4	\$	946.0	\$	511.2	2,525.1	27,953.2	607.0	293.5	41,578
Commercial/Industrial Programs												
New Construction / Major Renovation	1.2	\$	480.1	\$	129.4	\$	265.7	386.9	5,803.3	49.3	75.6	14
Large C&I Retrofit	1.0	\$	477.4	\$	148.0	\$	312.0	461.9	6,004.8	56.3	86.2	23
Small C&I Retrofit	1.3	\$	390.6	\$	165.0	\$	128.1	370.4	4,815.5	46.0	74.5	31
Other (Education)	0.0	\$	-	\$	35.6	\$	-	-	-	5.	-	-
Smart Start	0.0	\$	-	\$	13.4	\$	-			-		
Subtotal C&I	1.1		1,348.1		491.4		705.8	1,219.2	16,623.7	151.6	236.3	68
Total		\$	5,133.5	\$	1,437.3	\$:	1,217.1	3,744.3	44,576.8	758.6	529.8	41,646

Note 1: Plan included 9,867 members purchasing a total of 39,467 lighting products (4 per member)

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Program Cost-Effectiveness - 2012 ACTUAL

No. 40 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4 - 4		-		Pre	sent Valu	e					
	Total Resource							Lifetime		Summer	Number of
	Benefit/Cost		Benefit	Ut	ility Costs	I	Vlember	MWh	Winter kW	kW	Members
	Ratio		(\$000)		(\$000)	Co	sts (\$000)	Savings	Savings	Savings	Served
Residential Programs				0.110							
ENERGY STAR Homes	3.76	\$	1,276.4	\$	170.0	\$	169.3	1,311.9	14.8	6.1	77
Home Performance with Energy Star	2.75	\$	220.4	\$	56.8	\$	23.3	706.4	15.0	14.9	19
ENERGY STAR Lighting	1.52	\$	365.9	\$	100.6	\$	140.7	5,979.6	225.2	59.9	29,053
ENERGY STAR Appliances	1.49	\$	400.4	\$	135.1	\$	134.0	3,807.9	49.2	46.6	2,256
Home Energy Assistance	1.13	\$	294.5	\$	261.2	\$	-	891.8	29.8	29.8	64
High Efficiency Heat Pump	3.70	\$	516.5	\$	49.9	\$	89.5	6,673.1	72.5	1.4	11
Subtotal Residential	2.31	\$	3,074.2	\$	773.7	\$	557.0	19,370.7	406.5	158.7	31,480
Commercial/Industrial Programs											
New Construction / Major Renovation	2.04	\$	583.1	\$	145.1	\$	141.2	7,213.1	63.1	88.2	18
Large C&I Retrofit	1.56	\$	1,009.1	\$	191.6	\$	453.8	14,589.6	210.3	114.2	23
Small C&I Retrofit	1.02	\$	496.2	\$	283.0	\$	203.5	6,029.2	59.4	102.0	67
Other (Education)	0.00	\$	4	\$	18.0	\$	-	÷	-	7	-
Smart Start	0.00	\$. ○	\$	3.0	\$				=	2
Subtotal C&I	1.45	\$	2,088.4	\$	640.7	\$	798.6	27,831.9	332.8	304.4	108
Total		Ś	5,162.6	\$	1,414.4	Ś	1,355.6	47,202.7	739.3	463.1	31,588

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Present Value Benefits - 2012 PLAN

			САР	ACITY			ENE	RGY		
	Total Benefits (\$000)	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Non Electric Resource
Residential Programs	(4-5-5)								7, 444	
ENERGY STAR Homes	\$1,307	\$24,267	\$0	\$4,979	\$16,381	\$14,014	\$18,001	\$13,190	\$10,913	\$1,205,673
Home Performance w/Energy Star	\$542	\$113,798	\$0	\$24,000	\$78,965	\$94,196	\$122,401	\$49,046	\$59,883	\$0
ENERGY STAR Lighting *1	\$405	\$16,635	\$0	\$5,785	\$19,033	\$105,555	\$136,059	\$55,471	\$66,674	\$0
ENERGY STAR Appliances	\$396	\$18,414	\$0	\$5,953	\$19,586	\$59,366	\$77,453	\$32,447	\$38,104	\$144,663
Home Energy Assistance	\$477	\$14,086	\$0	\$3,962	\$13,036	\$14,612	\$19,069	\$7,676	\$9,288	\$395,405
High Efficiency Heat Pump	\$657	\$11,485	\$0	\$1,871	\$6,155	\$206,492	\$402,307	\$15,790	\$13,252	\$0
Subtotal Residential	\$3,785	\$198,684	\$0	\$46,549	\$153,156	\$494,236	\$775,289	\$173,619	\$198,114	\$1,745,741
Commercial/Industrial Programs										
New Construction / Major Renovation	\$480	\$66,604	\$0	\$14,835	\$48,811	\$98,094	\$91,379	\$91,362	\$69,036	\$0
Large C&I Retrofit	\$477	\$57,742	\$0	\$14,825	\$48,778	\$115,321	\$100,486	\$82,651	\$57,595	\$0
Small C&I Retrofit	\$391	\$49,901	\$0	\$12,812	\$42,154	\$103,461	\$81,063	\$59,766	\$41,434	\$0
Other (Education)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Smart Start	\$0	\$0	\$0	<u>\$0</u>	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal C&I	\$1,348	\$174,246	\$0	\$42,472	\$139,743		\$272,928		\$168,065	\$0
Total	\$5,133	\$372,930	\$0	\$89,022	\$292,898	\$811,112	\$1,048,217	\$407,398	\$366,179	\$1,745,741

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Present Value Benefits - 2012 ACTUAL

		CAP	ACITY			ENE	RGY		
Total Benefits (\$000)	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Non Electric Resource
\$1,276	\$6,057	\$0	\$1,260	\$4,144	\$23,513	\$33,640	\$10,482	\$12,268	\$1,185,047
\$220	\$14,685	\$0	\$3,097	\$10,190	\$12,155	\$15,794	\$6,329	\$7,727	\$150,456
\$366	\$16,301	\$0	\$4,990	\$16,417	\$95,250	\$122,853	\$49,848	\$60,218	\$0
\$400	\$19,849	\$0	\$6,330	\$20,827	\$61,308	\$79,990	\$34,475	\$39,683	\$137,955
\$295	\$11,944	\$0	\$4,044	\$13,304	\$14,457	\$18,857	\$7,595	\$9,167	\$215,141
\$517	\$2,681	\$0	\$437	\$1,437	\$137,296	\$271,347	\$3,287	\$3,891	\$96,161
\$3,074	\$71,517	\$0	\$20,158	\$66,319	\$343,979	\$542,481	\$112,016	\$132,954	\$1,784,760
\$583	\$77,705	\$0	\$17,308	\$56,947	\$128,025	\$133,312	\$89,222	\$80,543	\$0
\$1,009	\$76,538	\$0	\$19,651	\$64,656	\$301,259	\$403,064	\$88,603	\$55,356	\$0
\$496	\$65,366	\$0	\$16,930	\$55,704	\$136,419	\$96,819	\$76,242	\$48,737	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
\$2,088	\$219,609	\$0	\$53,889	\$177,307	\$565,703				\$0
AF 463	ć204 425	4.0	474.0-	4443 555	4000 500	A4 475 575	4266.555	4947	\$1,784,760
	\$1,276 \$220 \$366 \$400 \$295 \$517 \$3,074 \$583 \$1,009 \$496 \$0 \$0	Benefits (\$000) Summer Generation \$1,276 \$6,057 \$220 \$14,685 \$366 \$16,301 \$400 \$19,849 \$295 \$11,944 \$517 \$2,681 \$3,074 \$71,517 \$583 \$77,705 \$1,009 \$76,538 \$496 \$65,366 \$0 \$0 \$2,088 \$219,609	Total Benefits (\$000) Summer Generation Winter Generation \$1,276 \$6,057 \$0 \$220 \$14,685 \$0 \$366 \$16,301 \$0 \$400 \$19,849 \$0 \$295 \$11,944 \$0 \$517 \$2,681 \$0 \$3,074 \$71,517 \$0 \$583 \$77,705 \$0 \$1,009 \$76,538 \$0 \$496 \$65,366 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,088 \$219,609 \$0	Total Benefits (\$000) Summer Generation Winter Generation Transmission \$1,276 \$6,057 \$0 \$1,260 \$220 \$14,685 \$0 \$3,097 \$366 \$16,301 \$0 \$4,990 \$400 \$19,849 \$0 \$6,330 \$295 \$11,944 \$0 \$4,044 \$517 \$2,681 \$0 \$437 \$3,074 \$71,517 \$0 \$20,158 \$583 \$77,705 \$0 \$17,308 \$1,009 \$76,538 \$0 \$19,651 \$496 \$65,366 \$0 \$16,930 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,088 \$219,609 \$0 \$53,889	Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$220 \$14,685 \$0 \$3,097 \$10,190 \$366 \$16,301 \$0 \$4,990 \$16,417 \$400 \$19,849 \$0 \$6,330 \$20,827 \$295 \$11,944 \$0 \$4,044 \$13,304 \$517 \$2,681 \$0 \$437 \$1,437 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$583 \$77,705 \$0 \$17,308 \$56,947 \$1,009 \$76,538 \$0 \$19,651 \$64,656 \$496 \$65,366 \$0 \$16,930 \$55,704 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,088 \$219,609 \$0 \$53,889 \$177,307	Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution Winter Peak \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$23,513 \$220 \$14,685 \$0 \$3,097 \$10,190 \$12,155 \$366 \$16,301 \$0 \$4,990 \$16,417 \$95,250 \$400 \$19,849 \$0 \$6,330 \$20,827 \$61,308 \$295 \$11,944 \$0 \$4,044 \$13,304 \$14,457 \$517 \$2,681 \$0 \$437 \$1,437 \$137,296 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$343,979 \$583 \$77,705 \$0 \$17,308 \$56,947 \$128,025 \$1,009 \$76,538 \$0 \$19,651 \$64,656 \$301,259 \$496 \$65,366 \$0 \$16,930 \$55,704 \$136,419 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 <t< td=""><td>Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution Winter Peak Winter Off Peak \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$23,513 \$33,640 \$220 \$14,685 \$0 \$3,097 \$10,190 \$12,155 \$15,794 \$366 \$16,301 \$0 \$4,990 \$16,417 \$95,250 \$122,853 \$400 \$19,849 \$0 \$6,330 \$20,827 \$61,308 \$79,990 \$295 \$11,944 \$0 \$4,044 \$13,304 \$14,457 \$18,857 \$517 \$2,681 \$0 \$437 \$1,437 \$137,296 \$271,347 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$343,979 \$542,481 \$583 \$77,705 \$0 \$17,308 \$56,947 \$128,025 \$133,312 \$1,009 \$76,538 \$0 \$19,651 \$64,656 \$301,259 \$403,064 \$496 \$65,366 \$0 \$16,930 \$55,</td><td>Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution Winter Peak Winter Off Peak Summer Peak \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$23,513 \$33,640 \$10,482 \$220 \$14,685 \$0 \$3,097 \$10,190 \$12,155 \$15,794 \$6,329 \$366 \$16,301 \$0 \$4,990 \$16,417 \$95,250 \$122,853 \$49,848 \$400 \$19,849 \$0 \$6,330 \$20,827 \$61,308 \$79,990 \$34,475 \$295 \$11,944 \$0 \$4,044 \$13,304 \$14,457 \$18,857 \$7,595 \$517 \$2,681 \$0 \$437 \$1,437 \$137,296 \$271,347 \$3,287 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$343,979 \$542,481 \$112,016 \$583 \$77,705 \$0 \$17,308 \$56,947 \$128,025 \$133,312 \$89,222 \$1,009 \$76,538 \$0</td><td> Summer Summer Generation Summer Ge</td></t<>	Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution Winter Peak Winter Off Peak \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$23,513 \$33,640 \$220 \$14,685 \$0 \$3,097 \$10,190 \$12,155 \$15,794 \$366 \$16,301 \$0 \$4,990 \$16,417 \$95,250 \$122,853 \$400 \$19,849 \$0 \$6,330 \$20,827 \$61,308 \$79,990 \$295 \$11,944 \$0 \$4,044 \$13,304 \$14,457 \$18,857 \$517 \$2,681 \$0 \$437 \$1,437 \$137,296 \$271,347 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$343,979 \$542,481 \$583 \$77,705 \$0 \$17,308 \$56,947 \$128,025 \$133,312 \$1,009 \$76,538 \$0 \$19,651 \$64,656 \$301,259 \$403,064 \$496 \$65,366 \$0 \$16,930 \$55,	Total Benefits (\$000) Summer Generation Winter Generation Transmission Distribution Winter Peak Winter Off Peak Summer Peak \$1,276 \$6,057 \$0 \$1,260 \$4,144 \$23,513 \$33,640 \$10,482 \$220 \$14,685 \$0 \$3,097 \$10,190 \$12,155 \$15,794 \$6,329 \$366 \$16,301 \$0 \$4,990 \$16,417 \$95,250 \$122,853 \$49,848 \$400 \$19,849 \$0 \$6,330 \$20,827 \$61,308 \$79,990 \$34,475 \$295 \$11,944 \$0 \$4,044 \$13,304 \$14,457 \$18,857 \$7,595 \$517 \$2,681 \$0 \$437 \$1,437 \$137,296 \$271,347 \$3,287 \$3,074 \$71,517 \$0 \$20,158 \$66,319 \$343,979 \$542,481 \$112,016 \$583 \$77,705 \$0 \$17,308 \$56,947 \$128,025 \$133,312 \$89,222 \$1,009 \$76,538 \$0	Summer Summer Generation Summer Ge

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Shareholder Incentive Calculation 2012

	Planned	<u>Actual</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.09	1.39
2. Threshold Benefit / Cost Ratio ¹	1.00	
3. Lifetime kWh Savings	16,623,664	27,831,937
4. Threshold Lifetime kWh Savings (65%) ²	10,805,382	
5. Budget	\$491,355	\$640,715
6. Benefit / Cost Percentage of Budget	4.00%	
7. Lifetime kWh Percentage of Budget	4.00%	
8. C/I Member Incentive	\$39,308	\$58,963
9. Cap (12%)	\$58,963	
Residential Incentive		
10. Benefit / Cost Ratio	2.47	2.23
11. Threshold Benefit / Cost Ratio ¹	1.00	
12. Lifetime kWh Savings	27,953,151	19,370,729
13. Threshhold Lifetime kWh Savings (65%) ²	18,169,548	
14. Budget	\$945,950	\$773,687
15. Benefit / Cost Percentage of Budget	4.00%	
16. Lifetime kWh Percentage of Budget	4.00%	
	-	
17. Residential Incentive	\$75,676	\$49,363
18. Cap (12%)	\$113,514	
19. TOTAL INCENTIVE EARNED		\$108,325

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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Planned Versus Actual Benefit / Cost Ratio by Sector 2012

			<u>Planned</u>		<u>Actual</u>
	mmercial & Industrial:	ć	1 240 100	ć	2 000 405
1.	Benefits (Value) From Eligible Programs	\$	1,348,109	\$	2,088,405
2.	Implementation Expenses	\$	491,355	\$	640,715
3.	Customer Contribution	\$	745,136	\$	857,585
4.	Estimated Member Incentive	\$	39,308	\$	58,962.60
5.	Total Costs Including Member Incentive	\$	1,236,491	\$	1,498,300
5.	Benefit/Cost Ratio - C&I Sector		1.09		1.39
Re	sidential:				
6.	Benefits (Value) From Eligible Programs	\$	3,785,389	\$	3,074,186
7.	Implementation Expenses	\$	945,950	\$	773,687
8.	Customer Contribution	\$	586,906	\$	606,314
4.	Estimated Member Incentive	\$	75,676	\$	49,363
5.	Total Costs Including Member Incentive	\$	1,532,856	\$	1,380,001
10.	Benefit/Cost Ratio - Residential Sector		2.47		2.23

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Actual Lifetime Energy Savings by Sector and Program 2012

	Lifetime kWh Savings				
	<u>Planned</u>	<u>Actual</u>			
Commercial & Industrial:					
New Equipment & Construction	5,803,325	7,213,135			
Large C&I Retrofit	6,004,825	14,589,612			
Small Business Energy Solutions	4,815,514	6,029,190			
Education	0	0			
Other	<u>0</u>	<u>0</u>			
Total Commercial & Industrial Included for Incentive Calculation	16,623,664	27,831,937			
Residential:					
Home Energy Assistance Program	883,391	891,810			
Home Performance with Energy Star	5,474,363	706,402			
ENERGY STAR Homes Program	915,068	1,311,908			
ENERGY STAR Appliance Program	3,674,464	3,807,913			
ENERGY STAR Lighting Program	6,791,203	5,979,622			
High Efficiency Heat Pump Program	10,214,662	6,673,074			
Total Residential Included for Incentive Calculation	27,953,151	19,370,729			

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2012 End of Year Reconciliation

		<u>2012</u>
Carry Forward Balance	\$	569,440
Funding:		
System Benefit Charge	\$	1,351,510
Forward Capacity Market	\$	54,015
Interest	12	24,804
Total Funding for 2011 Energy Efficiency Programs	\$	1,430,328
Expenses:		
Energy Efficiency Expenditures	\$	1,414,067
FCM Expenses	\$	14,205
Member Incentive - 2011 ¹	\$	101,926
Member Incentive - 2012 ²	\$	108,325
Total 2011 Program Expenses	\$	1,638,522
Carry Forward Balance	\$	361,246

^{2. 2011} member incentive accrued in 2011 and booked in 2012

^{3. 2012} member incentive accrued in 2012 and booked in 2013